Third Quarter 2019 Groundwater and Surface Water Sampling and Analysis Report

Camp Bonneville
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Vancouver, Washington 98682

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 third quarter 2019 groundwater and surface water 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 and surface water 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 located 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. (March 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 8260B
- 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 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.

- Base Boundary
    - Paired Monitoring Wells: LC-MW01S and LC-MW01D
    - Paired Monitoring Wells: LC-MW02S and LC-MW02D

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

- 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)
- FBI (at the on-site Federal Bureau of Investigation (FBI) 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 Third 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
- Collection and analysis of surface water samples from Lacamas Creek and North Fork of Lacamas Creek

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 Control Act (MTCA)[9] to determine if the groundwater or surface water potentially poses an unacceptable

[8] Ecology and Environment, Inc. (May 2012). *Camp Bonneville Expanded Site Inspection, Vancouver, Washington, Technical Direction Document Number: 11-02-0010*.
[9] http://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

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 September 10 and 11, 2019. A field duplicate sample (labeled 03Q19LCMW140W) was collected from monitoring well LC-MW03S. An additional volume of groundwater was collected from monitoring well LC-MW03D 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 September 11, 12, and 13, 2019. Two field duplicate samples (labeled 03Q19L4MW145W and 03Q19L4MW150W) were collected from monitoring wells L4-MW01B and L4-MW02B, respectively. An additional volume of groundwater was collected from monitoring well LC-MW07B for laboratory MS/MSD samples.

Surface water samples were collected from the three previously listed locations on September 10, 2019. A field duplicate sample (labeled 03Q19DP05SW) was collected from location NF02. An additional volume of surface water was collected from location LC03 for laboratory MS/MSD samples.

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

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.

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. 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, numerous wells at Landfill 4/Demolition Area 1 had groundwater elevations drop more than 2-feet during low-flow purging prior to parameter stabilization (wells L4-MW02B, L4-MW08B, L4-MW09B, and L4-MW11B), 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 Surface Water Sample Collection

Surface water samples were collected using the protocol employed in the May 2012 EPA investigation. Samples were collected from downstream to upstream locations to minimize sediment disturbance that could increase turbidity. The sampling technique is described in detail in the SAP.

Surface water perchlorate samples were transferred from a new unpreserved 250-millileter (mL) polyethylene container filled in the stream to a 60-mL syringe for field filtering. The filtered water was placed in a second new 250-mL polyethylene container.

4.3 Quality Assurance/Quality Control Samples

Duplicate samples were collected at a frequency of at least one per every 10 samples, with one collected from Surface Water, one 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, Landfill 4/Demolition Area 1, and Surface Water). Trip blanks were submitted with all shipments containing samples for VOC analysis. Single-use sample containers for surface water and dedicated pumps in the wells at Base Boundary and Landfill 4/Demolition Area 1 eliminate the need for equipment blanks.

4.4 Deviations from SAP/QAPP

There were no deviations from established protocols, unusual conditions, or equipment issues encountered during this sampling event.

4.5 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. The drums were picked up by NRC Environmental Services Inc. of Portland, Oregon, on September 12, 2019, and were disposed at Storm Water Recycling in Sherwood, Oregon. A copy of the disposal receipt is provided in Appendix B. New drums are present for future sampling events.

5 GROUNDWATER MONITORING RESULTS

5.1 Base Boundary at Lacamas Creek

Groundwater elevations are provided in Table 2 for the third 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. The remaining field parameters are provided in Table 2.

The 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 are provided in Table 2 for the third 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.

Table 3 provides detected concentrations or MRLs of non-detections for the contaminants of concern. Figures 7A and 7B show perchlorate isocontours at shallow and deep wells, respectively. Figures 8A and 8B show RDX isocontours at shallow and deep wells, respectively.

Of the 18 wells in the Landfill 4/Demolition Area 1 area, 13 had one or more detections of perchlorate, RDX, or 2,4-dinitrotoluene that exceeded MTCA Method B cleanup levels (Table 3). Five wells had VOC detections above laboratory method reporting limtis. Of the five VOC detections, well L4-MW09B had exceedances of 1,1,2,2-tetrachloroethane and trichloroethene above MTCA Method B cleanup levels, and well L4-MW10B had an exceedance of 1,1,2,2-tetrachloroethane above MTCA Method B cleanup levels. The other detected VOC concentrations were below MTCA Method B cleanup levels.

6 SURFACE WATER MONITORING RESULTS

There were no detections of perchlorate or RDX in the surface water samples. Perchlorate and RDX have not been detected in surface water samples beginning in March 2013. Table 4 provides the MRLs for the analytes.

7 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 third quarter data met the following criteria:

- All 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 to the data as the result of 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, unless noted below.

7.1 Data Validation

All 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.

[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).

7.2 Presentation of Data

There were six sample submissions over four days. Samples were placed in six sample delivery groups (SDGs). Four of the SDGs (580-89079-1, 580-89177-1, 580-89179-1, 580-89180-1) were processed at Level II, and two (580-89081-1, 580-89178-1) at Level III. Laboratory reports are included on a compact disc (CD) with the printed third quarter report and are in the electronic version of the third quarter report. Level II data packages are found in Appendix C, and Level III data packages are found in Appendix D.

7.3 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 the explosives 2,4,6-trinitrotoluene and tetryl 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.

7.4 Method Reporting Limits

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

7.5 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 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.

7.6 Field Quality Control Sample Assessment

7.6.1 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 from September 10 through 13, 2019. All four trip blanks were analyzed for VOCs, and there were no detections.

7.6.2 Duplicates

Duplicate samples were collected from the three study areas (Base Boundary, Landfill 4/Demolition Area 1, Surface Water). 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-MW03S met all quality control requirements.

- **Landfill 4/Demolition Area 1 Duplicate**
  The field duplicate analysis for well L4-MW01B met all quality control requirements. The field duplicate analysis for well L4-MW02B met all quality control requirements, except for 1,1-dichloroethane, which exceeded the 20% RPD limit between the parent and duplicate samples and should include the qualifier "J" for this well. The analyte 1,1-dichloroethene also exceeded the 20% RPD limit, but the results were less than five times the PQL and the difference between the sample and duplicate was less than the PQL; therefore, the results are acceptable.
- **Surface Water**
  The field duplicate analysis for sample NF02 met all quality control requirements.

7.7 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.

7.7.1 Laboratory Quality Control Samples/Indicators

7.7.1.1 Blanks

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

7.7.1.2 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 580-311759 and 580-312054 recovered above the upper control limit (biased high) for methylene chloride. It was not detected in the associated samples; therefore, the data are considered valid.
- The LCS and/or LCSD for preparation batches 320-328371, 320-324018, 320-324273, and 320-328864 and analytical batches 320-326750 and 320-327493 recovered below the lower control limits (biased low) for 2,4,6-trinitrotoluene and tetryl. The associated samples were re-prepared outside holding time for verification purposes, and the reanalysis was within control limits for all batches. 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, initial results have been reported and the data are considered valid.

7.7.1.3 Matrix Spike/Matrix Spike Duplicates

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

- 1,2,4-Trichlorobenzene was biased low for the MS and MSD of sample 03Q19LCMW03DWMS (580-89081-3) in batch 580-311626. 1,4-Dichlorobenzene 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 and the data are considered valid.
- MS/MSD recoveries for 2,4,6-trinitrotoluene and tetryl were below the lower control limit (biased low) batch 320-326491. As noted above, LCS/LCSD recoveries were acceptable and the quality is not affected. The data are considered valid.
- During analysis of preparation batch 320-324018, TestAmerica noted that the extracts for the MSD and a sample were switched. All samples in the affected batch were re-extracted outside of hold time

and both sets of data were reported. LCS/LCSD recoveries were acceptable; therefore, the initial results analyzed within hold time are considered valid and are reported.

- The MS/MSD recoveries for preparation batches 320-324018 and 320-324273, and/or analytical batches 580-311759, 320-326491, and 320-326750 were outside control limits. LCS/LCSD recoveries were acceptable for these batches; therefore, the data are considered valid.
- The presence of the qualifier 4 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 are from analysis batches 471410 and 471411; they had acceptable LCS/LCSD recoveries and are considered valid.

7.7.1.4 Surrogates

Perchlorate is analyzed without the use of surrogates. All surrogate recoveries from VOC and explosive analyses were within specified control limits.

7.7.1.5 Internal Standards

The following CCV anomalies were identified in the laboratory reports:

- The minimum response factor (RF) criteria for the CCV analyzed in batch 580-311626 was outside criteria for 2-butanone (MEK), 2-hexanone, and 4-methyl-2-pentanone (MIBK). 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 batch 580-312054 recovered above the upper control limit (biased high) for chloroethane, methylene chloride, and 2,2-dichloropropane. The samples associated with this CCV were non-detect for the affected analytes; therefore, the data are considered valid.

7.7.1.6 Other Issues

- Samples in preparation batch 320-323060 were filtered due to large particulates for EPA Method 8330B. This does not affect data quality.
- The RPD between the primary and confirmation column/detector exceeded 40% for octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX) or RDX for samples 03Q19L4MW05AW (580-89179-4) and 03Q19L4MW08BW (580-89180-4). The primary column data was reported and qualified in accordance with TestAmerica's SOP. Data quality is not affected.

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.

7.7.2 Level III Data Review

The data packages for the SDGs receiving Level III data reporting (580-89081-1 and 580-89178-1) were reviewed for adherence to method criteria that exceed Level II reporting. There were no deviations from method criteria.

8 HYDROGEOLOGY DISCUSSION

8.1 Base Boundary/Lacamas Creek

The third 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.

8.2 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 radial flow pattern from the northwest (toward L4-MW04A) to southwest (toward well L4-MW05A) directions. 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 the 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)

9 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 March 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 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.

9.1 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.

9.2 Perchlorate and RDX Concentration Trend Analysis

Trend graphs for perchlorate and RDX concentrations are included in Appendix E. 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 micrograms per liter (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-MW03B
- L4-MW05A
- 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-MW02A
- L4-MW02B
- L4-MW03A
- L4-MW03B
- L4-MW05A
- L4-MW08A
- L4-MW08B
- L4-MW09A

RDX

- L4-MW02A
- L4-MW02B
- L4-MW03A
- L4-MW08A

RDX continues to not 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.

10 FUTURE ACTIVITIES

The fourth quarter monitoring is scheduled for December 2019.

PBS Engineering and Environmental Inc. is pleased to present the results of the third 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: 2020.01.07 11:23:10 -08'00'

Matt Randall, GIT — Date
Staff Geologist

Digitally signed by Lance A. Moen, PE
Date: 2020.01.07 11:19:28 -08'00'

Lance A. Moen, PE — Date
Senior Environmental Engineer

Digitally signed by Scott Braunsten
Date: 2020.01.07 09:57:36 -08'00'

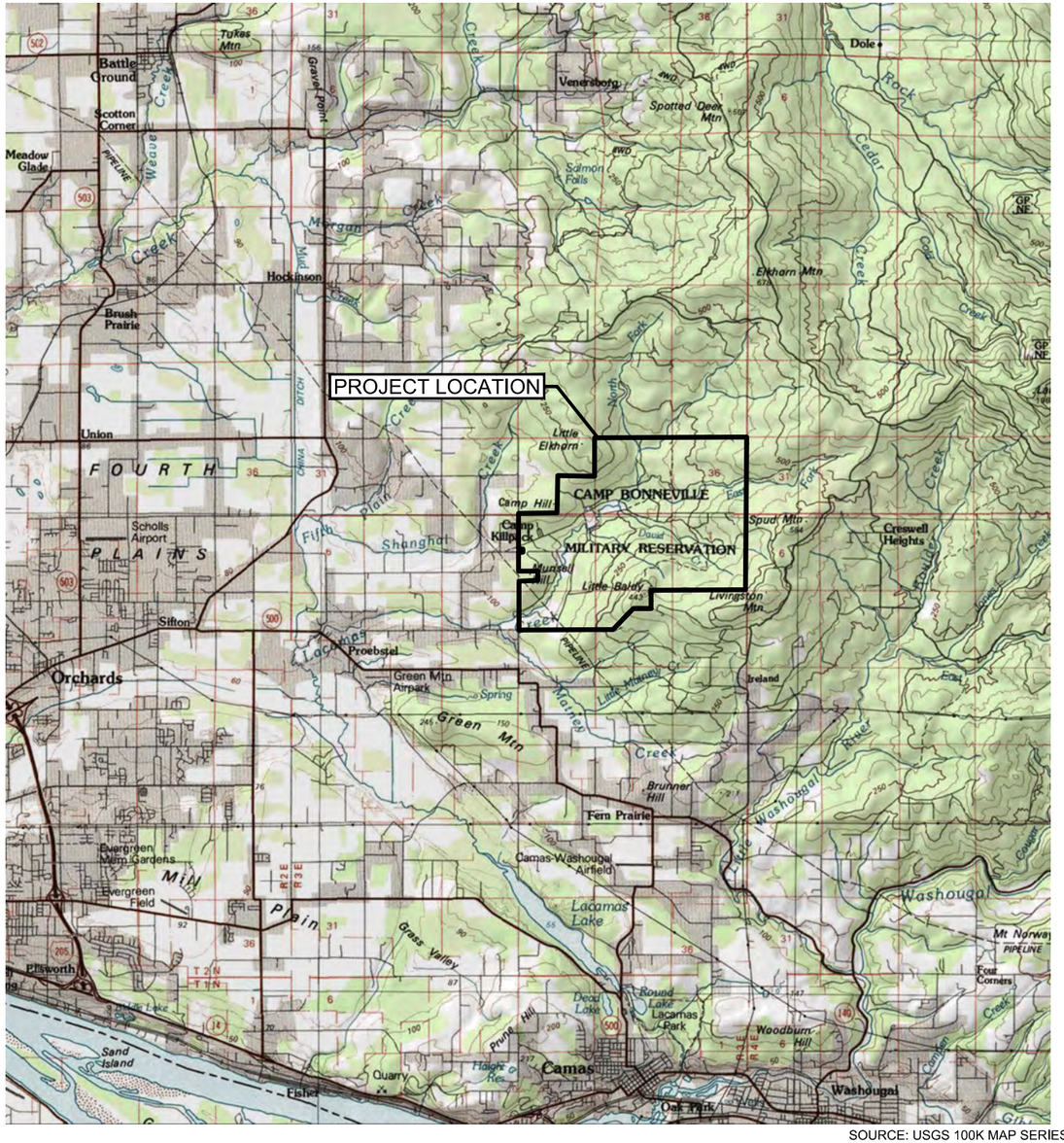
Scott Braunsten, LG, CES — Date
Project Geologist

Digitally signed by Thomas Mergy
Date: 2020.01.07 11:15:15 -08'00'

Tom Mergy, LHG
Senior Hydrogeologist

State of Washington
Hydrogeologist
1921
Licensed Geologist
Thomas J Mergy

Figures



SOURCE: USGS 100K MAP SERIES

SCALE: 1" = 10,000'

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

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VICINITY MAP

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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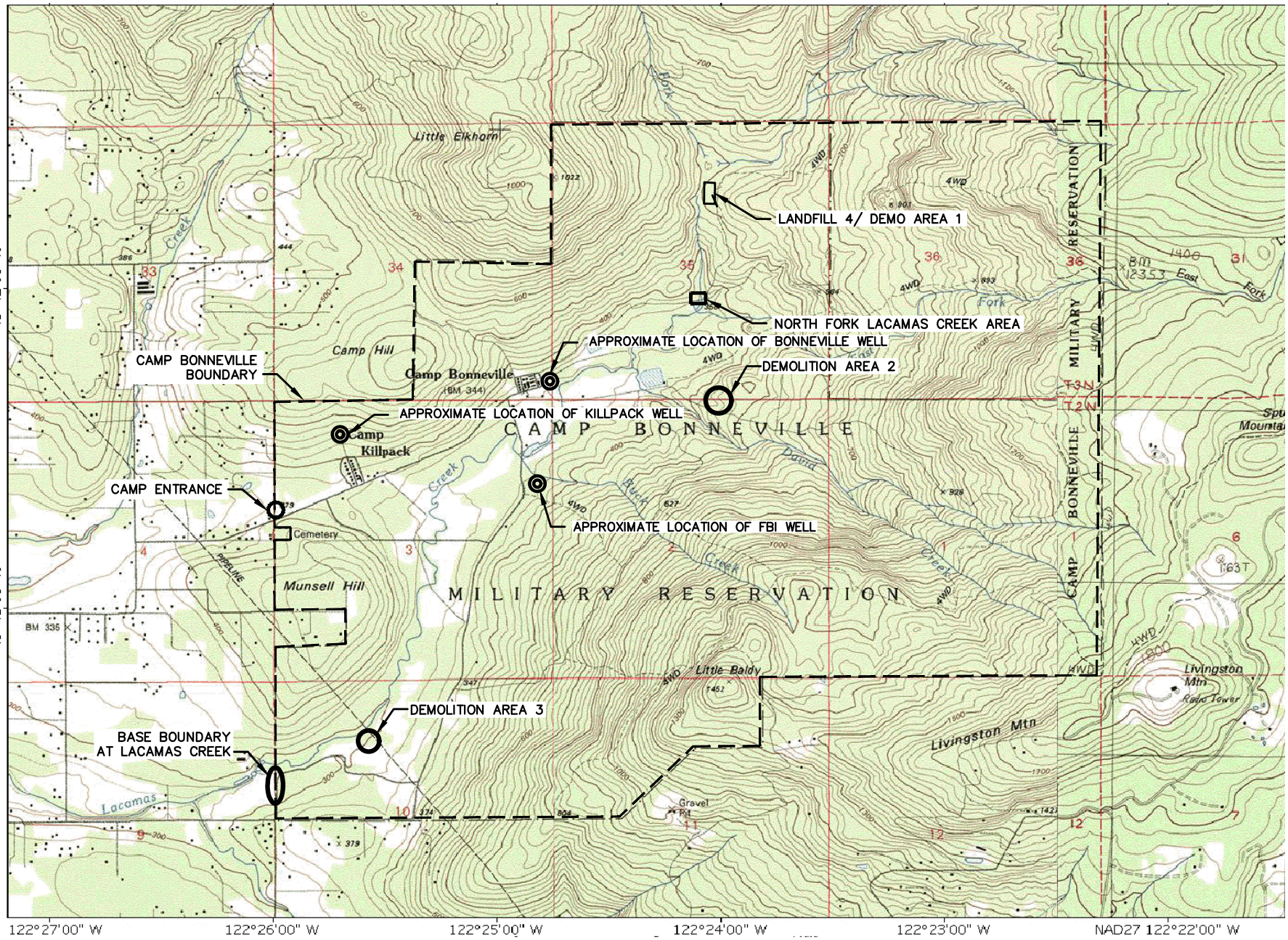
FIGURE
1



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INVESTIGATION AREAS WITHIN CAMP BONNEVILLE BOUNDARY

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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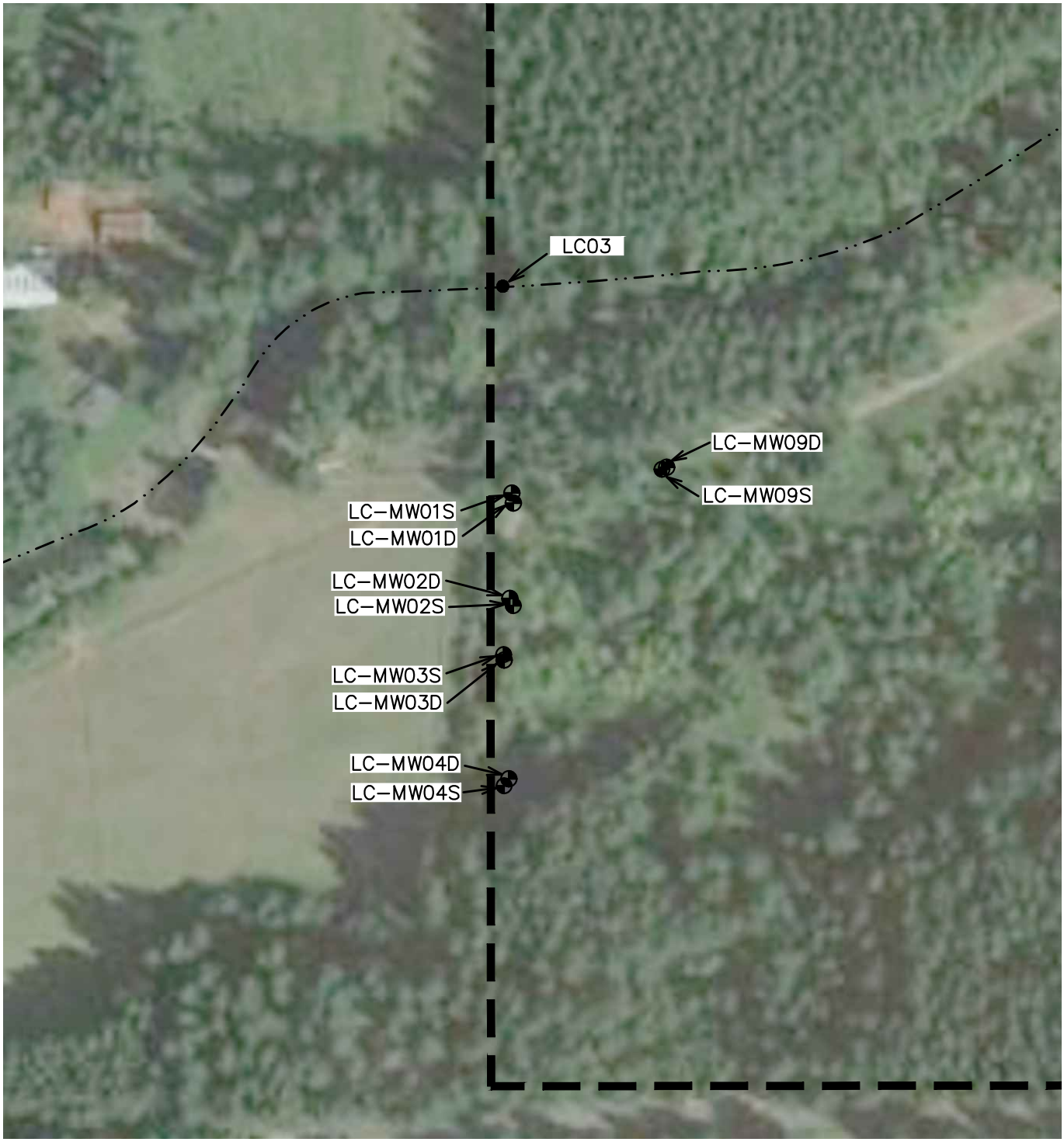
FIGURE
2



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
- LC03 — SURFACE WATER SAMPLE AND NUMBER

Scale 1" = 200'

0' 100' 200' 400'

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MONITORING WELL AND SURFACE WATER LOCATIONS AT BASE BOUNDARY

CAMP BONNEVILLE
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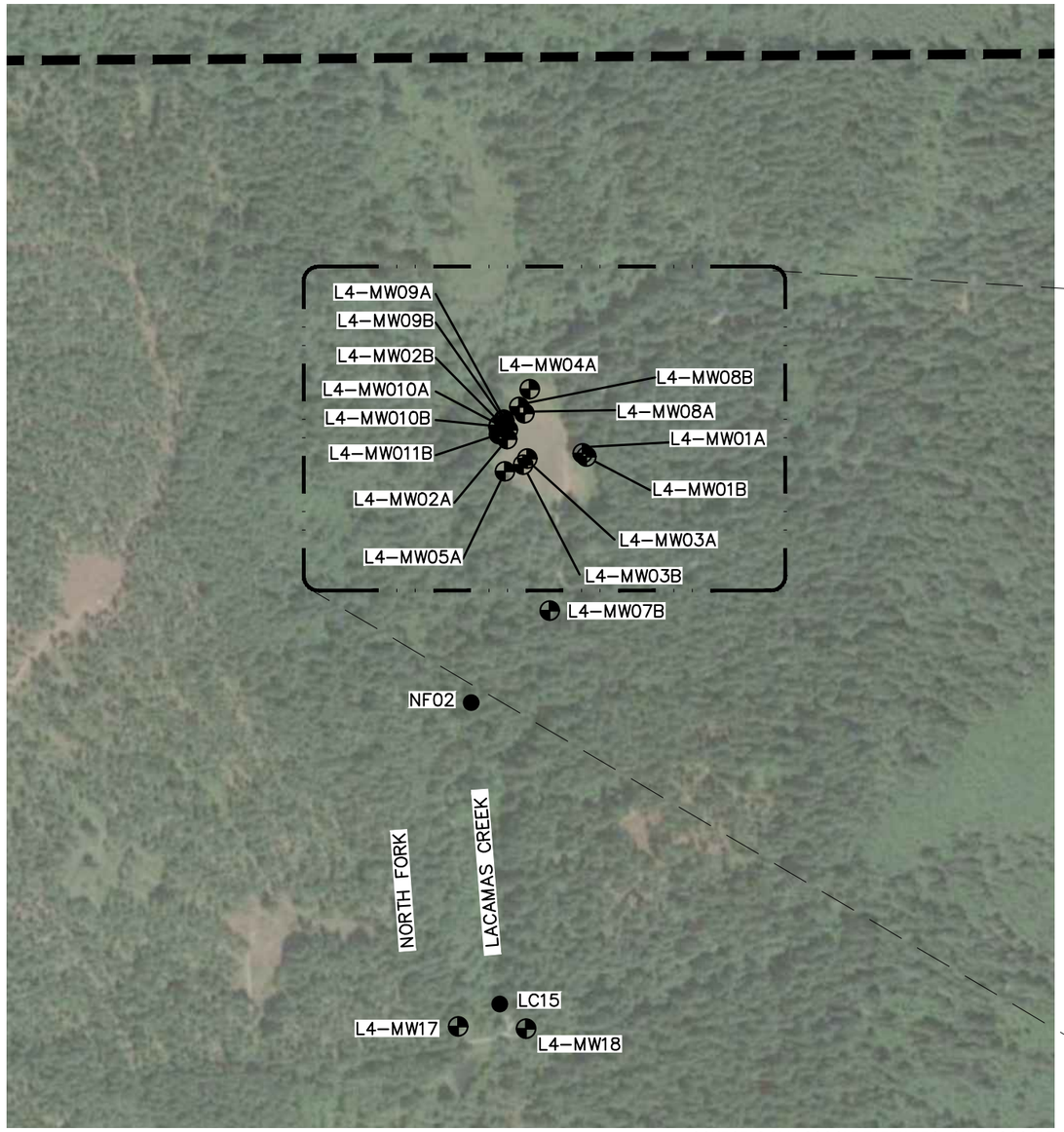
FIGURE
3

LEGEND

- LC–MW2A — MONITORING WELL AND WELL NUMBER
- BASE BOUNDARY
- NF02 — SURFACE WATER SAMPLE AND NUMBER

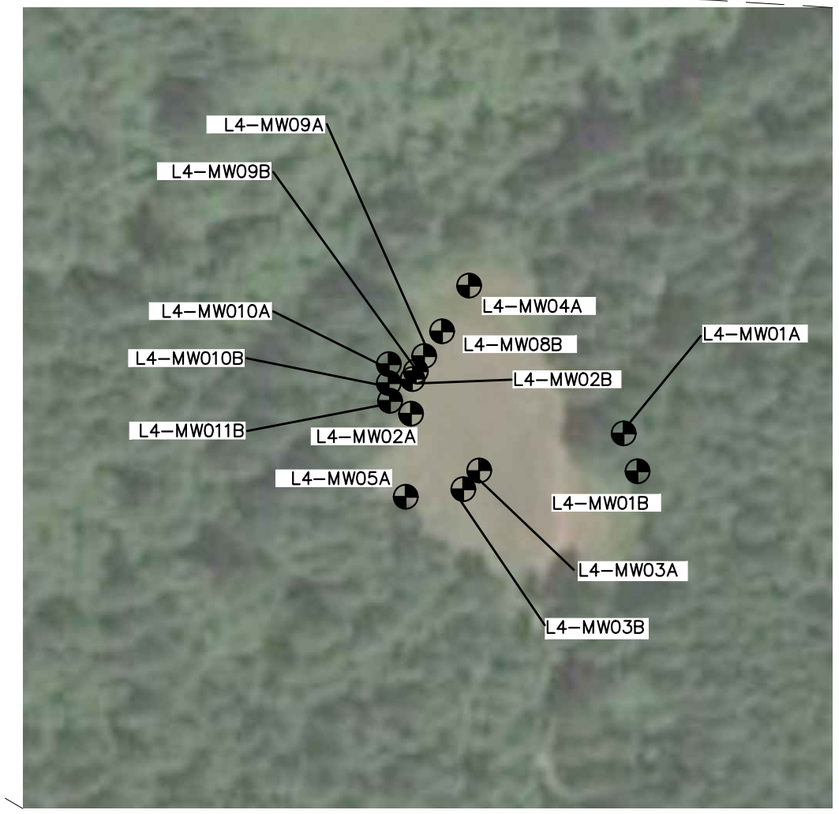


SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

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'

PREPARED FOR: CLARK COUNTY, WASHINGTON

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.

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PBS

MONITORING WELL & SUFACE WATER SAMPLE LOCATIONS NEAR LANDFILL 4 / DEMO AREA 1

CAMP BONNEVILLE

CLARK COUNTY,W ASHINGTON

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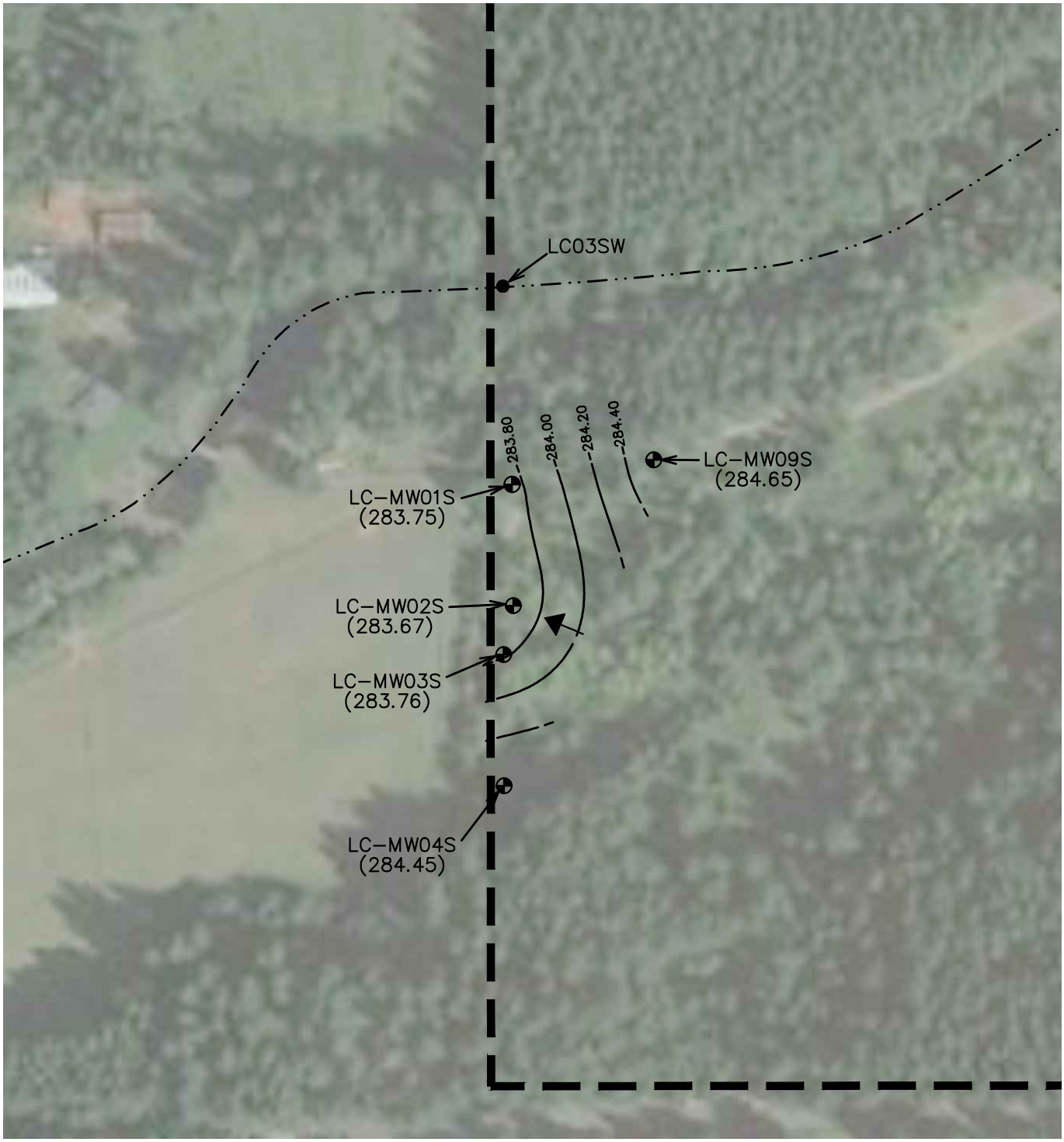
FIGURE
4

Filename: L:\Projects\76000\76100-76199\76151_Camp Bonneville, Vancouver\DWG\76151.009.0002\Q3 2020\76151.009_FIG-4_Q3_2020.dwg Layout Tab: FIG-4 User: Jim Blanco CAD Plot Date/Time: 1/2/2020 10:09:05 AM



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LEGEND

- LC-MW01S (283.75) — MONITORING WELL AND WELL NUMBER
- SHALLOW GROUNDWATER ELEVATION (FEET AMSL)
- LACAMAS CREEK
- BASE BOUNDARY
- 283.80 — SHALLOW GROUNDWATER CONTOUR (3RD QUARTER 2019)
- GROUNDWATER FLOW DIRECTION
- LC03SW — SURFACE WATER SAMPLE AND NUMBER

Scale 1" = 200'

0' 100' 200' 400'

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SHALLOW BASE BOUNDARY MONITORING WELLS WITH 3RD QUARTER 2019 GROUNDWATER CONTOURS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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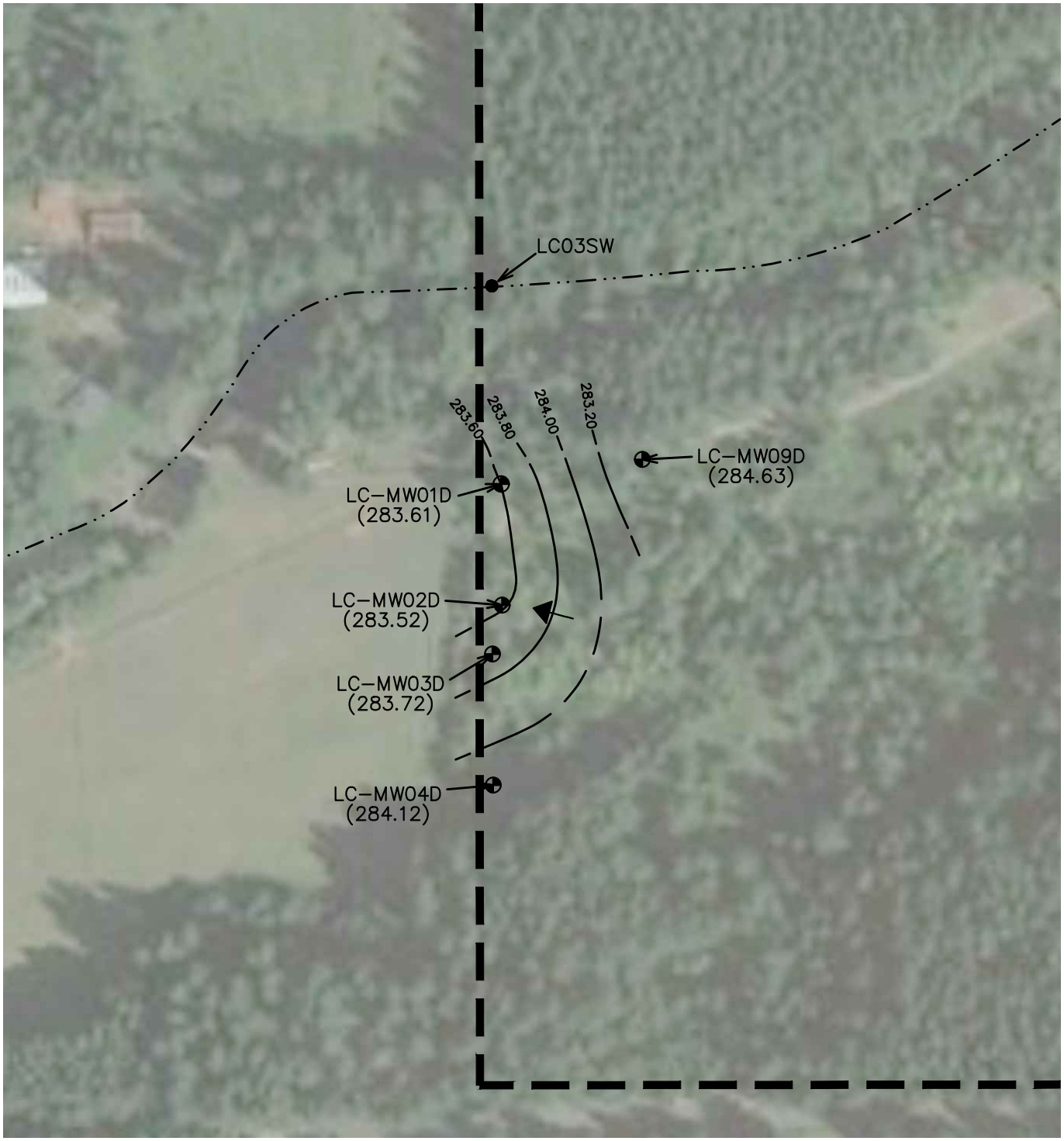
FIGURE
5A



SOURCE: © 2011 GOOGLE EARTH PRO, © 2012 GOOGLE

LEGEND

- LC–MW01D (285.39) — MONITORING WELL AND WELL NUMBER; DEEP GROUNDWATER ELEVATION (FEET AMSL)
- LACAMAS CREEK
- BASE BOUNDARY
- 284.60 — DEEP GROUNDWATER CONTOUR (3RD QUARTER 2019)
- GROUNDWATER FLOW DIRECTION
- LC03SW — SURFACE WATER SAMPLE AND NUMBER

Scale 1" = 200'

0' 100' 200' 400'

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DEEP BASE BOUNDARY MONITORING WELLS WITH 3RD QUARTER 2019 GROUNDWATER CONTOURS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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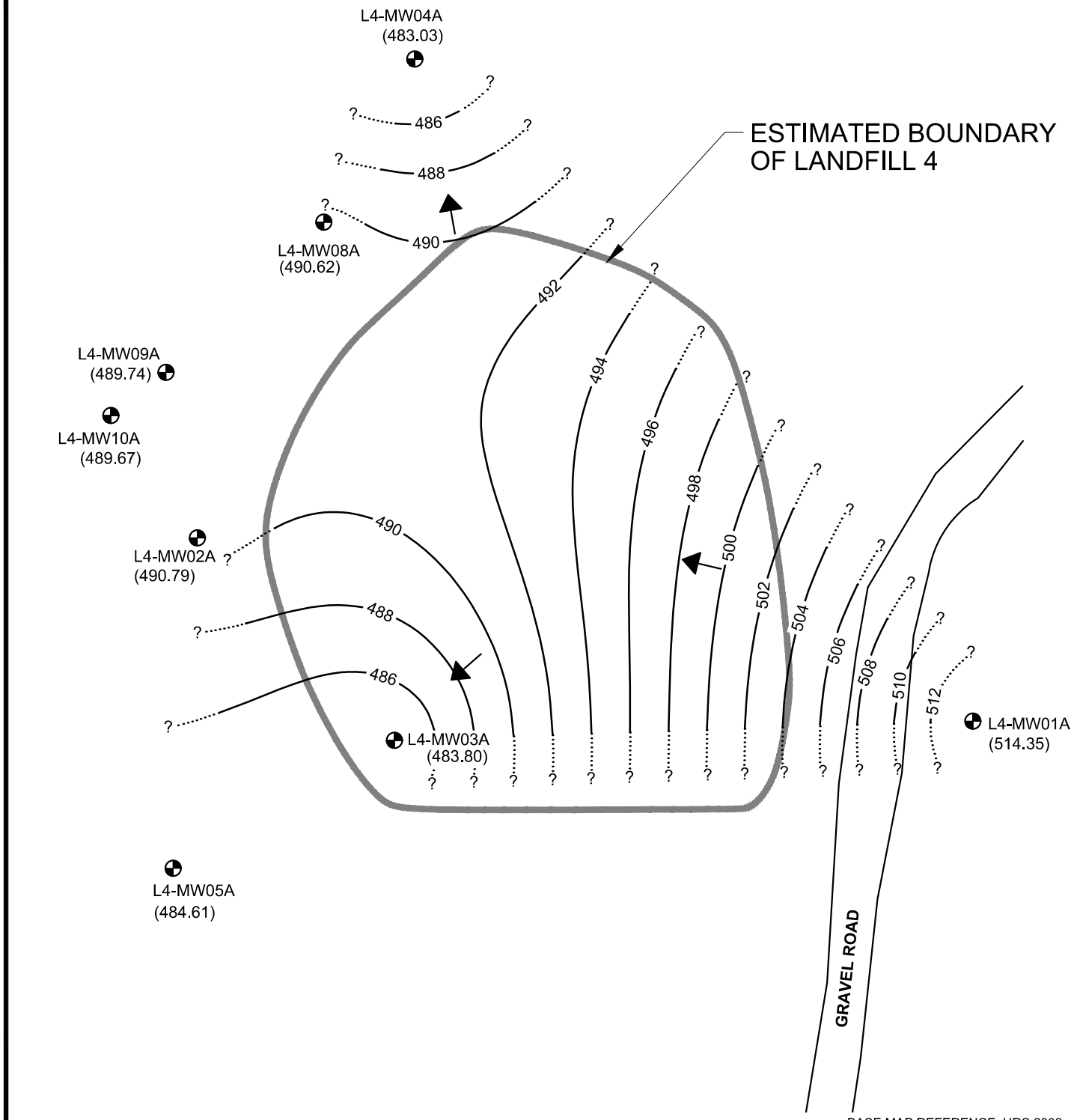
FIGURE
5B



LEGEND

LC-MW02A	MONITORING WELL AND WELL NUMBER
(490.79)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
(490)	SHALLOW GROUNDWATER CONTOUR (3RD QUARTER 2019)
	GROUNDWATER FLOW DIRECTION

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 50'

0' 25' 50' 100'

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SHALLOW LANDFILL 4 MONITORING WELLS, 3RD QUARTER 2019
GROUNDWATER CONTOURS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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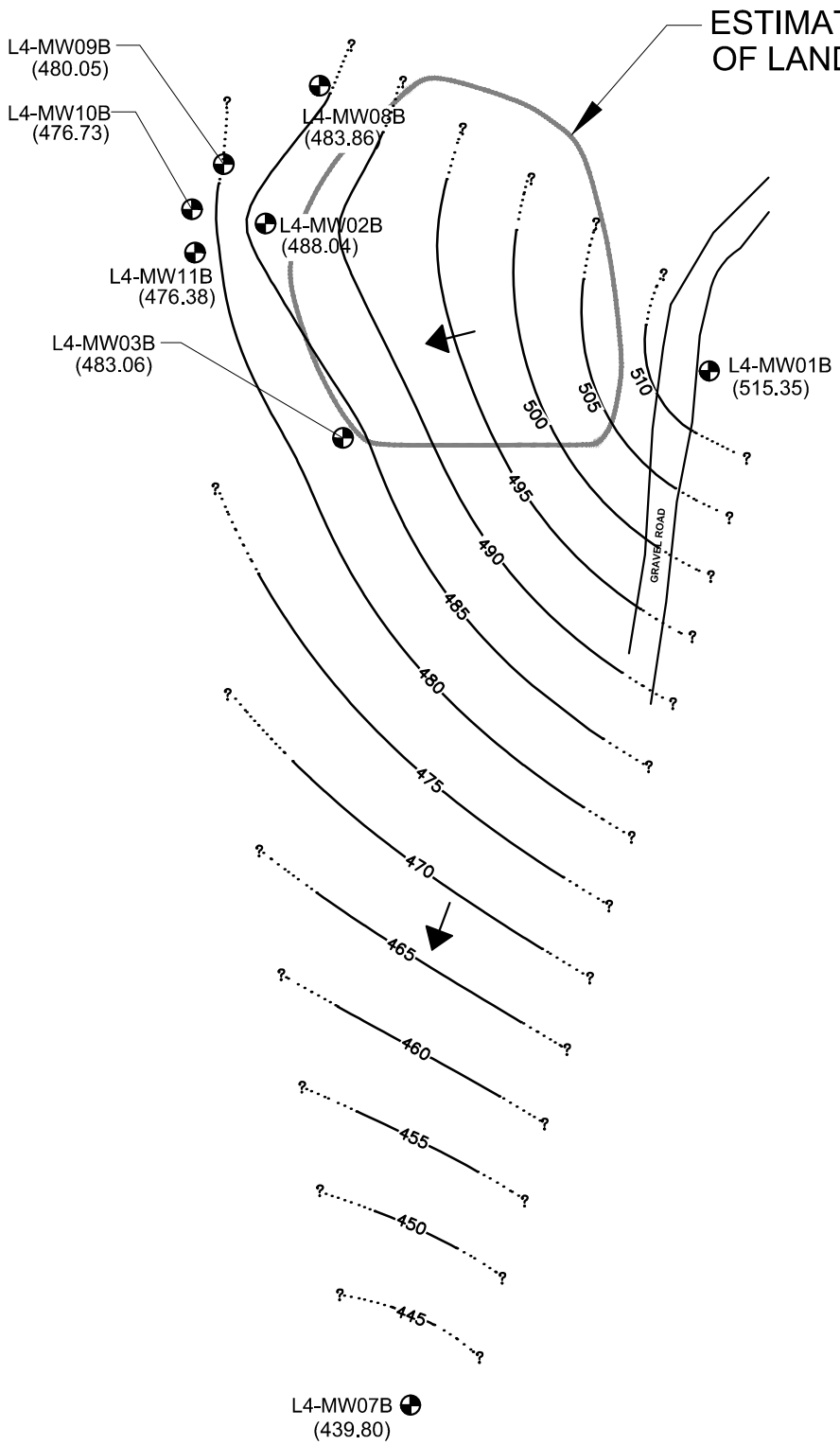
FIGURE
6A



LEGEND

LC-MW02B	MONITORING WELL AND WELL NUMBER
(488.04)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
——	DEEP GROUNDWATER CONTOUR (3RD QUARTER 2019)
←	GROUNDWATER FLOW DIRECTION

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 100'

0' 50' 100' 200'

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DEEP LANDFILL 4 MONITORING WELLS, 3RD QUARTER 2019
GROUNDWATER CONTOURS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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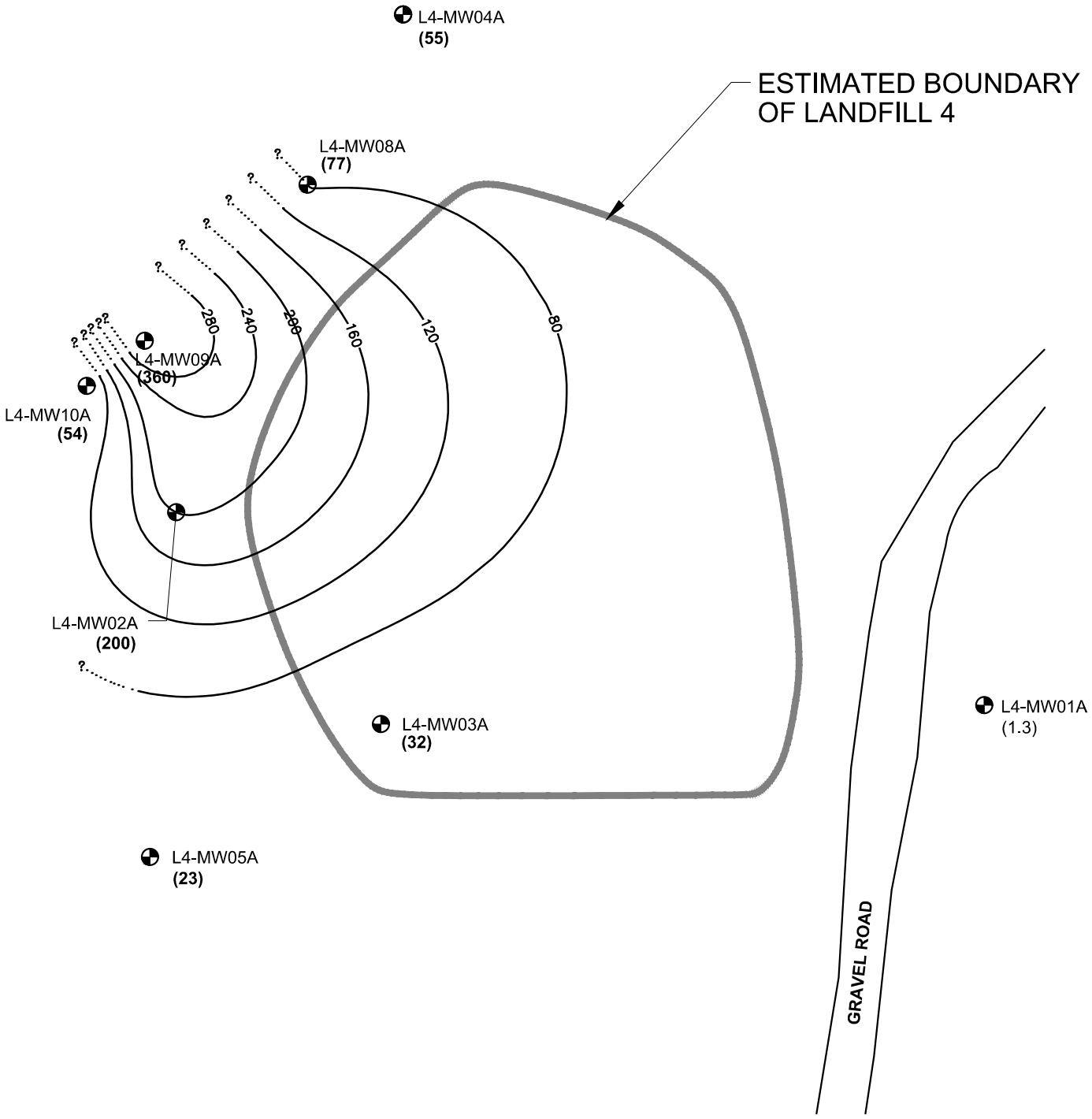
FIGURE
6B



BASE MAP REFERENCE: URS 2002

LEGEND

LC-MW02A	MONITORING WELL AND WELL NUMBER
(200)	PERCHLORATE CONCENTRATION IN SHALLOW GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 11.0 µg/L
——	SHALLOW GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (3RD QUARTER 2019)

SCALE: 1" = 50'

0' 25' 50' 100'

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PERCHLORATE ISOCONTOURS (A WELLS)
3RD QUARTER 2019 - LANDFILL 4 MONITORING WELLS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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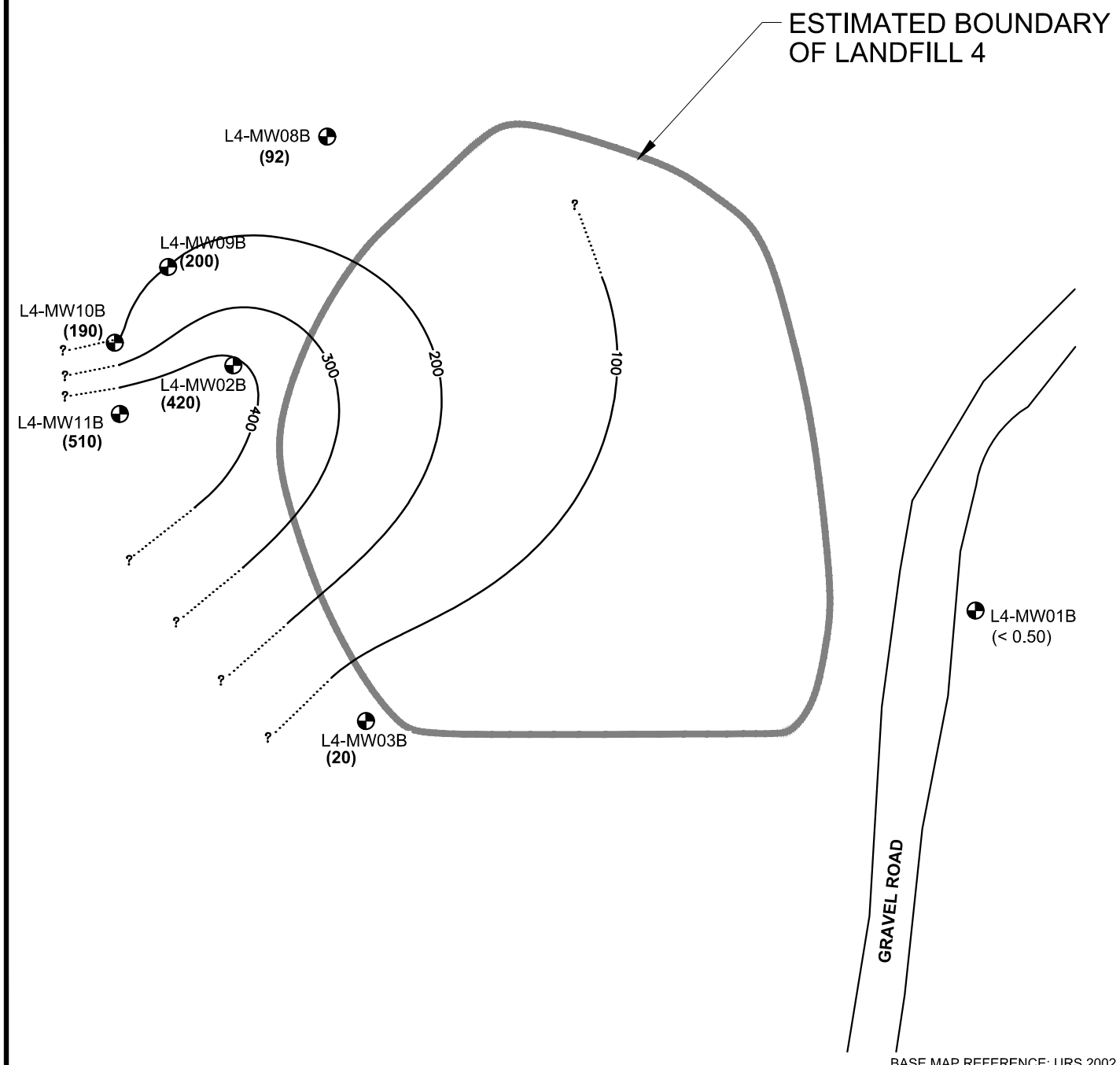
FIGURE
7A



BASE MAP REFERENCE: URS 2002

LEGEND

LC-MW02B	MONITORING WELL AND WELL NUMBER
(420)	PERCHLORATE CONCENTRATION IN DEEP GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 11.0 µg/L
——	DEEP GROUNDWATER PERCHLORATE CONCENTRATION CONTOUR (3RD QUARTER 2019)

SCALE: 1" = 50'

0' 25' 50' 100'

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PERCHLORATE ISOCONTOURS (B WELLS)
3RD QUARTER 2019 - LANDFILL 4 MONITORING WELLS

CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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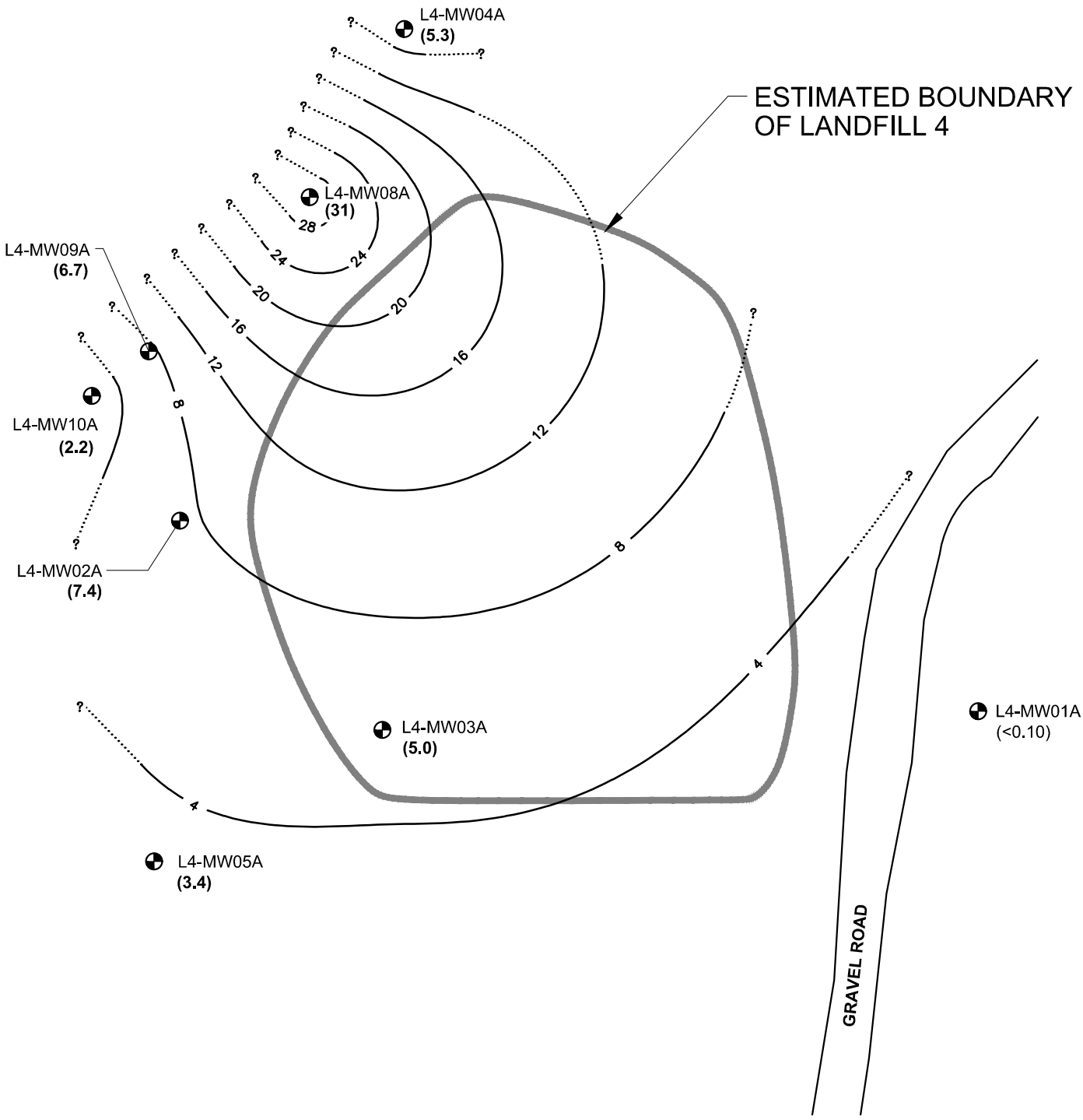
FIGURE
7B



LEGEND

LC-MW02B	MONITORING WELL AND WELL NUMBER
(5.4)	RDX CONCENTRATION IN SHALLOW GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 1.10 µg/L
——	SHALLOW GROUNDWATER RDX CONCENTRATION CONTOUR (3RD QUARTER 2019)

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 50'

0' 25' 50' 100'

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RDX ISOCONTOURS (A WELLS)
3RD QUARTER 2019 - LANDFILL 4 MONITORING WELLS
CAMP BONNEVILLE
CLARK COUNTY, WASHINGTON

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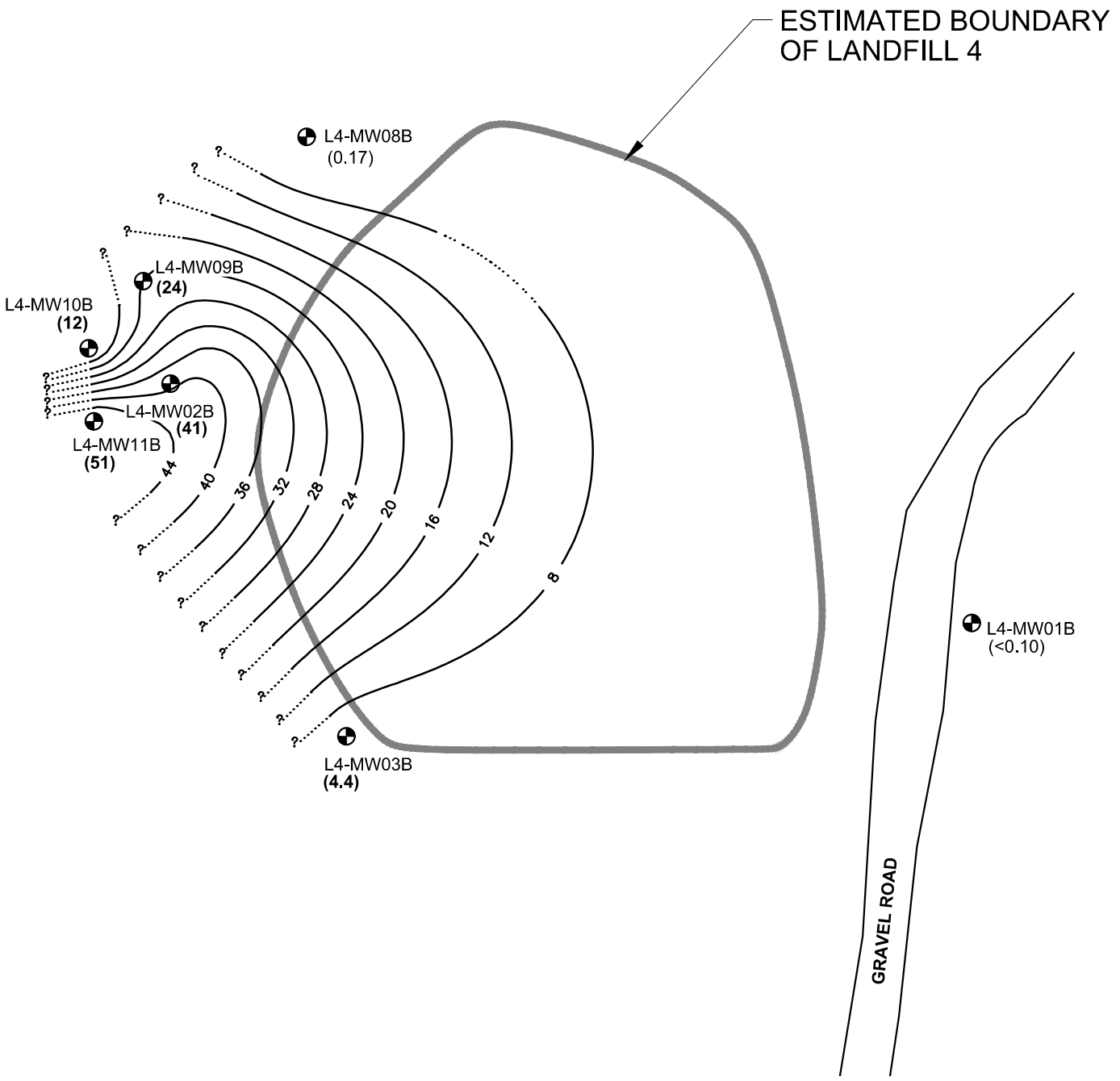
FIGURE
8A



LEGEND

LC-MW02B	MONITORING WELL AND WELL NUMBER
(41)	RDX CONCENTRATION IN DEEP GROUNDWATER (µg/L) BOLD EXCEEDS CLEANUP LEVEL OF 1.10 µg/L
——	DEEP GROUNDWATER RDX CONCENTRATION CONTOUR (3RD QUARTER 2019)

BASE MAP REFERENCE: URS 2002

SCALE: 1" = 50'

0' 25' 50' 100'

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RDX ISOCONTOURS (B WELLS)
3RD QUARTER 2019 - LANDFILL 4 MONITORING WELLS
CAMP BONNEVILLE
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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, 3rd 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	03Q19LCMW01DW	9/10/2019	6.65	283.61	7.45	166.1	6.86	86	12.1	1.34
	03Q19LCMW01SW	9/10/2019	6.40	283.75	7.24	169.3	6.78	84	11.8	0.09
	03Q19LCMW02DW	9/10/2019	8.05	283.52	7.89	161.5	6.84	88	11.9	1.25
	03Q19LCMW02SW	9/10/2019	7.48	283.67	7.92	163.2	6.83	84	11.7	1.25
	03Q19LCMW03DW	9/10/2019	7.21	283.72	7.88	159.6	6.71	91	11.3	1.17
	03Q19LCMW03SW	9/10/2019	7.11	283.76	7.52	160.0	6.72	90	11.5	1.87
	03Q19LCMW04DW	9/11/2019	7.67	284.12	8.12	160.8	7.06	177	11.7	0.04
	03Q19LCMW04SW	9/11/2019	7.18	284.45	6.28	184.3	6.38	164	12.4	0.65
	03Q19LCMW09DW	9/11/2019	9.47	284.63	5.64	136.2	6.75	181	12.8	1.15
	03Q19LCMW09SW	9/11/2019	8.87	284.65	7.11	160.8	6.63	155	12.0	0.47
Landfill 4 / Demolition Area 1	03Q19L4MW01AW	9/11/2019	17.08	514.35	7.43	269.9	5.54	44	12.0	0.19
	03Q19L4MW01BW	9/11/2019	14.22	515.35	10.22	254.7	5.93	47	11.0	0.12
	03Q19L4MW02AW	9/13/2019	29.18	490.79	8.34	297.7	4.70	19	11.6	0.57
	03Q19L4MW02BW	9/12/2019	33.66	488.04	3.41	179.7	5.92	44	13.2	2.57
	03Q19L4MW03AW	9/13/2019	31.10	483.80	7.72	281.4	5.34	21	11.2	0.95
	03Q19L4MW03BW	9/13/2019	28.43	483.06	6.19	262.0	6.03	42	11.7	2.75
	03Q19L4MW04AW	9/12/2019	28.81	483.03	5.88	233.5	4.98	16	10.2	0.52
	03Q19L4MW05AW	9/13/2019	25.13	484.61	6.34	251.8	5.51	27	10.6	0.18
	03Q19L4MW07BW	9/11/2019	40.69	439.80	6.55	222.7	5.87	57	10.0	0.44
	03Q19L4MW08AW	9/12/2019	24.90	490.62	6.52	253.3	5.13	16	10.8	0.62
	03Q19L4MW08BW	9/12/2019	31.86	483.86	4.09	163.4	6.56	65	11.4	0.92
	03Q19L4MW09AW	9/12/2019	33.26	489.74	6.92	288.9	5.19	20	12.0	2.79
	03Q19L4MW09BW	9/12/2019	43.22	480.05	1.95	289.2	5.59	28	12.3	0.39
	03Q19L4MW10AW	9/12/2019	33.38	489.67	6.05	276.2	5.03	21	11.3	3.92
	03Q19L4MW10BW	9/12/2019	45.75	476.73	2.75	263.5	6.25	48	11.7	3.12
	03Q19L4MW11BW	9/12/2019	45.91	476.38	3.29	281.4	5.77	27	12.4	1.06
	03Q19L4MW17W	9/11/2019	11.12	350.40	4.54	68.6	7.57	432	15.8	1.42
	03Q19L4MW18W	9/11/2019	12.06	350.79	7.88	147.7	6.92	225	11.8	1.56
Surface Water	03Q19LC03SW	9/10/2019	--	--	7.52	119.1	6.67	52	15.1	13.50
	03Q19LC15SW	9/10/2019	--	--	8.41	127.8	7.14	57	14.7	7.85
	03Q19NF02SW	9/10/2019	--	--	9.65	133.3	7.40	57	14.7	8.23

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, 3rd Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	LCMW01D 09/10/2019	LCMW01S 09/10/2019	LCMW02D 09/10/2019	LCMW02S 09/10/2019	LCMW03D 09/10/2019	LCMW03S 09/10/2019	LCMW03S Duplicate 09/10/2019	LCMW03S Duplicate RPD (<20%)	LCMW04D 09/11/2019	LCMW04S 09/11/2019	LCMW09D 09/11/2019	LCMW09S 09/11/2019
Explosives (µg/L)													
2,4,6-Trinitrotoluene	2.90	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.099	Acceptable	< 0.10	< 0.10	< 0.10	< 0.10
2,4-Dinitrotoluene	0.280	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.099	Acceptable	< 0.10	< 0.10	< 0.10	< 0.10
HMX	800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.099	Acceptable	< 0.10	< 0.10	< 0.10	< 0.10
RDX	1.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.099	Acceptable	< 0.10	< 0.10	< 0.10	< 0.10
Remaining Explosives	Varies	ND	ND	ND	ND	ND	ND	ND	Acceptable	ND	ND	ND	ND
Perchlorate (µg/L)													
Perchlorate	11.0	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	Acceptable	< 0.50	< 0.50	< 0.50	< 0.50
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	Acceptable	< 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	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	Acceptable	< 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	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
Remaining VOCs	Varies	ND	ND	ND	ND	ND	ND	ND	Acceptable	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 3. Constituents Detected in Groundwater, 3rd Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	L4MW01A	L4MW01B	L4MW01B Duplicate		L4MW02A	L4MW02B	L4MW02B Duplicate		L4MW03A	L4MW03B	L4MW04A	L4MW05A
		09/11/2019	09/11/2019	09/11/2019	RPD (<20%)	09/13/2019	09/12/2019	09/12/2019	RPD (<20%)	09/13/2019	09/13/2019	09/12/2019	09/13/2019
Explosives (µg/L)													
2,4,6-Trinitrotoluene	2.90	< 0.10	< 0.10	< 0.10	Acceptable	< 0.10	0.16	0.17	6%	< 0.10	< 0.10	< 0.10	< 0.099
2,4-Dinitrotoluene	0.280	< 0.10	< 0.10	< 0.10	Acceptable	< 0.10	**0.38**	**0.39**	3%	< 0.10	< 0.10	< 0.10	< 0.099
HMX	800	< 0.10	< 0.10	< 0.10	Acceptable	3.5	7.0	6.9	1%	0.36	< 0.10	< 0.10	0.16 P
RDX	1.10	< 0.10	< 0.10	< 0.10	Acceptable	**7.4**	**41**	**39**	5%	**5.0**	**4.4**	**5.3**	**3.4**
Remaining Explosives	Varies	ND	ND	ND	Acceptable	ND	ND	ND	Acceptable	ND	ND	ND	ND
Perchlorate (µg/L)													
Perchlorate	11.0	1.3	< 0.50	< 0.50	Acceptable	**200**	**420**	**420**	0%	**32**	**20**	**55**	**23**
Volatile Organic Compounds (µg/L)													
1,1,1-Trichloroethane	16,000	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	0.76	0.66	14%	< 0.20	< 0.20	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.220	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	2.6	2.0	26%	< 0.20	< 0.20	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	0.52	0.40	26%	< 0.20	< 0.20	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	< 0.40	< 0.40	< 0.40	Acceptable	< 0.40	2.0	1.9	5%	< 0.40	< 0.40	< 0.40	< 0.40
Trichloroethene	0.540	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	Acceptable	< 0.20	< 0.20	< 0.20	< 0.20
Remaining VOCs	Varies	ND	ND	ND	Acceptable	ND	ND	ND	Acceptable	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 3. Constituents Detected in Groundwater, 3rd Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup	L4MW07B 09/11/2019	L4MW08A 09/12/2019	L4MW08B 09/12/2019	L4MW09A 09/12/2019	L4MW09B 09/12/2019	L4MW10A 09/12/2019	L4MW10B 09/12/2019	L4MW11B 09/12/2019	L4MW17 09/11/2019	L4MW18 09/11/2019
Explosives (µg/L)											
2,4,6-Trinitrotoluene	2.90	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2,4-Dinitrotoluene	0.280	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
HMX	800	< 0.10	1.6	< 0.10	1.7	1.7	0.42	< 0.10	< 0.10	< 0.10	< 0.10
RDX	1.10	< 0.10	**31**	0.17	**6.7**	**24**	**2.2**	**12**	**51**	< 0.10	< 0.10
Remaining Explosives	Varies	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate (µg/L)											
Perchlorate	11.0	1.3	**77**	**92**	**360**	**200**	**54**	**190**	**510**	< 0.50	< 0.50
Volatile Organic Compounds (µg/L)											
1,1,1-Trichloroethane	16,000	< 0.20	< 0.20	< 0.20	< 0.20	8.0	< 0.20	9.3	5.5	< 0.20	< 0.20
1,1,2,2-Tetrachloroethane	0.220	< 0.20	< 0.20	< 0.20	< 0.20	**2.4**	< 0.20	**0.86**	< 0.20	< 0.20	< 0.20
1,1-Dichloroethane	1,600	< 0.20	< 0.20	< 0.20	< 0.20	12	< 0.20	11	6.8	< 0.20	< 0.20
1,1-Dichloroethene	400	< 0.20	< 0.20	< 0.20	< 0.20	8.1	< 0.20	11	4.5	< 0.20	< 0.20
Dichlorodifluoromethane	1,600	< 0.40	< 0.40	0.57	< 0.40	18	< 0.40	26	12	< 0.40	< 0.40
Trichloroethene	0.540	< 0.20	< 0.20	< 0.20	< 0.20	**0.60**	< 0.20	0.26	< 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 Analyzed in Surface Water - 3rd Quarter 2019

Camp Bonneville, Vancouver, Washington

Analyte	MTCA Method B Std. Cleanup Values	LC03	LC15	NF02	NF02 Duplicate	
		09/10/2019	09/10/2019	09/10/2019	09/10/2019	RPD (<20%)
Perchlorate (µg/L)						
Perchlorate	11.0	< 0.50	< 0.50	< 0.50	< 0.50	Acceptable
Explosives (µg/L)						
RDX	1.10	< 0.10	< 0.099	< 0.10	< 0.10	Acceptable

Notes:

The most stringent MTCA Method B Standard value is used

µg/L = micrograms per liter

BOLD = exceeds cleanup values

RPD = relative percent different

< = not detected above the indicated MRL

Acceptable = No detection in original or duplicate

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

Drum Disposal Receipts

NRC Project # 143129

STORM WATER RECYCLING

PLANT RECEIVING MANIFEST

Manifest #: 10865

Generator Name: Camp Bonneville
Billing Name:
Billing Address: 23201 NE Pluss Rd
City/State/Zip: Vancouver WA
Billing Contact: Matt Randall Phone:

Profile #	Waste Description	Quantity	Unit
	IDW Water	155	G

TRANSPORTER

Company Name: NRC
Company Address: 6211 N Ensign
City/State/Zip: Portland OR

I certify that the information supplied on this manifest is true, that it accurately describes the waste and the source of the waste presented at the time of submission, and that the waste only consists of non-hazardous material listed above to the best of my knowledge.

Driver Signature: Penny L. Stanton Date: 9/12/19
Print Name: Penny L. Stanton

PRE-SCREENING TESTING RESULTS

Sniffer Test: PASSED ✓ FAILED ___ Ph: 7.0
Truck #: 1331 Truck Capacity N/A
Sample #: 9-12-2019-01 Time Tested: 1200
Water %: 100 Solids %: 0 Rock %: 0 Oil %: 0

RECEIVING SITE

StormWater Recycling 10985 S.W. Clutter Rd. Sherwood, OR 97140

This is to certify that the above referenced material has been accepted by StormWater Recycling. StormWater Recycling acknowledges receipt of all referenced material and certifies that all material has or will be recycled or disposed of in accordance with all applicable Federal, State and Local Laws and Regulations.

Signature: Date: 9/12/19
Print Name: Mark Tackman

P.O. Box 631 Wilsonville OR 97070 Office 503-**682-9458** Fax 503-**570-0779**

transport only

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
CESQG	1	800-899-4672	9-12-19 PBC Camp B.

GENERATOR

5. Generator's Name and Mailing Address
PBS Environmental
4412 SW Corbett Ave
Portland, OR. 97239
Generator's Phone:

Generator's Site Address (if different than mailing address)
"Camp Bonneville"
32201 NE Pluss Rd.

6. Transporter 1 Company Name
NRI Environmental

U.S. EPA ID Number
CARC000030114

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
NRC ~~Hillsboro, OR~~ 10675 S.W. Clutter Rd
PLS Sherwood, OR. 97140
Facility's Phone: 503-625-2723

U.S. EPA ID Number

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	material not regulated by DOT (IDW water)	004	DM	155	G	
2.	~~material not regulated by DOT (IDW soil)~~ PLS		~~DM~~			
3.			PLS			
4.						

13. Special Handling Instructions and Additional Information
NRC Project # 143129
NRC Truck # 1331
NRC Profile # (per Curtis Martin)

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Greg Johnson
Signature: G L Johnson
Month: 09 Day: 12 Year: 19

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Perry L. Stayton
Signature: Perry L Stayton
Month: 09 Day: 12 Year: 19

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Mark Jackman
Signature:
Month: 09 Day: 12 Year: 19

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

NRC Project # 143129

GENERATOR'S WASTE MATERIAL PROFILE

Profile #: _____

Exp. Date: _____

REQUIRED FIELDS MARKED IN GREEN - COMPLETE ALL

GENERATOR INFORMATION:				CUSTOMER INFORMATION:	
Name:	PBS ENVIRONMENTAL			Name:	PBS ENVIRONMENTAL
Generating Address:	23201 NE PLUSS RD			Billing Address:	4412 SW CORBETT AVE
City/State/Zip:	VANCOUVER, WA, 98682			City/State/Zip:	PORTLAND, OR
Contact:	MATT RANDALL	Phone:		Contact:	MATT RANDALL
E-Mail:	MATT.RANDALL@PBSUSA.C	Status:	☑ CESQG	Phone:	
EPA ID #:		☐ SQG	☐ LQG	E-Mail:	MATT.RANDALL@PBSUSA.COM

WASTE DESCRIPTION AND CHARACTERISTICS

Name: CAMP BONNEVILLE IDW WATER

Process of Generation: WATER COLLECTED FROM INVESTIGATIVE DIG

Composition: (key components: e.g. water, soil, organic debris, etc.)

WATER.

Physical State at 70°F

Free Liquid: %
Pumpable Solids: %
Nonpumpable Solids: %
Other: %
Viscosity:

pH/Corrosivity

Aqueous pH:
☐ 0 < 2 ☐ 2 < 5
☑ 5 < 7 ☐ 7 < 9
☐ 9 < 12 ☐ > 12
DOT Corrosive: ☐ Y ☐ N

Density / Flash Point

Density (Sp. Gravity):
☑ < 0.8 ☐ 0.8 < 1.0
☐ 1.0 < 1.2 ☐ > 1.2
Flash Point:
☐ < 140 °F ☐ > 140 °F

Color: CLEAR/ LIGHT BROWN
Odor: N/A

Waste Characteristics Obtained From:
☑ Laboratory Analysis ☐ Generator Knowledge
☐ Process Knowledge ☐ SDS / MSDS

Shipments:
☐ Bulk ☑ Drum

Frequency:
☐ One-time ☑ Recurring

DOT Shipping Description:
MATERIAL NOT REGULATED BY DOT

TSS / TDS

TSS (ppm)	TDS (ppm)
☑ < 200	☑ < 0.5
☐ 200 < 1000	☐ 0.5 < 1.0
☐ 1000 < 5000	☐ 1.0 < 2.0
☐ > 5000	☐ > 2.0

Oil & Grease

Petroleum	Animal/Veg
☑ < 200 ppm	☑ < 200 ppm
☐ 200 < 1000 pp	☐ 200 < 1000 pp
☐ 1000 ppm < 5	☐ 1000 ppm < 5
☐ > 5%	☐ > 5%

BOD / COD

BOD (ppm)	COD (ppm)
☑ < 200	☑ < 200
☐ 200 < 2000	☐ 200 < 2000
☐ 2000 < 5000	☐ 2000 < 5000
☐ > 5000	☐ > 5000

Detergents/Chelating Agents

Waste contains detergent or chelating agents?
☐ Yes ☑ No
If yes, list all:

PCB's

TSCA-regulated source?
☐ Yes ☑ No
Concentration:
☑ < 2 ppm ☐ 2 < 50 ppm
☐ 50 > 500 ppm ☐ > 500 ppm

Other (list concentration)

Ammonia:
Phenols:
Sulfides:
Cyanides (total):
Cyanides (amenable):

EPA Hazardous Waste Codes:

State Hazardous Waste Codes:

GENERATOR CERTIFICATION

I certify under penalty of law that this document, all attachments or supporting materials were prepared by me or under my direct supervision and that the information provided is an accurate and complete representation of the waste materials presented for evaluation and management by NRC. I further certify that I have the authority to prepare and sign this document. Furthermore, I agree that any waste materials managed under approvals issued by NRC pursuant to this request will be transported and delivered in conformance with this waste characterization profile. Where NRC determines a waste to be non-conforming, the generator shall be responsible for all costs associated with return of the waste to generator or for other alternate management of the non-conforming waste conducted on behalf of the generator.

X _____ Signature

Printed Name: Greg Johnson

Date: 4/12/2019

Title: Program Manager

RECEIVING FACILITY USE

☐ Accepted ☐ Rejected Explanation:

Intake Facility: ☐ Sherwood ☐ Killingsworth By:

Appendix C

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: 580-89079-1
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:
9/30/2019 6:00:59 PM

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

Table of Contents

Case Narrative

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

Job ID: 580-89079-1

Job ID: 580-89079-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-89079-1

Comments
No additional comments.

Receipt
The samples were received on 9/11/2019 1:33 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 3.6º C, 4.7º C and 5.9º C.

Receipt Exceptions
Insufficient sample volume was provided for the following sample for the 8260C analysis: 03Q19LCMW02DW (580-89079-4). No VOA vials provided for the 8260 analysis. Client confirmed they have been on ice at office and will send on a separate COC in the next 2 days. Received and forwarded vials on 9/13/19 included with job 580-89180-1.

The following samples were activated for RDX Only analysis instead of normal explosive list per client request 9/11/19 per phone conversation: 03Q19LC03SW (580-89079-5), 03Q19LC03SW (580-89079-5[MS]), 03Q19LC03SW (580-89079-5[MSD]), 03Q19NF02SW (580-89079-6) and 03Q19DP05SW (580-89079-7). This analysis was not originally requested on the chain-of-custody (COC).

AA 9/13/19 - VOA vials were provided by client. Added back into the job.

GC/MS VOA
Method(s) 8260C: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-311626 was outside criteria for the following analyte(s): 2-Butanone (MEK), 2-Hexanone, and 4-Methyl-2-pentanone (MIBK). 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(s) 8330-Prep: Following samples were filtered due to large particulates for method 8330_SPE_P_IVWT aqueous in preparation batch 320-323060: 03Q19LC03SW (580-89079-5), 03Q19LC03SW (580-89079-5[MS]), 03Q19LC03SW (580-89079-5[MSD]), 03Q19NF02SW (580-89079-6) and 03Q19DP05SW (580-89079-7).

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.

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: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

LCMS

Qualifier	Qualifier Description
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: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW01SW
Lab Sample ID: 580-89079-1
Date Collected: 09/10/19 16:30
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 03:13	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 03:13	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 03:13	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 03:13	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 03:13	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 03:13	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 03:13	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 03:13	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 03:13	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 03:13	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 03:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 03:13	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:13	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 03:13	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 03:13	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 03:13	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:13	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 03:13	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:13	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 03:13	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 03:13	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 03:13	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 03:13	1
Benzene	ND		0.20		ug/L			09/19/19 03:13	1
Bromobenzene	ND		0.20		ug/L			09/19/19 03:13	1
Bromoform	ND		0.50		ug/L			09/19/19 03:13	1
Bromomethane	ND		0.50		ug/L			09/19/19 03:13	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 03:13	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 03:13	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 03:13	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 03:13	1
Chloroethane	ND		0.50		ug/L			09/19/19 03:13	1
Chloroform	ND		0.20		ug/L			09/19/19 03:13	1
Chloromethane	ND		0.50		ug/L			09/19/19 03:13	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 03:13	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 03:13	1
Dibromomethane	ND		0.20		ug/L			09/19/19 03:13	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 03:13	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 03:13	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 03:13	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 03:13	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 03:13	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 03:13	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 03:13	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 03:13	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 03:13	1
Naphthalene	ND		1.0		ug/L			09/19/19 03:13	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 03:13	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 03:13	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW01SW
Lab Sample ID: 580-89079-1
Date Collected: 09/10/19 16:30
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 03:13	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 03:13	1
Styrene	ND		0.50		ug/L			09/19/19 03:13	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 03:13	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 03:13	1
Toluene	ND		0.20		ug/L			09/19/19 03:13	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 03:13	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 03:13	1
Trichloroethene	ND		0.20		ug/L			09/19/19 03:13	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 03:13	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 03:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/19/19 03:13*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/19/19 03:13*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/19/19 03:13*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/19/19 03:13*	*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		09/13/19 08:40	09/27/19 00:51	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/13/19 08:40	09/27/19 00:51	1
2-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 00:51	1
3-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 00:51	1
4-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 00:51	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
HMX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
Nitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
Tetryl	ND		0.10		ug/L		09/13/19 08:40	09/27/19 00:51	1
Nitroglycerin	ND		0.66		ug/L		09/13/19 08:40	09/27/19 00:51	1
PETN	ND		0.66		ug/L		09/13/19 08:40	09/27/19 00:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/13/19 08:40*	*09/27/19 00:51*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 13:58	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW01DW
Lab Sample ID: 580-89079-2
Date Collected: 09/10/19 16:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 03:39	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 03:39	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 03:39	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 03:39	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 03:39	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 03:39	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 03:39	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 03:39	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 03:39	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 03:39	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 03:39	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 03:39	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:39	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 03:39	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 03:39	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 03:39	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:39	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 03:39	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 03:39	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 03:39	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 03:39	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 03:39	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 03:39	1
Benzene	ND		0.20		ug/L			09/19/19 03:39	1
Bromobenzene	ND		0.20		ug/L			09/19/19 03:39	1
Bromoform	ND		0.50		ug/L			09/19/19 03:39	1
Bromomethane	ND		0.50		ug/L			09/19/19 03:39	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 03:39	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 03:39	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 03:39	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 03:39	1
Chloroethane	ND		0.50		ug/L			09/19/19 03:39	1
Chloroform	ND		0.20		ug/L			09/19/19 03:39	1
Chloromethane	ND		0.50		ug/L			09/19/19 03:39	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 03:39	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 03:39	1
Dibromomethane	ND		0.20		ug/L			09/19/19 03:39	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 03:39	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 03:39	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 03:39	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 03:39	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 03:39	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 03:39	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 03:39	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 03:39	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 03:39	1
Naphthalene	ND		1.0		ug/L			09/19/19 03:39	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 03:39	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 03:39	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW01DW
Lab Sample ID: 580-89079-2
Date Collected: 09/10/19 16:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 03:39	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 03:39	1
Styrene	ND		0.50		ug/L			09/19/19 03:39	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 03:39	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 03:39	1
Toluene	ND		0.20		ug/L			09/19/19 03:39	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 03:39	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 03:39	1
Trichloroethene	ND		0.20		ug/L			09/19/19 03:39	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 03:39	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 03:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/19/19 03:39*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/19/19 03:39*	*1*
Dibromofluoromethane (Surr)	*111*		*80 - 120*		*09/19/19 03:39*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/19/19 03:39*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/13/19 08:40	09/27/19 01:44	1
2-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 01:44	1
3-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 01:44	1
4-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 01:44	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
HMX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
Nitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
Tetryl	ND		0.10		ug/L		09/13/19 08:40	09/27/19 01:44	1
Nitroglycerin	ND		0.66		ug/L		09/13/19 08:40	09/27/19 01:44	1
PETN	ND		0.66		ug/L		09/13/19 08:40	09/27/19 01:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/13/19 08:40*	*09/27/19 01:44*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:03	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW02SW
Lab Sample ID: 580-89079-3
Date Collected: 09/10/19 14:50
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:06	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 04:06	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 04:06	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 04:06	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 04:06	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 04:06	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 04:06	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 04:06	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 04:06	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 04:06	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 04:06	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 04:06	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:06	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 04:06	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 04:06	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 04:06	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:06	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 04:06	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:06	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 04:06	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 04:06	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 04:06	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 04:06	1
Benzene	ND		0.20		ug/L			09/19/19 04:06	1
Bromobenzene	ND		0.20		ug/L			09/19/19 04:06	1
Bromoform	ND		0.50		ug/L			09/19/19 04:06	1
Bromomethane	ND		0.50		ug/L			09/19/19 04:06	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 04:06	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 04:06	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 04:06	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 04:06	1
Chloroethane	ND		0.50		ug/L			09/19/19 04:06	1
Chloroform	ND		0.20		ug/L			09/19/19 04:06	1
Chloromethane	ND		0.50		ug/L			09/19/19 04:06	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:06	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:06	1
Dibromomethane	ND		0.20		ug/L			09/19/19 04:06	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 04:06	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 04:06	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 04:06	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 04:06	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 04:06	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 04:06	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 04:06	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 04:06	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 04:06	1
Naphthalene	ND		1.0		ug/L			09/19/19 04:06	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 04:06	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 04:06	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW02SW
Lab Sample ID: 580-89079-3
Date Collected: 09/10/19 14:50
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:06	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 04:06	1
Styrene	ND		0.50		ug/L			09/19/19 04:06	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 04:06	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 04:06	1
Toluene	ND		0.20		ug/L			09/19/19 04:06	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:06	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:06	1
Trichloroethene	ND		0.20		ug/L			09/19/19 04:06	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 04:06	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 04:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/19/19 04:06*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/19/19 04:06*	*1*
Dibromofluoromethane (Surr)	*115*		*80 - 120*		*09/19/19 04:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/19/19 04:06*	*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		09/13/19 08:40	09/27/19 02:38	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/13/19 08:40	09/27/19 02:38	1
2-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 02:38	1
3-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 02:38	1
4-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 02:38	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
HMX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
Nitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
Tetryl	ND		0.10		ug/L		09/13/19 08:40	09/27/19 02:38	1
Nitroglycerin	ND		0.66		ug/L		09/13/19 08:40	09/27/19 02:38	1
PETN	ND		0.66		ug/L		09/13/19 08:40	09/27/19 02:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/13/19 08:40*	*09/27/19 02:38*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:08	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW02DW
Lab Sample ID: 580-89079-4
Date Collected: 09/10/19 14:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 06:19	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 06:19	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 06:19	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 06:19	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 06:19	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 06:19	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 06:19	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 06:19	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 06:19	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 06:19	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 06:19	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 06:19	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 06:19	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 06:19	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 06:19	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 06:19	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 06:19	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 06:19	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 06:19	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 06:19	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 06:19	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 06:19	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 06:19	1
Benzene	ND		0.20		ug/L			09/19/19 06:19	1
Bromobenzene	ND		0.20		ug/L			09/19/19 06:19	1
Bromoform	ND		0.50		ug/L			09/19/19 06:19	1
Bromomethane	ND		0.50		ug/L			09/19/19 06:19	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 06:19	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 06:19	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 06:19	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 06:19	1
Chloroethane	ND		0.50		ug/L			09/19/19 06:19	1
Chloroform	ND		0.20		ug/L			09/19/19 06:19	1
Chloromethane	ND		0.50		ug/L			09/19/19 06:19	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 06:19	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 06:19	1
Dibromomethane	ND		0.20		ug/L			09/19/19 06:19	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 06:19	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 06:19	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 06:19	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 06:19	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 06:19	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 06:19	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 06:19	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 06:19	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 06:19	1
Naphthalene	ND		1.0		ug/L			09/19/19 06:19	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 06:19	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 06:19	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW02DW
Lab Sample ID: 580-89079-4
Date Collected: 09/10/19 14:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 06:19	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 06:19	1
Styrene	ND		0.50		ug/L			09/19/19 06:19	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 06:19	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 06:19	1
Toluene	ND		0.20		ug/L			09/19/19 06:19	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 06:19	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 06:19	1
Trichloroethene	ND		0.20		ug/L			09/19/19 06:19	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 06:19	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 06:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/19/19 06:19*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*09/19/19 06:19*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/19/19 06:19*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/19/19 06:19*	*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		09/13/19 08:40	09/27/19 03:32	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/13/19 08:40	09/27/19 03:32	1
2-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 03:32	1
3-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 03:32	1
4-Nitrotoluene	ND		0.51		ug/L		09/13/19 08:40	09/27/19 03:32	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
HMX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
Nitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
Tetryl	ND		0.10		ug/L		09/13/19 08:40	09/27/19 03:32	1
Nitroglycerin	ND		0.66		ug/L		09/13/19 08:40	09/27/19 03:32	1
PETN	ND		0.66		ug/L		09/13/19 08:40	09/27/19 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/13/19 08:40*	*09/27/19 03:32*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:13	1

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LC03SW
Lab Sample ID: 580-89079-5
Date Collected: 09/10/19 09:15
Matrix: Water
Date Received: 09/11/19 13:33

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 04:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/13/19 08:40*	*09/27/19 04:25*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:18	1

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

Job ID: 580-89079-1

Client Sample ID: 03Q19NF02SW

Date Collected: 09/10/19 10:30
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89079-6

Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 08:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*09/13/19 08:40*	*09/27/19 08:53*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:23	1

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

Job ID: 580-89079-1

Client Sample ID: 03Q19DP05SW

Date Collected: 09/10/19 12:00
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89079-7

Matrix: Water

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 09:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/13/19 08:40*	*09/27/19 09:47*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:28	1

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/18/19 21:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,2-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,3-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
2,2-Dichloropropane	ND		0.50		ug/L			09/18/19 21:27	1
2-Chlorotoluene	ND		0.50		ug/L			09/18/19 21:27	1
4-Chlorotoluene	ND		0.30		ug/L			09/18/19 21:27	1
4-Isopropyltoluene	ND		0.30		ug/L			09/18/19 21:27	1
Benzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromoform	ND		0.50		ug/L			09/18/19 21:27	1
Bromomethane	ND		0.50		ug/L			09/18/19 21:27	1
Carbon tetrachloride	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chlorodibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chloroethane	ND		0.50		ug/L			09/18/19 21:27	1
Chloroform	ND		0.20		ug/L			09/18/19 21:27	1
Chloromethane	ND		0.50		ug/L			09/18/19 21:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Dibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/18/19 21:27	1
Ethylbenzene	ND		0.20		ug/L			09/18/19 21:27	1
Ethylene Dibromide	ND		0.10		ug/L			09/18/19 21:27	1
Hexachlorobutadiene	ND		0.50		ug/L			09/18/19 21:27	1
Isopropylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/18/19 21:27	1
Methylene Chloride	ND		5.0		ug/L			09/18/19 21:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
Naphthalene	ND		1.0		ug/L			09/18/19 21:27	1
n-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
o-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
sec-Butylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Styrene	ND		0.50		ug/L			09/18/19 21:27	1
tert-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
Tetrachloroethene	ND		0.50		ug/L			09/18/19 21:27	1
Toluene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Trichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
Trichlorofluoromethane	ND		0.50		ug/L			09/18/19 21:27	1
Vinyl chloride	ND		0.020		ug/L			09/18/19 21:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*09/18/19 21:27*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/18/19 21:27*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*09/18/19 21:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*09/18/19 21:27*	*1*

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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	5.02		ug/L		100	79 - 127
1,1,1-Trichloroethane	5.00	4.84		ug/L		97	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.85		ug/L		97	69 - 139
1,1,2-Trichloroethane	5.00	5.11		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.00		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	4.98		ug/L		100	72 - 132
1,2,3-Trichlorobenzene	5.00	4.98		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	4.90		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	4.44		ug/L		89	79 - 130
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.54		ug/L		91	69 - 130
1,2-Dichlorobenzene	5.00	5.01		ug/L		100	80 - 129
1,2-Dichloroethane	5.00	5.14		ug/L		103	74 - 130
1,2-Dichloropropane	5.00	4.93		ug/L		99	80 - 130
1,3,5-Trimethylbenzene	5.00	4.78		ug/L		96	80 - 139
1,3-Dichlorobenzene	5.00	5.11		ug/L		102	80 - 130
1,3-Dichloropropane	5.00	4.96		ug/L		99	80 - 130
1,4-Dichlorobenzene	5.00	4.82		ug/L		96	80 - 129
2,2-Dichloropropane	5.00	5.03		ug/L		101	58 - 150
2-Chlorotoluene	5.00	4.64		ug/L		93	80 - 136
4-Chlorotoluene	5.00	4.74		ug/L		95	80 - 130
4-Isopropyltoluene	5.00	4.99		ug/L		100	78 - 132
Benzene	5.00	5.29		ug/L		106	73 - 133

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

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	5.00	4.61		ug/L		92	80 - 130
Bromoform	5.00	4.65		ug/L		93	69 - 137
Bromomethane	5.00	5.46		ug/L		109	68 - 120
Carbon tetrachloride	5.00	4.86		ug/L		97	71 - 132
Chlorobenzene	5.00	4.98		ug/L		100	80 - 123
Chlorobromomethane	5.00	5.17		ug/L		103	79 - 131
Chlorodibromomethane	5.00	5.05		ug/L		101	76 - 131
Chloroethane	5.00	5.68		ug/L		114	49 - 135
Chloroform	5.00	4.89		ug/L		98	80 - 130
Chloromethane	5.00	5.80		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130
cis-1,3-Dichloropropene	5.00	4.59		ug/L		92	66 - 141
Dibromomethane	5.00	4.78		ug/L		96	65 - 141
Dichlorobromomethane	5.00	5.04		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.68		ug/L		114	20 - 137
Ethylbenzene	5.00	4.90		ug/L		98	80 - 130
Ethylene Dibromide	5.00	4.87		ug/L		97	80 - 126
Hexachlorobutadiene	5.00	5.05		ug/L		101	72 - 138
Isopropylbenzene	5.00	4.94		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.68		ug/L		94	60 - 150
Methylene Chloride	5.00	5.03		ug/L		101	75 - 134
m-Xylene & p-Xylene	5.00	4.81		ug/L		96	78 - 130
Naphthalene	5.00	4.34		ug/L		87	64 - 132
n-Butylbenzene	5.00	4.68		ug/L		94	73 - 135
N-Propylbenzene	5.00	4.72		ug/L		94	77 - 142
o-Xylene	5.00	4.81		ug/L		96	80 - 139
sec-Butylbenzene	5.00	5.05		ug/L		101	78 - 140
Styrene	5.00	4.90		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.66		ug/L		93	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.37		ug/L		107	80 - 126
trans-1,2-Dichloroethene	5.00	5.16		ug/L		103	63 - 133
trans-1,3-Dichloropropene	5.00	4.61		ug/L		92	71 - 128
Trichloroethene	5.00	4.83		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	5.52		ug/L		110	60 - 132
Vinyl chloride	5.00	5.53		ug/L		111	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	5.00		ug/L		100	79 - 127	1	20
1,1,1-Trichloroethane			5.00	4.89		ug/L		98	74 - 128	1	14
1,1,2,2-Tetrachloroethane			5.00	4.59		ug/L		92	69 - 139	6	22
1,1,2-Trichloroethane			5.00	4.83		ug/L		97	80 - 127	6	19
1,1-Dichloroethane			5.00	4.96		ug/L		99	74 - 135	1	20
1,1-Dichloroethene			5.00	5.31		ug/L		106	71 - 126	1	17
1,1-Dichloropropene			5.00	4.76		ug/L		95	72 - 132	5	13
1,2,3-Trichlorobenzene			5.00	4.76		ug/L		95	75 - 137	4	20
1,2,3-Trichloropropane			5.00	4.76		ug/L		95	80 - 127	3	20
1,2,4-Trichlorobenzene			5.00	4.33		ug/L		87	79 - 130	2	20
1,2,4-Trimethylbenzene			5.00	4.99		ug/L		100	78 - 136	2	20
1,2-Dibromo-3-Chloropropane			5.00	4.08		ug/L		82	69 - 130	11	26
1,2-Dichlorobenzene			5.00	4.86		ug/L		97	80 - 129	3	14
1,2-Dichloroethane			5.00	4.70		ug/L		94	74 - 130	9	15
1,2-Dichloropropane			5.00	4.57		ug/L		91	80 - 130	8	14
1,3,5-Trimethylbenzene			5.00	4.68		ug/L		94	80 - 139	2	20
1,3-Dichlorobenzene			5.00	4.82		ug/L		96	80 - 130	6	12
1,3-Dichloropropane			5.00	4.64		ug/L		93	80 - 130	7	19
1,4-Dichlorobenzene			5.00	4.70		ug/L		94	80 - 129	2	11
2,2-Dichloropropane			5.00	4.87		ug/L		97	58 - 150	3	28
2-Chlorotoluene			5.00	4.49		ug/L		90	80 - 136	3	20
4-Chlorotoluene			5.00	4.44		ug/L		89	80 - 130	7	20
4-Isopropyltoluene			5.00	4.89		ug/L		98	78 - 132	2	14
Benzene			5.00	5.00		ug/L		100	73 - 133	6	20
Bromobenzene			5.00	4.27		ug/L		85	80 - 130	8	20
Bromoform			5.00	4.57		ug/L		91	69 - 137	2	20
Bromomethane			5.00	5.82		ug/L		116	68 - 120	6	18
Carbon tetrachloride			5.00	4.88		ug/L		98	71 - 132	1	15
Chlorobenzene			5.00	4.77		ug/L		95	80 - 123	4	12
Chlorobromomethane			5.00	4.94		ug/L		99	79 - 131	5	20
Chlorodibromomethane			5.00	4.70		ug/L		94	76 - 131	7	20
Chloroethane			5.00	5.51		ug/L		110	49 - 135	3	27
Chloroform			5.00	4.75		ug/L		95	80 - 130	3	20
Chloromethane			5.00	5.68		ug/L		114	32 - 143	2	23
cis-1,2-Dichloroethene			5.00	5.09		ug/L		102	72 - 130	3	20
cis-1,3-Dichloropropene			5.00	4.38		ug/L		88	66 - 141	5	22
Dibromomethane			5.00	4.59		ug/L		92	65 - 141	4	20
Dichlorobromomethane			5.00	4.62		ug/L		92	74 - 131	9	20
Dichlorodifluoromethane			5.00	5.24		ug/L		105	20 - 137	8	22
Ethylbenzene			5.00	4.79		ug/L		96	80 - 130	2	20
Ethylene Dibromide			5.00	4.61		ug/L		92	80 - 126	5	20
Hexachlorobutadiene			5.00	4.93		ug/L		99	72 - 138	3	20
Isopropylbenzene			5.00	4.95		ug/L		99	75 - 137	0	20
Methyl tert-butyl ether			5.00	4.74		ug/L		95	60 - 150	1	25
Methylene Chloride			5.00	5.30		ug/L		106	75 - 134	5	18
m-Xylene & p-Xylene			5.00	4.68		ug/L		94	78 - 130	3	20
Naphthalene			5.00	4.19		ug/L		84	64 - 132	4	20
n-Butylbenzene			5.00	4.54		ug/L		91	73 - 135	3	18

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	4.52		ug/L		90	77 - 142	4	20
o-Xylene			5.00	4.78		ug/L		96	80 - 139	1	20
sec-Butylbenzene			5.00	4.93		ug/L		99	78 - 140	2	20
Styrene			5.00	4.79		ug/L		96	74 - 136	2	20
tert-Butylbenzene			5.00	4.43		ug/L		89	77 - 140	5	20
Tetrachloroethene			5.00	4.79		ug/L		96	75 - 131	4	20
Toluene			5.00	5.21		ug/L		104	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	5.11		ug/L		102	63 - 133	1	17
trans-1,3-Dichloropropene			5.00	4.24		ug/L		85	71 - 128	9	21
Trichloroethene			5.00	4.61		ug/L		92	72 - 136	5	14
Trichlorofluoromethane			5.00	5.49		ug/L		110	60 - 132	0	20
Vinyl chloride			5.00	5.57		ug/L		111	52 - 128	1	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-323060/1-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 323060

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/13/19 08:40	09/26/19 21:16	1
2-Nitrotoluene	ND		0.50		ug/L		09/13/19 08:40	09/26/19 21:16	1
3-Nitrotoluene	ND		0.50		ug/L		09/13/19 08:40	09/26/19 21:16	1
4-Nitrotoluene	ND		0.50		ug/L		09/13/19 08:40	09/26/19 21:16	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
HMX	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
RDX	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
Nitrobenzene	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
Tetryl	ND		0.10		ug/L		09/13/19 08:40	09/26/19 21:16	1
Nitroglycerin	ND		0.65		ug/L		09/13/19 08:40	09/26/19 21:16	1
PETN	ND		0.65		ug/L		09/13/19 08:40	09/26/19 21:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/13/19 08:40*	*09/26/19 21:16*	*1*

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

Lab Sample ID: PB 320-323060/14-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 323060

Analyte	PB Result	PB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/13/19 08:40	09/27/19 10:41	1

Surrogate	*PB %Recovery*	*PB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/13/19 08:40*	*09/27/19 10:41*	*1*

Lab Sample ID: LCS 320-323060/2-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 323060

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	1.03		ug/L		103	74 - 120
1,3-Dinitrobenzene	1.00	1.04		ug/L		104	72 - 123
2,4,6-Trinitrotoluene	1.00	0.730		ug/L		73	69 - 111
2,4-Dinitrotoluene	1.00	1.02		ug/L		102	70 - 119
2,6-Dinitrotoluene	1.00	0.992		ug/L		99	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.04		ug/L		104	77 - 123
2-Nitrotoluene	1.00	0.964		ug/L		96	64 - 120
3-Nitrotoluene	1.00	1.05		ug/L		105	67 - 114
4-Nitrotoluene	1.00	0.934		ug/L		93	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	1.07		ug/L		107	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	1.02		ug/L		102	69 - 119
Tetryl	1.00	0.685		ug/L		68	66 - 105
Nitroglycerin	5.00	4.91		ug/L		98	85 - 115
PETN	5.00	4.81		ug/L		96	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*94*		*79 - 111*

Lab Sample ID: 580-89079-5 MS
Matrix: Water
Analysis Batch: 326491

Client Sample ID: 03Q19LC03SW
Prep Type: Total/NA
Prep Batch: 323060

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
RDX	ND		1.02	1.02		ug/L		100	68 - 122

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

Lab Sample ID: 580-89079-5 MSD
Matrix: Water
Analysis Batch: 326491

Client Sample ID: 03Q19LC03SW
Prep Type: Total/NA
Prep Batch: 323060

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
RDX	ND		1.03	1.04		ug/L		101	68 - 122	2	32

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

Lab Sample ID: 580-89079-5 MSD
Matrix: Water
Analysis Batch: 326491

Client Sample ID: 03Q19LC03SW
Prep Type: Total/NA
Prep Batch: 323060

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*90*		*79 - 111*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: MB 280-471409/13
Matrix: Water
Analysis Batch: 471409

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 12:20	1

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: LCS 280-471409/14
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0520	J	ug/L		104	70 - 130		

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW01SW
Lab Sample ID: 580-89079-1
Date Collected: 09/10/19 16:30
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 03:13	DSO	TAL SEA
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 00:51	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 13:58	CBB	TAL DEN

Client Sample ID: 03Q19LCMW01DW
Lab Sample ID: 580-89079-2
Date Collected: 09/10/19 16:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 03:39	DSO	TAL SEA
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 01:44	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:03	CBB	TAL DEN

Client Sample ID: 03Q19LCMW02SW
Lab Sample ID: 580-89079-3
Date Collected: 09/10/19 14:50
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 04:06	DSO	TAL SEA
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 02:38	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:08	CBB	TAL DEN

Client Sample ID: 03Q19LCMW02DW
Lab Sample ID: 580-89079-4
Date Collected: 09/10/19 14:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 06:19	DSO	TAL SEA
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 03:32	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:13	CBB	TAL DEN

Client Sample ID: 03Q19LC03SW
Lab Sample ID: 580-89079-5
Date Collected: 09/10/19 09:15
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 04:25	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:18	CBB	TAL DEN

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19NF02SW
Lab Sample ID: 580-89079-6
Date Collected: 09/10/19 10:30
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 08:53	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:23	CBB	TAL DEN

Client Sample ID: 03Q19DP05SW
Lab Sample ID: 580-89079-7
Date Collected: 09/10/19 12:00
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			323060	09/13/19 08:40	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 09:47	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:28	CBB	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89079-1
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
Alaska (UST)	State Program	17-024	01-19-20
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	DoD	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
California	State Program	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Montana (UST)	State Program	N/A	04-30-20
Oregon	NELAP	WA100007	11-05-19
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P330-14-00126	02-10-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20
Washington	State Program	C553	02-17-20

Laboratory: Eurofins TestAmerica, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	DoD	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Alaska (UST)	State Program	UST-30	01-08-20
Arizona	State	AZ0713	12-20-19
Arizona	State Program	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
Arkansas DEQ	State Program	88-0687	06-01-20
California	State	2513	01-08-20
California	State Program	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Connecticut	State Program	PH-0686	09-30-20
Florida	NELAP	E87667	06-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	200017	04-30-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Iowa	State Program	370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	02096	06-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State Program	CO0002	03-03-21

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
Minnesota	NELAP	8-999-405	12-31-19
Minnesota	NELAP	1545373	08-05-20
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
Nevada	State Program	CO0026	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Jersey	NELAP	CO004	06-30-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	11964	04-01-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
North Dakota	State Program	R-034	01-08-20
Oklahoma	State Program	8614	08-31-20
Oregon	NELAP	4025	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	68-00664	07-31-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-18-15	09-30-19
Texas	NELAP	T104704183-18-15	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO00026	07-31-20
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	460232	06-14-20
Virginia	NELAP	10490	06-14-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
Washington	State Program	C583	08-03-20
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wisconsin	State Program	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

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 Program	17-020	01-20-21
ANAB	Dept. of Defense ELAP	L2468	01-20-21
ANAB	Dept. of Energy	L2468.01	01-20-21
ANAB	DoD	L2468	01-20-21
ANAB	DOE	L2468.01	01-20-21
ANAB	ISO/IEC 17025	L2468	08-09-21
Arizona	State	AZ0708	08-11-20
Arizona	State Program	AZ0708	08-11-20
Arkansas DEQ	State Program	88-0691	06-17-20
California	State	2897	01-31-20
California	State Program	2897	01-31-20
Colorado	State	CA0004	08-31-20
Colorado	State Program	CA00044	08-31-20
Connecticut	State	PH-0691	06-30-21
Connecticut	State Program	PH-0691	06-30-21
Florida	NELAP	E87570	06-30-20
Florida	NELAP	E87570	06-30-20
Hawaii	State	<cert No.>	01-29-20
Hawaii	State Program	N/A	01-29-20
Illinois	NELAP	200060	03-17-20 *
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	30612	06-30-20
Louisiana	NELAP	01944	06-30-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
New Jersey	NELAP	CA005	06-30-20
New York	NELAP	11666	04-01-20
New York	NELAP	11666	04-01-20
Oregon	NELAP	4040	01-29-20
Oregon	NELAP	4040	01-29-20
Pennsylvania	NELAP	68-01272	03-31-20
Pennsylvania	NELAP	68-01272	03-31-20
Texas	NELAP	T104704399	05-31-20
Texas	NELAP	T104704399-19-13	05-31-20
US Fish & Wildlife	Federal	LE148388-0	07-31-20
US Fish & Wildlife	US Federal Programs	58448	07-31-20
USDA	Federal	P330-18-00239	01-17-21
USDA	US Federal Programs	P330-18-00239	07-31-21
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	02-29-20
Vermont	State	VT-4040	04-16-20
Vermont	State Program	VT-4040	04-16-20
Virginia	NELAP	460278	03-14-20
Virginia	NELAP	460278	03-14-20
Washington	State	C581	05-05-20

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Sacramento (Continued)

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

Authority	Program	Identification Number	Expiration Date
Washington	State Program	C581	05-05-20
West Virginia (DW)	State	9930C	12-31-19
West Virginia (DW)	State Program	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: 580-89079-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89079-1	03Q19LCMW01SW	Water	09/10/19 16:30	09/11/19 13:33	
580-89079-2	03Q19LCMW01DW	Water	09/10/19 16:10	09/11/19 13:33	
580-89079-3	03Q19LCMW02SW	Water	09/10/19 14:50	09/11/19 13:33	
580-89079-4	03Q19LCMW02DW	Water	09/10/19 14:10	09/11/19 13:33	
580-89079-5	03Q19LC03SW	Water	09/10/19 09:15	09/11/19 13:33	
580-89079-6	03Q19NF02SW	Water	09/10/19 10:30	09/11/19 13:33	
580-89079-7	03Q19DP05SW	Water	09/10/19 12:00	09/11/19 13:33	

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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

580-89079 Chain of Custody

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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
		Preservation Code:									
03Q19LCMW01SW	9/10/19	1630	G	W			X	X	X	6	
03Q19LCMW01DW		1610								6	
03Q19LCMW03SW		1450								6	
03Q19LCMW02DW		1410								6	
03Q19LC03SW		0915					X		X	5	MS/MSD
~~03Q19LC~~ 03Q19NF02SW		1030								3	
03Q19DP05SW		1200								3	

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: 3.6, 4.7, 5.9, ~~3.5~~, 4.8 9/11/19 AA

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/10/19 1900	PBS		9-11-19 1256	M-E
2		9-11-19 1333	M-E		9/11/19 1333	TAOR
3		Date/Time:	Company		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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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

580-89079 Chain of Custody

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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LCMW01SW	9/10/19	1630	G	W			X	X	X	6	
03Q19LCMW01DW		1610								6	
03Q19LCMW03SW		1450								6	
03Q19LCMW02DW		1410								6	
03Q19LC03SW		0915					X		X	5	MS/MSD
~~03Q19LC~~ 03Q19NF02SW		1030								3	
03Q19DP05SW		1200								3	

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: 3.6, 4.7, 5.9, ~~3.5~~, 4.8 9/11/19 AA

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/10/19 1900	PBS		9-11-19 1256	M-E
2		9-11-19 1333	M-E		9/11/19 1333	TAKR
3		9/11/19 1730	TAKR		9/12/19 0930	TAKR

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

IR5-05/AA

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89079-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/27/2019			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(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=wasteloil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19LCMW01SW (580-89079-1)	9/10/19	16:30 Pacific		Water			X	1	
03Q19LCMW01DW (580-89079-2)	9/10/19	16:10 Pacific		Water			X	1	
03Q19LCMW02SW (580-89079-3)	9/10/19	14:50 Pacific		Water			X	1	
03Q19LCMW02DW (580-89079-4)	9/10/19	14:10 Pacific		Water			X	1	
03Q19LC03SW (580-89079-5)	9/10/19	09:15 Pacific		Water			X	1	
03Q19NF02SW (580-89079-6)	9/10/19	10:30 Pacific		Water			X	1	
03Q19DP05SW (580-89079-7)	9/10/19	12:00 Pacific		Water			X	1	

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:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/17/19 1630	ETA		9/18/19 0915	TAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: 1.9, +0, IR, 9/18/19

Ver: 01/16/2019

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: 580-69794.1
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 #: 580-89079-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 9/27/2019			
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	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:							
03Q19LCMW01SW (580-89079-1)	9/10/19	16:30 Pacific		Water			X	X	3	
03Q19LCMW01DW (580-89079-2)	9/10/19	16:10 Pacific		Water			X	X	3	
03Q19LCMW02SW (580-89079-3)	9/10/19	14:50 Pacific		Water			X	X	3	
03Q19LCMW02DW (580-89079-4)	9/10/19	14:10 Pacific		Water			X	X	3	
03Q19LC035W (580-89079-5)	9/10/19	09:15 Pacific		Water			X	X	3	
03Q19NF025W (580-89079-6)	9/10/19	10:30 Pacific		Water			X	X	3	
03Q19DP05SW (580-89079-7)	9/10/19	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:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/11/19 1700	TAOOR			
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: 580-89079-1

Login Number: 89079
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	False	Insufficient volume received for requested analysis.
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: 580-89079-1

Login Number: 89079
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89079-1

Login Number: 89079
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/12/19 01:05 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	481189, 481188
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	1.5c, 1.9c
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

Tracking # : 1028 3892 0155

SO / PO / FO / 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: AK10 Corr. Factor: NA

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 481189

Sample Custody Seal: —

Cooler ID: 2 of 2

Temp Observed: 1.5 Corrected: 1.5

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initial: DV

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

Tracking # : 1028 3892 0144

SO / PO / FO / 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: AK10 Corr. Factor: NA

Ice V Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 481188

Sample Custody Seal: —

Cooler ID: 1 of 2

Temp Observed: 1.9 Corrected: 1.9

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: PR Date: 09/12/19

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 580-89081-1
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:
10/3/2019 3:25:14 PM

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

Table of Contents

Job ID: 580-89081-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020
Report Number: 580-89081-1

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 09/11/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.5º C and 4.8º 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 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3), 03Q19LCMW140W (580-89081-4) and 091019TB (580-89081-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 09/19/2019.

1,2,4-Trichlorobenzene failed the recovery criteria low for the MS of sample 03Q19LCMW03DWMS (580-89081-3) in batch 580-311626.

1,2,4-Trichlorobenzene failed the recovery criteria low for the MSD of sample 03Q19LCMW03DWMSD (580-89081-3) in batch 580-311626. 1,4-Dichlorobenzene exceeded the RPD limit.

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-311626 was outside criteria for the following analyte(s): 2-Butanone (MEK), 2-Hexanone, and 4-Methyl-2-pentanone (MIBK). 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.

PERCHLORATE
Samples 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3) and 03Q19LCMW140W (580-89081-4) were analyzed for Perchlorate in accordance with SW846 6860. The samples were analyzed on 09/23/2019.

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

EXPLOSIVES

Job ID: 580-89081-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Samples 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3) and 03Q19LCMW140W (580-89081-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 09/17/2019 and 09/30/2019 and analyzed on 09/27/2019, 10/01/2019 and 10/02/2019.

2,4,6-Trinitrotoluene and Tetryl failed the recovery criteria low for the MS of sample 03Q19LCMW03DWMS (580-89081-3) in batch 320-326491.

Tetryl failed the recovery criteria low for the MSD of sample 03Q19LCMW03DWMSD (580-89081-3) in batch 320-326491.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The laboratory control sample duplicate (LCSD) for preparation batch 320-324018 and analytical batch 320-327493 recovered outside control limits for the following analytes:Tetryl . The associated samples were re-prepared and/or re-analyzed outside holding time. Both sets of data have been reported.

Sample 03Q19LC15SW (580-89081-1) was filtered due to presence of large particulates in solution for method 8330B aqueous in preparation batch 320-327235.

The following samples were re-prepared outside of preparation holding time due to a potential label switch occurring between sample 580-89081-3MSD and 580-89177-3 for method 8330B water in preparation batch 320-327235. 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3), 03Q19LCMW03DW (580-89081-3[MS]), 03Q19LCMW03DW (580-89081-3[MSD]) and 03Q19LCMW140W (580-89081-4).

During analysis of 320-324018 it became apparent that the extracts for the matrix spike duplicate (MSD) and 580-89177-B-3-A were switched. All samples in the affected batch were re-extracted outside of hold time and both sets of data are being reported for supporting evidence. The reported data from the original extraction will be corrected to properly reflect the actual QC and samples tested since the re-extraction confirmed the label switch between the two samples. 03Q19LCMW03DW (580-89081-3[MSD])

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time

LCMS

Qualifier	Qualifier Description
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: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LC15SW
Lab Sample ID: 580-89081-1
Date Collected: 09/10/19 10:10
Matrix: Water
Date Received: 09/11/19 13:33

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 14:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND	H	0.099		ug/L		09/30/19 07:12	10/01/19 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*09/30/19 07:12*	*10/01/19 23:41*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:33	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:32	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 04:32	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 04:32	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 04:32	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 04:32	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 04:32	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 04:32	1
Benzene	ND		0.20		ug/L			09/19/19 04:32	1
Bromobenzene	ND		0.20		ug/L			09/19/19 04:32	1
Bromoform	ND		0.50		ug/L			09/19/19 04:32	1
Bromomethane	ND		0.50		ug/L			09/19/19 04:32	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 04:32	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 04:32	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Chloroethane	ND		0.50		ug/L			09/19/19 04:32	1
Chloroform	ND		0.20		ug/L			09/19/19 04:32	1
Chloromethane	ND		0.50		ug/L			09/19/19 04:32	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
Dibromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 04:32	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 04:32	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 04:32	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 04:32	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 04:32	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 04:32	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 04:32	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 04:32	1
Naphthalene	ND		1.0		ug/L			09/19/19 04:32	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 04:32	1

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:32	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 04:32	1
Styrene	ND		0.50		ug/L			09/19/19 04:32	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 04:32	1
Toluene	ND		0.20		ug/L			09/19/19 04:32	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
Trichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 04:32	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/19/19 04:32*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/19/19 04:32*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/19/19 04:32*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/19/19 04:32*	*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		09/17/19 10:52	09/27/19 15:09	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 15:09	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 15:09	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/17/19 10:52*	*09/27/19 15:09*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 00:35	1
2-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1
3-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 00:35	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*09/30/19 07:12*	*10/02/19 00:35*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:39	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3
Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:59	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 04:59	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 04:59	1
1,2,4-Trichlorobenzene	ND	F1	0.30		ug/L			09/19/19 04:59	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 04:59	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 04:59	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 04:59	1
1,4-Dichlorobenzene	ND	F2	0.30		ug/L			09/19/19 04:59	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 04:59	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 04:59	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 04:59	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 04:59	1
Benzene	ND		0.20		ug/L			09/19/19 04:59	1
Bromobenzene	ND		0.20		ug/L			09/19/19 04:59	1
Bromoform	ND		0.50		ug/L			09/19/19 04:59	1
Bromomethane	ND		0.50		ug/L			09/19/19 04:59	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 04:59	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 04:59	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Chloroethane	ND		0.50		ug/L			09/19/19 04:59	1
Chloroform	ND		0.20		ug/L			09/19/19 04:59	1
Chloromethane	ND		0.50		ug/L			09/19/19 04:59	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
Dibromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 04:59	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 04:59	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 04:59	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 04:59	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 04:59	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 04:59	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 04:59	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 04:59	1
Naphthalene	ND		1.0		ug/L			09/19/19 04:59	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 04:59	1

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3

Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:59	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 04:59	1
Styrene	ND		0.50		ug/L			09/19/19 04:59	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 04:59	1
Toluene	ND		0.20		ug/L			09/19/19 04:59	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
Trichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 04:59	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/19/19 04:59*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/19/19 04:59*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/19/19 04:59*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/19/19 04:59*	*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		09/17/19 10:52	09/27/19 16:03	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,4,6-Trinitrotoluene	ND	F1	0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 16:03	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Tetryl	ND	* F1	0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 16:03	1
PETN	ND	F1	0.65		ug/L		09/17/19 10:52	09/27/19 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 16:03*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 01:28	1
2-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1
3-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3
Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Nitroglycerin	ND	H	0.65		ug/L		09/30/19 07:12	10/02/19 01:28	1
PETN	ND	H	0.65		ug/L		09/30/19 07:12	10/02/19 01:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*09/30/19 07:12*	*10/02/19 01:28*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:59	1

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

Job ID: 580-89081-1

Client Sample ID: 03Q19LCMW140W
Date Collected: 09/10/19 13:00
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89081-4
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			09/19/19 22:18	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 22:18	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 22:18	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 22:18	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 22:18	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 22:18	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 22:18	1
Benzene	ND		0.20		ug/L			09/19/19 22:18	1
Bromobenzene	ND		0.20		ug/L			09/19/19 22:18	1
Bromoform	ND		0.50		ug/L			09/19/19 22:18	1
Bromomethane	ND		0.50		ug/L			09/19/19 22:18	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 22:18	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 22:18	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Chloroethane	ND		0.50		ug/L			09/19/19 22:18	1
Chloroform	ND		0.20		ug/L			09/19/19 22:18	1
Chloromethane	ND		0.50		ug/L			09/19/19 22:18	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
Dibromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 22:18	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 22:18	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 22:18	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 22:18	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 22:18	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 22:18	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 22:18	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 22:18	1
Naphthalene	ND		1.0		ug/L			09/19/19 22:18	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 22:18	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4
Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 22:18	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 22:18	1
Styrene	ND		0.50		ug/L			09/19/19 22:18	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 22:18	1
Toluene	ND		0.20		ug/L			09/19/19 22:18	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
Trichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 22:18	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/19/19 22:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/19/19 22:18*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*09/19/19 22:18*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/19/19 22:18*	*1*
Trifluorotoluene (Surr)	*106*		*80 - 120*		*09/19/19 22:18*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
1,3-Dinitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,4,6-Trinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,4-Dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,6-Dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 20:31	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
4-Amino-2,6-dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
HMX	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
RDX	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Nitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Tetryl	ND	*	0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 20:31	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 20:31*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		09/30/19 07:12	10/02/19 05:57	1
2-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4
Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1
4-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Nitroglycerin	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 05:57	1
PETN	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*09/30/19 07:12*	*10/02/19 05:57*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 15:04	1

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

Job ID: 580-89081-1

Client Sample ID: 091019TB
Date Collected: 09/10/19 00:00
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89081-5
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			09/19/19 22:44	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 22:44	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 22:44	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 22:44	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 22:44	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 22:44	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 22:44	1
Benzene	ND		0.20		ug/L			09/19/19 22:44	1
Bromobenzene	ND		0.20		ug/L			09/19/19 22:44	1
Bromoform	ND		0.50		ug/L			09/19/19 22:44	1
Bromomethane	ND		0.50		ug/L			09/19/19 22:44	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 22:44	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 22:44	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Chloroethane	ND		0.50		ug/L			09/19/19 22:44	1
Chloroform	ND		0.20		ug/L			09/19/19 22:44	1
Chloromethane	ND		0.50		ug/L			09/19/19 22:44	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
Dibromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 22:44	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 22:44	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 22:44	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 22:44	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 22:44	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 22:44	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 22:44	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 22:44	1
Naphthalene	ND		1.0		ug/L			09/19/19 22:44	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 22:44	1

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

Job ID: 580-89081-1

Client Sample ID: 091019TB
Date Collected: 09/10/19 00:00
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89081-5
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			09/19/19 22:44	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 22:44	1
Styrene	ND		0.50		ug/L			09/19/19 22:44	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 22:44	1
Toluene	ND		0.20		ug/L			09/19/19 22:44	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
Trichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 22:44	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*09/19/19 22:44*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*09/19/19 22:44*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*09/19/19 22:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/19/19 22:44*	*1*
Trifluorotoluene (Surr)	*114*		*80 - 120*		*09/19/19 22:44*	*1*

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/18/19 21:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,2-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,3-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
2,2-Dichloropropane	ND		0.50		ug/L			09/18/19 21:27	1
2-Chlorotoluene	ND		0.50		ug/L			09/18/19 21:27	1
4-Chlorotoluene	ND		0.30		ug/L			09/18/19 21:27	1
4-Isopropyltoluene	ND		0.30		ug/L			09/18/19 21:27	1
Benzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromoform	ND		0.50		ug/L			09/18/19 21:27	1
Bromomethane	ND		0.50		ug/L			09/18/19 21:27	1
Carbon tetrachloride	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chlorodibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chloroethane	ND		0.50		ug/L			09/18/19 21:27	1
Chloroform	ND		0.20		ug/L			09/18/19 21:27	1
Chloromethane	ND		0.50		ug/L			09/18/19 21:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Dibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/18/19 21:27	1
Ethylbenzene	ND		0.20		ug/L			09/18/19 21:27	1
Ethylene Dibromide	ND		0.10		ug/L			09/18/19 21:27	1
Hexachlorobutadiene	ND		0.50		ug/L			09/18/19 21:27	1
Isopropylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/18/19 21:27	1
Methylene Chloride	ND		5.0		ug/L			09/18/19 21:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
Naphthalene	ND		1.0		ug/L			09/18/19 21:27	1
n-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
o-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
sec-Butylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Styrene	ND		0.50		ug/L			09/18/19 21:27	1
tert-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
Tetrachloroethene	ND		0.50		ug/L			09/18/19 21:27	1
Toluene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Trichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
Trichlorofluoromethane	ND		0.50		ug/L			09/18/19 21:27	1
Vinyl chloride	ND		0.020		ug/L			09/18/19 21:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*09/18/19 21:27*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/18/19 21:27*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*09/18/19 21:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*09/18/19 21:27*	*1*

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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	5.02		ug/L		100	79 - 127
1,1,1-Trichloroethane	5.00	4.84		ug/L		97	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.85		ug/L		97	69 - 139
1,1,2-Trichloroethane	5.00	5.11		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.00		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	4.98		ug/L		100	72 - 132
1,2,3-Trichlorobenzene	5.00	4.98		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	4.90		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	4.44		ug/L		89	79 - 130
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.54		ug/L		91	69 - 130
1,2-Dichlorobenzene	5.00	5.01		ug/L		100	80 - 129
1,2-Dichloroethane	5.00	5.14		ug/L		103	74 - 130
1,2-Dichloropropane	5.00	4.93		ug/L		99	80 - 130
1,3,5-Trimethylbenzene	5.00	4.78		ug/L		96	80 - 139
1,3-Dichlorobenzene	5.00	5.11		ug/L		102	80 - 130
1,3-Dichloropropane	5.00	4.96		ug/L		99	80 - 130
1,4-Dichlorobenzene	5.00	4.82		ug/L		96	80 - 129
2,2-Dichloropropane	5.00	5.03		ug/L		101	58 - 150
2-Chlorotoluene	5.00	4.64		ug/L		93	80 - 136
4-Chlorotoluene	5.00	4.74		ug/L		95	80 - 130
4-Isopropyltoluene	5.00	4.99		ug/L		100	78 - 132
Benzene	5.00	5.29		ug/L		106	73 - 133

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

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	5.00	4.61		ug/L		92	80 - 130
Bromoform	5.00	4.65		ug/L		93	69 - 137
Bromomethane	5.00	5.46		ug/L		109	68 - 120
Carbon tetrachloride	5.00	4.86		ug/L		97	71 - 132
Chlorobenzene	5.00	4.98		ug/L		100	80 - 123
Chlorobromomethane	5.00	5.17		ug/L		103	79 - 131
Chlorodibromomethane	5.00	5.05		ug/L		101	76 - 131
Chloroethane	5.00	5.68		ug/L		114	49 - 135
Chloroform	5.00	4.89		ug/L		98	80 - 130
Chloromethane	5.00	5.80		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130
cis-1,3-Dichloropropene	5.00	4.59		ug/L		92	66 - 141
Dibromomethane	5.00	4.78		ug/L		96	65 - 141
Dichlorobromomethane	5.00	5.04		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.68		ug/L		114	20 - 137
Ethylbenzene	5.00	4.90		ug/L		98	80 - 130
Ethylene Dibromide	5.00	4.87		ug/L		97	80 - 126
Hexachlorobutadiene	5.00	5.05		ug/L		101	72 - 138
Isopropylbenzene	5.00	4.94		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.68		ug/L		94	60 - 150
Methylene Chloride	5.00	5.03		ug/L		101	75 - 134
m-Xylene & p-Xylene	5.00	4.81		ug/L		96	78 - 130
Naphthalene	5.00	4.34		ug/L		87	64 - 132
n-Butylbenzene	5.00	4.68		ug/L		94	73 - 135
N-Propylbenzene	5.00	4.72		ug/L		94	77 - 142
o-Xylene	5.00	4.81		ug/L		96	80 - 139
sec-Butylbenzene	5.00	5.05		ug/L		101	78 - 140
Styrene	5.00	4.90		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.66		ug/L		93	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.37		ug/L		107	80 - 126
trans-1,2-Dichloroethene	5.00	5.16		ug/L		103	63 - 133
trans-1,3-Dichloropropene	5.00	4.61		ug/L		92	71 - 128
Trichloroethene	5.00	4.83		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	5.52		ug/L		110	60 - 132
Vinyl chloride	5.00	5.53		ug/L		111	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	5.00		ug/L		100	79 - 127	1	20
1,1,1-Trichloroethane			5.00	4.89		ug/L		98	74 - 128	1	14
1,1,2,2-Tetrachloroethane			5.00	4.59		ug/L		92	69 - 139	6	22
1,1,2-Trichloroethane			5.00	4.83		ug/L		97	80 - 127	6	19
1,1-Dichloroethane			5.00	4.96		ug/L		99	74 - 135	1	20
1,1-Dichloroethene			5.00	5.31		ug/L		106	71 - 126	1	17
1,1-Dichloropropene			5.00	4.76		ug/L		95	72 - 132	5	13
1,2,3-Trichlorobenzene			5.00	4.76		ug/L		95	75 - 137	4	20
1,2,3-Trichloropropane			5.00	4.76		ug/L		95	80 - 127	3	20
1,2,4-Trichlorobenzene			5.00	4.33		ug/L		87	79 - 130	2	20
1,2,4-Trimethylbenzene			5.00	4.99		ug/L		100	78 - 136	2	20
1,2-Dibromo-3-Chloropropane			5.00	4.08		ug/L		82	69 - 130	11	26
1,2-Dichlorobenzene			5.00	4.86		ug/L		97	80 - 129	3	14
1,2-Dichloroethane			5.00	4.70		ug/L		94	74 - 130	9	15
1,2-Dichloropropane			5.00	4.57		ug/L		91	80 - 130	8	14
1,3,5-Trimethylbenzene			5.00	4.68		ug/L		94	80 - 139	2	20
1,3-Dichlorobenzene			5.00	4.82		ug/L		96	80 - 130	6	12
1,3-Dichloropropane			5.00	4.64		ug/L		93	80 - 130	7	19
1,4-Dichlorobenzene			5.00	4.70		ug/L		94	80 - 129	2	11
2,2-Dichloropropane			5.00	4.87		ug/L		97	58 - 150	3	28
2-Chlorotoluene			5.00	4.49		ug/L		90	80 - 136	3	20
4-Chlorotoluene			5.00	4.44		ug/L		89	80 - 130	7	20
4-Isopropyltoluene			5.00	4.89		ug/L		98	78 - 132	2	14
Benzene			5.00	5.00		ug/L		100	73 - 133	6	20
Bromobenzene			5.00	4.27		ug/L		85	80 - 130	8	20
Bromoform			5.00	4.57		ug/L		91	69 - 137	2	20
Bromomethane			5.00	5.82		ug/L		116	68 - 120	6	18
Carbon tetrachloride			5.00	4.88		ug/L		98	71 - 132	1	15
Chlorobenzene			5.00	4.77		ug/L		95	80 - 123	4	12
Chlorobromomethane			5.00	4.94		ug/L		99	79 - 131	5	20
Chlorodibromomethane			5.00	4.70		ug/L		94	76 - 131	7	20
Chloroethane			5.00	5.51		ug/L		110	49 - 135	3	27
Chloroform			5.00	4.75		ug/L		95	80 - 130	3	20
Chloromethane			5.00	5.68		ug/L		114	32 - 143	2	23
cis-1,2-Dichloroethene			5.00	5.09		ug/L		102	72 - 130	3	20
cis-1,3-Dichloropropene			5.00	4.38		ug/L		88	66 - 141	5	22
Dibromomethane			5.00	4.59		ug/L		92	65 - 141	4	20
Dichlorobromomethane			5.00	4.62		ug/L		92	74 - 131	9	20
Dichlorodifluoromethane			5.00	5.24		ug/L		105	20 - 137	8	22
Ethylbenzene			5.00	4.79		ug/L		96	80 - 130	2	20
Ethylene Dibromide			5.00	4.61		ug/L		92	80 - 126	5	20
Hexachlorobutadiene			5.00	4.93		ug/L		99	72 - 138	3	20
Isopropylbenzene			5.00	4.95		ug/L		99	75 - 137	0	20
Methyl tert-butyl ether			5.00	4.74		ug/L		95	60 - 150	1	25
Methylene Chloride			5.00	5.30		ug/L		106	75 - 134	5	18
m-Xylene & p-Xylene			5.00	4.68		ug/L		94	78 - 130	3	20
Naphthalene			5.00	4.19		ug/L		84	64 - 132	4	20
n-Butylbenzene			5.00	4.54		ug/L		91	73 - 135	3	18

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	4.52		ug/L		90	77 - 142	4	20
o-Xylene			5.00	4.78		ug/L		96	80 - 139	1	20
sec-Butylbenzene			5.00	4.93		ug/L		99	78 - 140	2	20
Styrene			5.00	4.79		ug/L		96	74 - 136	2	20
tert-Butylbenzene			5.00	4.43		ug/L		89	77 - 140	5	20
Tetrachloroethene			5.00	4.79		ug/L		96	75 - 131	4	20
Toluene			5.00	5.21		ug/L		104	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	5.11		ug/L		102	63 - 133	1	17
trans-1,3-Dichloropropene			5.00	4.24		ug/L		85	71 - 128	9	21
Trichloroethene			5.00	4.61		ug/L		92	72 - 136	5	14
Trichlorofluoromethane			5.00	5.49		ug/L		110	60 - 132	0	20
Vinyl chloride			5.00	5.57		ug/L		111	52 - 128	1	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
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	5.04		ug/L		101	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.13		ug/L		103	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	5.04		ug/L		101	69 - 139
1,1,2-Trichloroethane	ND		5.00	5.41		ug/L		108	80 - 127
1,1-Dichloroethane	ND		5.00	5.06		ug/L		101	74 - 135
1,1-Dichloroethene	ND		5.00	5.34		ug/L		107	71 - 126
1,1-Dichloropropene	ND		5.00	5.19		ug/L		104	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	4.49		ug/L		90	75 - 137
1,2,3-Trichloropropane	ND		5.00	5.06		ug/L		101	80 - 127
1,2,4-Trichlorobenzene	ND	F1	5.00	3.89	F1	ug/L		78	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.19		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.57		ug/L		91	69 - 130
1,2-Dichlorobenzene	ND		5.00	5.15		ug/L		103	80 - 129
1,2-Dichloroethane	ND		5.00	5.42		ug/L		108	74 - 130
1,2-Dichloropropane	ND		5.00	5.37		ug/L		107	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	4.93		ug/L		99	80 - 139
1,3-Dichlorobenzene	ND		5.00	5.12		ug/L		102	80 - 130
1,3-Dichloropropane	ND		5.00	5.26		ug/L		105	80 - 130
1,4-Dichlorobenzene	ND	F2	5.00	5.01		ug/L		100	80 - 129
2,2-Dichloropropane	ND		5.00	4.18		ug/L		84	58 - 150
2-Chlorotoluene	ND		5.00	4.88		ug/L		98	80 - 136
4-Chlorotoluene	ND		5.00	5.11		ug/L		102	80 - 130
4-Isopropyltoluene	ND		5.00	4.97		ug/L		99	78 - 132
Benzene	ND		5.00	5.56		ug/L		111	73 - 133

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

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	ND		5.00	4.95		ug/L		99	80 - 130
Bromoform	ND		5.00	4.83		ug/L		97	69 - 137
Bromomethane	ND		5.00	5.60		ug/L		112	68 - 120
Carbon tetrachloride	ND		5.00	5.18		ug/L		104	71 - 132
Chlorobenzene	ND		5.00	5.26		ug/L		105	80 - 123
Chlorobromomethane	ND		5.00	5.22		ug/L		104	79 - 131
Chlorodibromomethane	ND		5.00	5.22		ug/L		104	76 - 131
Chloroethane	ND		5.00	5.62		ug/L		112	49 - 135
Chloroform	ND		5.00	5.07		ug/L		101	80 - 130
Chloromethane	ND		5.00	5.67		ug/L		110	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.28		ug/L		106	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.53		ug/L		91	66 - 141
Dibromomethane	ND		5.00	5.05		ug/L		101	65 - 141
Dichlorobromomethane	ND		5.00	5.24		ug/L		105	74 - 131
Dichlorodifluoromethane	ND		5.00	5.70		ug/L		114	20 - 137
Ethylbenzene	ND		5.00	5.17		ug/L		103	80 - 130
Ethylene Dibromide	ND		5.00	5.13		ug/L		103	80 - 126
Hexachlorobutadiene	ND		5.00	4.61		ug/L		92	72 - 138
Isopropylbenzene	ND		5.00	5.01		ug/L		100	75 - 137
Methyl tert-butyl ether	ND		5.00	4.40		ug/L		88	60 - 150
Methylene Chloride	ND		5.00	ND		ug/L		91	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.00		ug/L		100	78 - 130
Naphthalene	ND		5.00	3.85		ug/L		77	64 - 132
n-Butylbenzene	ND		5.00	4.44		ug/L		89	73 - 135
N-Propylbenzene	ND		5.00	4.83		ug/L		97	77 - 142
o-Xylene	ND		5.00	4.91		ug/L		98	80 - 139
sec-Butylbenzene	ND		5.00	5.21		ug/L		104	78 - 140
Styrene	ND		5.00	5.29		ug/L		106	74 - 136
tert-Butylbenzene	ND		5.00	4.92		ug/L		98	77 - 140
Tetrachloroethene	ND		5.00	5.00		ug/L		100	75 - 131
Toluene	ND		5.00	5.67		ug/L		113	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.05		ug/L		101	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.61		ug/L		92	71 - 128
Trichloroethene	ND		5.00	5.10		ug/L		102	72 - 136
Trichlorofluoromethane	ND		5.00	5.88		ug/L		118	60 - 132
Vinyl chloride	ND		5.00	5.49		ug/L		110	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
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	5.04		ug/L		101	79 - 127	0	20
1,1,1-Trichloroethane	ND		5.00	5.15		ug/L		103	74 - 128	0	14
1,1,2,2-Tetrachloroethane	ND		5.00	4.84		ug/L		97	69 - 139	4	22
1,1,2-Trichloroethane	ND		5.00	5.14		ug/L		103	80 - 127	5	19
1,1-Dichloroethane	ND		5.00	5.08		ug/L		102	74 - 135	0	20
1,1-Dichloroethene	ND		5.00	5.52		ug/L		110	71 - 126	3	17
1,1-Dichloropropene	ND		5.00	4.86		ug/L		97	72 - 132	7	13
1,2,3-Trichlorobenzene	ND		5.00	4.46		ug/L		89	75 - 137	1	20
1,2,3-Trichloropropane	ND		5.00	4.89		ug/L		98	80 - 127	3	20
1,2,4-Trichlorobenzene	ND	F1	5.00	3.81	F1	ug/L		76	79 - 130	2	20
1,2,4-Trimethylbenzene	ND		5.00	4.93		ug/L		99	78 - 136	5	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.56		ug/L		91	69 - 130	0	26
1,2-Dichlorobenzene	ND		5.00	4.81		ug/L		96	80 - 129	7	14
1,2-Dichloroethane	ND		5.00	5.22		ug/L		104	74 - 130	4	15
1,2-Dichloropropane	ND		5.00	5.09		ug/L		102	80 - 130	5	14
1,3,5-Trimethylbenzene	ND		5.00	4.51		ug/L		90	80 - 139	9	20
1,3-Dichlorobenzene	ND		5.00	4.64		ug/L		93	80 - 130	10	12
1,3-Dichloropropane	ND		5.00	4.94		ug/L		99	80 - 130	6	19
1,4-Dichlorobenzene	ND	F2	5.00	4.46	F2	ug/L		89	80 - 129	12	11
2,2-Dichloropropane	ND		5.00	4.16		ug/L		83	58 - 150	0	28
2-Chlorotoluene	ND		5.00	4.43		ug/L		89	80 - 136	10	20
4-Chlorotoluene	ND		5.00	4.50		ug/L		90	80 - 130	12	20
4-Isopropyltoluene	ND		5.00	4.42		ug/L		88	78 - 132	12	14
Benzene	ND		5.00	5.31		ug/L		106	73 - 133	5	20
Bromobenzene	ND		5.00	4.53		ug/L		91	80 - 130	9	20
Bromoform	ND		5.00	4.75		ug/L		95	69 - 137	2	20
Bromomethane	ND		5.00	5.78		ug/L		116	68 - 120	3	18
Carbon tetrachloride	ND		5.00	5.18		ug/L		104	71 - 132	0	15
Chlorobenzene	ND		5.00	4.87		ug/L		97	80 - 123	8	12
Chlorobromomethane	ND		5.00	5.22		ug/L		104	79 - 131	0	20
Chlorodibromomethane	ND		5.00	4.99		ug/L		100	76 - 131	5	20
Chloroethane	ND		5.00	5.82		ug/L		116	49 - 135	3	27
Chloroform	ND		5.00	4.95		ug/L		99	80 - 130	2	20
Chloromethane	ND		5.00	5.97		ug/L		116	32 - 143	5	23
cis-1,2-Dichloroethene	ND		5.00	5.08		ug/L		102	72 - 130	4	20
cis-1,3-Dichloropropene	ND		5.00	4.41		ug/L		88	66 - 141	3	22
Dibromomethane	ND		5.00	4.93		ug/L		99	65 - 141	2	20
Dichlorobromomethane	ND		5.00	5.10		ug/L		102	74 - 131	3	20
Dichlorodifluoromethane	ND		5.00	5.72		ug/L		114	20 - 137	0	22
Ethylbenzene	ND		5.00	4.70		ug/L		94	80 - 130	10	20
Ethylene Dibromide	ND		5.00	5.08		ug/L		102	80 - 126	1	20
Hexachlorobutadiene	ND		5.00	4.11		ug/L		82	72 - 138	11	20
Isopropylbenzene	ND		5.00	4.67		ug/L		93	75 - 137	7	20
Methyl tert-butyl ether	ND		5.00	4.56		ug/L		91	60 - 150	4	25
Methylene Chloride	ND		5.00	ND		ug/L		91	75 - 134	0	18
m-Xylene & p-Xylene	ND		5.00	4.49		ug/L		90	78 - 130	11	20
Naphthalene	ND		5.00	4.14		ug/L		83	64 - 132	7	20
n-Butylbenzene	ND		5.00	3.74		ug/L		75	73 - 135	17	18

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
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	4.28		ug/L		86	77 - 142	12	20
o-Xylene	ND		5.00	4.62		ug/L		92	80 - 139	6	20
sec-Butylbenzene	ND		5.00	4.68		ug/L		94	78 - 140	11	20
Styrene	ND		5.00	4.77		ug/L		95	74 - 136	10	20
tert-Butylbenzene	ND		5.00	4.62		ug/L		92	77 - 140	6	20
Tetrachloroethene	ND		5.00	4.42		ug/L		88	75 - 131	12	20
Toluene	ND		5.00	5.31		ug/L		106	80 - 126	7	20
trans-1,2-Dichloroethene	ND		5.00	5.14		ug/L		103	63 - 133	2	17
trans-1,3-Dichloropropene	ND		5.00	4.35		ug/L		87	71 - 128	6	21
Trichloroethene	ND		5.00	4.72		ug/L		94	72 - 136	8	14
Trichlorofluoromethane	ND		5.00	5.70		ug/L		114	60 - 132	3	20
Vinyl chloride	ND		5.00	5.73		ug/L		115	52 - 128	4	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: MB 580-311739/7
Matrix: Water
Analysis Batch: 311739

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			09/19/19 17:26	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 17:26	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 17:26	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 17:26	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 17:26	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 17:26	1
Benzene	ND		0.20		ug/L			09/19/19 17:26	1

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

Lab Sample ID: MB 580-311739/7
Matrix: Water
Analysis Batch: 311739

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Bromoform	ND		0.50		ug/L			09/19/19 17:26	1
Bromomethane	ND		0.50		ug/L			09/19/19 17:26	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chloroethane	ND		0.50		ug/L			09/19/19 17:26	1
Chloroform	ND		0.20		ug/L			09/19/19 17:26	1
Chloromethane	ND		0.50		ug/L			09/19/19 17:26	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Dibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 17:26	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 17:26	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 17:26	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 17:26	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 17:26	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 17:26	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
Naphthalene	ND		1.0		ug/L			09/19/19 17:26	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 17:26	1
o-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Styrene	ND		0.50		ug/L			09/19/19 17:26	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 17:26	1
Toluene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Trichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 17:26	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/19/19 17:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/19/19 17:26*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/19/19 17:26*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/19/19 17:26*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*09/19/19 17:26*	*1*

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

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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	4.81		ug/L		96	79 - 127
1,1,1-Trichloroethane	5.00	4.75		ug/L		95	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.17		ug/L		103	69 - 139
1,1,2-Trichloroethane	5.00	5.29		ug/L		106	80 - 127
1,1-Dichloroethane	5.00	4.82		ug/L		96	74 - 135
1,1-Dichloroethene	5.00	5.11		ug/L		102	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.17		ug/L		103	75 - 137
1,2,3-Trichloropropane	5.00	5.24		ug/L		105	80 - 127
1,2,4-Trichlorobenzene	5.00	4.72		ug/L		94	79 - 130
1,2,4-Trimethylbenzene	5.00	5.25		ug/L		105	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.03		ug/L		101	69 - 130
1,2-Dichlorobenzene	5.00	5.21		ug/L		104	80 - 129
1,2-Dichloroethane	5.00	5.32		ug/L		106	74 - 130
1,2-Dichloropropane	5.00	5.14		ug/L		103	80 - 130
1,3,5-Trimethylbenzene	5.00	4.85		ug/L		97	80 - 139
1,3-Dichlorobenzene	5.00	5.27		ug/L		105	80 - 130
1,3-Dichloropropane	5.00	5.35		ug/L		107	80 - 130
1,4-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 129
2,2-Dichloropropane	5.00	4.45		ug/L		89	58 - 150
2-Chlorotoluene	5.00	4.87		ug/L		97	80 - 136
4-Chlorotoluene	5.00	5.03		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	5.16		ug/L		103	78 - 132
Benzene	5.00	5.30		ug/L		106	73 - 133
Bromobenzene	5.00	4.88		ug/L		98	80 - 130
Bromoform	5.00	5.00		ug/L		100	69 - 137
Bromomethane	5.00	5.51		ug/L		110	68 - 120
Carbon tetrachloride	5.00	4.83		ug/L		97	71 - 132
Chlorobenzene	5.00	5.14		ug/L		103	80 - 123
Chlorobromomethane	5.00	4.92		ug/L		98	79 - 131
Chlorodibromomethane	5.00	5.08		ug/L		102	76 - 131
Chloroethane	5.00	5.49		ug/L		110	49 - 135
Chloroform	5.00	4.73		ug/L		95	80 - 130
Chloromethane	5.00	5.62		ug/L		112	32 - 143
cis-1,2-Dichloroethene	5.00	4.98		ug/L		100	72 - 130
cis-1,3-Dichloropropene	5.00	4.75		ug/L		95	66 - 141
Dibromomethane	5.00	4.98		ug/L		100	65 - 141
Dichlorobromomethane	5.00	5.03		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.82		ug/L		116	20 - 137
Ethylbenzene	5.00	4.99		ug/L		100	80 - 130
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126
Hexachlorobutadiene	5.00	5.09		ug/L		102	72 - 138
Isopropylbenzene	5.00	4.96		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.57		ug/L		91	60 - 150
Methylene Chloride	5.00	5.00		ug/L		100	75 - 134
m-Xylene & p-Xylene	5.00	4.91		ug/L		98	78 - 130
Naphthalene	5.00	4.59		ug/L		92	64 - 132
n-Butylbenzene	5.00	4.71		ug/L		94	73 - 135

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

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	5.00	4.85		ug/L		97	77 - 142
o-Xylene	5.00	4.85		ug/L		97	80 - 139
sec-Butylbenzene	5.00	5.16		ug/L		103	78 - 140
Styrene	5.00	5.14		ug/L		103	74 - 136
tert-Butylbenzene	5.00	4.84		ug/L		97	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.38		ug/L		108	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.64		ug/L		93	71 - 128
Trichloroethene	5.00	4.78		ug/L		96	72 - 136
Trichlorofluoromethane	5.00	5.54		ug/L		111	60 - 132
Vinyl chloride	5.00	5.39		ug/L		108	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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	4.61		ug/L		92	79 - 127	4	20
1,1,1-Trichloroethane	5.00	4.66		ug/L		93	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	4.85		ug/L		97	69 - 139	6	22
1,1,2-Trichloroethane	5.00	5.08		ug/L		102	80 - 127	4	19
1,1-Dichloroethane	5.00	4.70		ug/L		94	74 - 135	3	20
1,1-Dichloroethene	5.00	4.97		ug/L		99	71 - 126	3	17
1,1-Dichloropropene	5.00	4.72		ug/L		94	72 - 132	5	13
1,2,3-Trichlorobenzene	5.00	4.83		ug/L		97	75 - 137	7	20
1,2,3-Trichloropropane	5.00	5.13		ug/L		103	80 - 127	2	20
1,2,4-Trichlorobenzene	5.00	4.31		ug/L		86	79 - 130	9	20
1,2,4-Trimethylbenzene	5.00	5.04		ug/L		101	78 - 136	4	20
1,2-Dibromo-3-Chloropropane	5.00	4.46		ug/L		89	69 - 130	12	26
1,2-Dichlorobenzene	5.00	5.01		ug/L		100	80 - 129	4	14
1,2-Dichloroethane	5.00	5.01		ug/L		100	74 - 130	6	15
1,2-Dichloropropane	5.00	5.02		ug/L		100	80 - 130	2	14
1,3,5-Trimethylbenzene	5.00	4.73		ug/L		95	80 - 139	3	20
1,3-Dichlorobenzene	5.00	5.10		ug/L		102	80 - 130	3	12
1,3-Dichloropropane	5.00	5.15		ug/L		103	80 - 130	4	19
1,4-Dichlorobenzene	5.00	4.96		ug/L		99	80 - 129	4	11
2,2-Dichloropropane	5.00	4.28		ug/L		86	58 - 150	4	28
2-Chlorotoluene	5.00	4.72		ug/L		94	80 - 136	3	20
4-Chlorotoluene	5.00	4.87		ug/L		97	80 - 130	3	20
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 132	4	14

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

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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
Benzene	5.00	5.09		ug/L		102	73 - 133	4	20
Bromobenzene	5.00	4.77		ug/L		95	80 - 130	2	20
Bromoform	5.00	4.63		ug/L		93	69 - 137	8	20
Bromomethane	5.00	5.30		ug/L		106	68 - 120	4	18
Carbon tetrachloride	5.00	4.63		ug/L		93	71 - 132	4	15
Chlorobenzene	5.00	4.88		ug/L		98	80 - 123	5	12
Chlorobromomethane	5.00	4.79		ug/L		96	79 - 131	3	20
Chlorodibromomethane	5.00	4.84		ug/L		97	76 - 131	5	20
Chloroethane	5.00	5.28		ug/L		106	49 - 135	4	27
Chloroform	5.00	4.62		ug/L		92	80 - 130	2	20
Chloromethane	5.00	5.39		ug/L		108	32 - 143	4	23
cis-1,2-Dichloroethene	5.00	4.96		ug/L		99	72 - 130	0	20
cis-1,3-Dichloropropene	5.00	4.50		ug/L		90	66 - 141	5	22
Dibromomethane	5.00	4.83		ug/L		97	65 - 141	3	20
Dichlorobromomethane	5.00	4.84		ug/L		97	74 - 131	4	20
Dichlorodifluoromethane	5.00	5.37		ug/L		107	20 - 137	8	22
Ethylbenzene	5.00	4.80		ug/L		96	80 - 130	4	20
Ethylene Dibromide	5.00	5.05		ug/L		101	80 - 126	4	20
Hexachlorobutadiene	5.00	4.95		ug/L		99	72 - 138	3	20
Isopropylbenzene	5.00	4.80		ug/L		96	75 - 137	3	20
Methyl tert-butyl ether	5.00	4.63		ug/L		93	60 - 150	1	25
Methylene Chloride	5.00	4.98	J	ug/L		100	75 - 134	0	18
m-Xylene & p-Xylene	5.00	4.78		ug/L		96	78 - 130	3	20
Naphthalene	5.00	4.30		ug/L		86	64 - 132	6	20
n-Butylbenzene	5.00	4.61		ug/L		92	73 - 135	2	18
N-Propylbenzene	5.00	4.70		ug/L		94	77 - 142	3	20
o-Xylene	5.00	4.72		ug/L		94	80 - 139	3	20
sec-Butylbenzene	5.00	5.03		ug/L		101	78 - 140	3	20
Styrene	5.00	4.97		ug/L		99	74 - 136	3	20
tert-Butylbenzene	5.00	4.67		ug/L		93	77 - 140	4	20
Tetrachloroethene	5.00	4.65		ug/L		93	75 - 131	7	20
Toluene	5.00	5.19		ug/L		104	80 - 126	4	20
trans-1,2-Dichloroethene	5.00	4.83		ug/L		97	63 - 133	2	17
trans-1,3-Dichloropropene	5.00	4.52		ug/L		90	71 - 128	3	21
Trichloroethene	5.00	4.62		ug/L		92	72 - 136	3	14
Trichlorofluoromethane	5.00	5.31		ug/L		106	60 - 132	4	20
Vinyl chloride	5.00	5.10		ug/L		102	52 - 128	6	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324018/1-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324018

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Tetryl	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/17/19 10:52*	*09/27/19 11:34*	*1*

Lab Sample ID: LCS 320-324018/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324018

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	1.01		ug/L		101	74 - 120
1,3-Dinitrobenzene	1.00	0.986		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.698		ug/L		70	69 - 111
2,4-Dinitrotoluene	1.00	0.979		ug/L		98	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.03		ug/L		103	77 - 123
2-Nitrotoluene	1.00	0.923		ug/L		92	64 - 120
3-Nitrotoluene	1.00	1.01		ug/L		101	67 - 114
4-Nitrotoluene	1.00	0.922		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	1.04		ug/L		104	68 - 113
HMX	1.00	0.995		ug/L		100	67 - 115
RDX	1.00	1.07		ug/L		107	68 - 122
Nitrobenzene	1.00	0.960		ug/L		96	69 - 119
Tetryl	1.00	0.656		ug/L		66	66 - 105
Nitroglycerin	5.00	4.99		ug/L		100	85 - 115
PETN	5.00	4.76		ug/L		95	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

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

Lab Sample ID: LCSD 320-324018/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 327493
Prep Batch: 324018

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.996		ug/L		100	74 - 120	1	29
1,3-Dinitrobenzene			1.00	0.981		ug/L		98	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.693		ug/L		69	69 - 111	1	28
2,4-Dinitrotoluene			1.00	0.976		ug/L		98	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.949		ug/L		95	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.02		ug/L		102	77 - 123	2	27
2-Nitrotoluene			1.00	0.921		ug/L		92	64 - 120	0	36
3-Nitrotoluene			1.00	0.999		ug/L		100	67 - 114	1	31
4-Nitrotoluene			1.00	0.919		ug/L		92	67 - 115	0	32
4-Amino-2,6-dinitrotoluene			1.00	1.03		ug/L		103	68 - 113	1	30
HMX			1.00	0.981		ug/L		98	67 - 115	1	32
RDX			1.00	1.06		ug/L		106	68 - 122	0	32
Nitrobenzene			1.00	0.958		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.653	*	ug/L		65	66 - 105	1	26
Nitroglycerin			5.00	4.74		ug/L		95	85 - 115	5	15
PETN			5.00	4.65		ug/L		93	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: 580-89081-3 MS
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 326491
Prep Batch: 324018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	ND		1.01	0.948		ug/L		94	74 - 120
1,3-Dinitrobenzene	ND		1.01	0.964		ug/L		95	72 - 123
2,4,6-Trinitrotoluene	ND	F1	1.01	0.668	F1	ug/L		66	69 - 111
2,4-Dinitrotoluene	ND		1.01	0.934		ug/L		92	70 - 119
2,6-Dinitrotoluene	ND		1.01	0.905		ug/L		89	71 - 119
2-Amino-4,6-dinitrotoluene	ND		1.01	0.972		ug/L		96	77 - 123
2-Nitrotoluene	ND		1.01	0.883		ug/L		87	64 - 120
3-Nitrotoluene	ND		1.01	0.964		ug/L		95	67 - 114
4-Nitrotoluene	ND		1.01	0.867		ug/L		86	67 - 115
4-Amino-2,6-dinitrotoluene	ND		1.01	0.983		ug/L		97	68 - 113
HMX	ND		1.01	1.01		ug/L		99	67 - 115
RDX	ND		1.01	1.01		ug/L		100	68 - 122
Nitrobenzene	ND		1.01	0.938		ug/L		93	69 - 119
Tetryl	ND	* F1	1.01	0.627	F1	ug/L		62	66 - 105
Nitroglycerin	ND		5.06	4.65		ug/L		92	85 - 115
PETN	ND	F1	5.06	4.52		ug/L		89	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*93*		*79 - 111*

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 326491

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 324018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.05	1.03		ug/L		98	74 - 120	8	29
1,3-Dinitrobenzene	ND		1.05	1.03		ug/L		99	72 - 123	7	29
2,4,6-Trinitrotoluene	ND	F1	1.05	0.727		ug/L		70	69 - 111	9	28
2,4-Dinitrotoluene	ND		1.05	1.01		ug/L		97	70 - 119	8	30
2,6-Dinitrotoluene	ND		1.05	0.975		ug/L		93	71 - 119	7	29
2-Amino-4,6-dinitrotoluene	ND		1.05	1.04		ug/L		99	77 - 123	6	27
2-Nitrotoluene	ND		1.05	0.969		ug/L		93	64 - 120	9	36
3-Nitrotoluene	ND		1.05	1.06		ug/L		101	67 - 114	9	31
4-Nitrotoluene	ND		1.05	0.969		ug/L		93	67 - 115	11	32
4-Amino-2,6-dinitrotoluene	ND		1.05	1.06		ug/L		101	68 - 113	7	30
HMX	ND		1.05	1.08		ug/L		103	67 - 115	7	32
RDX	ND		1.05	1.09		ug/L		104	68 - 122	8	32
Nitrobenzene	ND		1.05	1.01		ug/L		97	69 - 119	8	31
Tetryl	ND	* F1	1.05	0.680	* F1	ug/L		65	66 - 105	8	26
Nitroglycerin	ND		5.23	4.68		ug/L		89	85 - 115	1	15
PETN	ND	F1	5.23	4.59		ug/L		88	84 - 117	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

Lab Sample ID: MB 320-327235/1-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 327235

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
3-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
HMX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
RDX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Tetryl	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitroglycerin	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1
PETN	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*09/30/19 07:12*	*10/01/19 21:00*	*1*

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

Lab Sample ID: PB 320-327235/3-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 327235

Analyte	PB Result	PB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 22:48	1

Surrogate	*PB %Recovery*	*PB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*09/30/19 07:12*	*10/01/19 22:48*	*1*

Lab Sample ID: LCS 320-327235/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 327235

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	0.957		ug/L		96	72 - 123
2,4,6-Trinitrotoluene	1.00	0.778		ug/L		78	69 - 111
2,4-Dinitrotoluene	1.00	0.930		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.930		ug/L		93	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.985		ug/L		99	77 - 123
2-Nitrotoluene	1.00	0.911		ug/L		91	64 - 120
3-Nitrotoluene	1.00	0.934		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.917		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.962		ug/L		96	68 - 113
HMX	1.00	0.973		ug/L		97	67 - 115
RDX	1.00	0.983		ug/L		98	68 - 122
Nitrobenzene	1.00	0.948		ug/L		95	69 - 119
Tetryl	1.00	0.739		ug/L		74	66 - 105
Nitroglycerin	5.00	4.86		ug/L		97	85 - 115
PETN	5.00	4.87		ug/L		97	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

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

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 327493

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene - RE	ND	H	1.00	0.910	H	ug/L		91	74 - 120
1,3-Dinitrobenzene - RE	ND	H	1.00	0.926	H	ug/L		92	72 - 123
2,4,6-Trinitrotoluene - RE	ND	H	1.00	0.760	H	ug/L		76	69 - 111
2,4-Dinitrotoluene - RE	ND	H	1.00	0.898	H	ug/L		90	70 - 119
2,6-Dinitrotoluene - RE	ND	H	1.00	0.887	H	ug/L		88	71 - 119
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.00	0.959	H	ug/L		96	77 - 123
2-Nitrotoluene - RE	ND	H	1.00	0.862	H	ug/L		86	64 - 120
3-Nitrotoluene - RE	ND	H	1.00	0.896	H	ug/L		89	67 - 114
4-Nitrotoluene - RE	ND	H	1.00	0.881	H	ug/L		88	67 - 115
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.00	0.935	H	ug/L		93	68 - 113
HMX - RE	ND	H	1.00	0.956	H	ug/L		95	67 - 115

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

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 327493

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
RDX - RE	ND	H	1.00	0.968	H	ug/L		97	68 - 122
Nitrobenzene - RE	ND	H	1.00	0.913	H	ug/L		91	69 - 119
Tetryl - RE	ND	H	1.00	0.707	H	ug/L		70	66 - 105
Nitroglycerin - RE	ND	H	5.02	4.54	H	ug/L		91	85 - 115
PETN - RE	ND	H	5.02	4.53	H	ug/L		90	84 - 117

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 327493

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene - RE	ND	H	1.02	0.893	H	ug/L		88	74 - 120	2	29
1,3-Dinitrobenzene - RE	ND	H	1.02	0.913	H	ug/L		90	72 - 123	1	29
2,4,6-Trinitrotoluene - RE	ND	H	1.02	0.741	H	ug/L		73	69 - 111	2	28
2,4-Dinitrotoluene - RE	ND	H	1.02	0.888	H	ug/L		87	70 - 119	1	30
2,6-Dinitrotoluene - RE	ND	H	1.02	0.889	H	ug/L		87	71 - 119	0	29
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.02	0.922	H	ug/L		91	77 - 123	4	27
2-Nitrotoluene - RE	ND	H	1.02	0.847	H	ug/L		83	64 - 120	2	36
3-Nitrotoluene - RE	ND	H	1.02	0.878	H	ug/L		86	67 - 114	2	31
4-Nitrotoluene - RE	ND	H	1.02	0.860	H	ug/L		84	67 - 115	2	32
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.02	0.894	H	ug/L		88	68 - 113	5	30
HMX - RE	ND	H	1.02	0.939	H	ug/L		92	67 - 115	2	32
RDX - RE	ND	H	1.02	0.956	H	ug/L		94	68 - 122	1	32
Nitrobenzene - RE	ND	H	1.02	0.885	H	ug/L		87	69 - 119	3	31
Tetryl - RE	ND	H	1.02	0.694	H	ug/L		68	66 - 105	2	26
Nitroglycerin - RE	ND	H	5.09	4.41	H	ug/L		87	85 - 115	3	15
PETN - RE	ND	H	5.09	4.40	H	ug/L		87	84 - 117	3	15

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

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: MB 280-471409/13
Matrix: Water
Analysis Batch: 471409

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 12:20	1

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	ND		ug/L		97	70 - 130

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: LCS 280-471409/14
Matrix: Water
Analysis Batch: 471409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0520	J	ug/L		104	70 - 130

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LC15SW
Lab Sample ID: 580-89081-1
Date Collected: 09/10/19 10:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 14:15	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/01/19 23:41	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:33	CBB	TAL DEN

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 04:32	DSO	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 15:09	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 00:35	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:39	CBB	TAL DEN

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3
Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 04:59	DSO	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 16:03	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 01:28	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:59	CBB	TAL DEN

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4
Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311739	09/19/19 22:18	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 20:31	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 05:57	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 15:04	CBB	TAL DEN

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 091019TB
Lab Sample ID: 580-89081-5
Date Collected: 09/10/19 00:00
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311739	09/19/19 22:44	JSM	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89081-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	08-05-20
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-18-15	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State Program	354	11-30-19

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89081-1	03Q19LC15SW	Water	09/10/19 10:10	09/11/19 13:33	
580-89081-2	03Q19LCMW03SW	Water	09/10/19 13:10	09/11/19 13:33	
580-89081-3	03Q19LCMW03DW	Water	09/10/19 12:30	09/11/19 13:33	
580-89081-4	03Q19LCMW140W	Water	09/10/19 13:00	09/11/19 13:33	
580-89081-5	091019TB	Water	09/10/19 00:00	09/11/19 13:33	

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LC15SW	9/10/19	1010	G	W			X		X	3	
03Q19LCMW03SW		1310					X	X	X	6	
03Q19LCMW03DW		1230								14	MS/MSD
03QLCMW14OW		1300								6	
091019TB		–								3	

580-89081 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: Data Package 3 3.5,4.8

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/10/19 1900	PBS		9-11-19 / 1256	M.E
2		9-11-19 / 1333	M.E		9/11/19 1333	TAPOE
3		Date/Time:	Company		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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LCISSW	9/10/19	1010	G	W			X		X	3	
03Q19LCMW03SW		1310					X	X	X	6	
03Q19LCMW03DW		1230								14	MS/MSD
03QLCMW140W		1300								6	
091019TB		–								3	

580-89081 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: Data Package 3 3.5, 4.8

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Tommy Laird	9/10/19 1900	PBS		9-11-19 / 1256	M.E
2		9-11-19 / 1333	M.E		9/11/19 1333	TAL
3		9/11/19 1730	TAL		9/12/19 0930	TAL

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

Cooler Temperature(s) °C and Other Remarks:

IR5 = -0.5/-0.4

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89081-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/27/2019			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
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:

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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
03Q19LC15SW (580-89081-1)	9/10/19	10:10 Pacific		Water			X	1	
03Q19LCMW03SW (580-89081-2)	9/10/19	13:10 Pacific		Water			X	1	
03Q19LCMW03DW (580-89081-3)	9/10/19	12:30 Pacific		Water			X	1	
03Q19LCMW140W (580-89081-4)	9/10/19	13:00 Pacific		Water			X	1	

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: [signature]	Date/Time: 9/19/19 1630	Company: ETPS	Received by: [signature]	Date/Time: 9/18/19 0915	Company: TA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
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: 1.4, to, 1.8, ~~SZ~~, 9/18/19

Ver: 01/16/2019

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: 580-69794.1
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 #: 580-89081-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 9/27/2019			
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	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:							
03Q19LC15SW (580-89081-1)	9/10/19	10:10 Pacific		Water			X	X	3	
03Q19LC035W (580-89081-2)	9/10/19	13:10 Pacific		Water			X	X	3	
03Q19LC03DW (580-89081-3)	9/10/19	12:30 Pacific		Water			X	X	3	
03Q19LC03DW (580-89081-3MS)	9/10/19	12:30 Pacific	MS	Water				X	2	
03Q19LC03DW (580-89081-3MSD)	9/10/19	12:30 Pacific	MSD	Water				X	2	
03Q19LC140W (580-89081-4)	9/10/19	13:00 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:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/11/19 1700	TAPOR			
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: 580-89081-1

Login Number: 89081

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Antonson, Angeline D

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: 580-89081-1

Login Number: 89081
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89081-1

Login Number: 89081
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/12/19 01:07 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	481188, 481189
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	1.9c, 1.5c
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

580-89081 Field Sheet

Tracking # : 1028 3892 0144

Job: ____

SO / PO / FO / 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: AK10 Corr. Factor: NA

Ice ✓ Wet ✓ Gel ____ Other ____

Cooler Custody Seal: 481188

Sample Custody Seal: —

Cooler ID: 1 of 2

Temp Observed: 1.9 Corrected: 1.9

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: PR Date: 09/12/19

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

WIC

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Sacramento
Sample Receiving Notes

Tracking # : 1028 3892 0155

SO / PO / FO / 2-Day / Ground / UPS / CDO / Courier

Job: _____

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: AK10 Corr. Factor: NA

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 481189

Sample Custody Seal: —

Cooler ID: 2 of 2

Temp Observed: 1.5 Corrected: 1.5

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: PK Date: 9/12/19

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

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ANALYTICAL REPORT

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

Laboratory Job ID: 580-89177-1
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:
10/10/2019 5:14:54 PM

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

Table of Contents

Job ID: 580-89177-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-89177-1

Comments
No additional comments.

Receipt
The samples were received on 9/12/2019 12:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.5º C, 2.7º C, 3.4º C and 3.8º C.

GC/MS VOA
Method(s) 8260C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-311759 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 580-311759 was outside control limits. Sample non-homogeneity is suspected.

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

HPLC/IC
Method(s) 8330B: The laboratory control sample duplicate (LCSD) for preparation batch 320-324018 and analytical batch 320-327493 recovered outside control limits for the following analytes:Tetryl . The associated samples were re-prepared and/or re-analyzed outside holding time. Both sets of data have been reported.

Method(s) 8330B: The laboratory control sample duplicate (LCSD) for preparation batch 320-324273 and analytical batch 320-326750 recovered outside control limits for the following analytes: 2,4,6-Trinitrotoluene and Tetryl. The associated samples were re-prepared outside holding time. Both sets of data have been reported.

Method(s) 8330B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-324273 and analytical batch 320-326750 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8330-Prep: The following samples were re-prepared outside of preparation holding time due to a potential label switch occurring between sample 580-89081-3MSD and 580-89177-3 for method 8330B water in preparation batch 320-327235. 03Q19LCMW04SW (580-89177-1), 03Q19LCMW04DW (580-89177-2), 03Q19LCMW09SW (580-89177-3), 03Q19LCMW09DW (580-89177-4), 03Q19L4MW17W (580-89177-5) and 03Q19L4MW18W (580-89177-6).

Method(s) 8330B: The matrix spike (MS) / matrix spike duplicate (MSD) recoveries for preparation batch 320-324018 and analytical batch 320-326491 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8330B: During analysis of 320-324018 it became apparent that the extracts for the matrix spike duplicate (MSD) and 580-89177-B-3-A were switched. All samples in the affected batch were re-extracted outside of hold time and both sets of data are being reported. The reported data from the original extraction will be corrected to properly reflect the actual QC and samples tested since the re-extraction confirmed the label switch between the two samples. 03Q19LCMW09SW (580-89177-3) and (580-89081-A-3-A MSD)

Method(s) 8330-Prep: The following samples were re-prepared outside of preparation holding time due to the initial batch Laboratory Control Sample (LCS) recovering low for 2,4,6-Trinitrotoluene and/or Tetryl for method 8330B aqueous in preparation batch 320-328371: 03Q19L4MW01AW (580-89177-7), 03Q19L4MW01BW (580-89177-8), 03Q19L4MW07BW (580-89177-9), 03Q19L4MW07BW (580-89177-9[MS]), 03Q19L4MW07BW (580-89177-9[MSD]) and 03Q19L4MW145W (580-89177-10).

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

LCMS

Job ID: 580-89177-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

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: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time

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.
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
Project/Site: Camp Bonneville Groundwater 2019-2020

Job ID: 580-89177-1

Client Sample ID: 03Q19LCMW04SW
Date Collected: 09/11/19 11:39
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-1
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			09/20/19 00:56	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 00:56	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 00:56	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 00:56	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 00:56	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 00:56	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 00:56	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 00:56	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 00:56	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 00:56	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 00:56	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 00:56	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 00:56	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 00:56	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 00:56	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 00:56	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 00:56	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 00:56	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 00:56	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 00:56	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 00:56	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 00:56	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 00:56	1
Benzene	ND		0.20		ug/L			09/20/19 00:56	1
Bromobenzene	ND		0.20		ug/L			09/20/19 00:56	1
Bromoform	ND		0.50		ug/L			09/20/19 00:56	1
Bromomethane	ND		0.50		ug/L			09/20/19 00:56	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 00:56	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 00:56	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 00:56	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 00:56	1
Chloroethane	ND		0.50		ug/L			09/20/19 00:56	1
Chloroform	ND		0.20		ug/L			09/20/19 00:56	1
Chloromethane	ND		0.50		ug/L			09/20/19 00:56	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 00:56	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 00:56	1
Dibromomethane	ND		0.20		ug/L			09/20/19 00:56	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 00:56	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 00:56	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 00:56	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 00:56	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 00:56	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 00:56	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 00:56	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 00:56	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 00:56	1
Naphthalene	ND		1.0		ug/L			09/20/19 00:56	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 00:56	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 00:56	1

Client Sample ID: 03Q19LCMW04SW
Lab Sample ID: 580-89177-1

Date Collected: 09/11/19 11:39
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 00:56	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 00:56	1
Styrene	ND		0.50		ug/L			09/20/19 00:56	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 00:56	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 00:56	1
Toluene	ND		0.20		ug/L			09/20/19 00:56	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 00:56	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 00:56	1
Trichloroethene	ND		0.20		ug/L			09/20/19 00:56	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 00:56	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/20/19 00:56*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*09/20/19 00:56*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*09/20/19 00:56*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 00:56*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*		*09/20/19 00:56*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 21:24	1
2-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 21:24	1
3-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 21:24	1
4-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 21:24	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/27/19 21:24	1
Nitroglycerin	ND		0.67		ug/L		09/17/19 10:52	09/27/19 21:24	1
PETN	ND		0.67		ug/L		09/17/19 10:52	09/27/19 21:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*91*		*79 - 111*	*09/17/19 10:52*	*09/27/19 21:24*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		09/30/19 07:12	10/02/19 06:50	1
2-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 06:50	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW04SW
Lab Sample ID: 580-89177-1
Date Collected: 09/11/19 11:39
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 06:50	1
4-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 06:50	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 06:50	1
Nitroglycerin	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 06:50	1
PETN	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 06:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*09/30/19 07:12*	*10/02/19 06:50*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 15:39	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19LCMW04DW
Date Collected: 09/11/19 11:06
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-2
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			09/20/19 16:57	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 16:57	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 16:57	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 16:57	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 16:57	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 16:57	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 16:57	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 16:57	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 16:57	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 16:57	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 16:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 16:57	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:57	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 16:57	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 16:57	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 16:57	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:57	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 16:57	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:57	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 16:57	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 16:57	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 16:57	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 16:57	1
Benzene	ND		0.20		ug/L			09/20/19 16:57	1
Bromobenzene	ND		0.20		ug/L			09/20/19 16:57	1
Bromoform	ND		0.50		ug/L			09/20/19 16:57	1
Bromomethane	ND		0.50		ug/L			09/20/19 16:57	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 16:57	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 16:57	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 16:57	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 16:57	1
Chloroethane	ND		0.50		ug/L			09/20/19 16:57	1
Chloroform	ND		0.20		ug/L			09/20/19 16:57	1
Chloromethane	ND		0.50		ug/L			09/20/19 16:57	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:57	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:57	1
Dibromomethane	ND		0.20		ug/L			09/20/19 16:57	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 16:57	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 16:57	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 16:57	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 16:57	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 16:57	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 16:57	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 16:57	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 16:57	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 16:57	1
Naphthalene	ND		1.0		ug/L			09/20/19 16:57	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 16:57	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 16:57	1

Client Sample ID: 03Q19LCMW04DW
Lab Sample ID: 580-89177-2

Date Collected: 09/11/19 11:06
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 16:57	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 16:57	1
Styrene	ND		0.50		ug/L			09/20/19 16:57	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 16:57	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 16:57	1
Toluene	ND		0.20		ug/L			09/20/19 16:57	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:57	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:57	1
Trichloroethene	ND		0.20		ug/L			09/20/19 16:57	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 16:57	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*09/20/19 16:57*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/20/19 16:57*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*09/20/19 16:57*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 16:57*	*1*
Trifluorotoluene (Surr)	*111*		*80 - 120*		*09/20/19 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		09/17/19 10:52	09/27/19 22:18	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 22:18	1
2-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 22:18	1
3-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 22:18	1
4-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 22:18	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/27/19 22:18	1
Nitroglycerin	ND		0.66		ug/L		09/17/19 10:52	09/27/19 22:18	1
PETN	ND		0.66		ug/L		09/17/19 10:52	09/27/19 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/17/19 10:52*	*09/27/19 22:18*	*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		09/30/19 07:12	10/02/19 08:38	1
1,3-Dinitrobenzene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
2,4,6-Trinitrotoluene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
2,4-Dinitrotoluene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
2,6-Dinitrotoluene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		09/30/19 07:12	10/02/19 08:38	1
2-Nitrotoluene	ND	H	0.53		ug/L		09/30/19 07:12	10/02/19 08:38	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW04DW
Lab Sample ID: 580-89177-2
Date Collected: 09/11/19 11:06
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.53		ug/L		09/30/19 07:12	10/02/19 08:38	1
4-Nitrotoluene	ND	H	0.53		ug/L		09/30/19 07:12	10/02/19 08:38	1
4-Amino-2,6-dinitrotoluene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
HMX	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
RDX	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
Nitrobenzene	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
Tetryl	ND	H	0.11		ug/L		09/30/19 07:12	10/02/19 08:38	1
Nitroglycerin	ND	H	0.68		ug/L		09/30/19 07:12	10/02/19 08:38	1
PETN	ND	H	0.68		ug/L		09/30/19 07:12	10/02/19 08:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*09/30/19 07:12*	*10/02/19 08:38*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 15:54	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19LCMW09SW
Date Collected: 09/11/19 10:22
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-3
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			09/20/19 17:23	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 17:23	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 17:23	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 17:23	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 17:23	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 17:23	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 17:23	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 17:23	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 17:23	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 17:23	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 17:23	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 17:23	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:23	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 17:23	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 17:23	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 17:23	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:23	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 17:23	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:23	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 17:23	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 17:23	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 17:23	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 17:23	1
Benzene	ND		0.20		ug/L			09/20/19 17:23	1
Bromobenzene	ND		0.20		ug/L			09/20/19 17:23	1
Bromoform	ND		0.50		ug/L			09/20/19 17:23	1
Bromomethane	ND		0.50		ug/L			09/20/19 17:23	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 17:23	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 17:23	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 17:23	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 17:23	1
Chloroethane	ND		0.50		ug/L			09/20/19 17:23	1
Chloroform	ND		0.20		ug/L			09/20/19 17:23	1
Chloromethane	ND		0.50		ug/L			09/20/19 17:23	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 17:23	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 17:23	1
Dibromomethane	ND		0.20		ug/L			09/20/19 17:23	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 17:23	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 17:23	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 17:23	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 17:23	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 17:23	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 17:23	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 17:23	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 17:23	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 17:23	1
Naphthalene	ND		1.0		ug/L			09/20/19 17:23	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 17:23	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 17:23	1

Client Sample ID: 03Q19LCMW09SW
Lab Sample ID: 580-89177-3
Date Collected: 09/11/19 10:22
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 17:23	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 17:23	1
Styrene	ND		0.50		ug/L			09/20/19 17:23	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 17:23	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 17:23	1
Toluene	ND		0.20		ug/L			09/20/19 17:23	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 17:23	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 17:23	1
Trichloroethene	ND		0.20		ug/L			09/20/19 17:23	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 17:23	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 17:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/20/19 17:23*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*09/20/19 17:23*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/20/19 17:23*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/20/19 17:23*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*09/20/19 17:23*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 19:37	1
2-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 19:37	1
3-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 19:37	1
4-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/27/19 19:37	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/27/19 19:37	1
Nitroglycerin	ND		0.66		ug/L		09/17/19 10:52	09/27/19 19:37	1
PETN	ND		0.66		ug/L		09/17/19 10:52	09/27/19 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/17/19 10:52*	*09/27/19 19:37*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 09:31	1
2-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 09:31	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW09SW
Lab Sample ID: 580-89177-3
Date Collected: 09/11/19 10:22
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 09:31	1
4-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 09:31	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 09:31	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 09:31	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 09:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*09/30/19 07:12*	*10/02/19 09:31*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:00	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19LCMW09DW
Date Collected: 09/11/19 09:40
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-4
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			09/20/19 17:50	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 17:50	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 17:50	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 17:50	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 17:50	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 17:50	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 17:50	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 17:50	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 17:50	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 17:50	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 17:50	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 17:50	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:50	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 17:50	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 17:50	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 17:50	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:50	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 17:50	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 17:50	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 17:50	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 17:50	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 17:50	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 17:50	1
Benzene	ND		0.20		ug/L			09/20/19 17:50	1
Bromobenzene	ND		0.20		ug/L			09/20/19 17:50	1
Bromoform	ND		0.50		ug/L			09/20/19 17:50	1
Bromomethane	ND		0.50		ug/L			09/20/19 17:50	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 17:50	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 17:50	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 17:50	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 17:50	1
Chloroethane	ND		0.50		ug/L			09/20/19 17:50	1
Chloroform	ND		0.20		ug/L			09/20/19 17:50	1
Chloromethane	ND		0.50		ug/L			09/20/19 17:50	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 17:50	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 17:50	1
Dibromomethane	ND		0.20		ug/L			09/20/19 17:50	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 17:50	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 17:50	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 17:50	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 17:50	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 17:50	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 17:50	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 17:50	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 17:50	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 17:50	1
Naphthalene	ND		1.0		ug/L			09/20/19 17:50	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 17:50	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 17:50	1

Client Sample ID: 03Q19LCMW09DW
Lab Sample ID: 580-89177-4
Date Collected: 09/11/19 09:40
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 17:50	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 17:50	1
Styrene	ND		0.50		ug/L			09/20/19 17:50	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 17:50	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 17:50	1
Toluene	ND		0.20		ug/L			09/20/19 17:50	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 17:50	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 17:50	1
Trichloroethene	ND		0.20		ug/L			09/20/19 17:50	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 17:50	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*09/20/19 17:50*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/20/19 17:50*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/20/19 17:50*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/20/19 17:50*	*1*
Trifluorotoluene (Surr)	*112*		*80 - 120*		*09/20/19 17:50*	*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		09/17/19 10:52	09/28/19 00:05	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/28/19 00:05	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/28/19 00:05	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/28/19 00:05	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/28/19 00:05	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/28/19 00:05	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/28/19 00:05	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/28/19 00:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/17/19 10:52*	*09/28/19 00:05*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 10:24	1
2-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 10:24	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LCMW09DW
Lab Sample ID: 580-89177-4
Date Collected: 09/11/19 09:40
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 10:24	1
4-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 10:24	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 10:24	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 10:24	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*09/30/19 07:12*	*10/02/19 10:24*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:05	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19L4MW17W
Date Collected: 09/11/19 12:54
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-5
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			09/20/19 18:16	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 18:16	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 18:16	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 18:16	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 18:16	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 18:16	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 18:16	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 18:16	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 18:16	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 18:16	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 18:16	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 18:16	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:16	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 18:16	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 18:16	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 18:16	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:16	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 18:16	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:16	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 18:16	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 18:16	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 18:16	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 18:16	1
Benzene	ND		0.20		ug/L			09/20/19 18:16	1
Bromobenzene	ND		0.20		ug/L			09/20/19 18:16	1
Bromoform	ND		0.50		ug/L			09/20/19 18:16	1
Bromomethane	ND		0.50		ug/L			09/20/19 18:16	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 18:16	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 18:16	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 18:16	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 18:16	1
Chloroethane	ND		0.50		ug/L			09/20/19 18:16	1
Chloroform	ND		0.20		ug/L			09/20/19 18:16	1
Chloromethane	ND		0.50		ug/L			09/20/19 18:16	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 18:16	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 18:16	1
Dibromomethane	ND		0.20		ug/L			09/20/19 18:16	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 18:16	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 18:16	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 18:16	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 18:16	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 18:16	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 18:16	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 18:16	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 18:16	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 18:16	1
Naphthalene	ND		1.0		ug/L			09/20/19 18:16	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 18:16	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 18:16	1

Client Sample ID: 03Q19L4MW17W
Lab Sample ID: 580-89177-5

Date Collected: 09/11/19 12:54
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 18:16	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 18:16	1
Styrene	ND		0.50		ug/L			09/20/19 18:16	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 18:16	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 18:16	1
Toluene	ND		0.20		ug/L			09/20/19 18:16	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 18:16	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 18:16	1
Trichloroethene	ND		0.20		ug/L			09/20/19 18:16	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 18:16	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/20/19 18:16*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 18:16*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*09/20/19 18:16*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 18:16*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*09/20/19 18:16*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/17/19 10:52	09/28/19 00:59	1
2-Nitrotoluene	ND		0.52		ug/L		09/17/19 10:52	09/28/19 00:59	1
3-Nitrotoluene	ND		0.52		ug/L		09/17/19 10:52	09/28/19 00:59	1
4-Nitrotoluene	ND		0.52		ug/L		09/17/19 10:52	09/28/19 00:59	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/28/19 00:59	1
Nitroglycerin	ND		0.68		ug/L		09/17/19 10:52	09/28/19 00:59	1
PETN	ND		0.68		ug/L		09/17/19 10:52	09/28/19 00:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/28/19 00:59*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 11:18	1
2-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 11:18	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW17W
Lab Sample ID: 580-89177-5
Date Collected: 09/11/19 12:54
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 11:18	1
4-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 11:18	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 11:18	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 11:18	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*09/30/19 07:12*	*10/02/19 11:18*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:10	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW18W
Lab Sample ID: 580-89177-6
Date Collected: 09/11/19 13:36
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 18:43	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 18:43	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 18:43	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 18:43	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 18:43	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 18:43	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 18:43	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 18:43	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 18:43	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 18:43	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 18:43	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 18:43	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:43	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 18:43	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 18:43	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 18:43	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:43	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 18:43	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 18:43	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 18:43	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 18:43	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 18:43	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 18:43	1
Benzene	ND		0.20		ug/L			09/20/19 18:43	1
Bromobenzene	ND		0.20		ug/L			09/20/19 18:43	1
Bromoform	ND		0.50		ug/L			09/20/19 18:43	1
Bromomethane	ND		0.50		ug/L			09/20/19 18:43	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 18:43	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 18:43	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 18:43	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 18:43	1
Chloroethane	ND		0.50		ug/L			09/20/19 18:43	1
Chloroform	ND		0.20		ug/L			09/20/19 18:43	1
Chloromethane	ND		0.50		ug/L			09/20/19 18:43	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 18:43	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 18:43	1
Dibromomethane	ND		0.20		ug/L			09/20/19 18:43	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 18:43	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 18:43	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 18:43	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 18:43	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 18:43	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 18:43	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 18:43	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 18:43	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 18:43	1
Naphthalene	ND		1.0		ug/L			09/20/19 18:43	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 18:43	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 18:43	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19L4MW18W
Date Collected: 09/11/19 13:36
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-6
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			09/20/19 18:43	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 18:43	1
Styrene	ND		0.50		ug/L			09/20/19 18:43	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 18:43	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 18:43	1
Toluene	ND		0.20		ug/L			09/20/19 18:43	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 18:43	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 18:43	1
Trichloroethene	ND		0.20		ug/L			09/20/19 18:43	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 18:43	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/20/19 18:43*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 18:43*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/20/19 18:43*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 18:43*	*1*
Trifluorotoluene (Surr)	*108*		*80 - 120*		*09/20/19 18:43*	*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		09/17/19 10:52	09/28/19 01:53	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/28/19 01:53	1
2-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/28/19 01:53	1
3-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/28/19 01:53	1
4-Nitrotoluene	ND		0.51		ug/L		09/17/19 10:52	09/28/19 01:53	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/28/19 01:53	1
Nitroglycerin	ND		0.66		ug/L		09/17/19 10:52	09/28/19 01:53	1
PETN	ND		0.66		ug/L		09/17/19 10:52	09/28/19 01:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/28/19 01:53*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 12:12	1
2-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 12:12	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW18W
Lab Sample ID: 580-89177-6
Date Collected: 09/11/19 13:36
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 12:12	1
4-Nitrotoluene	ND	H	0.51		ug/L		09/30/19 07:12	10/02/19 12:12	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 12:12	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 12:12	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*09/30/19 07:12*	*10/02/19 12:12*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:30	1

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

Job ID: 580-89177-1

Client Sample ID: 03Q19L4MW01AW
Date Collected: 09/11/19 15:05
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-7
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			09/20/19 19:09	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 19:09	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 19:09	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 19:09	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 19:09	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 19:09	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 19:09	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 19:09	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 19:09	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 19:09	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 19:09	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 19:09	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:09	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 19:09	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 19:09	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 19:09	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:09	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 19:09	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:09	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 19:09	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 19:09	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 19:09	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 19:09	1
Benzene	ND		0.20		ug/L			09/20/19 19:09	1
Bromobenzene	ND		0.20		ug/L			09/20/19 19:09	1
Bromoform	ND		0.50		ug/L			09/20/19 19:09	1
Bromomethane	ND		0.50		ug/L			09/20/19 19:09	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 19:09	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 19:09	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 19:09	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 19:09	1
Chloroethane	ND		0.50		ug/L			09/20/19 19:09	1
Chloroform	ND		0.20		ug/L			09/20/19 19:09	1
Chloromethane	ND		0.50		ug/L			09/20/19 19:09	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 19:09	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 19:09	1
Dibromomethane	ND		0.20		ug/L			09/20/19 19:09	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 19:09	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 19:09	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 19:09	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 19:09	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 19:09	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 19:09	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 19:09	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 19:09	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 19:09	1
Naphthalene	ND		1.0		ug/L			09/20/19 19:09	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 19:09	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 19:09	1

Client Sample ID: 03Q19L4MW01AW
Lab Sample ID: 580-89177-7

Date Collected: 09/11/19 15:05
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 19:09	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 19:09	1
Styrene	ND		0.50		ug/L			09/20/19 19:09	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 19:09	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 19:09	1
Toluene	ND		0.20		ug/L			09/20/19 19:09	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 19:09	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 19:09	1
Trichloroethene	ND		0.20		ug/L			09/20/19 19:09	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 19:09	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/20/19 19:09*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*09/20/19 19:09*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*09/20/19 19:09*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/20/19 19:09*	*1*
Trifluorotoluene (Surr)	*113*		*80 - 120*		*09/20/19 19:09*	*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		09/18/19 08:06	09/28/19 21:32	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/18/19 08:06	09/28/19 21:32	1
2-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 21:32	1
3-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 21:32	1
4-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 21:32	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
HMX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
RDX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
Nitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
Tetryl	ND	*	0.10		ug/L		09/18/19 08:06	09/28/19 21:32	1
Nitroglycerin	ND		0.67		ug/L		09/18/19 08:06	09/28/19 21:32	1
PETN	ND		0.67		ug/L		09/18/19 08:06	09/28/19 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/18/19 08:06*	*09/28/19 21:32*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 09:18	1
2-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 09:18	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW01AW
Lab Sample ID: 580-89177-7
Date Collected: 09/11/19 15:05
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 09:18	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 09:18	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
RDX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 09:18	1
Nitroglycerin	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 09:18	1
PETN	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 09:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*10/04/19 07:06*	*10/09/19 09:18*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**1.3**		0.50		ug/L			09/23/19 16:35	10

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

Job ID: 580-89177-1

Client Sample ID: 03Q19L4MW01BW
Date Collected: 09/11/19 15:33
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-8
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			09/20/19 19:36	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 19:36	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 19:36	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 19:36	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 19:36	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 19:36	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 19:36	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 19:36	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 19:36	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 19:36	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 19:36	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 19:36	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:36	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 19:36	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 19:36	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 19:36	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:36	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 19:36	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 19:36	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 19:36	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 19:36	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 19:36	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 19:36	1
Benzene	ND		0.20		ug/L			09/20/19 19:36	1
Bromobenzene	ND		0.20		ug/L			09/20/19 19:36	1
Bromoform	ND		0.50		ug/L			09/20/19 19:36	1
Bromomethane	ND		0.50		ug/L			09/20/19 19:36	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 19:36	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 19:36	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 19:36	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 19:36	1
Chloroethane	ND		0.50		ug/L			09/20/19 19:36	1
Chloroform	ND		0.20		ug/L			09/20/19 19:36	1
Chloromethane	ND		0.50		ug/L			09/20/19 19:36	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 19:36	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 19:36	1
Dibromomethane	ND		0.20		ug/L			09/20/19 19:36	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 19:36	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 19:36	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 19:36	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 19:36	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 19:36	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 19:36	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 19:36	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 19:36	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 19:36	1
Naphthalene	ND		1.0		ug/L			09/20/19 19:36	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 19:36	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 19:36	1

Client Sample ID: 03Q19L4MW01BW
Lab Sample ID: 580-89177-8

Date Collected: 09/11/19 15:33
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 19:36	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 19:36	1
Styrene	ND		0.50		ug/L			09/20/19 19:36	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 19:36	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 19:36	1
Toluene	ND		0.20		ug/L			09/20/19 19:36	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 19:36	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 19:36	1
Trichloroethene	ND		0.20		ug/L			09/20/19 19:36	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 19:36	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/20/19 19:36*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 19:36*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*09/20/19 19:36*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 19:36*	*1*
Trifluorotoluene (Surr)	*104*		*80 - 120*		*09/20/19 19:36*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/18/19 08:06	09/28/19 22:26	1
2-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 22:26	1
3-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 22:26	1
4-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 22:26	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
HMX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
RDX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
Nitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
Tetryl	ND	*	0.10		ug/L		09/18/19 08:06	09/28/19 22:26	1
Nitroglycerin	ND		0.65		ug/L		09/18/19 08:06	09/28/19 22:26	1
PETN	ND		0.65		ug/L		09/18/19 08:06	09/28/19 22:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/18/19 08:06*	*09/28/19 22:26*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 10:12	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 10:12	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW01BW
Lab Sample ID: 580-89177-8
Date Collected: 09/11/19 15:33
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 10:12	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 10:12	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
RDX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 10:12	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 10:12	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 10:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*10/04/19 07:06*	*10/09/19 10:12*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:40	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW07BW
Lab Sample ID: 580-89177-9
Date Collected: 09/11/19 14:19
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 20:02	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 20:02	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 20:02	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 20:02	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 20:02	1
1,1-Dichloroethene	ND	F1	0.20		ug/L			09/20/19 20:02	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 20:02	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 20:02	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 20:02	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 20:02	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 20:02	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 20:02	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 20:02	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 20:02	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 20:02	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 20:02	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 20:02	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 20:02	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 20:02	1
2,2-Dichloropropane	ND	F1	0.50		ug/L			09/20/19 20:02	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 20:02	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 20:02	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 20:02	1
Benzene	ND		0.20		ug/L			09/20/19 20:02	1
Bromobenzene	ND		0.20		ug/L			09/20/19 20:02	1
Bromoform	ND		0.50		ug/L			09/20/19 20:02	1
Bromomethane	ND	F1	0.50		ug/L			09/20/19 20:02	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 20:02	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 20:02	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 20:02	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 20:02	1
Chloroethane	ND		0.50		ug/L			09/20/19 20:02	1
Chloroform	ND		0.20		ug/L			09/20/19 20:02	1
Chloromethane	ND		0.50		ug/L			09/20/19 20:02	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 20:02	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 20:02	1
Dibromomethane	ND		0.20		ug/L			09/20/19 20:02	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 20:02	1
Dichlorodifluoromethane	ND	F1	0.40		ug/L			09/20/19 20:02	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 20:02	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 20:02	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 20:02	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 20:02	1
Methyl tert-butyl ether	ND	F2 F1	0.30		ug/L			09/20/19 20:02	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 20:02	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 20:02	1
Naphthalene	ND		1.0		ug/L			09/20/19 20:02	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 20:02	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 20:02	1

Client Sample ID: 03Q19L4MW07BW
Lab Sample ID: 580-89177-9

Date Collected: 09/11/19 14:19
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 20:02	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 20:02	1
Styrene	ND		0.50		ug/L			09/20/19 20:02	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 20:02	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 20:02	1
Toluene	ND		0.20		ug/L			09/20/19 20:02	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 20:02	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 20:02	1
Trichloroethene	ND		0.20		ug/L			09/20/19 20:02	1
Trichlorofluoromethane	ND	F1	0.50		ug/L			09/20/19 20:02	1
Vinyl chloride	ND	F1	0.020		ug/L			09/20/19 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/20/19 20:02*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/20/19 20:02*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*09/20/19 20:02*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/20/19 20:02*	*1*
Trifluorotoluene (Surr)	*103*		*80 - 120*		*09/20/19 20:02*	*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		09/18/19 08:06	09/28/19 23:20	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/18/19 08:06	09/28/19 23:20	1
2-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 23:20	1
3-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 23:20	1
4-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/28/19 23:20	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
HMX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
RDX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
Nitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
Tetryl	ND	* F1	0.10		ug/L		09/18/19 08:06	09/28/19 23:20	1
Nitroglycerin	ND		0.66		ug/L		09/18/19 08:06	09/28/19 23:20	1
PETN	ND		0.66		ug/L		09/18/19 08:06	09/28/19 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*09/18/19 08:06*	*09/28/19 23:20*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 11:06	1
2-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 11:06	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW07BW
Lab Sample ID: 580-89177-9
Date Collected: 09/11/19 14:19
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 11:06	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 11:06	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
RDX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 11:06	1
Nitroglycerin	ND	H	0.67		ug/L		10/04/19 07:06	10/09/19 11:06	1
PETN	ND	H	0.67		ug/L		10/04/19 07:06	10/09/19 11:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 11:06*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**1.3**		0.50		ug/L			09/23/19 16:45	10

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

Job ID: 580-89177-1

Client Sample ID: 03Q19L4MW145W
Date Collected: 09/11/19 17:00
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-10
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			09/20/19 21:22	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 21:22	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 21:22	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 21:22	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 21:22	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 21:22	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 21:22	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 21:22	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 21:22	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 21:22	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 21:22	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 21:22	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:22	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 21:22	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 21:22	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 21:22	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:22	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 21:22	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:22	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 21:22	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 21:22	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 21:22	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 21:22	1
Benzene	ND		0.20		ug/L			09/20/19 21:22	1
Bromobenzene	ND		0.20		ug/L			09/20/19 21:22	1
Bromoform	ND		0.50		ug/L			09/20/19 21:22	1
Bromomethane	ND		0.50		ug/L			09/20/19 21:22	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 21:22	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 21:22	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 21:22	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 21:22	1
Chloroethane	ND		0.50		ug/L			09/20/19 21:22	1
Chloroform	ND		0.20		ug/L			09/20/19 21:22	1
Chloromethane	ND		0.50		ug/L			09/20/19 21:22	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 21:22	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 21:22	1
Dibromomethane	ND		0.20		ug/L			09/20/19 21:22	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 21:22	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 21:22	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 21:22	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 21:22	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 21:22	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 21:22	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 21:22	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 21:22	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 21:22	1
Naphthalene	ND		1.0		ug/L			09/20/19 21:22	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 21:22	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 21:22	1

Client Sample ID: 03Q19L4MW145W
Lab Sample ID: 580-89177-10
Date Collected: 09/11/19 17:00
Matrix: Water
Date Received: 09/12/19 12:55

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			09/20/19 21:22	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 21:22	1
Styrene	ND		0.50		ug/L			09/20/19 21:22	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 21:22	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 21:22	1
Toluene	ND		0.20		ug/L			09/20/19 21:22	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 21:22	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 21:22	1
Trichloroethene	ND		0.20		ug/L			09/20/19 21:22	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 21:22	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 21:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/20/19 21:22*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*09/20/19 21:22*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/20/19 21:22*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 21:22*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/20/19 21:22*	*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		09/18/19 08:06	09/29/19 02:01	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/18/19 08:06	09/29/19 02:01	1
2-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/29/19 02:01	1
3-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/29/19 02:01	1
4-Nitrotoluene	ND		0.51		ug/L		09/18/19 08:06	09/29/19 02:01	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
HMX	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
RDX	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
Nitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
Tetryl	ND	*	0.10		ug/L		09/18/19 08:06	09/29/19 02:01	1
Nitroglycerin	ND		0.66		ug/L		09/18/19 08:06	09/29/19 02:01	1
PETN	ND		0.66		ug/L		09/18/19 08:06	09/29/19 02:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/18/19 08:06*	*09/29/19 02:01*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 13:47	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 13:47	1

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW145W
Lab Sample ID: 580-89177-10
Date Collected: 09/11/19 17:00
Matrix: Water
Date Received: 09/12/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 13:47	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 13:47	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
RDX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 13:47	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 13:47	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 13:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 13:47*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 16:50	1

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

Job ID: 580-89177-1

Client Sample ID: 091119TB
Date Collected: 09/11/19 00:00
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-11
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			09/20/19 21:49	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 21:49	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 21:49	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 21:49	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 21:49	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 21:49	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 21:49	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 21:49	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 21:49	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 21:49	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 21:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 21:49	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:49	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 21:49	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 21:49	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 21:49	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:49	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 21:49	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 21:49	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 21:49	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 21:49	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 21:49	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 21:49	1
Benzene	ND		0.20		ug/L			09/20/19 21:49	1
Bromobenzene	ND		0.20		ug/L			09/20/19 21:49	1
Bromoform	ND		0.50		ug/L			09/20/19 21:49	1
Bromomethane	ND		0.50		ug/L			09/20/19 21:49	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 21:49	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 21:49	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 21:49	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 21:49	1
Chloroethane	ND		0.50		ug/L			09/20/19 21:49	1
Chloroform	ND		0.20		ug/L			09/20/19 21:49	1
Chloromethane	ND		0.50		ug/L			09/20/19 21:49	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 21:49	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 21:49	1
Dibromomethane	ND		0.20		ug/L			09/20/19 21:49	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 21:49	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 21:49	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 21:49	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 21:49	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 21:49	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 21:49	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 21:49	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 21:49	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 21:49	1
Naphthalene	ND		1.0		ug/L			09/20/19 21:49	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 21:49	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 21:49	1

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

Job ID: 580-89177-1

Client Sample ID: 091119TB
Date Collected: 09/11/19 00:00
Date Received: 09/12/19 12:55

Lab Sample ID: 580-89177-11
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			09/20/19 21:49	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 21:49	1
Styrene	ND		0.50		ug/L			09/20/19 21:49	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 21:49	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 21:49	1
Toluene	ND		0.20		ug/L			09/20/19 21:49	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 21:49	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 21:49	1
Trichloroethene	ND		0.20		ug/L			09/20/19 21:49	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 21:49	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/20/19 21:49*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/20/19 21:49*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*09/20/19 21:49*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 21:49*	*1*
Trifluorotoluene (Surr)	*104*		*80 - 120*		*09/20/19 21:49*	*1*

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

Lab Sample ID: MB 580-311739/7
Matrix: Water
Analysis Batch: 311739

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			09/19/19 17:26	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 17:26	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 17:26	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 17:26	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 17:26	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 17:26	1
Benzene	ND		0.20		ug/L			09/19/19 17:26	1
Bromobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Bromoform	ND		0.50		ug/L			09/19/19 17:26	1
Bromomethane	ND		0.50		ug/L			09/19/19 17:26	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chloroethane	ND		0.50		ug/L			09/19/19 17:26	1
Chloroform	ND		0.20		ug/L			09/19/19 17:26	1
Chloromethane	ND		0.50		ug/L			09/19/19 17:26	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Dibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 17:26	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 17:26	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 17:26	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 17:26	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 17:26	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 17:26	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
Naphthalene	ND		1.0		ug/L			09/19/19 17:26	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1

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

Lab Sample ID: MB 580-311739/7
Matrix: Water
Analysis Batch: 311739

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			09/19/19 17:26	1
o-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Styrene	ND		0.50		ug/L			09/19/19 17:26	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 17:26	1
Toluene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Trichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 17:26	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/19/19 17:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/19/19 17:26*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/19/19 17:26*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/19/19 17:26*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*09/19/19 17:26*	*1*

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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	4.81		ug/L		96	79 - 127
1,1,1-Trichloroethane	5.00	4.75		ug/L		95	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.17		ug/L		103	69 - 139
1,1,2-Trichloroethane	5.00	5.29		ug/L		106	80 - 127
1,1-Dichloroethane	5.00	4.82		ug/L		96	74 - 135
1,1-Dichloroethene	5.00	5.11		ug/L		102	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.17		ug/L		103	75 - 137
1,2,3-Trichloropropane	5.00	5.24		ug/L		105	80 - 127
1,2,4-Trichlorobenzene	5.00	4.72		ug/L		94	79 - 130
1,2,4-Trimethylbenzene	5.00	5.25		ug/L		105	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.03		ug/L		101	69 - 130
1,2-Dichlorobenzene	5.00	5.21		ug/L		104	80 - 129
1,2-Dichloroethane	5.00	5.32		ug/L		106	74 - 130
1,2-Dichloropropane	5.00	5.14		ug/L		103	80 - 130
1,3,5-Trimethylbenzene	5.00	4.85		ug/L		97	80 - 139
1,3-Dichlorobenzene	5.00	5.27		ug/L		105	80 - 130
1,3-Dichloropropane	5.00	5.35		ug/L		107	80 - 130
1,4-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 129
2,2-Dichloropropane	5.00	4.45		ug/L		89	58 - 150
2-Chlorotoluene	5.00	4.87		ug/L		97	80 - 136
4-Chlorotoluene	5.00	5.03		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	5.16		ug/L		103	78 - 132

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

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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	5.30		ug/L		106	73 - 133
Bromobenzene	5.00	4.88		ug/L		98	80 - 130
Bromoform	5.00	5.00		ug/L		100	69 - 137
Bromomethane	5.00	5.51		ug/L		110	68 - 120
Carbon tetrachloride	5.00	4.83		ug/L		97	71 - 132
Chlorobenzene	5.00	5.14		ug/L		103	80 - 123
Chlorobromomethane	5.00	4.92		ug/L		98	79 - 131
Chlorodibromomethane	5.00	5.08		ug/L		102	76 - 131
Chloroethane	5.00	5.49		ug/L		110	49 - 135
Chloroform	5.00	4.73		ug/L		95	80 - 130
Chloromethane	5.00	5.62		ug/L		112	32 - 143
cis-1,2-Dichloroethene	5.00	4.98		ug/L		100	72 - 130
cis-1,3-Dichloropropene	5.00	4.75		ug/L		95	66 - 141
Dibromomethane	5.00	4.98		ug/L		100	65 - 141
Dichlorobromomethane	5.00	5.03		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.82		ug/L		116	20 - 137
Ethylbenzene	5.00	4.99		ug/L		100	80 - 130
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126
Hexachlorobutadiene	5.00	5.09		ug/L		102	72 - 138
Isopropylbenzene	5.00	4.96		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.57		ug/L		91	60 - 150
Methylene Chloride	5.00	5.00		ug/L		100	75 - 134
m-Xylene & p-Xylene	5.00	4.91		ug/L		98	78 - 130
Naphthalene	5.00	4.59		ug/L		92	64 - 132
n-Butylbenzene	5.00	4.71		ug/L		94	73 - 135
N-Propylbenzene	5.00	4.85		ug/L		97	77 - 142
o-Xylene	5.00	4.85		ug/L		97	80 - 139
sec-Butylbenzene	5.00	5.16		ug/L		103	78 - 140
Styrene	5.00	5.14		ug/L		103	74 - 136
tert-Butylbenzene	5.00	4.84		ug/L		97	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.38		ug/L		108	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.64		ug/L		93	71 - 128
Trichloroethene	5.00	4.78		ug/L		96	72 - 136
Trichlorofluoromethane	5.00	5.54		ug/L		111	60 - 132
Vinyl chloride	5.00	5.39		ug/L		108	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

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

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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	4.61		ug/L		92	79 - 127	4	20
1,1,1-Trichloroethane			5.00	4.66		ug/L		93	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	4.85		ug/L		97	69 - 139	6	22
1,1,2-Trichloroethane			5.00	5.08		ug/L		102	80 - 127	4	19
1,1-Dichloroethane			5.00	4.70		ug/L		94	74 - 135	3	20
1,1-Dichloroethene			5.00	4.97		ug/L		99	71 - 126	3	17
1,1-Dichloropropene			5.00	4.72		ug/L		94	72 - 132	5	13
1,2,3-Trichlorobenzene			5.00	4.83		ug/L		97	75 - 137	7	20
1,2,3-Trichloropropane			5.00	5.13		ug/L		103	80 - 127	2	20
1,2,4-Trichlorobenzene			5.00	4.31		ug/L		86	79 - 130	9	20
1,2,4-Trimethylbenzene			5.00	5.04		ug/L		101	78 - 136	4	20
1,2-Dibromo-3-Chloropropane			5.00	4.46		ug/L		89	69 - 130	12	26
1,2-Dichlorobenzene			5.00	5.01		ug/L		100	80 - 129	4	14
1,2-Dichloroethane			5.00	5.01		ug/L		100	74 - 130	6	15
1,2-Dichloropropane			5.00	5.02		ug/L		100	80 - 130	2	14
1,3,5-Trimethylbenzene			5.00	4.73		ug/L		95	80 - 139	3	20
1,3-Dichlorobenzene			5.00	5.10		ug/L		102	80 - 130	3	12
1,3-Dichloropropane			5.00	5.15		ug/L		103	80 - 130	4	19
1,4-Dichlorobenzene			5.00	4.96		ug/L		99	80 - 129	4	11
2,2-Dichloropropane			5.00	4.28		ug/L		86	58 - 150	4	28
2-Chlorotoluene			5.00	4.72		ug/L		94	80 - 136	3	20
4-Chlorotoluene			5.00	4.87		ug/L		97	80 - 130	3	20
4-Isopropyltoluene			5.00	4.97		ug/L		99	78 - 132	4	14
Benzene			5.00	5.09		ug/L		102	73 - 133	4	20
Bromobenzene			5.00	4.77		ug/L		95	80 - 130	2	20
Bromoform			5.00	4.63		ug/L		93	69 - 137	8	20
Bromomethane			5.00	5.30		ug/L		106	68 - 120	4	18
Carbon tetrachloride			5.00	4.63		ug/L		93	71 - 132	4	15
Chlorobenzene			5.00	4.88		ug/L		98	80 - 123	5	12
Chlorobromomethane			5.00	4.79		ug/L		96	79 - 131	3	20
Chlorodibromomethane			5.00	4.84		ug/L		97	76 - 131	5	20
Chloroethane			5.00	5.28		ug/L		106	49 - 135	4	27
Chloroform			5.00	4.62		ug/L		92	80 - 130	2	20
Chloromethane			5.00	5.39		ug/L		108	32 - 143	4	23
cis-1,2-Dichloroethene			5.00	4.96		ug/L		99	72 - 130	0	20
cis-1,3-Dichloropropene			5.00	4.50		ug/L		90	66 - 141	5	22
Dibromomethane			5.00	4.83		ug/L		97	65 - 141	3	20
Dichlorobromomethane			5.00	4.84		ug/L		97	74 - 131	4	20
Dichlorodifluoromethane			5.00	5.37		ug/L		107	20 - 137	8	22
Ethylbenzene			5.00	4.80		ug/L		96	80 - 130	4	20
Ethylene Dibromide			5.00	5.05		ug/L		101	80 - 126	4	20
Hexachlorobutadiene			5.00	4.95		ug/L		99	72 - 138	3	20
Isopropylbenzene			5.00	4.80		ug/L		96	75 - 137	3	20
Methyl tert-butyl ether			5.00	4.63		ug/L		93	60 - 150	1	25
Methylene Chloride			5.00	4.98	J	ug/L		100	75 - 134	0	18
m-Xylene & p-Xylene			5.00	4.78		ug/L		96	78 - 130	3	20
Naphthalene			5.00	4.30		ug/L		86	64 - 132	6	20
n-Butylbenzene			5.00	4.61		ug/L		92	73 - 135	2	18

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

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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	4.70		ug/L		94	77 - 142	3	20
o-Xylene			5.00	4.72		ug/L		94	80 - 139	3	20
sec-Butylbenzene			5.00	5.03		ug/L		101	78 - 140	3	20
Styrene			5.00	4.97		ug/L		99	74 - 136	3	20
tert-Butylbenzene			5.00	4.67		ug/L		93	77 - 140	4	20
Tetrachloroethene			5.00	4.65		ug/L		93	75 - 131	7	20
Toluene			5.00	5.19		ug/L		104	80 - 126	4	20
trans-1,2-Dichloroethene			5.00	4.83		ug/L		97	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.52		ug/L		90	71 - 128	3	21
Trichloroethene			5.00	4.62		ug/L		92	72 - 136	3	14
Trichlorofluoromethane			5.00	5.31		ug/L		106	60 - 132	4	20
Vinyl chloride			5.00	5.10		ug/L		102	52 - 128	6	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 16:30	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 16:30	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 16:30	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 16:30	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 16:30	1

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

Job ID: 580-89177-1

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromoform	ND		0.50		ug/L			09/20/19 16:30	1
Bromomethane	ND		0.50		ug/L			09/20/19 16:30	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chloroethane	ND		0.50		ug/L			09/20/19 16:30	1
Chloroform	ND		0.20		ug/L			09/20/19 16:30	1
Chloromethane	ND		0.50		ug/L			09/20/19 16:30	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Dibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 16:30	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 16:30	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 16:30	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 16:30	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 16:30	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 16:30	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
Naphthalene	ND		1.0		ug/L			09/20/19 16:30	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 16:30	1
o-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Styrene	ND		0.50		ug/L			09/20/19 16:30	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 16:30	1
Toluene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Trichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 16:30	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 16:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 16:30*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*09/20/19 16:30*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 16:30*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*09/20/19 16:30*	*1*

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

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.34		ug/L		107	79 - 127
1,1,1-Trichloroethane	5.00	5.12		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.32		ug/L		106	69 - 139
1,1,2-Trichloroethane	5.00	5.77		ug/L		115	80 - 127
1,1-Dichloroethane	5.00	5.12		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.45		ug/L		109	71 - 126
1,1-Dichloropropene	5.00	5.13		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.65		ug/L		113	75 - 137
1,2,3-Trichloropropane	5.00	5.55		ug/L		111	80 - 127
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	79 - 130
1,2,4-Trimethylbenzene	5.00	5.54		ug/L		111	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.02		ug/L		100	69 - 130
1,2-Dichlorobenzene	5.00	5.55		ug/L		111	80 - 129
1,2-Dichloroethane	5.00	5.46		ug/L		109	74 - 130
1,2-Dichloropropane	5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	5.00	5.15		ug/L		103	80 - 139
1,3-Dichlorobenzene	5.00	5.57		ug/L		111	80 - 130
1,3-Dichloropropane	5.00	5.52		ug/L		110	80 - 130
1,4-Dichlorobenzene	5.00	5.38		ug/L		108	80 - 129
2,2-Dichloropropane	5.00	5.23		ug/L		105	58 - 150
2-Chlorotoluene	5.00	5.00		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	5.00	5.42		ug/L		108	78 - 132
Benzene	5.00	5.43		ug/L		109	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	5.31		ug/L		106	69 - 137
Bromomethane	5.00	5.83		ug/L		117	68 - 120
Carbon tetrachloride	5.00	5.00		ug/L		100	71 - 132
Chlorobenzene	5.00	5.41		ug/L		108	80 - 123
Chlorobromomethane	5.00	5.27		ug/L		105	79 - 131
Chlorodibromomethane	5.00	5.51		ug/L		110	76 - 131
Chloroethane	5.00	5.66		ug/L		113	49 - 135
Chloroform	5.00	5.14		ug/L		103	80 - 130
Chloromethane	5.00	5.79		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.39		ug/L		108	72 - 130
cis-1,3-Dichloropropene	5.00	4.98		ug/L		100	66 - 141
Dibromomethane	5.00	5.31		ug/L		106	65 - 141
Dichlorobromomethane	5.00	5.42		ug/L		108	74 - 131
Dichlorodifluoromethane	5.00	6.33		ug/L		127	20 - 137
Ethylbenzene	5.00	5.27		ug/L		105	80 - 130
Ethylene Dibromide	5.00	5.41		ug/L		108	80 - 126
Hexachlorobutadiene	5.00	5.51		ug/L		110	72 - 138
Isopropylbenzene	5.00	5.31		ug/L		106	75 - 137
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150
Methylene Chloride	5.00	8.49	*	ug/L		170	75 - 134
m-Xylene & p-Xylene	5.00	5.19		ug/L		104	78 - 130
Naphthalene	5.00	5.16		ug/L		103	64 - 132
n-Butylbenzene	5.00	5.16		ug/L		103	73 - 135

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

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
N-Propylbenzene			5.00	5.01		ug/L		100	77 - 142		
o-Xylene			5.00	5.27		ug/L		105	80 - 139		
sec-Butylbenzene			5.00	5.42		ug/L		108	78 - 140		
Styrene			5.00	5.40		ug/L		108	74 - 136		
tert-Butylbenzene			5.00	5.01		ug/L		100	77 - 140		
Tetrachloroethene			5.00	5.13		ug/L		103	75 - 131		
Toluene			5.00	5.56		ug/L		111	80 - 126		
trans-1,2-Dichloroethene			5.00	5.18		ug/L		104	63 - 133		
trans-1,3-Dichloropropene			5.00	5.02		ug/L		100	71 - 128		
Trichloroethene			5.00	5.10		ug/L		102	72 - 136		
Trichlorofluoromethane			5.00	5.80		ug/L		116	60 - 132		
Vinyl chloride			5.00	5.47		ug/L		109	52 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*80 - 120*

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.24		ug/L		105	79 - 127	2	20
1,1,1-Trichloroethane			5.00	5.04		ug/L		101	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	5.06		ug/L		101	69 - 139	5	22
1,1,2-Trichloroethane			5.00	5.43		ug/L		109	80 - 127	6	19
1,1-Dichloroethane			5.00	5.05		ug/L		101	74 - 135	1	20
1,1-Dichloroethene			5.00	5.42		ug/L		108	71 - 126	1	17
1,1-Dichloropropene			5.00	5.03		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene			5.00	5.41		ug/L		108	75 - 137	4	20
1,2,3-Trichloropropane			5.00	5.44		ug/L		109	80 - 127	2	20
1,2,4-Trichlorobenzene			5.00	4.95		ug/L		99	79 - 130	1	20
1,2,4-Trimethylbenzene			5.00	5.49		ug/L		110	78 - 136	1	20
1,2-Dibromo-3-Chloropropane			5.00	5.00		ug/L		100	69 - 130	0	26
1,2-Dichlorobenzene			5.00	5.42		ug/L		108	80 - 129	2	14
1,2-Dichloroethane			5.00	5.20		ug/L		104	74 - 130	5	15
1,2-Dichloropropane			5.00	5.04		ug/L		101	80 - 130	5	14
1,3,5-Trimethylbenzene			5.00	5.13		ug/L		103	80 - 139	1	20
1,3-Dichlorobenzene			5.00	5.50		ug/L		110	80 - 130	1	12
1,3-Dichloropropane			5.00	5.22		ug/L		104	80 - 130	6	19
1,4-Dichlorobenzene			5.00	5.29		ug/L		106	80 - 129	2	11
2,2-Dichloropropane			5.00	5.27		ug/L		105	58 - 150	1	28
2-Chlorotoluene			5.00	5.07		ug/L		101	80 - 136	1	20
4-Chlorotoluene			5.00	5.22		ug/L		104	80 - 130	0	20
4-Isopropyltoluene			5.00	5.40		ug/L		108	78 - 132	0	14

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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
Benzene			5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene			5.00	5.03		ug/L		101	80 - 130	0	20
Bromoform			5.00	5.15		ug/L		103	69 - 137	3	20
Bromomethane			5.00	5.89		ug/L		118	68 - 120	1	18
Carbon tetrachloride			5.00	5.07		ug/L		101	71 - 132	1	15
Chlorobenzene			5.00	5.37		ug/L		107	80 - 123	1	12
Chlorobromomethane			5.00	5.11		ug/L		102	79 - 131	3	20
Chlorodibromomethane			5.00	5.20		ug/L		104	76 - 131	6	20
Chloroethane			5.00	5.69		ug/L		114	49 - 135	0	27
Chloroform			5.00	5.01		ug/L		100	80 - 130	3	20
Chloromethane			5.00	5.90		ug/L		118	32 - 143	2	23
cis-1,2-Dichloroethene			5.00	5.25		ug/L		105	72 - 130	3	20
cis-1,3-Dichloropropene			5.00	4.85		ug/L		97	66 - 141	3	22
Dibromomethane			5.00	4.99		ug/L		100	65 - 141	6	20
Dichlorobromomethane			5.00	5.10		ug/L		102	74 - 131	6	20
Dichlorodifluoromethane			5.00	5.80		ug/L		116	20 - 137	9	22
Ethylbenzene			5.00	5.24		ug/L		105	80 - 130	1	20
Ethylene Dibromide			5.00	5.26		ug/L		105	80 - 126	3	20
Hexachlorobutadiene			5.00	5.55		ug/L		111	72 - 138	1	20
Isopropylbenzene			5.00	5.39		ug/L		108	75 - 137	1	20
Methyl tert-butyl ether			5.00	4.94		ug/L		99	60 - 150	0	25
Methylene Chloride			5.00	8.65	*	ug/L		173	75 - 134	2	18
m-Xylene & p-Xylene			5.00	5.16		ug/L		103	78 - 130	1	20
Naphthalene			5.00	4.87		ug/L		97	64 - 132	6	20
n-Butylbenzene			5.00	5.12		ug/L		102	73 - 135	1	18
N-Propylbenzene			5.00	5.04		ug/L		101	77 - 142	1	20
o-Xylene			5.00	5.25		ug/L		105	80 - 139	0	20
sec-Butylbenzene			5.00	5.46		ug/L		109	78 - 140	1	20
Styrene			5.00	5.33		ug/L		107	74 - 136	1	20
tert-Butylbenzene			5.00	4.98		ug/L		100	77 - 140	1	20
Tetrachloroethene			5.00	5.01		ug/L		100	75 - 131	2	20
Toluene			5.00	5.52		ug/L		110	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	5.29		ug/L		106	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.83		ug/L		97	71 - 128	4	21
Trichloroethene			5.00	4.99		ug/L		100	72 - 136	2	14
Trichlorofluoromethane			5.00	5.78		ug/L		116	60 - 132	0	20
Vinyl chloride			5.00	5.47		ug/L		109	52 - 128	0	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

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

Lab Sample ID: 580-89177-9 MS
Matrix: Water
Analysis Batch: 311759

Client Sample ID: 03Q19L4MW07BW
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	5.42		ug/L		108	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.52		ug/L		110	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	4.97		ug/L		99	69 - 139
1,1,2-Trichloroethane	ND		5.00	5.64		ug/L		113	80 - 127
1,1-Dichloroethane	ND		5.00	5.46		ug/L		109	74 - 135
1,1-Dichloroethene	ND	F1	5.00	5.82		ug/L		116	71 - 126
1,1-Dichloropropene	ND		5.00	5.53		ug/L		111	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	5.04		ug/L		101	75 - 137
1,2,3-Trichloropropane	ND		5.00	5.09		ug/L		102	80 - 127
1,2,4-Trichlorobenzene	ND		5.00	4.39		ug/L		88	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.49		ug/L		110	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.56		ug/L		91	69 - 130
1,2-Dichlorobenzene	ND		5.00	5.25		ug/L		105	80 - 129
1,2-Dichloroethane	ND		5.00	5.53		ug/L		111	74 - 130
1,2-Dichloropropane	ND		5.00	5.43		ug/L		109	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	5.10		ug/L		98	80 - 139
1,3-Dichlorobenzene	ND		5.00	5.41		ug/L		108	80 - 130
1,3-Dichloropropane	ND		5.00	5.40		ug/L		108	80 - 130
1,4-Dichlorobenzene	ND		5.00	5.19		ug/L		104	80 - 129
2,2-Dichloropropane	ND	F1	5.00	2.85	F1	ug/L		57	58 - 150
2-Chlorotoluene	ND		5.00	4.99		ug/L		100	80 - 136
4-Chlorotoluene	ND		5.00	5.03		ug/L		101	80 - 130
4-Isopropyltoluene	ND		5.00	5.25		ug/L		105	78 - 132
Benzene	ND		5.00	5.83		ug/L		117	73 - 133
Bromobenzene	ND		5.00	4.96		ug/L		99	80 - 130
Bromoform	ND		5.00	5.02		ug/L		100	69 - 137
Bromomethane	ND	F1	5.00	6.02		ug/L		120	68 - 120
Carbon tetrachloride	ND		5.00	5.55		ug/L		111	71 - 132
Chlorobenzene	ND		5.00	5.55		ug/L		111	80 - 123
Chlorobromomethane	ND		5.00	5.36		ug/L		107	79 - 131
Chlorodibromomethane	ND		5.00	5.28		ug/L		106	76 - 131
Chloroethane	ND		5.00	5.98		ug/L		120	49 - 135
Chloroform	ND		5.00	5.37		ug/L		107	80 - 130
Chloromethane	ND		5.00	6.18		ug/L		124	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.63		ug/L		113	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.41		ug/L		88	66 - 141
Dibromomethane	ND		5.00	5.33		ug/L		107	65 - 141
Dichlorobromomethane	ND		5.00	5.36		ug/L		107	74 - 131
Dichlorodifluoromethane	ND	F1	5.00	6.11		ug/L		122	20 - 137
Ethylbenzene	ND		5.00	5.57		ug/L		110	80 - 130
Ethylene Dibromide	ND		5.00	5.24		ug/L		105	80 - 126
Hexachlorobutadiene	ND		5.00	5.11		ug/L		102	72 - 138
Isopropylbenzene	ND		5.00	5.52		ug/L		110	75 - 137
Methyl tert-butyl ether	ND	F2 F1	5.00	2.85	F1	ug/L		57	60 - 150
Methylene Chloride	ND	*	5.00	ND		ug/L		99	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.41		ug/L		108	78 - 130
Naphthalene	ND		5.00	4.31		ug/L		86	64 - 132
n-Butylbenzene	ND		5.00	4.75		ug/L		93	73 - 135

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

Lab Sample ID: 580-89177-9 MS
Matrix: Water
Analysis Batch: 311759

Client Sample ID: 03Q19L4MW07BW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	ND		5.00	5.03		ug/L		101	77 - 142
o-Xylene	ND		5.00	5.39		ug/L		108	80 - 139
sec-Butylbenzene	ND		5.00	5.46		ug/L		109	78 - 140
Styrene	ND		5.00	5.47		ug/L		109	74 - 136
tert-Butylbenzene	ND		5.00	5.04		ug/L		101	77 - 140
Tetrachloroethene	ND		5.00	5.33		ug/L		107	75 - 131
Toluene	ND		5.00	6.00		ug/L		120	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.46		ug/L		109	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.21		ug/L		84	71 - 128
Trichloroethene	ND		5.00	5.31		ug/L		106	72 - 136
Trichlorofluoromethane	ND	F1	5.00	3.01		ug/L		60	60 - 132
Vinyl chloride	ND	F1	5.00	6.04		ug/L		121	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*80 - 120*

Lab Sample ID: 580-89177-9 MSD
Matrix: Water
Analysis Batch: 311759

Client Sample ID: 03Q19L4MW07BW
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	5.70		ug/L		114	79 - 127	5	20
1,1,1-Trichloroethane	ND		5.00	5.93		ug/L		119	74 - 128	7	14
1,1,2,2-Tetrachloroethane	ND		5.00	5.13		ug/L		103	69 - 139	3	22
1,1,2-Trichloroethane	ND		5.00	5.49		ug/L		110	80 - 127	3	19
1,1-Dichloroethane	ND		5.00	5.90		ug/L		118	74 - 135	8	20
1,1-Dichloroethene	ND	F1	5.00	6.47	F1	ug/L		129	71 - 126	11	17
1,1-Dichloropropene	ND		5.00	5.90		ug/L		118	72 - 132	6	13
1,2,3-Trichlorobenzene	ND		5.00	5.54		ug/L		111	75 - 137	10	20
1,2,3-Trichloropropane	ND		5.00	5.49		ug/L		110	80 - 127	8	20
1,2,4-Trichlorobenzene	ND		5.00	4.98		ug/L		100	79 - 130	13	20
1,2,4-Trimethylbenzene	ND		5.00	5.98		ug/L		120	78 - 136	8	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.78		ug/L		96	69 - 130	5	26
1,2-Dichlorobenzene	ND		5.00	5.71		ug/L		114	80 - 129	9	14
1,2-Dichloroethane	ND		5.00	5.61		ug/L		112	74 - 130	1	15
1,2-Dichloropropane	ND		5.00	5.50		ug/L		110	80 - 130	1	14
1,3,5-Trimethylbenzene	ND		5.00	5.60		ug/L		108	80 - 139	9	20
1,3-Dichlorobenzene	ND		5.00	5.80		ug/L		116	80 - 130	7	12
1,3-Dichloropropane	ND		5.00	5.44		ug/L		109	80 - 130	1	19
1,4-Dichlorobenzene	ND		5.00	5.61		ug/L		112	80 - 129	8	11
2,2-Dichloropropane	ND	F1	5.00	2.93		ug/L		59	58 - 150	3	28
2-Chlorotoluene	ND		5.00	5.40		ug/L		108	80 - 136	8	20
4-Chlorotoluene	ND		5.00	5.50		ug/L		110	80 - 130	9	20
4-Isopropyltoluene	ND		5.00	5.98		ug/L		120	78 - 132	13	14

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

Lab Sample ID: 580-89177-9 MSD
Matrix: Water
Analysis Batch: 311759

Client Sample ID: 03Q19L4MW07BW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	ND		5.00	6.02		ug/L		120	73 - 133	3	20
Bromobenzene	ND		5.00	5.08		ug/L		102	80 - 130	2	20
Bromoform	ND		5.00	5.17		ug/L		103	69 - 137	3	20
Bromomethane	ND	F1	5.00	6.46	F1	ug/L		129	68 - 120	7	18
Carbon tetrachloride	ND		5.00	6.04		ug/L		121	71 - 132	8	15
Chlorobenzene	ND		5.00	5.77		ug/L		115	80 - 123	4	12
Chlorobromomethane	ND		5.00	5.73		ug/L		115	79 - 131	7	20
Chlorodibromomethane	ND		5.00	5.45		ug/L		109	76 - 131	3	20
Chloroethane	ND		5.00	6.71		ug/L		134	49 - 135	12	27
Chloroform	ND		5.00	5.69		ug/L		114	80 - 130	6	20
Chloromethane	ND		5.00	6.94		ug/L		139	32 - 143	12	23
cis-1,2-Dichloroethene	ND		5.00	6.02		ug/L		120	72 - 130	7	20
cis-1,3-Dichloropropene	ND		5.00	4.51		ug/L		90	66 - 141	2	22
Dibromomethane	ND		5.00	5.11		ug/L		102	65 - 141	4	20
Dichlorobromomethane	ND		5.00	5.44		ug/L		109	74 - 131	2	20
Dichlorodifluoromethane	ND	F1	5.00	6.96	F1	ug/L		139	20 - 137	13	22
Ethylbenzene	ND		5.00	5.78		ug/L		115	80 - 130	4	20
Ethylene Dibromide	ND		5.00	5.47		ug/L		109	80 - 126	4	20
Hexachlorobutadiene	ND		5.00	5.58		ug/L		112	72 - 138	9	20
Isopropylbenzene	ND		5.00	6.04		ug/L		121	75 - 137	9	20
Methyl tert-butyl ether	ND	F2 F1	5.00	5.08	F2	ug/L		102	60 - 150	56	25
Methylene Chloride	ND	*	5.00	5.41		ug/L		108	75 - 134	9	18
m-Xylene & p-Xylene	ND		5.00	5.67		ug/L		113	78 - 130	5	20
Naphthalene	ND		5.00	4.71		ug/L		94	64 - 132	9	20
n-Butylbenzene	ND		5.00	5.41		ug/L		106	73 - 135	13	18
N-Propylbenzene	ND		5.00	5.46		ug/L		109	77 - 142	8	20
o-Xylene	ND		5.00	5.79		ug/L		116	80 - 139	7	20
sec-Butylbenzene	ND		5.00	6.06		ug/L		121	78 - 140	10	20
Styrene	ND		5.00	5.84		ug/L		117	74 - 136	6	20
tert-Butylbenzene	ND		5.00	5.51		ug/L		110	77 - 140	9	20
Tetrachloroethene	ND		5.00	5.65		ug/L		113	75 - 131	6	20
Toluene	ND		5.00	6.09		ug/L		122	80 - 126	1	20
trans-1,2-Dichloroethene	ND		5.00	6.17		ug/L		123	63 - 133	12	17
trans-1,3-Dichloropropene	ND		5.00	4.47		ug/L		89	71 - 128	6	21
Trichloroethene	ND		5.00	5.55		ug/L		111	72 - 136	4	14
Trichlorofluoromethane	ND	F1	5.00	2.47	F1	ug/L		49	60 - 132	20	20
Vinyl chloride	ND	F1	5.00	6.93	F1	ug/L		139	52 - 128	14	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*88*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324018/1-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324018

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Tetryl	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/17/19 10:52*	*09/27/19 11:34*	*1*

Lab Sample ID: LCS 320-324018/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324018

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	1.01		ug/L		101	74 - 120
1,3-Dinitrobenzene	1.00	0.986		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.698		ug/L		70	69 - 111
2,4-Dinitrotoluene	1.00	0.979		ug/L		98	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.03		ug/L		103	77 - 123
2-Nitrotoluene	1.00	0.923		ug/L		92	64 - 120
3-Nitrotoluene	1.00	1.01		ug/L		101	67 - 114
4-Nitrotoluene	1.00	0.922		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	1.04		ug/L		104	68 - 113
HMX	1.00	0.995		ug/L		100	67 - 115
RDX	1.00	1.07		ug/L		107	68 - 122
Nitrobenzene	1.00	0.960		ug/L		96	69 - 119
Tetryl	1.00	0.656		ug/L		66	66 - 105
Nitroglycerin	5.00	4.99		ug/L		100	85 - 115
PETN	5.00	4.76		ug/L		95	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

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

Lab Sample ID: LCSD 320-324018/3-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324018

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.996		ug/L		100	74 - 120	1	29
1,3-Dinitrobenzene			1.00	0.981		ug/L		98	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.693		ug/L		69	69 - 111	1	28
2,4-Dinitrotoluene			1.00	0.976		ug/L		98	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.949		ug/L		95	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.02		ug/L		102	77 - 123	2	27
2-Nitrotoluene			1.00	0.921		ug/L		92	64 - 120	0	36
3-Nitrotoluene			1.00	0.999		ug/L		100	67 - 114	1	31
4-Nitrotoluene			1.00	0.919		ug/L		92	67 - 115	0	32
4-Amino-2,6-dinitrotoluene			1.00	1.03		ug/L		103	68 - 113	1	30
HMX			1.00	0.981		ug/L		98	67 - 115	1	32
RDX			1.00	1.06		ug/L		106	68 - 122	0	32
Nitrobenzene			1.00	0.958		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.653	*	ug/L		65	66 - 105	1	26
Nitroglycerin			5.00	4.74		ug/L		95	85 - 115	5	15
PETN			5.00	4.65		ug/L		93	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: MB 320-324273/1-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324273

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/18/19 08:06	09/28/19 17:58	1
2-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 17:58	1
3-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 17:58	1
4-Nitrotoluene	ND		0.50		ug/L		09/18/19 08:06	09/28/19 17:58	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
HMX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
RDX	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
Nitrobenzene	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
Tetryl	ND		0.10		ug/L		09/18/19 08:06	09/28/19 17:58	1
Nitroglycerin	ND		0.65		ug/L		09/18/19 08:06	09/28/19 17:58	1
PETN	ND		0.65		ug/L		09/18/19 08:06	09/28/19 17:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/18/19 08:06*	*09/28/19 17:58*	*1*

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

Lab Sample ID: LCS 320-324273/2-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324273

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	1.04		ug/L		104	74 - 120		
1,3-Dinitrobenzene			1.00	1.03		ug/L		103	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.721		ug/L		72	69 - 111		
2,4-Dinitrotoluene			1.00	1.02		ug/L		102	70 - 119		
2,6-Dinitrotoluene			1.00	0.988		ug/L		99	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.05		ug/L		105	77 - 123		
2-Nitrotoluene			1.00	0.950		ug/L		95	64 - 120		
3-Nitrotoluene			1.00	1.05		ug/L		105	67 - 114		
4-Nitrotoluene			1.00	0.930		ug/L		93	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.07		ug/L		107	68 - 113		
HMX			1.00	1.05		ug/L		105	67 - 115		
RDX			1.00	1.13		ug/L		113	68 - 122		
Nitrobenzene			1.00	1.01		ug/L		101	69 - 119		
Tetryl			1.00	0.677		ug/L		68	66 - 105		
Nitroglycerin			5.00	4.89		ug/L		98	85 - 115		
PETN			5.00	4.72		ug/L		94	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: LCSD 320-324273/3-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324273

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.940		ug/L		94	74 - 120	10	29
1,3-Dinitrobenzene			1.00	0.953		ug/L		95	72 - 123	8	29
2,4,6-Trinitrotoluene			1.00	0.656	*	ug/L		66	69 - 111	9	28
2,4-Dinitrotoluene			1.00	0.932		ug/L		93	70 - 119	9	30
2,6-Dinitrotoluene			1.00	0.907		ug/L		91	71 - 119	9	29
2-Amino-4,6-dinitrotoluene			1.00	0.962		ug/L		96	77 - 123	9	27
2-Nitrotoluene			1.00	0.855		ug/L		85	64 - 120	11	36
3-Nitrotoluene			1.00	0.953		ug/L		95	67 - 114	10	31
4-Nitrotoluene			1.00	0.855		ug/L		86	67 - 115	8	32
4-Amino-2,6-dinitrotoluene			1.00	0.977		ug/L		98	68 - 113	9	30
HMX			1.00	0.988		ug/L		99	67 - 115	6	32
RDX			1.00	1.06		ug/L		106	68 - 122	6	32
Nitrobenzene			1.00	0.937		ug/L		94	69 - 119	7	31
Tetryl			1.00	0.623	*	ug/L		62	66 - 105	8	26
Nitroglycerin			5.00	4.69		ug/L		94	85 - 115	4	15
PETN			5.00	4.45		ug/L		89	84 - 117	6	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*94*		*79 - 111*

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

Lab Sample ID: 580-89177-9 MS
Matrix: Water
Analysis Batch: 326750

Client Sample ID: 03Q19L4MW07BW
Prep Type: Total/NA
Prep Batch: 324273

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	ND		1.01	1.01		ug/L		100	74 - 120
1,3-Dinitrobenzene	ND		1.01	1.02		ug/L		101	72 - 123
2,4,6-Trinitrotoluene	ND	*	1.01	0.708	*	ug/L		70	69 - 111
2,4-Dinitrotoluene	ND		1.01	1.01		ug/L		100	70 - 119
2,6-Dinitrotoluene	ND		1.01	0.973		ug/L		97	71 - 119
2-Amino-4,6-dinitrotoluene	ND		1.01	1.02		ug/L		101	77 - 123
2-Nitrotoluene	ND		1.01	0.933		ug/L		93	64 - 120
3-Nitrotoluene	ND		1.01	1.03		ug/L		103	67 - 114
4-Nitrotoluene	ND		1.01	0.910		ug/L		90	67 - 115
4-Amino-2,6-dinitrotoluene	ND		1.01	1.04		ug/L		103	68 - 113
HMX	ND		1.01	1.05		ug/L		104	67 - 115
RDX	ND		1.01	1.06		ug/L		105	68 - 122
Nitrobenzene	ND		1.01	0.989		ug/L		98	69 - 119
Tetryl	ND	* F1	1.01	0.660	*	ug/L		66	66 - 105
Nitroglycerin	ND		5.03	4.65		ug/L		92	85 - 115
PETN	ND		5.03	4.59		ug/L		91	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*93*		*79 - 111*

Lab Sample ID: 580-89177-9 MSD
Matrix: Water
Analysis Batch: 326750

Client Sample ID: 03Q19L4MW07BW
Prep Type: Total/NA
Prep Batch: 324273

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.01	1.01		ug/L		99	74 - 120	0	29
1,3-Dinitrobenzene	ND		1.01	1.02		ug/L		100	72 - 123	0	29
2,4,6-Trinitrotoluene	ND	*	1.01	0.704	*	ug/L		70	69 - 111	1	28
2,4-Dinitrotoluene	ND		1.01	0.998		ug/L		98	70 - 119	1	30
2,6-Dinitrotoluene	ND		1.01	0.968		ug/L		96	71 - 119	0	29
2-Amino-4,6-dinitrotoluene	ND		1.01	1.01		ug/L		100	77 - 123	1	27
2-Nitrotoluene	ND		1.01	0.942		ug/L		93	64 - 120	1	36
3-Nitrotoluene	ND		1.01	1.02		ug/L		101	67 - 114	1	31
4-Nitrotoluene	ND		1.01	0.923		ug/L		91	67 - 115	1	32
4-Amino-2,6-dinitrotoluene	ND		1.01	1.03		ug/L		102	68 - 113	1	30
HMX	ND		1.01	1.05		ug/L		103	67 - 115	0	32
RDX	ND		1.01	1.07		ug/L		106	68 - 122	1	32
Nitrobenzene	ND		1.01	0.995		ug/L		98	69 - 119	1	31
Tetryl	ND	* F1	1.01	0.662	* F1	ug/L		65	66 - 105	0	26
Nitroglycerin	ND		5.07	4.96		ug/L		98	85 - 115	6	15
PETN	ND		5.07	4.76		ug/L		94	84 - 117	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*93*		*79 - 111*

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

Lab Sample ID: MB 320-327235/1-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 327235

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
3-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
HMX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
RDX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Tetryl	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitroglycerin	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1
PETN	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*09/30/19 07:12*	*10/01/19 21:00*	*1*

Lab Sample ID: LCS 320-327235/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 327235

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	0.957		ug/L		96	72 - 123
2,4,6-Trinitrotoluene	1.00	0.778		ug/L		78	69 - 111
2,4-Dinitrotoluene	1.00	0.930		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.930		ug/L		93	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.985		ug/L		99	77 - 123
2-Nitrotoluene	1.00	0.911		ug/L		91	64 - 120
3-Nitrotoluene	1.00	0.934		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.917		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.962		ug/L		96	68 - 113
HMX	1.00	0.973		ug/L		97	67 - 115
RDX	1.00	0.983		ug/L		98	68 - 122
Nitrobenzene	1.00	0.948		ug/L		95	69 - 119
Tetryl	1.00	0.739		ug/L		74	66 - 105
Nitroglycerin	5.00	4.86		ug/L		97	85 - 115
PETN	5.00	4.87		ug/L		97	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

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

Lab Sample ID: MB 320-328371/1-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
1,3-Dinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,6-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
3-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
HMX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
RDX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Tetryl	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitroglycerin	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1
PETN	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 06:38*	*1*

Lab Sample ID: LCS 320-328371/2-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.975		ug/L		98	74 - 120
1,3-Dinitrobenzene	1.00	0.991		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.852		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.966		ug/L		97	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.998		ug/L		100	77 - 123
2-Nitrotoluene	1.00	0.934		ug/L		93	64 - 120
3-Nitrotoluene	1.00	0.946		ug/L		95	67 - 114
4-Nitrotoluene	1.00	0.951		ug/L		95	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.974		ug/L		97	68 - 113
HMX	1.00	1.03		ug/L		103	67 - 115
RDX	1.00	1.04		ug/L		104	68 - 122
Nitrobenzene	1.00	0.975		ug/L		98	69 - 119
Tetryl	1.00	0.816		ug/L		82	66 - 105
Nitroglycerin	5.00	4.70		ug/L		94	85 - 115
PETN	5.00	4.48		ug/L		90	84 - 117

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

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

Lab Sample ID: 580-89177-9 MS
Client Sample ID: 03Q19L4MW07BW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 329066
Prep Batch: 328371

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene - RE	ND	H	1.00	0.894	H	ug/L		89	74 - 120
1,3-Dinitrobenzene - RE	ND	H	1.00	0.906	H	ug/L		91	72 - 123
2,4,6-Trinitrotoluene - RE	ND	H	1.00	0.771	H	ug/L		77	69 - 111
2,4-Dinitrotoluene - RE	ND	H	1.00	0.888	H	ug/L		89	70 - 119
2,6-Dinitrotoluene - RE	ND	H	1.00	0.883	H	ug/L		88	71 - 119
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.00	0.921	H	ug/L		92	77 - 123
2-Nitrotoluene - RE	ND	H	1.00	0.868	H	ug/L		87	64 - 120
3-Nitrotoluene - RE	ND	H	1.00	0.861	H	ug/L		86	67 - 114
4-Nitrotoluene - RE	ND	H	1.00	0.859	H	ug/L		86	67 - 115
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.00	0.883	H	ug/L		88	68 - 113
HMX - RE	ND	H	1.00	0.953	H	ug/L		95	67 - 115
RDX - RE	ND	H	1.00	0.963	H	ug/L		96	68 - 122
Nitrobenzene - RE	ND	H	1.00	0.891	H	ug/L		89	69 - 119
Tetryl - RE	ND	H	1.00	0.733	H	ug/L		73	66 - 105
Nitroglycerin - RE	ND	H	5.00	4.49	H	ug/L		90	85 - 115
PETN - RE	ND	H	5.00	4.42	H	ug/L		88	84 - 117

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene - RE	*87*		*79 - 111*

Lab Sample ID: 580-89177-9 MSD
Client Sample ID: 03Q19L4MW07BW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 329066
Prep Batch: 328371

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene - RE	ND	H	1.00	1.01	H	ug/L		101	74 - 120	12	29
1,3-Dinitrobenzene - RE	ND	H	1.00	1.02	H	ug/L		102	72 - 123	12	29
2,4,6-Trinitrotoluene - RE	ND	H	1.00	0.868	H	ug/L		87	69 - 111	12	28
2,4-Dinitrotoluene - RE	ND	H	1.00	0.975	H	ug/L		97	70 - 119	9	30
2,6-Dinitrotoluene - RE	ND	H	1.00	0.970	H	ug/L		97	71 - 119	9	29
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.00	1.02	H	ug/L		102	77 - 123	10	27
2-Nitrotoluene - RE	ND	H	1.00	0.951	H	ug/L		95	64 - 120	9	36
3-Nitrotoluene - RE	ND	H	1.00	0.977	H	ug/L		98	67 - 114	13	31
4-Nitrotoluene - RE	ND	H	1.00	0.988	H	ug/L		99	67 - 115	14	32
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.00	1.00	H	ug/L		100	68 - 113	12	30
HMX - RE	ND	H	1.00	1.08	H	ug/L		108	67 - 115	12	32
RDX - RE	ND	H	1.00	1.09	H	ug/L		109	68 - 122	12	32
Nitrobenzene - RE	ND	H	1.00	1.01	H	ug/L		101	69 - 119	12	31
Tetryl - RE	ND	H	1.00	0.830	H	ug/L		83	66 - 105	13	26
Nitroglycerin - RE	ND	H	5.00	4.64	H	ug/L		93	85 - 115	3	15
PETN - RE	ND	H	5.00	4.35	H	ug/L		87	84 - 117	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene - RE	*89*		*79 - 111*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: MB 280-471410/44
Matrix: Water
Analysis Batch: 471410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 15:24	1

Lab Sample ID: LCS 280-471410/45
Matrix: Water
Analysis Batch: 471410

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0534	J	ug/L		107	70 - 130		

Lab Sample ID: 580-89177-1 MS
Matrix: Water
Analysis Batch: 471410

Client Sample ID: 03Q19LCMW04SW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate	ND		0.0500	ND	4	ug/L		111	70 - 130		

Lab Sample ID: 580-89177-1 MSD
Matrix: Water
Analysis Batch: 471410

Client Sample ID: 03Q19LCMW04SW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		0.0500	ND	4	ug/L		90	70 - 130	4	15

Client Sample ID: 03Q19LCMW04SW
Lab Sample ID: 580-89177-1
Date Collected: 09/11/19 11:39
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311739	09/20/19 00:56	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 21:24	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 06:50	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 15:39	CBB	TAL DEN

Client Sample ID: 03Q19LCMW04DW
Lab Sample ID: 580-89177-2
Date Collected: 09/11/19 11:06
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 16:57	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 22:18	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 08:38	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 15:54	CBB	TAL DEN

Client Sample ID: 03Q19LCMW09SW
Lab Sample ID: 580-89177-3
Date Collected: 09/11/19 10:22
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 17:23	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 19:37	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 09:31	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:00	CBB	TAL DEN

Client Sample ID: 03Q19LCMW09DW
Lab Sample ID: 580-89177-4
Date Collected: 09/11/19 09:40
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 17:50	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 00:05	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 10:24	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:05	CBB	TAL DEN

Client Sample ID: 03Q19L4MW17W
Lab Sample ID: 580-89177-5

Date Collected: 09/11/19 12:54
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 18:16	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 00:59	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 11:18	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:10	CBB	TAL DEN

Client Sample ID: 03Q19L4MW18W
Lab Sample ID: 580-89177-6

Date Collected: 09/11/19 13:36
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 18:43	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 01:53	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 12:12	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:30	CBB	TAL DEN

Client Sample ID: 03Q19L4MW01AW
Lab Sample ID: 580-89177-7

Date Collected: 09/11/19 15:05
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 19:09	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324273	09/18/19 08:06	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/28/19 21:32	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 09:18	AJC	TAL SAC
Total/NA	Analysis	6860		10	471410	09/23/19 16:35	CBB	TAL DEN

Client Sample ID: 03Q19L4MW01BW
Lab Sample ID: 580-89177-8

Date Collected: 09/11/19 15:33
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 19:36	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324273	09/18/19 08:06	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/28/19 22:26	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 10:12	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:40	CBB	TAL DEN

Client Sample ID: 03Q19L4MW07BW
Lab Sample ID: 580-89177-9

Date Collected: 09/11/19 14:19
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 20:02	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324273	09/18/19 08:06	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/28/19 23:20	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 11:06	AJC	TAL SAC
Total/NA	Analysis	6860		10	471410	09/23/19 16:45	CBB	TAL DEN

Client Sample ID: 03Q19L4MW145W
Lab Sample ID: 580-89177-10

Date Collected: 09/11/19 17:00
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 21:22	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324273	09/18/19 08:06	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 02:01	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 13:47	AJC	TAL SAC
Total/NA	Analysis	6860		1	471410	09/23/19 16:50	CBB	TAL DEN

Client Sample ID: 091119TB
Lab Sample ID: 580-89177-11

Date Collected: 09/11/19 00:00
Matrix: Water
Date Received: 09/12/19 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 21:49	JSM	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89177-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89177-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89177-1	03Q19LCMW04SW	Water	09/11/19 11:39	09/12/19 12:55	
580-89177-2	03Q19LCMW04DW	Water	09/11/19 11:06	09/12/19 12:55	
580-89177-3	03Q19LCMW09SW	Water	09/11/19 10:22	09/12/19 12:55	
580-89177-4	03Q19LCMW09DW	Water	09/11/19 09:40	09/12/19 12:55	
580-89177-5	03Q19L4MW17W	Water	09/11/19 12:54	09/12/19 12:55	
580-89177-6	03Q19L4MW18W	Water	09/11/19 13:36	09/12/19 12:55	
580-89177-7	03Q19L4MW01AW	Water	09/11/19 15:05	09/12/19 12:55	
580-89177-8	03Q19L4MW01BW	Water	09/11/19 15:33	09/12/19 12:55	
580-89177-9	03Q19L4MW07BW	Water	09/11/19 14:19	09/12/19 12:55	
580-89177-10	03Q19L4MW145W	Water	09/11/19 17:00	09/12/19 12:55	
580-89177-11	091119TB	Water	09/11/19 00:00	09/12/19 12:55	

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Braunsten	Phone:	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

580-89177 Chain of Custody

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_LL	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
		Preservation Code:									
03Q19LCMW04SW	9/11/19	1139	G	W			X	X	X	6	
03Q19LCMW04DW		1106									
03Q19LCMW09SW		1022									
03Q19LCMW09DW		0940									
03Q19L4MW17W		1254									
03Q19L4MW18W		1336									
03Q19L4MW01AW		1505									
03Q19L4MW01BW		1533									
03Q19L4MW07BW		1419								14	MS/MSD
03Q19L4MW14SW		1700								6	
09119TB		—								3	

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: 3.8, 1.5, 2.7, 3.4

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/11/19 1720	PBS		9/12/19 1100	M.E.
2		9/12/19 1255	M.E.		9/12/19 1155	TAL-FOR
3		Date/Time:	Company		Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ 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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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

580-89177 Chain of Custody

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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LCMW04SW	9/11/19	1139	G	W			X	X	X	6	
03Q19LCMW04DW		1106									
03Q19LCMW09SW		1022									
03Q19LCMW09DW		0940									
03Q19L4MW17W		1254									
03Q19L4MW18W		1336									
03Q19L4MW01AW		1505									
03Q19L4MW01BW		1533									
03Q19L4MW07BW		1419								14	MS/MSD
03Q19L4MW14SW		1700								6	
09119TB		—								3	

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: 3.8, 1.5, 2.7, 3.4

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Tommy Laird	9/11/19 1720	PBS		9/12/19 1100	M.E.
2		9/12/19 1255	M.E.		9/12/19 1155	TAPOX
3		9/16/19 1700	FAFOR		9/17/19 0910	TASDA

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

Cooler Temperature(s) °C and Other Remarks:

IR4 = 0.0/0.3

Ver: 08/04/2016

10/10/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 1 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-89177-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 9/30/2019			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19LCMW04SW (580-89177-1)	9/11/19	11:39 Pacific		Water			X	1	
03Q19LCMW04DW (580-89177-2)	9/11/19	11:06 Pacific		Water			X	1	
03Q19LCMW09SW (580-89177-3)	9/11/19	10:22 Pacific		Water			X	1	
03Q19LCMW09DW (580-89177-4)	9/11/19	09:40 Pacific		Water			X	1	
03Q19L4MW17W (580-89177-5)	9/11/19	12:54 Pacific		Water			X	1	
03Q19L4MW18W (580-89177-6)	9/11/19	13:36 Pacific		Water			X	1	
03Q19L4MW01AW (580-89177-7)	9/11/19	15:05 Pacific		Water			X	1	
03Q19L4MW01BW (580-89177-8)	9/11/19	15:33 Pacific		Water			X	1	
03Q19L4MW07BW (580-89177-9)	9/11/19	14:19 Pacific		Water			X	1	

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
	9/17/19 1630	ETA		9/18/19 0905	TAL
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.:	Cooler Temperature(s) °C and Other Remarks: 1.9, +0.1 IR8, 87, 9/18/19

Ver: 01/16/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.2
Client Contact: Shipping/Receiving	Phone:	E-Mail: sheri.cruz@testamericainc.com	State of Origin: Oregon	Page: Page 2 of 2
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 580-89177-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/30/2019			Preservation Codes:
City: Arvada	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) Other:
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19L4MW145W (580-89177-10)	9/11/19	17:00 Pacific		Water			X	1	

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		9/19/19 1650	TAL		9/15/19 0915	TADEN
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

10/10/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-89177-1

Login Number: 89177

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Antonson, Angeline D

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: 580-89177-1

Login Number: 89177
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89177-1

Login Number: 89177

List Source: Eurofins TestAmerica, Sacramento

List Number: 2

Creator: Nuval, Mark-Anthony M

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	481156
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	3.6C
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?	N/A	
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

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

Laboratory Job ID: 580-89178-1
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:
10/11/2019 4:56:18 PM

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

Table of Contents

Job ID: 580-89178-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020
Report Number: 580-89178-1

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 09/13/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.9 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 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3), 03Q19L4MW10BW (580-89178-4) and 091219TB (580-89178-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 09/20/2019 and 09/21/2019.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-311759 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

PERCHLORATE
Samples 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and 03Q19L4MW10BW (580-89178-4) were analyzed for Perchlorate in accordance with SW846 6860. The samples were analyzed on 09/23/2019.

Samples 03Q19L4MW09AW (580-89178-1)[1000X], 03Q19L4MW09BW (580-89178-2)[1000X], 03Q19L4MW10AW (580-89178-3)[200X] and 03Q19L4MW10BW (580-89178-4)[1000X] 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.

EXPLOSIVES
Samples 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and

Job ID: 580-89178-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

03Q19L4MW10BW (580-89178-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 09/19/2019 and 10/04/2019 and analyzed on 09/26/2019, 09/28/2019, 09/29/2019, 10/02/2019, 10/03/2019, 10/09/2019 and 10/10/2019.

Samples 03Q19L4MW09BW (580-89178-2)[4X] and 03Q19L4MW10BW (580-89178-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330_SPE_P_IVWT aqueous in preparation batch 320-324664.

The laboratory control sample duplicate (LCSD) for preparation batch 320-324664 and analytical batch 320-326750 recovered outside control limits for the following analytes: 2,4,6-Trinitrotoluene and Tetryl. The associated samples were re-extracted outside holding time. Both sets of data have been reported.

The following samples were re-prepared outside of preparation holding time due to the initial batch Laboratory Control Sample (LCS) recovering low for 2,4,6-Trinitrotoluene and/or Tetryl for method 8330B aqueous in preparation batch 320-328371: 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and 03Q19L4MW10BW (580-89178-4).

The following samples were diluted to bring the concentration of target analytes within the calibration range: 03Q19L4MW09BW (580-89178-2) and 03Q19L4MW10BW (580-89178-4). 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.

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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: 580-89178-1

Client Sample ID: 03Q19L4MW09AW
Date Collected: 09/12/19 12:25
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-1
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			09/20/19 22:15	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 22:15	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 22:15	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 22:15	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 22:15	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 22:15	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 22:15	1
Benzene	ND		0.20		ug/L			09/20/19 22:15	1
Bromobenzene	ND		0.20		ug/L			09/20/19 22:15	1
Bromoform	ND		0.50		ug/L			09/20/19 22:15	1
Bromomethane	ND		0.50		ug/L			09/20/19 22:15	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 22:15	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 22:15	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Chloroethane	ND		0.50		ug/L			09/20/19 22:15	1
Chloroform	ND		0.20		ug/L			09/20/19 22:15	1
Chloromethane	ND		0.50		ug/L			09/20/19 22:15	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
Dibromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 22:15	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 22:15	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 22:15	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 22:15	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 22:15	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 22:15	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 22:15	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 22:15	1
Naphthalene	ND		1.0		ug/L			09/20/19 22:15	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 22:15	1

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1
Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 22:15	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 22:15	1
Styrene	ND		0.50		ug/L			09/20/19 22:15	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 22:15	1
Toluene	ND		0.20		ug/L			09/20/19 22:15	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
Trichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 22:15	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/20/19 22:15*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 22:15*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/20/19 22:15*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 22:15*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*		*09/20/19 22:15*	*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		09/19/19 07:30	09/29/19 19:53	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 19:53	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
HMX	**1.7**		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
RDX	**6.7**		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 19:53	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/26/19 11:39*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 19:53*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 20:55	1

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1
Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
3-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
HMX	**1.7**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
RDX	**6.1**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Nitroglycerin	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 20:55	1
PETN	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 18:32*	*1*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:55*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**360**		50		ug/L			09/23/19 16:56	1000

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

Job ID: 580-89178-1

Client Sample ID: 03Q19L4MW09BW
Date Collected: 09/12/19 13:20
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-2
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			09/20/19 22:41	1
1,1,1-Trichloroethane	**8.0**		0.20		ug/L			09/20/19 22:41	1
1,1,2,2-Tetrachloroethane	**2.4**		0.20		ug/L			09/20/19 22:41	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloroethane	**12**		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloroethene	**8.1**		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 22:41	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 22:41	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 22:41	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 22:41	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 22:41	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 22:41	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 22:41	1
Benzene	ND		0.20		ug/L			09/20/19 22:41	1
Bromobenzene	ND		0.20		ug/L			09/20/19 22:41	1
Bromoform	ND		0.50		ug/L			09/20/19 22:41	1
Bromomethane	ND		0.50		ug/L			09/20/19 22:41	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 22:41	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 22:41	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Chloroethane	ND		0.50		ug/L			09/20/19 22:41	1
Chloroform	ND		0.20		ug/L			09/20/19 22:41	1
Chloromethane	ND		0.50		ug/L			09/20/19 22:41	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:41	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
Dibromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Dichlorodifluoromethane	**18**		0.40		ug/L			09/20/19 22:41	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 22:41	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 22:41	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 22:41	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 22:41	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 22:41	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 22:41	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 22:41	1
Naphthalene	ND		1.0		ug/L			09/20/19 22:41	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 22:41	1

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 22:41	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 22:41	1
Styrene	ND		0.50		ug/L			09/20/19 22:41	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 22:41	1
Toluene	ND		0.20		ug/L			09/20/19 22:41	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:41	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
Trichloroethene	**0.60**		0.20		ug/L			09/20/19 22:41	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 22:41	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/20/19 22:41*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 22:41*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*09/20/19 22:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 22:41*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/20/19 22:41*	*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		09/19/19 07:30	09/29/19 21:40	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 21:40	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
HMX	**1.7**		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
RDX	**21**	**E**	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 21:40	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*103*		*79 - 111*	*09/19/19 07:30*	*09/26/19 12:37*	*1*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/29/19 21:40*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**24**		0.40		ug/L		09/19/19 07:30	10/02/19 13:05	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*98*		*79 - 111*	*09/19/19 07:30*	*10/02/19 13:05*	*4*
3,4-Dinitrotoluene	*109*		*79 - 111*	*09/19/19 07:30*	*10/02/19 23:14*	*4*

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

Job ID: 580-89178-1

Client Sample ID: 03Q19L4MW09BW

Date Collected: 09/12/19 13:20
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-2

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	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 19:08	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
HMX	**1.5**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
RDX	**19**	**H E**	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 19:08	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 19:08*	*1*
3,4-Dinitrotoluene	*95*		*79 - 111*	*10/04/19 07:06*	*10/09/19 19:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**22**	**H**	0.40		ug/L		10/04/19 07:06	10/10/19 00:30	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/10/19 00:30*	*4*
3,4-Dinitrotoluene	*93*		*79 - 111*	*10/04/19 07:06*	*10/10/19 02:12*	*4*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**200**		50		ug/L			09/23/19 17:01	1000

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

Job ID: 580-89178-1

Client Sample ID: 03Q19L4MW10AW
Date Collected: 09/12/19 14:10
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-3
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			09/20/19 23:08	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 23:08	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 23:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 23:08	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 23:08	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 23:08	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 23:08	1
Benzene	ND		0.20		ug/L			09/20/19 23:08	1
Bromobenzene	ND		0.20		ug/L			09/20/19 23:08	1
Bromoform	ND		0.50		ug/L			09/20/19 23:08	1
Bromomethane	ND		0.50		ug/L			09/20/19 23:08	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 23:08	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 23:08	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Chloroethane	ND		0.50		ug/L			09/20/19 23:08	1
Chloroform	ND		0.20		ug/L			09/20/19 23:08	1
Chloromethane	ND		0.50		ug/L			09/20/19 23:08	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
Dibromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 23:08	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 23:08	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 23:08	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 23:08	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 23:08	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 23:08	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 23:08	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 23:08	1
Naphthalene	ND		1.0		ug/L			09/20/19 23:08	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 23:08	1

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3
Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 23:08	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 23:08	1
Styrene	ND		0.50		ug/L			09/20/19 23:08	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 23:08	1
Toluene	ND		0.20		ug/L			09/20/19 23:08	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
Trichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 23:08	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/20/19 23:08*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 23:08*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/20/19 23:08*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/20/19 23:08*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/20/19 23:08*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 22:34	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
HMX	**0.42**		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
RDX	**2.2**		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Nitroglycerin	ND		0.66		ug/L		09/19/19 07:30	09/29/19 22:34	1
PETN	ND		0.66		ug/L		09/19/19 07:30	09/29/19 22:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/28/19 00:09*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 22:34*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 20:02	1

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3
Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
HMX	**0.46**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
RDX	**2.4**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 20:02	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:02*	*1*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:27*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**54**		10		ug/L			09/23/19 17:06	200

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

Job ID: 580-89178-1

Client Sample ID: 03Q19L4MW10BW
Date Collected: 09/12/19 15:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-4
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			09/20/19 23:34	1
1,1,1-Trichloroethane	**9.3**		0.20		ug/L			09/20/19 23:34	1
1,1,2,2-Tetrachloroethane	**0.86**		0.20		ug/L			09/20/19 23:34	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloroethane	**11**		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloroethene	**11**		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 23:34	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 23:34	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 23:34	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 23:34	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 23:34	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 23:34	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 23:34	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 23:34	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 23:34	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 23:34	1
Benzene	ND		0.20		ug/L			09/20/19 23:34	1
Bromobenzene	ND		0.20		ug/L			09/20/19 23:34	1
Bromoform	ND		0.50		ug/L			09/20/19 23:34	1
Bromomethane	ND		0.50		ug/L			09/20/19 23:34	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 23:34	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 23:34	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Chloroethane	ND		0.50		ug/L			09/20/19 23:34	1
Chloroform	ND		0.20		ug/L			09/20/19 23:34	1
Chloromethane	ND		0.50		ug/L			09/20/19 23:34	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:34	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
Dibromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Dichlorodifluoromethane	**26**		0.40		ug/L			09/20/19 23:34	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 23:34	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 23:34	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 23:34	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 23:34	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 23:34	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 23:34	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 23:34	1
Naphthalene	ND		1.0		ug/L			09/20/19 23:34	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 23:34	1

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4

Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 23:34	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 23:34	1
Styrene	ND		0.50		ug/L			09/20/19 23:34	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 23:34	1
Toluene	ND		0.20		ug/L			09/20/19 23:34	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:34	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
Trichloroethene	**0.26**		0.20		ug/L			09/20/19 23:34	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 23:34	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/20/19 23:34*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 23:34*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*09/20/19 23:34*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 23:34*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*09/20/19 23:34*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 23:28	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
RDX	**11**	**E**	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Nitroglycerin	ND		0.66		ug/L		09/19/19 07:30	09/29/19 23:28	1
PETN	ND		0.66		ug/L		09/19/19 07:30	09/29/19 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*09/19/19 07:30*	*09/28/19 01:06*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 23:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**12**		0.20		ug/L		09/19/19 07:30	10/02/19 16:40	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*98*		*79 - 111*	*09/19/19 07:30*	*10/02/19 16:40*	*2*
3,4-Dinitrotoluene	*103*		*79 - 111*	*09/19/19 07:30*	*10/03/19 00:12*	*2*

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

Job ID: 580-89178-1

Client Sample ID: 03Q19L4MW10BW

Date Collected: 09/12/19 15:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-4

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	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 21:49	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
RDX	**11**	**H E**	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 21:49	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 21:25*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 21:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**13**	**H**	0.20		ug/L		10/04/19 07:06	10/10/19 01:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*10/04/19 07:06*	*10/10/19 01:15*	*2*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/10/19 01:23*	*2*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**190**		50		ug/L			09/23/19 17:11	1000

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

Job ID: 580-89178-1

Client Sample ID: 091219TB
Date Collected: 09/12/19 00:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89178-5
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			09/21/19 00:01	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/21/19 00:01	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/21/19 00:01	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2-Dichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,2-Dichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,3-Dichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
2,2-Dichloropropane	ND		0.50		ug/L			09/21/19 00:01	1
2-Chlorotoluene	ND		0.50		ug/L			09/21/19 00:01	1
4-Chlorotoluene	ND		0.30		ug/L			09/21/19 00:01	1
4-Isopropyltoluene	ND		0.30		ug/L			09/21/19 00:01	1
Benzene	ND		0.20		ug/L			09/21/19 00:01	1
Bromobenzene	ND		0.20		ug/L			09/21/19 00:01	1
Bromoform	ND		0.50		ug/L			09/21/19 00:01	1
Bromomethane	ND		0.50		ug/L			09/21/19 00:01	1
Carbon tetrachloride	ND		0.20		ug/L			09/21/19 00:01	1
Chlorobenzene	ND		0.20		ug/L			09/21/19 00:01	1
Chlorobromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Chlorodibromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Chloroethane	ND		0.50		ug/L			09/21/19 00:01	1
Chloroform	ND		0.20		ug/L			09/21/19 00:01	1
Chloromethane	ND		0.50		ug/L			09/21/19 00:01	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
Dibromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Dichlorobromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/21/19 00:01	1
Ethylbenzene	ND		0.20		ug/L			09/21/19 00:01	1
Ethylene Dibromide	ND		0.10		ug/L			09/21/19 00:01	1
Hexachlorobutadiene	ND		0.50		ug/L			09/21/19 00:01	1
Isopropylbenzene	ND		1.0		ug/L			09/21/19 00:01	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/21/19 00:01	1
Methylene Chloride	ND	*	5.0		ug/L			09/21/19 00:01	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/21/19 00:01	1
Naphthalene	ND		1.0		ug/L			09/21/19 00:01	1
n-Butylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
N-Propylbenzene	ND		0.30		ug/L			09/21/19 00:01	1

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 091219TB
Lab Sample ID: 580-89178-5
Date Collected: 09/12/19 00:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/21/19 00:01	1
sec-Butylbenzene	ND		1.0		ug/L			09/21/19 00:01	1
Styrene	ND		0.50		ug/L			09/21/19 00:01	1
tert-Butylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
Tetrachloroethene	ND		0.50		ug/L			09/21/19 00:01	1
Toluene	ND		0.20		ug/L			09/21/19 00:01	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
Trichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
Trichlorofluoromethane	ND		0.50		ug/L			09/21/19 00:01	1
Vinyl chloride	ND		0.020		ug/L			09/21/19 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/21/19 00:01*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*09/21/19 00:01*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/21/19 00:01*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/21/19 00:01*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*09/21/19 00:01*	*1*

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 16:30	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 16:30	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 16:30	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 16:30	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 16:30	1
Benzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromoform	ND		0.50		ug/L			09/20/19 16:30	1
Bromomethane	ND		0.50		ug/L			09/20/19 16:30	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chloroethane	ND		0.50		ug/L			09/20/19 16:30	1
Chloroform	ND		0.20		ug/L			09/20/19 16:30	1
Chloromethane	ND		0.50		ug/L			09/20/19 16:30	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Dibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 16:30	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 16:30	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 16:30	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 16:30	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 16:30	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 16:30	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
Naphthalene	ND		1.0		ug/L			09/20/19 16:30	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
o-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Styrene	ND		0.50		ug/L			09/20/19 16:30	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 16:30	1
Toluene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Trichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 16:30	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 16:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 16:30*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*09/20/19 16:30*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 16:30*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*09/20/19 16:30*	*1*

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.34		ug/L		107	79 - 127
1,1,1-Trichloroethane	5.00	5.12		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.32		ug/L		106	69 - 139
1,1,2-Trichloroethane	5.00	5.77		ug/L		115	80 - 127
1,1-Dichloroethane	5.00	5.12		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.45		ug/L		109	71 - 126
1,1-Dichloropropene	5.00	5.13		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.65		ug/L		113	75 - 137
1,2,3-Trichloropropane	5.00	5.55		ug/L		111	80 - 127
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	79 - 130
1,2,4-Trimethylbenzene	5.00	5.54		ug/L		111	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.02		ug/L		100	69 - 130
1,2-Dichlorobenzene	5.00	5.55		ug/L		111	80 - 129
1,2-Dichloroethane	5.00	5.46		ug/L		109	74 - 130
1,2-Dichloropropane	5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	5.00	5.15		ug/L		103	80 - 139
1,3-Dichlorobenzene	5.00	5.57		ug/L		111	80 - 130
1,3-Dichloropropane	5.00	5.52		ug/L		110	80 - 130
1,4-Dichlorobenzene	5.00	5.38		ug/L		108	80 - 129
2,2-Dichloropropane	5.00	5.23		ug/L		105	58 - 150
2-Chlorotoluene	5.00	5.00		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	5.00	5.42		ug/L		108	78 - 132

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

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.43		ug/L		109	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	5.31		ug/L		106	69 - 137
Bromomethane	5.00	5.83		ug/L		117	68 - 120
Carbon tetrachloride	5.00	5.00		ug/L		100	71 - 132
Chlorobenzene	5.00	5.41		ug/L		108	80 - 123
Chlorobromomethane	5.00	5.27		ug/L		105	79 - 131
Chlorodibromomethane	5.00	5.51		ug/L		110	76 - 131
Chloroethane	5.00	5.66		ug/L		113	49 - 135
Chloroform	5.00	5.14		ug/L		103	80 - 130
Chloromethane	5.00	5.79		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.39		ug/L		108	72 - 130
cis-1,3-Dichloropropene	5.00	4.98		ug/L		100	66 - 141
Dibromomethane	5.00	5.31		ug/L		106	65 - 141
Dichlorobromomethane	5.00	5.42		ug/L		108	74 - 131
Dichlorodifluoromethane	5.00	6.33		ug/L		127	20 - 137
Ethylbenzene	5.00	5.27		ug/L		105	80 - 130
Ethylene Dibromide	5.00	5.41		ug/L		108	80 - 126
Hexachlorobutadiene	5.00	5.51		ug/L		110	72 - 138
Isopropylbenzene	5.00	5.31		ug/L		106	75 - 137
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150
Methylene Chloride	5.00	8.49	*	ug/L		170	75 - 134
m-Xylene & p-Xylene	5.00	5.19		ug/L		104	78 - 130
Naphthalene	5.00	5.16		ug/L		103	64 - 132
n-Butylbenzene	5.00	5.16		ug/L		103	73 - 135
N-Propylbenzene	5.00	5.01		ug/L		100	77 - 142
o-Xylene	5.00	5.27		ug/L		105	80 - 139
sec-Butylbenzene	5.00	5.42		ug/L		108	78 - 140
Styrene	5.00	5.40		ug/L		108	74 - 136
tert-Butylbenzene	5.00	5.01		ug/L		100	77 - 140
Tetrachloroethene	5.00	5.13		ug/L		103	75 - 131
Toluene	5.00	5.56		ug/L		111	80 - 126
trans-1,2-Dichloroethene	5.00	5.18		ug/L		104	63 - 133
trans-1,3-Dichloropropene	5.00	5.02		ug/L		100	71 - 128
Trichloroethene	5.00	5.10		ug/L		102	72 - 136
Trichlorofluoromethane	5.00	5.80		ug/L		116	60 - 132
Vinyl chloride	5.00	5.47		ug/L		109	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*80 - 120*

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.24		ug/L		105	79 - 127	2	20
1,1,1-Trichloroethane	5.00	5.04		ug/L		101	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	5.06		ug/L		101	69 - 139	5	22
1,1,2-Trichloroethane	5.00	5.43		ug/L		109	80 - 127	6	19
1,1-Dichloroethane	5.00	5.05		ug/L		101	74 - 135	1	20
1,1-Dichloroethene	5.00	5.42		ug/L		108	71 - 126	1	17
1,1-Dichloropropene	5.00	5.03		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene	5.00	5.41		ug/L		108	75 - 137	4	20
1,2,3-Trichloropropane	5.00	5.44		ug/L		109	80 - 127	2	20
1,2,4-Trichlorobenzene	5.00	4.95		ug/L		99	79 - 130	1	20
1,2,4-Trimethylbenzene	5.00	5.49		ug/L		110	78 - 136	1	20
1,2-Dibromo-3-Chloropropane	5.00	5.00		ug/L		100	69 - 130	0	26
1,2-Dichlorobenzene	5.00	5.42		ug/L		108	80 - 129	2	14
1,2-Dichloroethane	5.00	5.20		ug/L		104	74 - 130	5	15
1,2-Dichloropropane	5.00	5.04		ug/L		101	80 - 130	5	14
1,3,5-Trimethylbenzene	5.00	5.13		ug/L		103	80 - 139	1	20
1,3-Dichlorobenzene	5.00	5.50		ug/L		110	80 - 130	1	12
1,3-Dichloropropane	5.00	5.22		ug/L		104	80 - 130	6	19
1,4-Dichlorobenzene	5.00	5.29		ug/L		106	80 - 129	2	11
2,2-Dichloropropane	5.00	5.27		ug/L		105	58 - 150	1	28
2-Chlorotoluene	5.00	5.07		ug/L		101	80 - 136	1	20
4-Chlorotoluene	5.00	5.22		ug/L		104	80 - 130	0	20
4-Isopropyltoluene	5.00	5.40		ug/L		108	78 - 132	0	14
Benzene	5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene	5.00	5.03		ug/L		101	80 - 130	0	20
Bromoform	5.00	5.15		ug/L		103	69 - 137	3	20
Bromomethane	5.00	5.89		ug/L		118	68 - 120	1	18
Carbon tetrachloride	5.00	5.07		ug/L		101	71 - 132	1	15
Chlorobenzene	5.00	5.37		ug/L		107	80 - 123	1	12
Chlorobromomethane	5.00	5.11		ug/L		102	79 - 131	3	20
Chlorodibromomethane	5.00	5.20		ug/L		104	76 - 131	6	20
Chloroethane	5.00	5.69		ug/L		114	49 - 135	0	27
Chloroform	5.00	5.01		ug/L		100	80 - 130	3	20
Chloromethane	5.00	5.90		ug/L		118	32 - 143	2	23
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130	3	20
cis-1,3-Dichloropropene	5.00	4.85		ug/L		97	66 - 141	3	22
Dibromomethane	5.00	4.99		ug/L		100	65 - 141	6	20
Dichlorobromomethane	5.00	5.10		ug/L		102	74 - 131	6	20
Dichlorodifluoromethane	5.00	5.80		ug/L		116	20 - 137	9	22
Ethylbenzene	5.00	5.24		ug/L		105	80 - 130	1	20
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126	3	20
Hexachlorobutadiene	5.00	5.55		ug/L		111	72 - 138	1	20
Isopropylbenzene	5.00	5.39		ug/L		108	75 - 137	1	20
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150	0	25
Methylene Chloride	5.00	8.65	*	ug/L		173	75 - 134	2	18
m-Xylene & p-Xylene	5.00	5.16		ug/L		103	78 - 130	1	20
Naphthalene	5.00	4.87		ug/L		97	64 - 132	6	20
n-Butylbenzene	5.00	5.12		ug/L		102	73 - 135	1	18

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.04		ug/L		101	77 - 142	1	20
o-Xylene			5.00	5.25		ug/L		105	80 - 139	0	20
sec-Butylbenzene			5.00	5.46		ug/L		109	78 - 140	1	20
Styrene			5.00	5.33		ug/L		107	74 - 136	1	20
tert-Butylbenzene			5.00	4.98		ug/L		100	77 - 140	1	20
Tetrachloroethene			5.00	5.01		ug/L		100	75 - 131	2	20
Toluene			5.00	5.52		ug/L		110	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	5.29		ug/L		106	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.83		ug/L		97	71 - 128	4	21
Trichloroethene			5.00	4.99		ug/L		100	72 - 136	2	14
Trichlorofluoromethane			5.00	5.78		ug/L		116	60 - 132	0	20
Vinyl chloride			5.00	5.47		ug/L		109	52 - 128	0	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324664/1-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
RDX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Tetryl	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/29/19 09:10*	*1*

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

Lab Sample ID: LCS 320-324664/2-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	1.04		ug/L		104	74 - 120		
1,3-Dinitrobenzene			1.00	1.06		ug/L		106	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.735		ug/L		73	69 - 111		
2,4-Dinitrotoluene			1.00	1.03		ug/L		103	70 - 119		
2,6-Dinitrotoluene			1.00	1.00		ug/L		100	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.07		ug/L		107	77 - 123		
2-Nitrotoluene			1.00	0.964		ug/L		96	64 - 120		
3-Nitrotoluene			1.00	1.08		ug/L		108	67 - 114		
4-Nitrotoluene			1.00	0.947		ug/L		95	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.10		ug/L		110	68 - 113		
HMX			1.00	1.08		ug/L		108	67 - 115		
RDX			1.00	1.11		ug/L		111	68 - 122		
Nitrobenzene			1.00	1.03		ug/L		103	69 - 119		
Tetryl			1.00	0.683		ug/L		68	66 - 105		
Nitroglycerin			5.00	5.00		ug/L		100	85 - 115		
PETN			5.00	4.85		ug/L		97	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*95*		*79 - 111*

Lab Sample ID: LCSD 320-324664/3-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.988		ug/L		99	74 - 120	6	29
1,3-Dinitrobenzene			1.00	0.961		ug/L		96	72 - 123	10	29
2,4,6-Trinitrotoluene			1.00	0.674	*	ug/L		67	69 - 111	9	28
2,4-Dinitrotoluene			1.00	0.948		ug/L		95	70 - 119	9	30
2,6-Dinitrotoluene			1.00	0.916		ug/L		92	71 - 119	9	29
2-Amino-4,6-dinitrotoluene			1.00	0.993		ug/L		99	77 - 123	7	27
2-Nitrotoluene			1.00	0.892		ug/L		89	64 - 120	8	36
3-Nitrotoluene			1.00	0.982		ug/L		98	67 - 114	9	31
4-Nitrotoluene			1.00	0.856		ug/L		86	67 - 115	10	32
4-Amino-2,6-dinitrotoluene			1.00	1.01		ug/L		101	68 - 113	9	30
HMX			1.00	0.991		ug/L		99	67 - 115	9	32
RDX			1.00	1.00		ug/L		100	68 - 122	10	32
Nitrobenzene			1.00	0.937		ug/L		94	69 - 119	9	31
Tetryl			1.00	0.625	*	ug/L		62	66 - 105	9	26
Nitroglycerin			5.00	4.43		ug/L		89	85 - 115	12	15
PETN			5.00	4.43		ug/L		89	84 - 117	9	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

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

Lab Sample ID: MB 320-328371/1-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
1,3-Dinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,6-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
3-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
HMX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
RDX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Tetryl	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitroglycerin	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1
PETN	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 06:38*	*1*

Lab Sample ID: LCS 320-328371/2-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.975		ug/L		98	74 - 120
1,3-Dinitrobenzene	1.00	0.991		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.852		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.966		ug/L		97	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.998		ug/L		100	77 - 123
2-Nitrotoluene	1.00	0.934		ug/L		93	64 - 120
3-Nitrotoluene	1.00	0.946		ug/L		95	67 - 114
4-Nitrotoluene	1.00	0.951		ug/L		95	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.974		ug/L		97	68 - 113
HMX	1.00	1.03		ug/L		103	67 - 115
RDX	1.00	1.04		ug/L		104	68 - 122
Nitrobenzene	1.00	0.975		ug/L		98	69 - 119
Tetryl	1.00	0.816		ug/L		82	66 - 105
Nitroglycerin	5.00	4.70		ug/L		94	85 - 115
PETN	5.00	4.48		ug/L		90	84 - 117

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

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: MB 280-471410/44
Matrix: Water
Analysis Batch: 471410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.050		ug/L			09/23/19 15:24	1

Lab Sample ID: LCS 280-471410/45
Matrix: Water
Analysis Batch: 471410

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0534		ug/L		107	70 - 130		

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1
Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 22:15	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 19:53	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 20:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326181	09/26/19 11:39	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 18:32	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 16:56	CBB	TAL DEN

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2
Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 22:41	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 21:40	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	4	327493	10/02/19 13:05	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 19:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	4	329066	10/10/19 00:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326181	09/26/19 12:37	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	4	327955	10/02/19 23:14	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 19:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	4	329486	10/10/19 02:12	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 17:01	CBB	TAL DEN

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3
Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 23:08	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 22:34	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3
Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 20:02	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 00:09	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 20:27	AJC	TAL SAC
Total/NA	Analysis	6860		200	471410	09/23/19 17:06	CBB	TAL DEN

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4
Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 23:34	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 23:28	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	2	327493	10/02/19 16:40	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 21:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	2	329066	10/10/19 01:23	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 01:06	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	2	327955	10/03/19 00:12	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 21:25	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	2	329486	10/10/19 01:15	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 17:11	CBB	TAL DEN

Client Sample ID: 091219TB
Lab Sample ID: 580-89178-5
Date Collected: 09/12/19 00:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/21/19 00:01	JSM	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89178-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19
Wyoming (UST)	A2LA	2907.01	10-31-21

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89178-1	03Q19L4MW09AW	Water	09/12/19 12:25	09/13/19 13:55	
580-89178-2	03Q19L4MW09BW	Water	09/12/19 13:20	09/13/19 13:55	
580-89178-3	03Q19L4MW10AW	Water	09/12/19 14:10	09/13/19 13:55	
580-89178-4	03Q19L4MW10BW	Water	09/12/19 15:00	09/13/19 13:55	
580-89178-5	091219TB	Water	09/12/19 00:00	09/13/19 13:55	

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19L4MW09AW	9/12/19	1225	G	W			X	X	X	6	
03Q19L4MW09BW		1320									
03Q19L4MW10AW		1410									
03Q19L4MW10BW		1500									
091219TB		—								3	

580-89178 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: Data Package III 3.9°

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Tommy Laird	9/12/19 1730	PBS			
2		9/13/19 1355	M.E.		9/13/19 1200	M.E.
3					9/13/19 1355	FAPOR

Custody Seals Intact: △ Yes △ 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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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, 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	8260C_LL	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19L4MW09AW	9/12/19	1225	G	W			X	X	X	6	
03Q19L4MW09BW		1320									
03Q19L4MW10AW		1410									
03Q19L4MW10BW		1500									
091219TB		—								3	

580-89178 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: Data Package III 3.9°
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	Tommy Laird	9/12/19 1730	PBS			
2		9/13/19 1355	M.E.		9/13/19 1200	M.E.
3		9/16/19 1700	TAL-OR		9/13/19 1355	TAL-OR
4					9/17/19 0910	TASER

Custody Seals Intact: △ Yes ▲ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

IR4 = 0.0/0.3

Ver: 08/04/2016

10/11/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89178-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/1/2019	Analysis Requested		Preservation Codes:
City: Arvada	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: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			

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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19L4MW09AW (580-89178-1)	9/12/19	12:25 Pacific		Water			X	1	
03Q19L4MW09BW (580-89178-2)	9/12/19	13:20 Pacific		Water			X	1	
03Q19L4MW10AW (580-89178-3)	9/12/19	14:10 Pacific		Water			X	1	
03Q19L4MW10BW (580-89178-4)	9/12/19	15:00 Pacific		Water			X	1	

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
[signature]	9/17/19 1830	[illegible]	[signature]	9/18/19 0913	TADEN
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.:	Cooler Temperature(s) °C and Other Remarks: 1.9, 1.0, IR5, ~~5.6~~, 9/18/19

Ver: 01-16-2019

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: 580-70060.1
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 #: 580-89178-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/1/2019	Analysis Requested		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#:			

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:							
03Q19L4MW09AW (580-89178-1)	9/12/19	12:25 Pacific		Water			X	X	3	
03Q19L4MW09BW (580-89178-2)	9/12/19	13:20 Pacific		Water			X	X	3	
03Q19L4MW10AW (580-89178-3)	9/12/19	14:10 Pacific		Water			X	X	3	
03Q19L4MW10BW (580-89178-4)	9/12/19	15:00 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:	Company	Received by:	Date/Time:	Company
1		9/16/19 1720	TAPOR		9/17/19 900	TAPOR
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.: 481127, 481125, 481126	Cooler Temperature(s) °C and Other Remarks: 2.3, 1.7, 1.7

Ver: 01/16/2019

10/11/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-89178-1

Login Number: 89178
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: 580-89178-1

Login Number: 89178
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89178-1

Login Number: 89178
List Number: 2
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/17/19 12:50 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	481125
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	1.7c
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?	N/A	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

Tracking # : 1028 3892 0567

SO / (PO) / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 48125

Sample Custody Seal: —

Cooler ID: 3 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☐	☐

Initials: SJ Date: 9/17/19

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

WHD

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

Tracking # : 1028 3592 0545

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 481127

Sample Custody Seal: —

Cooler ID: 1 of 3

Temp Observed: 2.3 Corrected: 2.3

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: ST Date: 9/17/19

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

eurofins | Environment Testing TestAmerica

Sacramento
Sample Receiving Notes

Tracking # : 1028 3892 0556

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet — Gel _____ Other _____

Cooler Custody Seal: 481126

Sample Custody Seal: —

Cooler ID: 2 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☐	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: SD Date: 9/17/19

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

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 580-89179-1
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:
10/7/2019 5:34:07 PM

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

Table of Contents

Job ID: 580-89179-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-89179-1

Comments
No additional comments.

Receipt
The samples were received on 9/13/2019 1:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.2º C and 3.5º C.

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

HPLC/IC
Method(s) 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330_SPE_P_IVWT aqueous in preparation batch 320-324888.

Method(s) 8330B: The %RPD between the primary and confirmation column / detector exceeded 40% for HMX for the following sample: 03Q19L4MW05AW (580-89179-4). The primary column data has been reported and qualified in accordance with the laboratory's SOP.

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

LCMS
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.

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
P	The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported

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: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW02AW
Lab Sample ID: 580-89179-1
Date Collected: 09/13/19 08:24
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 05:21	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 05:21	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 05:21	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 05:21	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 05:21	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 05:21	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 05:21	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 05:21	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 05:21	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 05:21	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 05:21	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 05:21	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:21	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 05:21	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 05:21	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 05:21	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:21	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 05:21	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:21	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 05:21	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 05:21	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 05:21	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 05:21	1
Benzene	ND		0.20		ug/L			09/20/19 05:21	1
Bromobenzene	ND		0.20		ug/L			09/20/19 05:21	1
Bromoform	ND		0.50		ug/L			09/20/19 05:21	1
Bromomethane	ND		0.50		ug/L			09/20/19 05:21	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 05:21	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 05:21	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 05:21	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 05:21	1
Chloroethane	ND		0.50		ug/L			09/20/19 05:21	1
Chloroform	ND		0.20		ug/L			09/20/19 05:21	1
Chloromethane	ND		0.50		ug/L			09/20/19 05:21	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 05:21	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 05:21	1
Dibromomethane	ND		0.20		ug/L			09/20/19 05:21	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 05:21	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 05:21	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 05:21	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 05:21	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 05:21	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 05:21	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 05:21	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 05:21	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 05:21	1
Naphthalene	ND		1.0		ug/L			09/20/19 05:21	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 05:21	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 05:21	1

Client Sample ID: 03Q19L4MW02AW
Lab Sample ID: 580-89179-1
Date Collected: 09/13/19 08:24
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 05:21	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 05:21	1
Styrene	ND		0.50		ug/L			09/20/19 05:21	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 05:21	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 05:21	1
Toluene	ND		0.20		ug/L			09/20/19 05:21	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 05:21	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 05:21	1
Trichloroethene	ND		0.20		ug/L			09/20/19 05:21	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 05:21	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 05:21*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*09/20/19 05:21*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*09/20/19 05:21*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 05:21*	*1*
Trifluorotoluene (Surr)	*98*		*80 - 120*		*09/20/19 05:21*	*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		09/20/19 06:24	09/28/19 09:02	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/20/19 06:24	09/28/19 09:02	1
2-Nitrotoluene	ND		0.51		ug/L		09/20/19 06:24	09/28/19 09:02	1
3-Nitrotoluene	ND		0.51		ug/L		09/20/19 06:24	09/28/19 09:02	1
4-Nitrotoluene	ND		0.51		ug/L		09/20/19 06:24	09/28/19 09:02	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
HMX	**3.5**		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
RDX	**7.4**		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
Nitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
Tetryl	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:02	1
Nitroglycerin	ND		0.67		ug/L		09/20/19 06:24	09/28/19 09:02	1
PETN	ND		0.67		ug/L		09/20/19 06:24	09/28/19 09:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/20/19 06:24*	*09/28/19 09:02*	*1*
3,4-Dinitrotoluene	*91*		*79 - 111*	*09/20/19 06:24*	*09/28/19 20:17*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**200**		50		ug/L			09/23/19 17:16	1000

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW03AW
Lab Sample ID: 580-89179-2
Date Collected: 09/13/19 09:23
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 05:48	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 05:48	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 05:48	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 05:48	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 05:48	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 05:48	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 05:48	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 05:48	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 05:48	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 05:48	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 05:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 05:48	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:48	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 05:48	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 05:48	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 05:48	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:48	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 05:48	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 05:48	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 05:48	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 05:48	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 05:48	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 05:48	1
Benzene	ND		0.20		ug/L			09/20/19 05:48	1
Bromobenzene	ND		0.20		ug/L			09/20/19 05:48	1
Bromoform	ND		0.50		ug/L			09/20/19 05:48	1
Bromomethane	ND		0.50		ug/L			09/20/19 05:48	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 05:48	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 05:48	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 05:48	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 05:48	1
Chloroethane	ND		0.50		ug/L			09/20/19 05:48	1
Chloroform	ND		0.20		ug/L			09/20/19 05:48	1
Chloromethane	ND		0.50		ug/L			09/20/19 05:48	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 05:48	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 05:48	1
Dibromomethane	ND		0.20		ug/L			09/20/19 05:48	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 05:48	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 05:48	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 05:48	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 05:48	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 05:48	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 05:48	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 05:48	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 05:48	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 05:48	1
Naphthalene	ND		1.0		ug/L			09/20/19 05:48	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 05:48	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 05:48	1

Client Sample ID: 03Q19L4MW03AW
Lab Sample ID: 580-89179-2

Date Collected: 09/13/19 09:23
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 05:48	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 05:48	1
Styrene	ND		0.50		ug/L			09/20/19 05:48	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 05:48	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 05:48	1
Toluene	ND		0.20		ug/L			09/20/19 05:48	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 05:48	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 05:48	1
Trichloroethene	ND		0.20		ug/L			09/20/19 05:48	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 05:48	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 05:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*09/20/19 05:48*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*09/20/19 05:48*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*09/20/19 05:48*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 05:48*	*1*
Trifluorotoluene (Surr)	*95*		*80 - 120*		*09/20/19 05:48*	*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		09/20/19 06:24	09/28/19 09:55	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/20/19 06:24	09/28/19 09:55	1
2-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 09:55	1
3-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 09:55	1
4-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 09:55	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
HMX	**0.36**		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
RDX	**5.0**		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
Nitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
Tetryl	ND		0.10		ug/L		09/20/19 06:24	09/28/19 09:55	1
Nitroglycerin	ND		0.65		ug/L		09/20/19 06:24	09/28/19 09:55	1
PETN	ND		0.65		ug/L		09/20/19 06:24	09/28/19 09:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/20/19 06:24*	*09/28/19 09:55*	*1*
3,4-Dinitrotoluene	*89*		*79 - 111*	*09/20/19 06:24*	*09/28/19 21:14*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**32**		5.0		ug/L			09/23/19 17:37	100

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW03BW
Lab Sample ID: 580-89179-3
Date Collected: 09/13/19 10:07
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 06:14	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 06:14	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 06:14	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 06:14	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 06:14	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 06:14	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 06:14	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 06:14	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 06:14	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 06:14	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 06:14	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 06:14	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:14	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 06:14	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 06:14	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 06:14	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:14	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 06:14	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:14	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 06:14	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 06:14	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 06:14	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 06:14	1
Benzene	ND		0.20		ug/L			09/20/19 06:14	1
Bromobenzene	ND		0.20		ug/L			09/20/19 06:14	1
Bromoform	ND		0.50		ug/L			09/20/19 06:14	1
Bromomethane	ND		0.50		ug/L			09/20/19 06:14	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 06:14	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 06:14	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 06:14	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 06:14	1
Chloroethane	ND		0.50		ug/L			09/20/19 06:14	1
Chloroform	ND		0.20		ug/L			09/20/19 06:14	1
Chloromethane	ND		0.50		ug/L			09/20/19 06:14	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 06:14	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 06:14	1
Dibromomethane	ND		0.20		ug/L			09/20/19 06:14	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 06:14	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 06:14	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 06:14	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 06:14	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 06:14	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 06:14	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 06:14	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 06:14	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 06:14	1
Naphthalene	ND		1.0		ug/L			09/20/19 06:14	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 06:14	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 06:14	1

Client Sample ID: 03Q19L4MW03BW
Lab Sample ID: 580-89179-3

Date Collected: 09/13/19 10:07
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 06:14	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 06:14	1
Styrene	ND		0.50		ug/L			09/20/19 06:14	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 06:14	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 06:14	1
Toluene	ND		0.20		ug/L			09/20/19 06:14	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 06:14	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 06:14	1
Trichloroethene	ND		0.20		ug/L			09/20/19 06:14	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 06:14	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 06:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 06:14*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*09/20/19 06:14*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*09/20/19 06:14*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 06:14*	*1*
Trifluorotoluene (Surr)	*95*		*80 - 120*		*09/20/19 06:14*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/20/19 06:24	09/28/19 10:49	1
2-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 10:49	1
3-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 10:49	1
4-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 10:49	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
HMX	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
RDX	**4.4**		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
Nitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
Tetryl	ND		0.10		ug/L		09/20/19 06:24	09/28/19 10:49	1
Nitroglycerin	ND		0.65		ug/L		09/20/19 06:24	09/28/19 10:49	1
PETN	ND		0.65		ug/L		09/20/19 06:24	09/28/19 10:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/20/19 06:24*	*09/28/19 10:49*	*1*
3,4-Dinitrotoluene	*89*		*79 - 111*	*09/20/19 06:24*	*09/28/19 23:09*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**20**		5.0		ug/L			09/23/19 17:42	100

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW05AW
Lab Sample ID: 580-89179-4
Date Collected: 09/13/19 08:52
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 06:41	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 06:41	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 06:41	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 06:41	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 06:41	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 06:41	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 06:41	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 06:41	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 06:41	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 06:41	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 06:41	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 06:41	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:41	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 06:41	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 06:41	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 06:41	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:41	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 06:41	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 06:41	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 06:41	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 06:41	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 06:41	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 06:41	1
Benzene	ND		0.20		ug/L			09/20/19 06:41	1
Bromobenzene	ND		0.20		ug/L			09/20/19 06:41	1
Bromoform	ND		0.50		ug/L			09/20/19 06:41	1
Bromomethane	ND		0.50		ug/L			09/20/19 06:41	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 06:41	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 06:41	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 06:41	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 06:41	1
Chloroethane	ND		0.50		ug/L			09/20/19 06:41	1
Chloroform	ND		0.20		ug/L			09/20/19 06:41	1
Chloromethane	ND		0.50		ug/L			09/20/19 06:41	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 06:41	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 06:41	1
Dibromomethane	ND		0.20		ug/L			09/20/19 06:41	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 06:41	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 06:41	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 06:41	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 06:41	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 06:41	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 06:41	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 06:41	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 06:41	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 06:41	1
Naphthalene	ND		1.0		ug/L			09/20/19 06:41	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 06:41	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 06:41	1

Client Sample ID: 03Q19L4MW05AW
Lab Sample ID: 580-89179-4

Date Collected: 09/13/19 08:52
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 06:41	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 06:41	1
Styrene	ND		0.50		ug/L			09/20/19 06:41	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 06:41	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 06:41	1
Toluene	ND		0.20		ug/L			09/20/19 06:41	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 06:41	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 06:41	1
Trichloroethene	ND		0.20		ug/L			09/20/19 06:41	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 06:41	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 06:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/20/19 06:41*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*09/20/19 06:41*	*1*
Dibromofluoromethane (Surr)	*114*		*80 - 120*		*09/20/19 06:41*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 06:41*	*1*
Trifluorotoluene (Surr)	*93*		*80 - 120*		*09/20/19 06:41*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
1,3-Dinitrobenzene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
2,4,6-Trinitrotoluene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
2,4-Dinitrotoluene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
2,6-Dinitrotoluene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/20/19 06:24	09/28/19 11:43	1
2-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 11:43	1
3-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 11:43	1
4-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 11:43	1
4-Amino-2,6-dinitrotoluene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
HMX	**0.16**	**P**	0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
RDX	**3.4**		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
Nitrobenzene	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
Tetryl	ND		0.099		ug/L		09/20/19 06:24	09/28/19 11:43	1
Nitroglycerin	ND		0.64		ug/L		09/20/19 06:24	09/28/19 11:43	1
PETN	ND		0.64		ug/L		09/20/19 06:24	09/28/19 11:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/20/19 06:24*	*09/28/19 11:43*	*1*
3,4-Dinitrotoluene	*89*		*79 - 111*	*09/20/19 06:24*	*09/29/19 00:07*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**23**		5.0		ug/L			09/23/19 17:47	100

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

Job ID: 580-89179-1

Client Sample ID: 091319TB
Date Collected: 09/13/19 00:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89179-5
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			09/20/19 07:07	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 07:07	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 07:07	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 07:07	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 07:07	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 07:07	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 07:07	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 07:07	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 07:07	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 07:07	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 07:07	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 07:07	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 07:07	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 07:07	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 07:07	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 07:07	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 07:07	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 07:07	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 07:07	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 07:07	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 07:07	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 07:07	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 07:07	1
Benzene	ND		0.20		ug/L			09/20/19 07:07	1
Bromobenzene	ND		0.20		ug/L			09/20/19 07:07	1
Bromoform	ND		0.50		ug/L			09/20/19 07:07	1
Bromomethane	ND		0.50		ug/L			09/20/19 07:07	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 07:07	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 07:07	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 07:07	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 07:07	1
Chloroethane	ND		0.50		ug/L			09/20/19 07:07	1
Chloroform	ND		0.20		ug/L			09/20/19 07:07	1
Chloromethane	ND		0.50		ug/L			09/20/19 07:07	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 07:07	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 07:07	1
Dibromomethane	ND		0.20		ug/L			09/20/19 07:07	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 07:07	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 07:07	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 07:07	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 07:07	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 07:07	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 07:07	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 07:07	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 07:07	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 07:07	1
Naphthalene	ND		1.0		ug/L			09/20/19 07:07	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 07:07	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 07:07	1

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

Job ID: 580-89179-1

Client Sample ID: 091319TB
Date Collected: 09/13/19 00:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89179-5
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			09/20/19 07:07	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 07:07	1
Styrene	ND		0.50		ug/L			09/20/19 07:07	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 07:07	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 07:07	1
Toluene	ND		0.20		ug/L			09/20/19 07:07	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 07:07	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 07:07	1
Trichloroethene	ND		0.20		ug/L			09/20/19 07:07	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 07:07	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 07:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 07:07*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*09/20/19 07:07*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*09/20/19 07:07*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 07:07*	*1*
Trifluorotoluene (Surr)	*97*		*80 - 120*		*09/20/19 07:07*	*1*

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

Lab Sample ID: MB 580-311763/7
Matrix: Water
Analysis Batch: 311763

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			09/20/19 01:23	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 01:23	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 01:23	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 01:23	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 01:23	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 01:23	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 01:23	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 01:23	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 01:23	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 01:23	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 01:23	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 01:23	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 01:23	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 01:23	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 01:23	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 01:23	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 01:23	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 01:23	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 01:23	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 01:23	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 01:23	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 01:23	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 01:23	1
Benzene	ND		0.20		ug/L			09/20/19 01:23	1
Bromobenzene	ND		0.20		ug/L			09/20/19 01:23	1
Bromoform	ND		0.50		ug/L			09/20/19 01:23	1
Bromomethane	ND		0.50		ug/L			09/20/19 01:23	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 01:23	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 01:23	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 01:23	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 01:23	1
Chloroethane	ND		0.50		ug/L			09/20/19 01:23	1
Chloroform	ND		0.20		ug/L			09/20/19 01:23	1
Chloromethane	ND		0.50		ug/L			09/20/19 01:23	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 01:23	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 01:23	1
Dibromomethane	ND		0.20		ug/L			09/20/19 01:23	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 01:23	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 01:23	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 01:23	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 01:23	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 01:23	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 01:23	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 01:23	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 01:23	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 01:23	1
Naphthalene	ND		1.0		ug/L			09/20/19 01:23	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 01:23	1

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

Lab Sample ID: MB 580-311763/7
Matrix: Water
Analysis Batch: 311763

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			09/20/19 01:23	1
o-Xylene	ND		0.50		ug/L			09/20/19 01:23	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 01:23	1
Styrene	ND		0.50		ug/L			09/20/19 01:23	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 01:23	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 01:23	1
Toluene	ND		0.20		ug/L			09/20/19 01:23	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 01:23	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 01:23	1
Trichloroethene	ND		0.20		ug/L			09/20/19 01:23	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 01:23	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 01:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*09/20/19 01:23*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*09/20/19 01:23*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*09/20/19 01:23*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/20/19 01:23*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*09/20/19 01:23*	*1*

Lab Sample ID: LCS 580-311763/4
Matrix: Water
Analysis Batch: 311763

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	5.30		ug/L		106	79 - 127
1,1,1-Trichloroethane	5.00	5.14		ug/L		103	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.54		ug/L		91	69 - 139
1,1,2-Trichloroethane	5.00	4.96		ug/L		99	80 - 127
1,1-Dichloroethane	5.00	5.00		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	5.23		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	4.89		ug/L		98	72 - 132
1,2,3-Trichlorobenzene	5.00	5.74		ug/L		115	75 - 137
1,2,3-Trichloropropane	5.00	4.73		ug/L		95	80 - 127
1,2,4-Trichlorobenzene	5.00	5.79		ug/L		116	79 - 130
1,2,4-Trimethylbenzene	5.00	5.16		ug/L		103	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.00		ug/L		100	69 - 130
1,2-Dichlorobenzene	5.00	5.00		ug/L		100	80 - 129
1,2-Dichloroethane	5.00	5.05		ug/L		101	74 - 130
1,2-Dichloropropane	5.00	4.58		ug/L		92	80 - 130
1,3,5-Trimethylbenzene	5.00	4.76		ug/L		95	80 - 139
1,3-Dichlorobenzene	5.00	4.97		ug/L		99	80 - 130
1,3-Dichloropropane	5.00	4.84		ug/L		97	80 - 130
1,4-Dichlorobenzene	5.00	4.84		ug/L		97	80 - 129
2,2-Dichloropropane	5.00	4.82		ug/L		96	58 - 150
2-Chlorotoluene	5.00	4.97		ug/L		99	80 - 136
4-Chlorotoluene	5.00	4.88		ug/L		98	80 - 130
4-Isopropyltoluene	5.00	4.76		ug/L		95	78 - 132

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

Lab Sample ID: LCS 580-311763/4
Matrix: Water
Analysis Batch: 311763

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	4.96		ug/L		99	73 - 133
Bromobenzene	5.00	4.72		ug/L		94	80 - 130
Bromoform	5.00	4.66		ug/L		93	69 - 137
Bromomethane	5.00	5.59		ug/L		112	68 - 120
Carbon tetrachloride	5.00	5.14		ug/L		103	71 - 132
Chlorobenzene	5.00	4.84		ug/L		97	80 - 123
Chlorobromomethane	5.00	5.31		ug/L		106	79 - 131
Chlorodibromomethane	5.00	4.94		ug/L		99	76 - 131
Chloroethane	5.00	5.39		ug/L		108	49 - 135
Chloroform	5.00	5.10		ug/L		102	80 - 130
Chloromethane	5.00	4.96		ug/L		99	32 - 143
cis-1,2-Dichloroethene	5.00	5.15		ug/L		103	72 - 130
cis-1,3-Dichloropropene	5.00	4.91		ug/L		98	66 - 141
Dibromomethane	5.00	5.12		ug/L		102	65 - 141
Dichlorobromomethane	5.00	5.15		ug/L		103	74 - 131
Dichlorodifluoromethane	5.00	5.49		ug/L		110	20 - 137
Ethylbenzene	5.00	5.05		ug/L		101	80 - 130
Ethylene Dibromide	5.00	4.82		ug/L		96	80 - 126
Hexachlorobutadiene	5.00	5.14		ug/L		103	72 - 138
Isopropylbenzene	5.00	5.35		ug/L		107	75 - 137
Methyl tert-butyl ether	5.00	4.97		ug/L		99	60 - 150
Methylene Chloride	5.00	5.29		ug/L		106	75 - 134
m-Xylene & p-Xylene	5.00	5.13		ug/L		103	78 - 130
Naphthalene	5.00	5.93		ug/L		119	64 - 132
n-Butylbenzene	5.00	4.78		ug/L		96	73 - 135
N-Propylbenzene	5.00	4.55		ug/L		91	77 - 142
o-Xylene	5.00	5.35		ug/L		107	80 - 139
sec-Butylbenzene	5.00	4.72		ug/L		94	78 - 140
Styrene	5.00	4.90		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.44		ug/L		89	77 - 140
Tetrachloroethene	5.00	4.94		ug/L		99	75 - 131
Toluene	5.00	5.02		ug/L		100	80 - 126
trans-1,2-Dichloroethene	5.00	5.20		ug/L		104	63 - 133
trans-1,3-Dichloropropene	5.00	4.43		ug/L		89	71 - 128
Trichloroethene	5.00	5.19		ug/L		104	72 - 136
Trichlorofluoromethane	5.00	5.69		ug/L		114	60 - 132
Vinyl chloride	5.00	5.22		ug/L		104	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*
Trifluorotoluene (Surr)	*93*		*80 - 120*

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

Lab Sample ID: LCSD 580-311763/5
Matrix: Water
Analysis Batch: 311763

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	5.31		ug/L		106	79 - 127	0	20
1,1,1-Trichloroethane			5.00	5.26		ug/L		105	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	4.42		ug/L		88	69 - 139	3	22
1,1,2-Trichloroethane			5.00	4.75		ug/L		95	80 - 127	4	19
1,1-Dichloroethane			5.00	5.06		ug/L		101	74 - 135	1	20
1,1-Dichloroethene			5.00	5.30		ug/L		106	71 - 126	1	17
1,1-Dichloropropene			5.00	4.84		ug/L		97	72 - 132	1	13
1,2,3-Trichlorobenzene			5.00	5.53		ug/L		111	75 - 137	4	20
1,2,3-Trichloropropane			5.00	4.58		ug/L		92	80 - 127	3	20
1,2,4-Trichlorobenzene			5.00	5.56		ug/L		111	79 - 130	4	20
1,2,4-Trimethylbenzene			5.00	5.15		ug/L		103	78 - 136	0	20
1,2-Dibromo-3-Chloropropane			5.00	4.82		ug/L		96	69 - 130	4	26
1,2-Dichlorobenzene			5.00	5.01		ug/L		100	80 - 129	0	14
1,2-Dichloroethane			5.00	4.86		ug/L		97	74 - 130	4	15
1,2-Dichloropropane			5.00	4.55		ug/L		91	80 - 130	1	14
1,3,5-Trimethylbenzene			5.00	4.74		ug/L		95	80 - 139	0	20
1,3-Dichlorobenzene			5.00	4.94		ug/L		99	80 - 130	0	12
1,3-Dichloropropane			5.00	4.67		ug/L		93	80 - 130	4	19
1,4-Dichlorobenzene			5.00	4.77		ug/L		95	80 - 129	1	11
2,2-Dichloropropane			5.00	5.20		ug/L		104	58 - 150	8	28
2-Chlorotoluene			5.00	4.97		ug/L		99	80 - 136	0	20
4-Chlorotoluene			5.00	4.87		ug/L		97	80 - 130	0	20
4-Isopropyltoluene			5.00	4.73		ug/L		95	78 - 132	1	14
Benzene			5.00	4.92		ug/L		98	73 - 133	1	20
Bromobenzene			5.00	4.71		ug/L		94	80 - 130	0	20
Bromoform			5.00	4.48		ug/L		90	69 - 137	4	20
Bromomethane			5.00	5.75		ug/L		115	68 - 120	3	18
Carbon tetrachloride			5.00	5.23		ug/L		105	71 - 132	2	15
Chlorobenzene			5.00	4.82		ug/L		96	80 - 123	0	12
Chlorobromomethane			5.00	5.28		ug/L		106	79 - 131	1	20
Chlorodibromomethane			5.00	4.78		ug/L		96	76 - 131	3	20
Chloroethane			5.00	5.24		ug/L		105	49 - 135	3	27
Chloroform			5.00	5.20		ug/L		104	80 - 130	2	20
Chloromethane			5.00	5.05		ug/L		101	32 - 143	2	23
cis-1,2-Dichloroethene			5.00	5.24		ug/L		105	72 - 130	2	20
cis-1,3-Dichloropropene			5.00	4.70		ug/L		94	66 - 141	5	22
Dibromomethane			5.00	5.02		ug/L		100	65 - 141	2	20
Dichlorobromomethane			5.00	4.83		ug/L		97	74 - 131	6	20
Dichlorodifluoromethane			5.00	5.29		ug/L		106	20 - 137	4	22
Ethylbenzene			5.00	5.07		ug/L		101	80 - 130	0	20
Ethylene Dibromide			5.00	4.58		ug/L		92	80 - 126	5	20
Hexachlorobutadiene			5.00	5.03		ug/L		101	72 - 138	2	20
Isopropylbenzene			5.00	5.38		ug/L		108	75 - 137	1	20
Methyl tert-butyl ether			5.00	5.05		ug/L		101	60 - 150	2	25
Methylene Chloride			5.00	5.42		ug/L		108	75 - 134	2	18
m-Xylene & p-Xylene			5.00	5.13		ug/L		103	78 - 130	0	20
Naphthalene			5.00	5.55		ug/L		111	64 - 132	7	20
n-Butylbenzene			5.00	4.74		ug/L		95	73 - 135	1	18

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

Lab Sample ID: LCSD 580-311763/5
Matrix: Water
Analysis Batch: 311763

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	4.52		ug/L		90	77 - 142	1	20
o-Xylene			5.00	5.39		ug/L		108	80 - 139	1	20
sec-Butylbenzene			5.00	4.67		ug/L		93	78 - 140	1	20
Styrene			5.00	4.92		ug/L		98	74 - 136	0	20
tert-Butylbenzene			5.00	4.37		ug/L		87	77 - 140	1	20
Tetrachloroethene			5.00	4.94		ug/L		99	75 - 131	0	20
Toluene			5.00	4.97		ug/L		99	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	5.35		ug/L		107	63 - 133	3	17
trans-1,3-Dichloropropene			5.00	4.24		ug/L		85	71 - 128	4	21
Trichloroethene			5.00	5.07		ug/L		101	72 - 136	2	14
Trichlorofluoromethane			5.00	5.78		ug/L		116	60 - 132	2	20
Vinyl chloride			5.00	5.31		ug/L		106	52 - 128	2	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*
Trifluorotoluene (Surr)	*94*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324888/1-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324888

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/20/19 06:24	09/28/19 06:21	1
2-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 06:21	1
3-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 06:21	1
4-Nitrotoluene	ND		0.50		ug/L		09/20/19 06:24	09/28/19 06:21	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
HMX	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
RDX	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
Nitrobenzene	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
Tetryl	ND		0.10		ug/L		09/20/19 06:24	09/28/19 06:21	1
Nitroglycerin	ND		0.65		ug/L		09/20/19 06:24	09/28/19 06:21	1
PETN	ND		0.65		ug/L		09/20/19 06:24	09/28/19 06:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/20/19 06:24*	*09/28/19 06:21*	*1*

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

Lab Sample ID: LCS 320-324888/2-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324888

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	1.03		ug/L		103	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.720		ug/L		72	69 - 111		
2,4-Dinitrotoluene			1.00	1.01		ug/L		101	70 - 119		
2,6-Dinitrotoluene			1.00	0.981		ug/L		98	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.04		ug/L		104	77 - 123		
2-Nitrotoluene			1.00	0.944		ug/L		94	64 - 120		
3-Nitrotoluene			1.00	1.04		ug/L		104	67 - 114		
4-Nitrotoluene			1.00	0.948		ug/L		95	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.06		ug/L		106	68 - 113		
HMX			1.00	1.04		ug/L		104	67 - 115		
RDX			1.00	1.07		ug/L		107	68 - 122		
Nitrobenzene			1.00	1.00		ug/L		100	69 - 119		
Tetryl			1.00	0.674		ug/L		67	66 - 105		
Nitroglycerin			5.00	4.77		ug/L		95	85 - 115		
PETN			5.00	4.64		ug/L		93	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: LCSD 320-324888/3-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324888

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	1.04		ug/L		104	74 - 120	2	29
1,3-Dinitrobenzene			1.00	1.04		ug/L		104	72 - 123	1	29
2,4,6-Trinitrotoluene			1.00	0.721		ug/L		72	69 - 111	0	28
2,4-Dinitrotoluene			1.00	1.01		ug/L		101	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.980		ug/L		98	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.04		ug/L		104	77 - 123	0	27
2-Nitrotoluene			1.00	0.946		ug/L		95	64 - 120	0	36
3-Nitrotoluene			1.00	1.05		ug/L		105	67 - 114	1	31
4-Nitrotoluene			1.00	0.923		ug/L		92	67 - 115	3	32
4-Amino-2,6-dinitrotoluene			1.00	1.07		ug/L		107	68 - 113	1	30
HMX			1.00	1.07		ug/L		107	67 - 115	2	32
RDX			1.00	1.09		ug/L		109	68 - 122	2	32
Nitrobenzene			1.00	1.02		ug/L		102	69 - 119	1	31
Tetryl			1.00	0.677		ug/L		68	66 - 105	0	26
Nitroglycerin			5.00	4.51		ug/L		90	85 - 115	6	15
PETN			5.00	4.43		ug/L		89	84 - 117	5	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*95*		*79 - 111*

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: MB 280-471410/44
Matrix: Water
Analysis Batch: 471410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.050		ug/L			09/23/19 15:24	1

Lab Sample ID: LCS 280-471410/45
Matrix: Water
Analysis Batch: 471410

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0534		ug/L		107	70 - 130		

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW02AW
Lab Sample ID: 580-89179-1
Date Collected: 09/13/19 08:24
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311763	09/20/19 05:21	T1W	TAL SEA
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 09:02	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 20:17	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 17:16	CBB	TAL DEN

Client Sample ID: 03Q19L4MW03AW
Lab Sample ID: 580-89179-2
Date Collected: 09/13/19 09:23
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311763	09/20/19 05:48	T1W	TAL SEA
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 09:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 21:14	AJC	TAL SAC
Total/NA	Analysis	6860		100	471410	09/23/19 17:37	CBB	TAL DEN

Client Sample ID: 03Q19L4MW03BW
Lab Sample ID: 580-89179-3
Date Collected: 09/13/19 10:07
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311763	09/20/19 06:14	T1W	TAL SEA
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 10:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 23:09	AJC	TAL SAC
Total/NA	Analysis	6860		100	471410	09/23/19 17:42	CBB	TAL DEN

Client Sample ID: 03Q19L4MW05AW
Lab Sample ID: 580-89179-4
Date Collected: 09/13/19 08:52
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311763	09/20/19 06:41	T1W	TAL SEA
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/28/19 11:43	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324888	09/20/19 06:24	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/29/19 00:07	AJC	TAL SAC
Total/NA	Analysis	6860		100	471410	09/23/19 17:47	CBB	TAL DEN

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 091319TB
Date Collected: 09/13/19 00:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89179-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311763	09/20/19 07:07	T1W	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89179-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89179-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89179-1	03Q19L4MW02AW	Water	09/13/19 08:24	09/13/19 13:55	
580-89179-2	03Q19L4MW03AW	Water	09/13/19 09:23	09/13/19 13:55	
580-89179-3	03Q19L4MW03BW	Water	09/13/19 10:07	09/13/19 13:55	
580-89179-4	03Q19L4MW05AW	Water	09/13/19 08:52	09/13/19 13:55	
580-89179-5	091319TB	Water	09/13/19 00:00	09/13/19 13:55	

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 & Tommy Laird
Phone:
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	8260C_LL	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19L4MW02AW	9/13/19	0824	G	W	X		X	X	X	6	
03Q19L4MW03AW		0923									
03Q19L4MW03BW		1007									
03Q19L4MW05AW		0852									
091319TB		—								3	

580-89179 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: 2,2,3,5

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Matt Randall	9/13/19 1120	PBS	Jessica Nye	9/13/19 1200	M.E.
2	Jessica Nye	9/13/19 1355	M-E-		9/13/19 1355	TAPOR
3						

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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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				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	8260C_LL	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19L4MW02AW	9/13/19	0824	G	W	N		X	X	X	6	
03Q19L4MW03AW		0923									
03Q19L4MW03BW		1007									
03Q19L4MW05AW		0852									
091319TB		—						X		3	

580-89179 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)	Special Instructions/QC Requirements: 2,2,3,5

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	9/13/19 1120	PBS	[signature]	9/13/19 1200	M.E.
2	[signature]	9/13/19 1355	M-E-	[signature]	9/13/19 1355	TAPOR
3	[signature]	9/16/19 1708	TAPOR	[signature]	9/17/19 0910	TASTA

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

IR4 = 0.0/0.3

Ver: 08/04/2016

10/7/2019

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89179-1
Address: 4955 Yarrow Street,	Due Date Requested: 10/1/2019	Analysis Requested		Preservation Codes:
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			Other:

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)

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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19L4MW02AW (580-89179-1)	9/13/19	08:24 Pacific		Water			X	1	
03Q19L4MW03AW (580-89179-2)	9/13/19	09:23 Pacific		Water			X	1	
03Q19L4MW03BW (580-89179-3)	9/13/19	10:07 Pacific		Water			X	1	
03Q19L4MW05AW (580-89179-4)	9/13/19	08:52 Pacific		Water			X	1	

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: [signature]	Date/Time: 9/17/19 1630	Company: ETMS	Received by: [signature]	Date/Time: 9/18/19 0915	Company: TA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
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: 1.9, +0, 1.8, SE, 9/18/19	

Ver: 01 16 2019

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: 580-70060.1
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 #: 580-89179-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/1/2019	Analysis Requested		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#:			

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:							
03Q19L4MW02AW (580-89179-1)	9/13/19	08:24 Pacific		Water			X	X	3	
03Q19L4MW03AW (580-89179-2)	9/13/19	09:23 Pacific		Water			X	X	3	
03Q19L4MW03BW (580-89179-3)	9/13/19	10:07 Pacific		Water			X	X	3	
03Q19L4MW05AW (580-89179-4)	9/13/19	08:52 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:	9/16/19 1720	TALON		9/17/19 900	EA Sea
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 481127, 481125, 481126	Cooler Temperature(s) °C and Other Remarks: 2.3, 1.7, 1.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-89179-1

Login Number: 89179

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Antonson, Angeline D

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: 580-89179-1

Login Number: 89179
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89179-1

Login Number: 89179
List Number: 2
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/17/19 12:50 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	481125, 481126, 481127
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	1.7c, 1.7C, 2.3C
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?	N/A	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

580-89179 Field Sheet

Tracking # : 1028 3892 0567

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 48125

Sample Custody Seal: —

Cooler ID: 3 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☐	☐

Initials: ST Date: 9/17/19

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

WHD / WPIA

eurofins | Environment Testing TestAmerica

Sacramento Sample Receiving Notes

Tracking # : 1028 3892 0545

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice C Wet — Gel Other

Cooler Custody Seal: 481127

Sample Custody Seal: —

Cooler ID: 1 of 3

Temp Observed: 2.3 Corrected: 2.3

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: ST Date: 9/17/19

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

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Sacramento Sample Receiving Notes

Tracking # : 1028 3892 0556

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet — Gel _____ Other _____

Cooler Custody Seal: 481126

Sample Custody Seal: —

Cooler ID: 2 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: ET Date: 9/17/19

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

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 580-89180-1
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:
10/14/2019 3:55:29 PM

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

Table of Contents

Job ID: 580-89180-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative
580-89180-1

Comments
No additional comments.

Receipt
The samples were received on 9/13/2019 1:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.5º C and 4.7º C.

GC/MS VOA
Method(s) 8260C: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-311759 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-312054 recovered above the upper control limit for Chloroethane, Methylene chloride, and 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-312054/3).

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-312054 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

HPLC/IC
Method(s) 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330_SPE_P_IVWT aqueous in preparation batch 320-324664.

Method(s) 8330-Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330B/8330B_DOD5 aqueous in preparation batch 320-328864.

Method(s) 8330B: The laboratory control sample duplicate (LCSD) for preparation batch 320-324664 and analytical batch 320-326750 recovered outside control limits for the following analytes: 2,4,6-Trinitrotoluene and Tetryl. The associated samples were re-extracted outside holding time. Both sets of data have been reported.

Method(s) 8330B: The %RPD between the primary and confirmation column exceeded 40% for the following sample: 03Q19L4MW08BW (580-89180-4). The primary column data has been reported and qualified in accordance with the laboratory's SOP. 580-89180-4: RDX

Method(s) 8330-Prep: The following samples were re-prepared outside of preparation holding time due to the initial batch Laboratory Control Sample (LCS) recovering low for 2,4,6-Trinitrotoluene and/or Tetryl for method 8330B aqueous in preparation batch 320-328371: 03Q19L4MW02BW (580-89180-1) and 03Q19L4MW04AW (580-89180-2).

Method(s) 8330-Prep: The following samples were re-prepared outside of preparation holding time due to the laboratory control sample (LCS)recovering low for 2,4,6-Trinitrotoluene and/or Tetryl for 8330B/8330B water in preparation batch 320-328864: 03Q19L4MW08AW (580-89180-3), 03Q19L4MW08BW (580-89180-4), 03Q19L4MW11BW (580-89180-5) and 03Q19L4MW150W (580-89180-6).

Method(s) 8330B: The following samples were diluted to bring the concentration of target analytes within the calibration range: 03Q19L4MW02BW (580-89180-1), 03Q19L4MW08AW (580-89180-3), 03Q19L4MW11BW (580-89180-5) and 03Q19L4MW150W (580-89180-6). 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
No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 580-89180-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

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: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
P	The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported

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.

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: 580-89180-1

Client Sample ID: 03Q19L4MW02BW
Date Collected: 09/12/19 11:20
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-1
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			09/21/19 00:27	1
1,1,1-Trichloroethane	**0.76**		0.20		ug/L			09/21/19 00:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/21/19 00:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/21/19 00:27	1
1,1-Dichloroethane	**2.6**		0.20		ug/L			09/21/19 00:27	1
1,1-Dichloroethene	**0.52**		0.20		ug/L			09/21/19 00:27	1
1,1-Dichloropropene	ND		0.20		ug/L			09/21/19 00:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/21/19 00:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/21/19 00:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/21/19 00:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/21/19 00:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/21/19 00:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:27	1
1,2-Dichloroethane	ND		0.20		ug/L			09/21/19 00:27	1
1,2-Dichloropropane	ND		0.20		ug/L			09/21/19 00:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/21/19 00:27	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:27	1
1,3-Dichloropropane	ND		0.20		ug/L			09/21/19 00:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:27	1
2,2-Dichloropropane	ND		0.50		ug/L			09/21/19 00:27	1
2-Chlorotoluene	ND		0.50		ug/L			09/21/19 00:27	1
4-Chlorotoluene	ND		0.30		ug/L			09/21/19 00:27	1
4-Isopropyltoluene	ND		0.30		ug/L			09/21/19 00:27	1
Benzene	ND		0.20		ug/L			09/21/19 00:27	1
Bromobenzene	ND		0.20		ug/L			09/21/19 00:27	1
Bromoform	ND		0.50		ug/L			09/21/19 00:27	1
Bromomethane	ND		0.50		ug/L			09/21/19 00:27	1
Carbon tetrachloride	ND		0.20		ug/L			09/21/19 00:27	1
Chlorobenzene	ND		0.20		ug/L			09/21/19 00:27	1
Chlorobromomethane	ND		0.20		ug/L			09/21/19 00:27	1
Chlorodibromomethane	ND		0.20		ug/L			09/21/19 00:27	1
Chloroethane	ND		0.50		ug/L			09/21/19 00:27	1
Chloroform	ND		0.20		ug/L			09/21/19 00:27	1
Chloromethane	ND		0.50		ug/L			09/21/19 00:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:27	1
Dibromomethane	ND		0.20		ug/L			09/21/19 00:27	1
Dichlorobromomethane	ND		0.20		ug/L			09/21/19 00:27	1
Dichlorodifluoromethane	**2.0**		0.40		ug/L			09/21/19 00:27	1
Ethylbenzene	ND		0.20		ug/L			09/21/19 00:27	1
Ethylene Dibromide	ND		0.10		ug/L			09/21/19 00:27	1
Hexachlorobutadiene	ND		0.50		ug/L			09/21/19 00:27	1
Isopropylbenzene	ND		1.0		ug/L			09/21/19 00:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/21/19 00:27	1
Methylene Chloride	ND	*	5.0		ug/L			09/21/19 00:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/21/19 00:27	1
Naphthalene	ND		1.0		ug/L			09/21/19 00:27	1
n-Butylbenzene	ND		0.50		ug/L			09/21/19 00:27	1
N-Propylbenzene	ND		0.30		ug/L			09/21/19 00:27	1

Client Sample ID: 03Q19L4MW02BW
Lab Sample ID: 580-89180-1

Date Collected: 09/12/19 11:20
Matrix: Water
Date Received: 09/13/19 13:55

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			09/21/19 00:27	1
sec-Butylbenzene	ND		1.0		ug/L			09/21/19 00:27	1
Styrene	ND		0.50		ug/L			09/21/19 00:27	1
tert-Butylbenzene	ND		0.50		ug/L			09/21/19 00:27	1
Tetrachloroethene	ND		0.50		ug/L			09/21/19 00:27	1
Toluene	ND		0.20		ug/L			09/21/19 00:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:27	1
Trichloroethene	ND		0.20		ug/L			09/21/19 00:27	1
Trichlorofluoromethane	ND		0.50		ug/L			09/21/19 00:27	1
Vinyl chloride	ND		0.020		ug/L			09/21/19 00:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/21/19 00:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/21/19 00:27*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/21/19 00:27*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/21/19 00:27*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/21/19 00:27*	*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		09/19/19 07:30	09/30/19 02:08	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
2,4,6-Trinitrotoluene	**0.16**	*	0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
2,4-Dinitrotoluene	**0.38**		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/30/19 02:08	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 02:08	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 02:08	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 02:08	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
HMX	**7.0**		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
RDX	**34**	**E**	0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 02:08	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/30/19 02:08	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/30/19 02:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/28/19 03:01*	*1*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/30/19 02:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**41**		0.50		ug/L		09/19/19 07:30	09/30/19 01:15	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*100*		*79 - 111*	*09/19/19 07:30*	*09/28/19 02:04*	*5*
3,4-Dinitrotoluene	*102*		*79 - 111*	*09/19/19 07:30*	*09/30/19 01:15*	*5*

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW02BW
Lab Sample ID: 580-89180-1
Date Collected: 09/12/19 11:20
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
2,4,6-Trinitrotoluene	**0.15**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
2,4-Dinitrotoluene	**0.37**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 22:42	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 22:42	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 22:42	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 22:42	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
HMX	**7.0**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
RDX	**35**	**H E**	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 22:42	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 22:42	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*89*		*79 - 111*	*10/04/19 07:06*	*10/09/19 22:42*	*1*
3,4-Dinitrotoluene	*96*		*79 - 111*	*10/04/19 07:06*	*10/09/19 23:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**40**	**H**	0.50		ug/L		10/04/19 07:06	10/10/19 02:17	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*10/04/19 07:06*	*10/10/19 00:17*	*5*
3,4-Dinitrotoluene	*89*		*79 - 111*	*10/04/19 07:06*	*10/10/19 02:17*	*5*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**420**		50		ug/L			09/23/19 18:23	1000

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW04AW
Date Collected: 09/12/19 09:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-2
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			09/21/19 00:54	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/21/19 00:54	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/21/19 00:54	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/21/19 00:54	1
1,1-Dichloroethane	ND		0.20		ug/L			09/21/19 00:54	1
1,1-Dichloroethene	ND		0.20		ug/L			09/21/19 00:54	1
1,1-Dichloropropene	ND		0.20		ug/L			09/21/19 00:54	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/21/19 00:54	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/21/19 00:54	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/21/19 00:54	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/21/19 00:54	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/21/19 00:54	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:54	1
1,2-Dichloroethane	ND		0.20		ug/L			09/21/19 00:54	1
1,2-Dichloropropane	ND		0.20		ug/L			09/21/19 00:54	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/21/19 00:54	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:54	1
1,3-Dichloropropane	ND		0.20		ug/L			09/21/19 00:54	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:54	1
2,2-Dichloropropane	ND		0.50		ug/L			09/21/19 00:54	1
2-Chlorotoluene	ND		0.50		ug/L			09/21/19 00:54	1
4-Chlorotoluene	ND		0.30		ug/L			09/21/19 00:54	1
4-Isopropyltoluene	ND		0.30		ug/L			09/21/19 00:54	1
Benzene	ND		0.20		ug/L			09/21/19 00:54	1
Bromobenzene	ND		0.20		ug/L			09/21/19 00:54	1
Bromoform	ND		0.50		ug/L			09/21/19 00:54	1
Bromomethane	ND		0.50		ug/L			09/21/19 00:54	1
Carbon tetrachloride	ND		0.20		ug/L			09/21/19 00:54	1
Chlorobenzene	ND		0.20		ug/L			09/21/19 00:54	1
Chlorobromomethane	ND		0.20		ug/L			09/21/19 00:54	1
Chlorodibromomethane	ND		0.20		ug/L			09/21/19 00:54	1
Chloroethane	ND		0.50		ug/L			09/21/19 00:54	1
Chloroform	ND		0.20		ug/L			09/21/19 00:54	1
Chloromethane	ND		0.50		ug/L			09/21/19 00:54	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:54	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:54	1
Dibromomethane	ND		0.20		ug/L			09/21/19 00:54	1
Dichlorobromomethane	ND		0.20		ug/L			09/21/19 00:54	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/21/19 00:54	1
Ethylbenzene	ND		0.20		ug/L			09/21/19 00:54	1
Ethylene Dibromide	ND		0.10		ug/L			09/21/19 00:54	1
Hexachlorobutadiene	ND		0.50		ug/L			09/21/19 00:54	1
Isopropylbenzene	ND		1.0		ug/L			09/21/19 00:54	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/21/19 00:54	1
Methylene Chloride	ND	*	5.0		ug/L			09/21/19 00:54	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/21/19 00:54	1
Naphthalene	ND		1.0		ug/L			09/21/19 00:54	1
n-Butylbenzene	ND		0.50		ug/L			09/21/19 00:54	1
N-Propylbenzene	ND		0.30		ug/L			09/21/19 00:54	1

Client Sample ID: 03Q19L4MW04AW
Lab Sample ID: 580-89180-2

Date Collected: 09/12/19 09:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/21/19 00:54	1
sec-Butylbenzene	ND		1.0		ug/L			09/21/19 00:54	1
Styrene	ND		0.50		ug/L			09/21/19 00:54	1
tert-Butylbenzene	ND		0.50		ug/L			09/21/19 00:54	1
Tetrachloroethene	ND		0.50		ug/L			09/21/19 00:54	1
Toluene	ND		0.20		ug/L			09/21/19 00:54	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:54	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:54	1
Trichloroethene	ND		0.20		ug/L			09/21/19 00:54	1
Trichlorofluoromethane	ND		0.50		ug/L			09/21/19 00:54	1
Vinyl chloride	ND		0.020		ug/L			09/21/19 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/21/19 00:54*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/21/19 00:54*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/21/19 00:54*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/21/19 00:54*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*09/21/19 00:54*	*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		09/19/19 07:30	09/30/19 03:02	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/30/19 03:02	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 03:02	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 03:02	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/30/19 03:02	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
RDX	**5.3**		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 03:02	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/30/19 03:02	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/30/19 03:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*09/19/19 07:30*	*09/28/19 03:59*	*1*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/19/19 07:30*	*09/30/19 03:02*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 23:36	1

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW04AW
Lab Sample ID: 580-89180-2
Date Collected: 09/12/19 09:00
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 23:36	1
3-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 23:36	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 23:36	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
RDX	**5.1**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 23:36	1
Nitroglycerin	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 23:36	1
PETN	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*10/04/19 07:06*	*10/09/19 23:36*	*1*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/10/19 06:03*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**55**		10		ug/L			09/23/19 18:39	200

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW08AW
Date Collected: 09/12/19 09:25
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-3
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			09/21/19 01:20	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/21/19 01:20	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/21/19 01:20	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/21/19 01:20	1
1,1-Dichloroethane	ND		0.20		ug/L			09/21/19 01:20	1
1,1-Dichloroethene	ND		0.20		ug/L			09/21/19 01:20	1
1,1-Dichloropropene	ND		0.20		ug/L			09/21/19 01:20	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/21/19 01:20	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/21/19 01:20	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/21/19 01:20	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/21/19 01:20	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/21/19 01:20	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/21/19 01:20	1
1,2-Dichloroethane	ND		0.20		ug/L			09/21/19 01:20	1
1,2-Dichloropropane	ND		0.20		ug/L			09/21/19 01:20	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/21/19 01:20	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/21/19 01:20	1
1,3-Dichloropropane	ND		0.20		ug/L			09/21/19 01:20	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/21/19 01:20	1
2,2-Dichloropropane	ND		0.50		ug/L			09/21/19 01:20	1
2-Chlorotoluene	ND		0.50		ug/L			09/21/19 01:20	1
4-Chlorotoluene	ND		0.30		ug/L			09/21/19 01:20	1
4-Isopropyltoluene	ND		0.30		ug/L			09/21/19 01:20	1
Benzene	ND		0.20		ug/L			09/21/19 01:20	1
Bromobenzene	ND		0.20		ug/L			09/21/19 01:20	1
Bromoform	ND		0.50		ug/L			09/21/19 01:20	1
Bromomethane	ND		0.50		ug/L			09/21/19 01:20	1
Carbon tetrachloride	ND		0.20		ug/L			09/21/19 01:20	1
Chlorobenzene	ND		0.20		ug/L			09/21/19 01:20	1
Chlorobromomethane	ND		0.20		ug/L			09/21/19 01:20	1
Chlorodibromomethane	ND		0.20		ug/L			09/21/19 01:20	1
Chloroethane	ND		0.50		ug/L			09/21/19 01:20	1
Chloroform	ND		0.20		ug/L			09/21/19 01:20	1
Chloromethane	ND		0.50		ug/L			09/21/19 01:20	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 01:20	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 01:20	1
Dibromomethane	ND		0.20		ug/L			09/21/19 01:20	1
Dichlorobromomethane	ND		0.20		ug/L			09/21/19 01:20	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/21/19 01:20	1
Ethylbenzene	ND		0.20		ug/L			09/21/19 01:20	1
Ethylene Dibromide	ND		0.10		ug/L			09/21/19 01:20	1
Hexachlorobutadiene	ND		0.50		ug/L			09/21/19 01:20	1
Isopropylbenzene	ND		1.0		ug/L			09/21/19 01:20	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/21/19 01:20	1
Methylene Chloride	ND	*	5.0		ug/L			09/21/19 01:20	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/21/19 01:20	1
Naphthalene	ND		1.0		ug/L			09/21/19 01:20	1
n-Butylbenzene	ND		0.50		ug/L			09/21/19 01:20	1
N-Propylbenzene	ND		0.30		ug/L			09/21/19 01:20	1

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW08AW
Lab Sample ID: 580-89180-3
Date Collected: 09/12/19 09:25
Matrix: Water
Date Received: 09/13/19 13:55

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			09/21/19 01:20	1
sec-Butylbenzene	ND		1.0		ug/L			09/21/19 01:20	1
Styrene	ND		0.50		ug/L			09/21/19 01:20	1
tert-Butylbenzene	ND		0.50		ug/L			09/21/19 01:20	1
Tetrachloroethene	ND		0.50		ug/L			09/21/19 01:20	1
Toluene	ND		0.20		ug/L			09/21/19 01:20	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 01:20	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 01:20	1
Trichloroethene	ND		0.20		ug/L			09/21/19 01:20	1
Trichlorofluoromethane	ND		0.50		ug/L			09/21/19 01:20	1
Vinyl chloride	ND		0.020		ug/L			09/21/19 01:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*09/21/19 01:20*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/21/19 01:20*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/21/19 01:20*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/21/19 01:20*	*1*
Trifluorotoluene (Surr)	*106*		*80 - 120*		*09/21/19 01:20*	*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		09/19/19 07:30	09/30/19 04:49	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/30/19 04:49	1
2-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 04:49	1
3-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 04:49	1
4-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 04:49	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
HMX	**1.6**		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
RDX	**27**	**E**	0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 04:49	1
Nitroglycerin	ND		0.66		ug/L		09/19/19 07:30	09/30/19 04:49	1
PETN	ND		0.66		ug/L		09/19/19 07:30	09/30/19 04:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*09/19/19 07:30*	*09/28/19 05:54*	*1*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/30/19 04:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**31**		0.51		ug/L		09/19/19 07:30	09/30/19 03:55	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/19/19 07:30*	*09/28/19 04:57*	*5*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/30/19 03:55*	*5*

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW08AW
Date Collected: 09/12/19 09:25
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-3
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	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/07/19 07:36	10/11/19 00:47	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 00:47	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 00:47	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 00:47	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
HMX	**1.4**	**H**	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
RDX	**25**	**H E**	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
Nitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
Tetryl	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 00:47	1
Nitroglycerin	ND	H	0.65		ug/L		10/07/19 07:36	10/11/19 00:47	1
PETN	ND	H	0.65		ug/L		10/07/19 07:36	10/11/19 00:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/07/19 07:36*	*10/10/19 07:00*	*1*
3,4-Dinitrotoluene	*82*		*79 - 111*	*10/07/19 07:36*	*10/11/19 00:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**29**	**H**	0.50		ug/L		10/07/19 07:36	10/11/19 01:40	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/07/19 07:36*	*10/10/19 05:05*	*5*
3,4-Dinitrotoluene	*84*		*79 - 111*	*10/07/19 07:36*	*10/11/19 01:40*	*5*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**77**		10		ug/L			09/23/19 18:44	200

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW08BW
Date Collected: 09/12/19 10:20
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-4
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			09/23/19 22:10	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/23/19 22:10	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/23/19 22:10	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/23/19 22:10	1
1,1-Dichloroethane	ND		0.20		ug/L			09/23/19 22:10	1
1,1-Dichloroethene	ND		0.20		ug/L			09/23/19 22:10	1
1,1-Dichloropropene	ND		0.20		ug/L			09/23/19 22:10	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/23/19 22:10	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/23/19 22:10	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/23/19 22:10	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/23/19 22:10	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/23/19 22:10	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:10	1
1,2-Dichloroethane	ND		0.20		ug/L			09/23/19 22:10	1
1,2-Dichloropropane	ND		0.20		ug/L			09/23/19 22:10	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/23/19 22:10	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:10	1
1,3-Dichloropropane	ND		0.20		ug/L			09/23/19 22:10	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:10	1
2,2-Dichloropropane	ND		0.50		ug/L			09/23/19 22:10	1
2-Chlorotoluene	ND		0.50		ug/L			09/23/19 22:10	1
4-Chlorotoluene	ND		0.30		ug/L			09/23/19 22:10	1
4-Isopropyltoluene	ND		0.30		ug/L			09/23/19 22:10	1
Benzene	ND		0.20		ug/L			09/23/19 22:10	1
Bromobenzene	ND		0.20		ug/L			09/23/19 22:10	1
Bromoform	ND		0.50		ug/L			09/23/19 22:10	1
Bromomethane	ND		0.50		ug/L			09/23/19 22:10	1
Carbon tetrachloride	ND		0.20		ug/L			09/23/19 22:10	1
Chlorobenzene	ND		0.20		ug/L			09/23/19 22:10	1
Chlorobromomethane	ND		0.20		ug/L			09/23/19 22:10	1
Chlorodibromomethane	ND		0.20		ug/L			09/23/19 22:10	1
Chloroethane	ND		0.50		ug/L			09/23/19 22:10	1
Chloroform	ND		0.20		ug/L			09/23/19 22:10	1
Chloromethane	ND		0.50		ug/L			09/23/19 22:10	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 22:10	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 22:10	1
Dibromomethane	ND		0.20		ug/L			09/23/19 22:10	1
Dichlorobromomethane	ND		0.20		ug/L			09/23/19 22:10	1
Dichlorodifluoromethane	**0.57**		0.40		ug/L			09/23/19 22:10	1
Ethylbenzene	ND		0.20		ug/L			09/23/19 22:10	1
Ethylene Dibromide	ND		0.10		ug/L			09/23/19 22:10	1
Hexachlorobutadiene	ND		0.50		ug/L			09/23/19 22:10	1
Isopropylbenzene	ND		1.0		ug/L			09/23/19 22:10	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/23/19 22:10	1
Methylene Chloride	ND	*	5.0		ug/L			09/23/19 22:10	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/23/19 22:10	1
Naphthalene	ND		1.0		ug/L			09/23/19 22:10	1
n-Butylbenzene	ND		0.50		ug/L			09/23/19 22:10	1
N-Propylbenzene	ND		0.30		ug/L			09/23/19 22:10	1

Client Sample ID: 03Q19L4MW08BW
Lab Sample ID: 580-89180-4
Date Collected: 09/12/19 10:20
Matrix: Water
Date Received: 09/13/19 13:55

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			09/23/19 22:10	1
sec-Butylbenzene	ND		1.0		ug/L			09/23/19 22:10	1
Styrene	ND		0.50		ug/L			09/23/19 22:10	1
tert-Butylbenzene	ND		0.50		ug/L			09/23/19 22:10	1
Tetrachloroethene	ND		0.50		ug/L			09/23/19 22:10	1
Toluene	ND		0.20		ug/L			09/23/19 22:10	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 22:10	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 22:10	1
Trichloroethene	ND		0.20		ug/L			09/23/19 22:10	1
Trichlorofluoromethane	ND		0.50		ug/L			09/23/19 22:10	1
Vinyl chloride	ND		0.020		ug/L			09/23/19 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*80 - 120*		*09/23/19 22:10*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*09/23/19 22:10*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*09/23/19 22:10*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/23/19 22:10*	*1*
Trifluorotoluene (Surr)	*89*		*80 - 120*		*09/23/19 22:10*	*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		09/19/19 07:30	09/30/19 05:42	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/19/19 07:30	09/30/19 05:42	1
2-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 05:42	1
3-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 05:42	1
4-Nitrotoluene	ND		0.51		ug/L		09/19/19 07:30	09/30/19 05:42	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
RDX	**0.17**	**P**	0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 05:42	1
Nitroglycerin	ND		0.67		ug/L		09/19/19 07:30	09/30/19 05:42	1
PETN	ND		0.67		ug/L		09/19/19 07:30	09/30/19 05:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*09/19/19 07:30*	*09/28/19 12:36*	*1*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/30/19 05:42*	*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	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/07/19 07:36	10/11/19 02:34	1

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW08BW
Lab Sample ID: 580-89180-4
Date Collected: 09/12/19 10:20
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 02:34	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 02:34	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/07/19 07:36	10/11/19 02:34	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
HMX	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
RDX	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
Nitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
Tetryl	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 02:34	1
Nitroglycerin	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 02:34	1
PETN	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 02:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/07/19 07:36*	*10/10/19 07:58*	*1*
3,4-Dinitrotoluene	*84*		*79 - 111*	*10/07/19 07:36*	*10/11/19 02:34*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**92**		25		ug/L			09/23/19 18:49	500

Client Sample ID: 03Q19L4MW11BW
Lab Sample ID: 580-89180-5

Date Collected: 09/12/19 16:15
Matrix: Water
Date Received: 09/13/19 13:55

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			09/23/19 22:36	1
1,1,1-Trichloroethane	**5.5**		0.20		ug/L			09/23/19 22:36	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/23/19 22:36	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/23/19 22:36	1
1,1-Dichloroethane	**6.8**		0.20		ug/L			09/23/19 22:36	1
1,1-Dichloroethene	**4.5**		0.20		ug/L			09/23/19 22:36	1
1,1-Dichloropropene	ND		0.20		ug/L			09/23/19 22:36	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/23/19 22:36	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/23/19 22:36	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/23/19 22:36	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/23/19 22:36	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/23/19 22:36	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:36	1
1,2-Dichloroethane	ND		0.20		ug/L			09/23/19 22:36	1
1,2-Dichloropropane	ND		0.20		ug/L			09/23/19 22:36	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/23/19 22:36	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:36	1
1,3-Dichloropropane	ND		0.20		ug/L			09/23/19 22:36	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/23/19 22:36	1
2,2-Dichloropropane	ND		0.50		ug/L			09/23/19 22:36	1
2-Chlorotoluene	ND		0.50		ug/L			09/23/19 22:36	1
4-Chlorotoluene	ND		0.30		ug/L			09/23/19 22:36	1
4-Isopropyltoluene	ND		0.30		ug/L			09/23/19 22:36	1
Benzene	ND		0.20		ug/L			09/23/19 22:36	1
Bromobenzene	ND		0.20		ug/L			09/23/19 22:36	1
Bromoform	ND		0.50		ug/L			09/23/19 22:36	1
Bromomethane	ND		0.50		ug/L			09/23/19 22:36	1
Carbon tetrachloride	ND		0.20		ug/L			09/23/19 22:36	1
Chlorobenzene	ND		0.20		ug/L			09/23/19 22:36	1
Chlorobromomethane	ND		0.20		ug/L			09/23/19 22:36	1
Chlorodibromomethane	ND		0.20		ug/L			09/23/19 22:36	1
Chloroethane	ND		0.50		ug/L			09/23/19 22:36	1
Chloroform	ND		0.20		ug/L			09/23/19 22:36	1
Chloromethane	ND		0.50		ug/L			09/23/19 22:36	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 22:36	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 22:36	1
Dibromomethane	ND		0.20		ug/L			09/23/19 22:36	1
Dichlorobromomethane	ND		0.20		ug/L			09/23/19 22:36	1
Dichlorodifluoromethane	**12**		0.40		ug/L			09/23/19 22:36	1
Ethylbenzene	ND		0.20		ug/L			09/23/19 22:36	1
Ethylene Dibromide	ND		0.10		ug/L			09/23/19 22:36	1
Hexachlorobutadiene	ND		0.50		ug/L			09/23/19 22:36	1
Isopropylbenzene	ND		1.0		ug/L			09/23/19 22:36	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/23/19 22:36	1
Methylene Chloride	ND	*	5.0		ug/L			09/23/19 22:36	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/23/19 22:36	1
Naphthalene	ND		1.0		ug/L			09/23/19 22:36	1
n-Butylbenzene	ND		0.50		ug/L			09/23/19 22:36	1
N-Propylbenzene	ND		0.30		ug/L			09/23/19 22:36	1

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW11BW
Date Collected: 09/12/19 16:15
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-5
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			09/23/19 22:36	1
sec-Butylbenzene	ND		1.0		ug/L			09/23/19 22:36	1
Styrene	ND		0.50		ug/L			09/23/19 22:36	1
tert-Butylbenzene	ND		0.50		ug/L			09/23/19 22:36	1
Tetrachloroethene	ND		0.50		ug/L			09/23/19 22:36	1
Toluene	ND		0.20		ug/L			09/23/19 22:36	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 22:36	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 22:36	1
Trichloroethene	ND		0.20		ug/L			09/23/19 22:36	1
Trichlorofluoromethane	ND		0.50		ug/L			09/23/19 22:36	1
Vinyl chloride	ND		0.020		ug/L			09/23/19 22:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*118*		*80 - 120*		*09/23/19 22:36*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*09/23/19 22:36*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/23/19 22:36*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/23/19 22:36*	*1*
Trifluorotoluene (Surr)	*93*		*80 - 120*		*09/23/19 22:36*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/19/19 07:30	09/30/19 07:30	1
2-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 07:30	1
3-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 07:30	1
4-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 07:30	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
RDX	**44**	**E**	0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 07:30	1
Nitroglycerin	ND		0.67		ug/L		09/19/19 07:30	09/30/19 07:30	1
PETN	ND		0.67		ug/L		09/19/19 07:30	09/30/19 07:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/19/19 07:30*	*09/28/19 14:32*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/30/19 07:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**51**		1.0		ug/L		09/19/19 07:30	10/02/19 17:33	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*96*		*79 - 111*	*09/19/19 07:30*	*10/02/19 17:33*	*10*
3,4-Dinitrotoluene	*105*		*79 - 111*	*09/19/19 07:30*	*10/03/19 01:09*	*10*

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW11BW

Date Collected: 09/12/19 16:15
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-5

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	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/07/19 07:36	10/11/19 03:27	1
2-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 03:27	1
3-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 03:27	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 03:27	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
HMX	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
RDX	**40**	**H E**	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
Nitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
Tetryl	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 03:27	1
Nitroglycerin	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 03:27	1
PETN	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*10/07/19 07:36*	*10/10/19 09:53*	*1*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/07/19 07:36*	*10/11/19 03:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**47**	**H**	0.51		ug/L		10/07/19 07:36	10/11/19 04:21	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*92*		*79 - 111*	*10/07/19 07:36*	*10/10/19 04:07*	*5*
3,4-Dinitrotoluene	*91*		*79 - 111*	*10/07/19 07:36*	*10/11/19 04:21*	*5*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**510**		50		ug/L			09/23/19 18:54	1000

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW150W
Date Collected: 09/12/19 12:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-6
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			09/23/19 23:03	1
1,1,1-Trichloroethane	**0.66**		0.20		ug/L			09/23/19 23:03	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/23/19 23:03	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/23/19 23:03	1
1,1-Dichloroethane	**2.0**		0.20		ug/L			09/23/19 23:03	1
1,1-Dichloroethene	**0.40**		0.20		ug/L			09/23/19 23:03	1
1,1-Dichloropropene	ND		0.20		ug/L			09/23/19 23:03	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/23/19 23:03	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/23/19 23:03	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/23/19 23:03	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/23/19 23:03	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/23/19 23:03	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/23/19 23:03	1
1,2-Dichloroethane	ND		0.20		ug/L			09/23/19 23:03	1
1,2-Dichloropropane	ND		0.20		ug/L			09/23/19 23:03	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/23/19 23:03	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/23/19 23:03	1
1,3-Dichloropropane	ND		0.20		ug/L			09/23/19 23:03	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/23/19 23:03	1
2,2-Dichloropropane	ND		0.50		ug/L			09/23/19 23:03	1
2-Chlorotoluene	ND		0.50		ug/L			09/23/19 23:03	1
4-Chlorotoluene	ND		0.30		ug/L			09/23/19 23:03	1
4-Isopropyltoluene	ND		0.30		ug/L			09/23/19 23:03	1
Benzene	ND		0.20		ug/L			09/23/19 23:03	1
Bromobenzene	ND		0.20		ug/L			09/23/19 23:03	1
Bromoform	ND		0.50		ug/L			09/23/19 23:03	1
Bromomethane	ND		0.50		ug/L			09/23/19 23:03	1
Carbon tetrachloride	ND		0.20		ug/L			09/23/19 23:03	1
Chlorobenzene	ND		0.20		ug/L			09/23/19 23:03	1
Chlorobromomethane	ND		0.20		ug/L			09/23/19 23:03	1
Chlorodibromomethane	ND		0.20		ug/L			09/23/19 23:03	1
Chloroethane	ND		0.50		ug/L			09/23/19 23:03	1
Chloroform	ND		0.20		ug/L			09/23/19 23:03	1
Chloromethane	ND		0.50		ug/L			09/23/19 23:03	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 23:03	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 23:03	1
Dibromomethane	ND		0.20		ug/L			09/23/19 23:03	1
Dichlorobromomethane	ND		0.20		ug/L			09/23/19 23:03	1
Dichlorodifluoromethane	**1.9**		0.40		ug/L			09/23/19 23:03	1
Ethylbenzene	ND		0.20		ug/L			09/23/19 23:03	1
Ethylene Dibromide	ND		0.10		ug/L			09/23/19 23:03	1
Hexachlorobutadiene	ND		0.50		ug/L			09/23/19 23:03	1
Isopropylbenzene	ND		1.0		ug/L			09/23/19 23:03	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/23/19 23:03	1
Methylene Chloride	ND	*	5.0		ug/L			09/23/19 23:03	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/23/19 23:03	1
Naphthalene	ND		1.0		ug/L			09/23/19 23:03	1
n-Butylbenzene	ND		0.50		ug/L			09/23/19 23:03	1
N-Propylbenzene	ND		0.30		ug/L			09/23/19 23:03	1

Client Sample ID: 03Q19L4MW150W
Lab Sample ID: 580-89180-6

Date Collected: 09/12/19 12:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/23/19 23:03	1
sec-Butylbenzene	ND		1.0		ug/L			09/23/19 23:03	1
Styrene	ND		0.50		ug/L			09/23/19 23:03	1
tert-Butylbenzene	ND		0.50		ug/L			09/23/19 23:03	1
Tetrachloroethene	ND		0.50		ug/L			09/23/19 23:03	1
Toluene	ND		0.20		ug/L			09/23/19 23:03	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 23:03	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 23:03	1
Trichloroethene	ND		0.20		ug/L			09/23/19 23:03	1
Trichlorofluoromethane	ND		0.50		ug/L			09/23/19 23:03	1
Vinyl chloride	ND		0.020		ug/L			09/23/19 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*117*		*80 - 120*		*09/23/19 23:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*09/23/19 23:03*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*09/23/19 23:03*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/23/19 23:03*	*1*
Trifluorotoluene (Surr)	*94*		*80 - 120*		*09/23/19 23:03*	*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		09/19/19 07:30	09/30/19 09:17	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
2,4,6-Trinitrotoluene	**0.17**	*	0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
2,4-Dinitrotoluene	**0.39**		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
2-Amino-4,6-dinitrotoluene	ND		0.21		ug/L		09/19/19 07:30	09/30/19 09:17	1
2-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 09:17	1
3-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 09:17	1
4-Nitrotoluene	ND		0.52		ug/L		09/19/19 07:30	09/30/19 09:17	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
HMX	**6.9**		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
RDX	**33**	**E**	0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/30/19 09:17	1
Nitroglycerin	ND		0.67		ug/L		09/19/19 07:30	09/30/19 09:17	1
PETN	ND		0.67		ug/L		09/19/19 07:30	09/30/19 09:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*98*		*79 - 111*	*09/19/19 07:30*	*09/28/19 16:27*	*1*
3,4-Dinitrotoluene	*100*		*79 - 111*	*09/19/19 07:30*	*09/30/19 09:17*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**39**		0.52		ug/L		09/19/19 07:30	09/30/19 08:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/28/19 15:29*	*5*
3,4-Dinitrotoluene	*101*		*79 - 111*	*09/19/19 07:30*	*09/30/19 08:23*	*5*

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

Job ID: 580-89180-1

Client Sample ID: 03Q19L4MW150W

Date Collected: 09/12/19 12:00
Date Received: 09/13/19 13:55

Lab Sample ID: 580-89180-6

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	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
2,4,6-Trinitrotoluene	**0.14**	**H**	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
2,4-Dinitrotoluene	**0.36**	**H**	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/07/19 07:36	10/11/19 05:15	1
2-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 05:15	1
3-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 05:15	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/07/19 07:36	10/11/19 05:15	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
HMX	**6.6**	**H**	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
RDX	**32**	**H E**	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
Nitrobenzene	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
Tetryl	ND	H	0.10		ug/L		10/07/19 07:36	10/11/19 05:15	1
Nitroglycerin	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 05:15	1
PETN	ND	H	0.66		ug/L		10/07/19 07:36	10/11/19 05:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*10/07/19 07:36*	*10/10/19 10:50*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/07/19 07:36*	*10/11/19 05:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**35**	**H**	1.0		ug/L		10/07/19 07:36	10/11/19 06:08	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*10/07/19 07:36*	*10/10/19 03:10*	*10*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/07/19 07:36*	*10/11/19 06:08*	*10*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**420**		50		ug/L			09/23/19 19:15	1000

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 16:30	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 16:30	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 16:30	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 16:30	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 16:30	1
Benzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromoform	ND		0.50		ug/L			09/20/19 16:30	1
Bromomethane	ND		0.50		ug/L			09/20/19 16:30	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chloroethane	ND		0.50		ug/L			09/20/19 16:30	1
Chloroform	ND		0.20		ug/L			09/20/19 16:30	1
Chloromethane	ND		0.50		ug/L			09/20/19 16:30	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Dibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 16:30	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 16:30	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 16:30	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 16:30	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 16:30	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 16:30	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
Naphthalene	ND		1.0		ug/L			09/20/19 16:30	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
o-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Styrene	ND		0.50		ug/L			09/20/19 16:30	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 16:30	1
Toluene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Trichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 16:30	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 16:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 16:30*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*09/20/19 16:30*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 16:30*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*09/20/19 16:30*	*1*

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.34		ug/L		107	79 - 127
1,1,1-Trichloroethane	5.00	5.12		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.32		ug/L		106	69 - 139
1,1,2-Trichloroethane	5.00	5.77		ug/L		115	80 - 127
1,1-Dichloroethane	5.00	5.12		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.45		ug/L		109	71 - 126
1,1-Dichloropropene	5.00	5.13		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.65		ug/L		113	75 - 137
1,2,3-Trichloropropane	5.00	5.55		ug/L		111	80 - 127
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	79 - 130
1,2,4-Trimethylbenzene	5.00	5.54		ug/L		111	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.02		ug/L		100	69 - 130
1,2-Dichlorobenzene	5.00	5.55		ug/L		111	80 - 129
1,2-Dichloroethane	5.00	5.46		ug/L		109	74 - 130
1,2-Dichloropropane	5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	5.00	5.15		ug/L		103	80 - 139
1,3-Dichlorobenzene	5.00	5.57		ug/L		111	80 - 130
1,3-Dichloropropane	5.00	5.52		ug/L		110	80 - 130
1,4-Dichlorobenzene	5.00	5.38		ug/L		108	80 - 129
2,2-Dichloropropane	5.00	5.23		ug/L		105	58 - 150
2-Chlorotoluene	5.00	5.00		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	5.00	5.42		ug/L		108	78 - 132

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

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.43		ug/L		109	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	5.31		ug/L		106	69 - 137
Bromomethane	5.00	5.83		ug/L		117	68 - 120
Carbon tetrachloride	5.00	5.00		ug/L		100	71 - 132
Chlorobenzene	5.00	5.41		ug/L		108	80 - 123
Chlorobromomethane	5.00	5.27		ug/L		105	79 - 131
Chlorodibromomethane	5.00	5.51		ug/L		110	76 - 131
Chloroethane	5.00	5.66		ug/L		113	49 - 135
Chloroform	5.00	5.14		ug/L		103	80 - 130
Chloromethane	5.00	5.79		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.39		ug/L		108	72 - 130
cis-1,3-Dichloropropene	5.00	4.98		ug/L		100	66 - 141
Dibromomethane	5.00	5.31		ug/L		106	65 - 141
Dichlorobromomethane	5.00	5.42		ug/L		108	74 - 131
Dichlorodifluoromethane	5.00	6.33		ug/L		127	20 - 137
Ethylbenzene	5.00	5.27		ug/L		105	80 - 130
Ethylene Dibromide	5.00	5.41		ug/L		108	80 - 126
Hexachlorobutadiene	5.00	5.51		ug/L		110	72 - 138
Isopropylbenzene	5.00	5.31		ug/L		106	75 - 137
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150
Methylene Chloride	5.00	8.49	*	ug/L		170	75 - 134
m-Xylene & p-Xylene	5.00	5.19		ug/L		104	78 - 130
Naphthalene	5.00	5.16		ug/L		103	64 - 132
n-Butylbenzene	5.00	5.16		ug/L		103	73 - 135
N-Propylbenzene	5.00	5.01		ug/L		100	77 - 142
o-Xylene	5.00	5.27		ug/L		105	80 - 139
sec-Butylbenzene	5.00	5.42		ug/L		108	78 - 140
Styrene	5.00	5.40		ug/L		108	74 - 136
tert-Butylbenzene	5.00	5.01		ug/L		100	77 - 140
Tetrachloroethene	5.00	5.13		ug/L		103	75 - 131
Toluene	5.00	5.56		ug/L		111	80 - 126
trans-1,2-Dichloroethene	5.00	5.18		ug/L		104	63 - 133
trans-1,3-Dichloropropene	5.00	5.02		ug/L		100	71 - 128
Trichloroethene	5.00	5.10		ug/L		102	72 - 136
Trichlorofluoromethane	5.00	5.80		ug/L		116	60 - 132
Vinyl chloride	5.00	5.47		ug/L		109	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*80 - 120*

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.24		ug/L		105	79 - 127	2	20
1,1,1-Trichloroethane	5.00	5.04		ug/L		101	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	5.06		ug/L		101	69 - 139	5	22
1,1,2-Trichloroethane	5.00	5.43		ug/L		109	80 - 127	6	19
1,1-Dichloroethane	5.00	5.05		ug/L		101	74 - 135	1	20
1,1-Dichloroethene	5.00	5.42		ug/L		108	71 - 126	1	17
1,1-Dichloropropene	5.00	5.03		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene	5.00	5.41		ug/L		108	75 - 137	4	20
1,2,3-Trichloropropane	5.00	5.44		ug/L		109	80 - 127	2	20
1,2,4-Trichlorobenzene	5.00	4.95		ug/L		99	79 - 130	1	20
1,2,4-Trimethylbenzene	5.00	5.49		ug/L		110	78 - 136	1	20
1,2-Dibromo-3-Chloropropane	5.00	5.00		ug/L		100	69 - 130	0	26
1,2-Dichlorobenzene	5.00	5.42		ug/L		108	80 - 129	2	14
1,2-Dichloroethane	5.00	5.20		ug/L		104	74 - 130	5	15
1,2-Dichloropropane	5.00	5.04		ug/L		101	80 - 130	5	14
1,3,5-Trimethylbenzene	5.00	5.13		ug/L		103	80 - 139	1	20
1,3-Dichlorobenzene	5.00	5.50		ug/L		110	80 - 130	1	12
1,3-Dichloropropane	5.00	5.22		ug/L		104	80 - 130	6	19
1,4-Dichlorobenzene	5.00	5.29		ug/L		106	80 - 129	2	11
2,2-Dichloropropane	5.00	5.27		ug/L		105	58 - 150	1	28
2-Chlorotoluene	5.00	5.07		ug/L		101	80 - 136	1	20
4-Chlorotoluene	5.00	5.22		ug/L		104	80 - 130	0	20
4-Isopropyltoluene	5.00	5.40		ug/L		108	78 - 132	0	14
Benzene	5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene	5.00	5.03		ug/L		101	80 - 130	0	20
Bromoform	5.00	5.15		ug/L		103	69 - 137	3	20
Bromomethane	5.00	5.89		ug/L		118	68 - 120	1	18
Carbon tetrachloride	5.00	5.07		ug/L		101	71 - 132	1	15
Chlorobenzene	5.00	5.37		ug/L		107	80 - 123	1	12
Chlorobromomethane	5.00	5.11		ug/L		102	79 - 131	3	20
Chlorodibromomethane	5.00	5.20		ug/L		104	76 - 131	6	20
Chloroethane	5.00	5.69		ug/L		114	49 - 135	0	27
Chloroform	5.00	5.01		ug/L		100	80 - 130	3	20
Chloromethane	5.00	5.90		ug/L		118	32 - 143	2	23
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130	3	20
cis-1,3-Dichloropropene	5.00	4.85		ug/L		97	66 - 141	3	22
Dibromomethane	5.00	4.99		ug/L		100	65 - 141	6	20
Dichlorobromomethane	5.00	5.10		ug/L		102	74 - 131	6	20
Dichlorodifluoromethane	5.00	5.80		ug/L		116	20 - 137	9	22
Ethylbenzene	5.00	5.24		ug/L		105	80 - 130	1	20
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126	3	20
Hexachlorobutadiene	5.00	5.55		ug/L		111	72 - 138	1	20
Isopropylbenzene	5.00	5.39		ug/L		108	75 - 137	1	20
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150	0	25
Methylene Chloride	5.00	8.65	*	ug/L		173	75 - 134	2	18
m-Xylene & p-Xylene	5.00	5.16		ug/L		103	78 - 130	1	20
Naphthalene	5.00	4.87		ug/L		97	64 - 132	6	20
n-Butylbenzene	5.00	5.12		ug/L		102	73 - 135	1	18

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.04		ug/L		101	77 - 142	1	20
o-Xylene			5.00	5.25		ug/L		105	80 - 139	0	20
sec-Butylbenzene			5.00	5.46		ug/L		109	78 - 140	1	20
Styrene			5.00	5.33		ug/L		107	74 - 136	1	20
tert-Butylbenzene			5.00	4.98		ug/L		100	77 - 140	1	20
Tetrachloroethene			5.00	5.01		ug/L		100	75 - 131	2	20
Toluene			5.00	5.52		ug/L		110	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	5.29		ug/L		106	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.83		ug/L		97	71 - 128	4	21
Trichloroethene			5.00	4.99		ug/L		100	72 - 136	2	14
Trichlorofluoromethane			5.00	5.78		ug/L		116	60 - 132	0	20
Vinyl chloride			5.00	5.47		ug/L		109	52 - 128	0	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Lab Sample ID: MB 580-312054/7
Matrix: Water
Analysis Batch: 312054

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			09/23/19 16:51	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/23/19 16:51	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/23/19 16:51	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/23/19 16:51	1
1,1-Dichloroethane	ND		0.20		ug/L			09/23/19 16:51	1
1,1-Dichloroethene	ND		0.20		ug/L			09/23/19 16:51	1
1,1-Dichloropropene	ND		0.20		ug/L			09/23/19 16:51	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/23/19 16:51	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/23/19 16:51	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/23/19 16:51	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/23/19 16:51	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/23/19 16:51	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/23/19 16:51	1
1,2-Dichloroethane	ND		0.20		ug/L			09/23/19 16:51	1
1,2-Dichloropropane	ND		0.20		ug/L			09/23/19 16:51	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/23/19 16:51	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/23/19 16:51	1
1,3-Dichloropropane	ND		0.20		ug/L			09/23/19 16:51	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/23/19 16:51	1
2,2-Dichloropropane	ND		0.50		ug/L			09/23/19 16:51	1
2-Chlorotoluene	ND		0.50		ug/L			09/23/19 16:51	1
4-Chlorotoluene	ND		0.30		ug/L			09/23/19 16:51	1
4-Isopropyltoluene	ND		0.30		ug/L			09/23/19 16:51	1

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

Job ID: 580-89180-1

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

Lab Sample ID: MB 580-312054/7
Matrix: Water
Analysis Batch: 312054

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20		ug/L			09/23/19 16:51	1
Bromobenzene	ND		0.20		ug/L			09/23/19 16:51	1
Bromoform	ND		0.50		ug/L			09/23/19 16:51	1
Bromomethane	ND		0.50		ug/L			09/23/19 16:51	1
Carbon tetrachloride	ND		0.20		ug/L			09/23/19 16:51	1
Chlorobenzene	ND		0.20		ug/L			09/23/19 16:51	1
Chlorobromomethane	ND		0.20		ug/L			09/23/19 16:51	1
Chlorodibromomethane	ND		0.20		ug/L			09/23/19 16:51	1
Chloroethane	ND		0.50		ug/L			09/23/19 16:51	1
Chloroform	ND		0.20		ug/L			09/23/19 16:51	1
Chloromethane	ND		0.50		ug/L			09/23/19 16:51	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 16:51	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 16:51	1
Dibromomethane	ND		0.20		ug/L			09/23/19 16:51	1
Dichlorobromomethane	ND		0.20		ug/L			09/23/19 16:51	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/23/19 16:51	1
Ethylbenzene	ND		0.20		ug/L			09/23/19 16:51	1
Ethylene Dibromide	ND		0.10		ug/L			09/23/19 16:51	1
Hexachlorobutadiene	ND		0.50		ug/L			09/23/19 16:51	1
Isopropylbenzene	ND		1.0		ug/L			09/23/19 16:51	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/23/19 16:51	1
Methylene Chloride	ND		5.0		ug/L			09/23/19 16:51	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/23/19 16:51	1
Naphthalene	ND		1.0		ug/L			09/23/19 16:51	1
n-Butylbenzene	ND		0.50		ug/L			09/23/19 16:51	1
N-Propylbenzene	ND		0.30		ug/L			09/23/19 16:51	1
o-Xylene	ND		0.50		ug/L			09/23/19 16:51	1
sec-Butylbenzene	ND		1.0		ug/L			09/23/19 16:51	1
Styrene	ND		0.50		ug/L			09/23/19 16:51	1
tert-Butylbenzene	ND		0.50		ug/L			09/23/19 16:51	1
Tetrachloroethene	ND		0.50		ug/L			09/23/19 16:51	1
Toluene	ND		0.20		ug/L			09/23/19 16:51	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/23/19 16:51	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/23/19 16:51	1
Trichloroethene	ND		0.20		ug/L			09/23/19 16:51	1
Trichlorofluoromethane	ND		0.50		ug/L			09/23/19 16:51	1
Vinyl chloride	ND		0.020		ug/L			09/23/19 16:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*09/23/19 16:51*	*1*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*09/23/19 16:51*	*1*
Dibromofluoromethane (Surr)	*118*		*80 - 120*		*09/23/19 16:51*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/23/19 16:51*	*1*
Trifluorotoluene (Surr)	*96*		*80 - 120*		*09/23/19 16:51*	*1*

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

Lab Sample ID: LCS 580-312054/4
Matrix: Water
Analysis Batch: 312054

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	5.08		ug/L		102	79 - 127
1,1,1-Trichloroethane	5.00	4.94		ug/L		99	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.45		ug/L		89	69 - 139
1,1,2-Trichloroethane	5.00	5.12		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	4.54		ug/L		91	74 - 135
1,1-Dichloroethene	5.00	4.56		ug/L		91	71 - 126
1,1-Dichloropropene	5.00	4.87		ug/L		97	72 - 132
1,2,3-Trichlorobenzene	5.00	4.98		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	4.87		ug/L		97	80 - 127
1,2,4-Trichlorobenzene	5.00	5.23		ug/L		105	79 - 130
1,2,4-Trimethylbenzene	5.00	5.22		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.67		ug/L		93	69 - 130
1,2-Dichlorobenzene	5.00	4.90		ug/L		98	80 - 129
1,2-Dichloroethane	5.00	5.31		ug/L		106	74 - 130
1,2-Dichloropropane	5.00	4.91		ug/L		98	80 - 130
1,3,5-Trimethylbenzene	5.00	4.83		ug/L		97	80 - 139
1,3-Dichlorobenzene	5.00	5.07		ug/L		101	80 - 130
1,3-Dichloropropane	5.00	5.11		ug/L		102	80 - 130
1,4-Dichlorobenzene	5.00	4.85		ug/L		97	80 - 129
2,2-Dichloropropane	5.00	5.42		ug/L		108	58 - 150
2-Chlorotoluene	5.00	4.99		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.20		ug/L		104	80 - 130
4-Isopropyltoluene	5.00	4.87		ug/L		97	78 - 132
Benzene	5.00	4.87		ug/L		97	73 - 133
Bromobenzene	5.00	4.96		ug/L		99	80 - 130
Bromoform	5.00	4.72		ug/L		94	69 - 137
Bromomethane	5.00	4.61		ug/L		92	68 - 120
Carbon tetrachloride	5.00	5.06		ug/L		101	71 - 132
Chlorobenzene	5.00	4.94		ug/L		99	80 - 123
Chlorobromomethane	5.00	4.72		ug/L		94	79 - 131
Chlorodibromomethane	5.00	5.10		ug/L		102	76 - 131
Chloroethane	5.00	5.65		ug/L		113	49 - 135
Chloroform	5.00	4.80		ug/L		96	80 - 130
Chloromethane	5.00	4.10		ug/L		82	32 - 143
cis-1,2-Dichloroethene	5.00	4.59		ug/L		92	72 - 130
cis-1,3-Dichloropropene	5.00	5.35		ug/L		107	66 - 141
Dibromomethane	5.00	5.15		ug/L		103	65 - 141
Dichlorobromomethane	5.00	5.44		ug/L		109	74 - 131
Dichlorodifluoromethane	5.00	4.22		ug/L		84	20 - 137
Ethylbenzene	5.00	5.13		ug/L		103	80 - 130
Ethylene Dibromide	5.00	4.96		ug/L		99	80 - 126
Hexachlorobutadiene	5.00	5.09		ug/L		102	72 - 138
Isopropylbenzene	5.00	5.22		ug/L		104	75 - 137
Methyl tert-butyl ether	5.00	4.49		ug/L		90	60 - 150
Methylene Chloride	5.00	7.18	*	ug/L		144	75 - 134
m-Xylene & p-Xylene	5.00	5.26		ug/L		105	78 - 130
Naphthalene	5.00	5.10		ug/L		102	64 - 132
n-Butylbenzene	5.00	4.82		ug/L		96	73 - 135

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

Lab Sample ID: LCS 580-312054/4
Matrix: Water
Analysis Batch: 312054

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
N-Propylbenzene			5.00	4.71		ug/L		94	77 - 142		
o-Xylene			5.00	5.17		ug/L		103	80 - 139		
sec-Butylbenzene			5.00	4.86		ug/L		97	78 - 140		
Styrene			5.00	5.18		ug/L		104	74 - 136		
tert-Butylbenzene			5.00	4.85		ug/L		97	77 - 140		
Tetrachloroethene			5.00	4.97		ug/L		99	75 - 131		
Toluene			5.00	5.00		ug/L		100	80 - 126		
trans-1,2-Dichloroethene			5.00	4.58		ug/L		92	63 - 133		
trans-1,3-Dichloropropene			5.00	5.07		ug/L		101	71 - 128		
Trichloroethene			5.00	5.14		ug/L		103	72 - 136		
Trichlorofluoromethane			5.00	5.18		ug/L		104	60 - 132		
Vinyl chloride			5.00	4.42		ug/L		88	52 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Lab Sample ID: LCSD 580-312054/5
Matrix: Water
Analysis Batch: 312054

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	4.99		ug/L		100	79 - 127	2	20
1,1,1-Trichloroethane			5.00	4.83		ug/L		97	74 - 128	2	14
1,1,2,2-Tetrachloroethane			5.00	4.57		ug/L		91	69 - 139	3	22
1,1,2-Trichloroethane			5.00	5.17		ug/L		103	80 - 127	1	19
1,1-Dichloroethane			5.00	4.39		ug/L		88	74 - 135	3	20
1,1-Dichloroethene			5.00	4.43		ug/L		89	71 - 126	3	17
1,1-Dichloropropene			5.00	4.76		ug/L		95	72 - 132	2	13
1,2,3-Trichlorobenzene			5.00	4.93		ug/L		99	75 - 137	1	20
1,2,3-Trichloropropane			5.00	4.94		ug/L		99	80 - 127	2	20
1,2,4-Trichlorobenzene			5.00	5.16		ug/L		103	79 - 130	1	20
1,2,4-Trimethylbenzene			5.00	5.10		ug/L		102	78 - 136	2	20
1,2-Dibromo-3-Chloropropane			5.00	4.82		ug/L		96	69 - 130	3	26
1,2-Dichlorobenzene			5.00	4.87		ug/L		97	80 - 129	1	14
1,2-Dichloroethane			5.00	5.37		ug/L		107	74 - 130	1	15
1,2-Dichloropropane			5.00	4.93		ug/L		99	80 - 130	0	14
1,3,5-Trimethylbenzene			5.00	4.73		ug/L		95	80 - 139	2	20
1,3-Dichlorobenzene			5.00	4.96		ug/L		99	80 - 130	2	12
1,3-Dichloropropane			5.00	5.23		ug/L		105	80 - 130	2	19
1,4-Dichlorobenzene			5.00	4.87		ug/L		97	80 - 129	0	11
2,2-Dichloropropane			5.00	5.10		ug/L		102	58 - 150	6	28
2-Chlorotoluene			5.00	4.88		ug/L		98	80 - 136	2	20
4-Chlorotoluene			5.00	5.11		ug/L		102	80 - 130	2	20
4-Isopropyltoluene			5.00	4.71		ug/L		94	78 - 132	3	14

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

Lab Sample ID: LCSD 580-312054/5
Matrix: Water
Analysis Batch: 312054

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
Benzene			5.00	4.81		ug/L		96	73 - 133	1	20
Bromobenzene			5.00	4.97		ug/L		99	80 - 130	0	20
Bromoform			5.00	4.83		ug/L		97	69 - 137	2	20
Bromomethane			5.00	4.43		ug/L		89	68 - 120	4	18
Carbon tetrachloride			5.00	4.90		ug/L		98	71 - 132	3	15
Chlorobenzene			5.00	4.83		ug/L		97	80 - 123	2	12
Chlorobromomethane			5.00	4.57		ug/L		91	79 - 131	3	20
Chlorodibromomethane			5.00	5.14		ug/L		103	76 - 131	1	20
Chloroethane			5.00	5.44		ug/L		109	49 - 135	4	27
Chloroform			5.00	4.66		ug/L		93	80 - 130	3	20
Chloromethane			5.00	3.66		ug/L		73	32 - 143	11	23
cis-1,2-Dichloroethene			5.00	4.47		ug/L		89	72 - 130	2	20
cis-1,3-Dichloropropene			5.00	5.39		ug/L		108	66 - 141	1	22
Dibromomethane			5.00	5.09		ug/L		102	65 - 141	1	20
Dichlorobromomethane			5.00	5.49		ug/L		110	74 - 131	1	20
Dichlorodifluoromethane			5.00	4.09		ug/L		82	20 - 137	3	22
Ethylbenzene			5.00	5.02		ug/L		100	80 - 130	2	20
Ethylene Dibromide			5.00	5.16		ug/L		103	80 - 126	4	20
Hexachlorobutadiene			5.00	4.86		ug/L		97	72 - 138	4	20
Isopropylbenzene			5.00	5.07		ug/L		101	75 - 137	3	20
Methyl tert-butyl ether			5.00	4.52		ug/L		90	60 - 150	1	25
Methylene Chloride			5.00	7.07	*	ug/L		141	75 - 134	2	18
m-Xylene & p-Xylene			5.00	5.21		ug/L		104	78 - 130	1	20
Naphthalene			5.00	5.11		ug/L		102	64 - 132	0	20
n-Butylbenzene			5.00	4.65		ug/L		93	73 - 135	4	18
N-Propylbenzene			5.00	4.60		ug/L		92	77 - 142	3	20
o-Xylene			5.00	5.09		ug/L		102	80 - 139	2	20
sec-Butylbenzene			5.00	4.73		ug/L		95	78 - 140	3	20
Styrene			5.00	5.23		ug/L		105	74 - 136	1	20
tert-Butylbenzene			5.00	4.78		ug/L		96	77 - 140	2	20
Tetrachloroethene			5.00	4.91		ug/L		98	75 - 131	1	20
Toluene			5.00	4.96		ug/L		99	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	4.40		ug/L		88	63 - 133	4	17
trans-1,3-Dichloropropene			5.00	5.16		ug/L		103	71 - 128	2	21
Trichloroethene			5.00	5.05		ug/L		101	72 - 136	2	14
Trichlorofluoromethane			5.00	5.08		ug/L		102	60 - 132	2	20
Vinyl chloride			5.00	3.89		ug/L		78	52 - 128	13	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*80 - 120*
Toluene-d8 (Surr)	*95*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324664/1-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
RDX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Tetryl	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/29/19 09:10*	*1*

Lab Sample ID: LCS 320-324664/2-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	1.04		ug/L		104	74 - 120
1,3-Dinitrobenzene	1.00	1.06		ug/L		106	72 - 123
2,4,6-Trinitrotoluene	1.00	0.735		ug/L		73	69 - 111
2,4-Dinitrotoluene	1.00	1.03		ug/L		103	70 - 119
2,6-Dinitrotoluene	1.00	1.00		ug/L		100	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	1.07		ug/L		107	77 - 123
2-Nitrotoluene	1.00	0.964		ug/L		96	64 - 120
3-Nitrotoluene	1.00	1.08		ug/L		108	67 - 114
4-Nitrotoluene	1.00	0.947		ug/L		95	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	1.10		ug/L		110	68 - 113
HMX	1.00	1.08		ug/L		108	67 - 115
RDX	1.00	1.11		ug/L		111	68 - 122
Nitrobenzene	1.00	1.03		ug/L		103	69 - 119
Tetryl	1.00	0.683		ug/L		68	66 - 105
Nitroglycerin	5.00	5.00		ug/L		100	85 - 115
PETN	5.00	4.85		ug/L		97	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*95*		*79 - 111*

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

Lab Sample ID: LCSD 320-324664/3-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.988		ug/L		99	74 - 120	6	29
1,3-Dinitrobenzene			1.00	0.961		ug/L		96	72 - 123	10	29
2,4,6-Trinitrotoluene			1.00	0.674	*	ug/L		67	69 - 111	9	28
2,4-Dinitrotoluene			1.00	0.948		ug/L		95	70 - 119	9	30
2,6-Dinitrotoluene			1.00	0.916		ug/L		92	71 - 119	9	29
2-Amino-4,6-dinitrotoluene			1.00	0.993		ug/L		99	77 - 123	7	27
2-Nitrotoluene			1.00	0.892		ug/L		89	64 - 120	8	36
3-Nitrotoluene			1.00	0.982		ug/L		98	67 - 114	9	31
4-Nitrotoluene			1.00	0.856		ug/L		86	67 - 115	10	32
4-Amino-2,6-dinitrotoluene			1.00	1.01		ug/L		101	68 - 113	9	30
HMX			1.00	0.991		ug/L		99	67 - 115	9	32
RDX			1.00	1.00		ug/L		100	68 - 122	10	32
Nitrobenzene			1.00	0.937		ug/L		94	69 - 119	9	31
Tetryl			1.00	0.625	*	ug/L		62	66 - 105	9	26
Nitroglycerin			5.00	4.43		ug/L		89	85 - 115	12	15
PETN			5.00	4.43		ug/L		89	84 - 117	9	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: MB 320-328371/1-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
1,3-Dinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,6-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
3-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
HMX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
RDX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Tetryl	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitroglycerin	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1
PETN	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 06:38*	*1*

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

Lab Sample ID: LCS 320-328371/2-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.975		ug/L		98	74 - 120
1,3-Dinitrobenzene	1.00	0.991		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.852		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.966		ug/L		97	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.998		ug/L		100	77 - 123
2-Nitrotoluene	1.00	0.934		ug/L		93	64 - 120
3-Nitrotoluene	1.00	0.946		ug/L		95	67 - 114
4-Nitrotoluene	1.00	0.951		ug/L		95	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.974		ug/L		97	68 - 113
HMX	1.00	1.03		ug/L		103	67 - 115
RDX	1.00	1.04		ug/L		104	68 - 122
Nitrobenzene	1.00	0.975		ug/L		98	69 - 119
Tetryl	1.00	0.816		ug/L		82	66 - 105
Nitroglycerin	5.00	4.70		ug/L		94	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: MB 320-328864/1-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328864

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
1,3-Dinitrobenzene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
2,4-Dinitrotoluene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
2,6-Dinitrotoluene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		10/07/19 07:36	10/09/19 01:16	1
2-Nitrotoluene	ND		0.50		ug/L		10/07/19 07:36	10/09/19 01:16	1
3-Nitrotoluene	ND		0.50		ug/L		10/07/19 07:36	10/09/19 01:16	1
4-Nitrotoluene	ND		0.50		ug/L		10/07/19 07:36	10/09/19 01:16	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
HMX	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
RDX	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
Nitrobenzene	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
Tetryl	ND		0.10		ug/L		10/07/19 07:36	10/09/19 01:16	1
Nitroglycerin	ND		0.65		ug/L		10/07/19 07:36	10/09/19 01:16	1
PETN	ND		0.65		ug/L		10/07/19 07:36	10/09/19 01:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*10/07/19 07:36*	*10/09/19 01:16*	*1*

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

Lab Sample ID: MB 320-328864/1-A
Matrix: Water
Analysis Batch: 329486

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328864

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	94		79 - 111	10/07/19 07:36	10/09/19 05:06	1

Lab Sample ID: LCS 320-328864/2-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328864

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.915		ug/L		92	74 - 120
1,3-Dinitrobenzene	1.00	0.914		ug/L		91	72 - 123
2,4,6-Trinitrotoluene	1.00	0.761		ug/L		76	69 - 111
2,4-Dinitrotoluene	1.00	0.891		ug/L		89	70 - 119
2,6-Dinitrotoluene	1.00	0.881		ug/L		88	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.918		ug/L		92	77 - 123
2-Nitrotoluene	1.00	0.866		ug/L		87	64 - 120
3-Nitrotoluene	1.00	0.877		ug/L		88	67 - 114
4-Nitrotoluene	1.00	0.870		ug/L		87	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.906		ug/L		91	68 - 113
HMX	1.00	0.973		ug/L		97	67 - 115
RDX	1.00	0.977		ug/L		98	68 - 122
Nitrobenzene	1.00	0.903		ug/L		90	69 - 119
Tetryl	1.00	0.717		ug/L		72	66 - 105
Nitroglycerin	5.00	4.62		ug/L		92	85 - 115
PETN	5.00	4.50		ug/L		90	84 - 117

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

Lab Sample ID: LCS 320-328864/2-A
Matrix: Water
Analysis Batch: 329486

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328864

Surrogate	LCS %Recovery	LCS Qualifier	Limits
3,4-Dinitrotoluene	92		79 - 111

Lab Sample ID: LCSD 320-328864/3-A
Matrix: Water
Analysis Batch: 329486

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 328864

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
3,4-Dinitrotoluene	90		79 - 111

Lab Sample ID: LCSD 320-328864/3-A
Matrix: Water
Analysis Batch: 329857

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 328864

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	1.00	1.07		ug/L		107	74 - 120	15	29

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

Lab Sample ID: LCSD 320-328864/3-A
Matrix: Water
Analysis Batch: 329857

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 328864

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dinitrobenzene			1.00	1.08		ug/L		108	72 - 123	16	29
2,4,6-Trinitrotoluene			1.00	0.888		ug/L		89	69 - 111	15	28
2,4-Dinitrotoluene			1.00	1.05		ug/L		105	70 - 119	16	30
2,6-Dinitrotoluene			1.00	1.03		ug/L		103	71 - 119	16	29
2-Amino-4,6-dinitrotoluene			1.00	1.13		ug/L		113	77 - 123	21	27
2-Nitrotoluene			1.00	0.892		ug/L		89	64 - 120	3	36
3-Nitrotoluene			1.00	0.903		ug/L		90	67 - 114	3	31
4-Nitrotoluene			1.00	0.956		ug/L		96	67 - 115	9	32
4-Amino-2,6-dinitrotoluene			1.00	1.10		ug/L		110	68 - 113	19	30
HMX			1.00	1.11		ug/L		111	67 - 115	13	32
RDX			1.00	1.13		ug/L		113	68 - 122	15	32
Nitrobenzene			1.00	0.923		ug/L		92	69 - 119	2	31
Tetryl			1.00	0.831		ug/L		83	66 - 105	15	26
Nitroglycerin			5.00	4.38		ug/L		88	85 - 115	5	15
PETN			5.00	4.24		ug/L		85	84 - 117	6	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*87*		*79 - 111*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: MB 280-471411/76
Matrix: Water
Analysis Batch: 471411

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.050		ug/L			09/23/19 18:08	1

Lab Sample ID: LCS 280-471411/77
Matrix: Water
Analysis Batch: 471411

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0517		ug/L		103	70 - 130		

Lab Sample ID: 580-89180-1 MS
Matrix: Water
Analysis Batch: 471411

Client Sample ID: 03Q19L4MW02BW
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate	420		50.0	468	4	ug/L		93	70 - 130		

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS (Continued)

Lab Sample ID: 580-89180-1 MSD
Client Sample ID: 03Q19L4MW02BW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 471411

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	420		50.0	473	4	ug/L		103	70 - 130	1	15

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW02BW
Lab Sample ID: 580-89180-1
Date Collected: 09/12/19 11:20
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/21/19 00:27	JSM	TAL SEA
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326750	09/30/19 01:15	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 02:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 22:42	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329066	10/10/19 02:17	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326765	09/28/19 02:04	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 03:01	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 23:20	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329486	10/10/19 00:17	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471411	09/23/19 18:23	CBB	TAL DEN

Client Sample ID: 03Q19L4MW04AW
Lab Sample ID: 580-89180-2
Date Collected: 09/12/19 09:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/21/19 00:54	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 03:02	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 23:36	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 03:59	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/10/19 06:03	AJC	TAL SAC
Total/NA	Analysis	6860		200	471411	09/23/19 18:39	CBB	TAL DEN

Client Sample ID: 03Q19L4MW08AW
Lab Sample ID: 580-89180-3
Date Collected: 09/12/19 09:25
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/21/19 01:20	JSM	TAL SEA
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326750	09/30/19 03:55	AJC	TAL SAC

Client Sample ID: 03Q19L4MW08AW
Lab Sample ID: 580-89180-3

Date Collected: 09/12/19 09:25
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 04:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329857	10/11/19 00:47	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329857	10/11/19 01:40	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326765	09/28/19 04:57	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 05:54	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329486	10/10/19 05:05	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/10/19 07:00	AJC	TAL SAC
Total/NA	Analysis	6860		200	471411	09/23/19 18:44	CBB	TAL DEN

Client Sample ID: 03Q19L4MW08BW
Lab Sample ID: 580-89180-4

Date Collected: 09/12/19 10:20
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	312054	09/23/19 22:10	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 05:42	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329857	10/11/19 02:34	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 12:36	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/10/19 07:58	AJC	TAL SAC
Total/NA	Analysis	6860		500	471411	09/23/19 18:49	CBB	TAL DEN

Client Sample ID: 03Q19L4MW11BW
Lab Sample ID: 580-89180-5

Date Collected: 09/12/19 16:15
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	312054	09/23/19 22:36	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 07:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	10	327493	10/02/19 17:33	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329857	10/11/19 03:27	AJC	TAL SAC

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW11BW
Lab Sample ID: 580-89180-5
Date Collected: 09/12/19 16:15
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329857	10/11/19 04:21	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 14:32	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	10	327955	10/03/19 01:09	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	5	329486	10/10/19 04:07	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/10/19 09:53	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471411	09/23/19 18:54	CBB	TAL DEN

Client Sample ID: 03Q19L4MW150W
Lab Sample ID: 580-89180-6
Date Collected: 09/12/19 12:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	312054	09/23/19 23:03	JSM	TAL SEA
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326750	09/30/19 08:23	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/30/19 09:17	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329857	10/11/19 05:15	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	10	329857	10/11/19 06:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	5	326765	09/28/19 15:29	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 16:27	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	REDL	10	329486	10/10/19 03:10	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328864	10/07/19 07:36	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/10/19 10:50	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471411	09/23/19 19:15	CBB	TAL DEN

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89180-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State	4025-011	01-08-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State	72002001	01-08-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19
Wyoming (UST)	A2LA	2907.01	10-31-21

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89180-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89180-1	03Q19L4MW02BW	Water	09/12/19 11:20	09/13/19 13:55	
580-89180-2	03Q19L4MW04AW	Water	09/12/19 09:00	09/13/19 13:55	
580-89180-3	03Q19L4MW08AW	Water	09/12/19 09:25	09/13/19 13:55	
580-89180-4	03Q19L4MW08BW	Water	09/12/19 10:20	09/13/19 13:55	
580-89180-5	03Q19L4MW11BW	Water	09/12/19 16:15	09/13/19 13:55	
580-89180-6	03Q19L4MW150W	Water	09/12/19 12:00	09/13/19 13:55	

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
~~0314~~ TL 03Q19L4MW02BW	9/12/19	1120	G	W			X	X	X	6	03Q19LCMW02DW
03Q19L4MW04AW		0900									VOAs are included
03Q19L4MW08AW		0925									in coolers that
03Q19L4MW08BW		1020									were missing in
03Q19L4MW11BW		1615									previous coolers
03Q19L4MW15OW		1200									collected on 9/10/19

580-89180 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: 3.5, 4.7

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/12/19 1730	PBS		9/13/19 1200	M.E.
2		9/13/19 1355	M.E.		9/13/19 1355	TAPOK
3		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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
~~0314~~ TL 03Q19L4MW02BW	9/12/19	1120	G	W			X	X	X	6	03Q19LCMW02DW
03Q19L4MW04AW		0900									VOAs are included
03Q19L4MW08AW		0925									in coolers that
03Q19L4MW08BW		1020									were missing in
03Q19L4MW11BW		1615									previous coolers
03Q19L4MW15OW	↓	1200	↓	↓			↓	↓	↓	↓	collected on 9/10/19

580-89180 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: 3.5, 4.7

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: Tommy Laird	Date/Time: 9/12/19 1730	Company: PBS	Received by:	Date/Time: 9/13/19 1200	Company: M.E.
Relinquished by:	Date/Time: 9/13/19 1355	Company: M.E.	Received by:	Date/Time: 9/13/19 1355	Company: TAPOK
Relinquished by:	Date/Time: 9/16/19 1700	Company: TAPOK	Received by:	Date/Time: 9/17/19 0910	Company: TASO
Custody Seals Intact: Δ Yes ✓ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

IR4 = 0.0/0.3

Ver: 08/04/2016

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89180-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/1/2019	Analysis Requested		Preservation Codes:
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(Fax)	PO #:			
Email:	WO #:			
Project Name: Camp Bonneville Groundwater 2019-2020	Project #: 58013907			
Site:	SSOW#:			Other:

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)

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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X		X	
03Q19L4MW02BW (580-89180-1)	9/12/19	11:20 Pacific		Water			X	1	
03Q19L4MW04AW (580-89180-2)	9/12/19	09:00 Pacific		Water			X	1	
03Q19L4MW08AW (580-89180-3)	9/12/19	09:25 Pacific		Water			X	1	
03Q19L4MW08BW (580-89180-4)	9/12/19	10:20 Pacific		Water			X	1	
03Q19L4MW11BW (580-89180-5)	9/12/19	16:15 Pacific		Water			X	1	
03Q19L4MW150W (580-89180-6)	9/12/19	12:00 Pacific		Water			X	1	

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: [signature]	Date/Time: 9/17/19 1630	Company: ETA Sac	Received by: [signature]	Date/Time: 9/18/19 0915	Company: TA DEN
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
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: 1.9, +0, 1.8, SZ, 9/18/19		

Ver: 01/16/2019

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: 580-70060.1
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 #: 580-89180-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/1/2019	Analysis Requested		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#:			

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:							
03Q19L4MW02BW (580-89180-1)	9/12/19	11:20 Pacific		Water			X	X	3	
03Q19L4MW04AW (580-89180-2)	9/12/19	09:00 Pacific		Water			X	X	3	
03Q19L4MW08AW (580-89180-3)	9/12/19	09:25 Pacific		Water			X	X	3	
03Q19L4MW08BW (580-89180-4)	9/12/19	10:20 Pacific		Water			X	X	3	
03Q19L4MW11BW (580-89180-5)	9/12/19	16:15 Pacific		Water			X	X	3	
03Q19L4MW150W (580-89180-6)	9/12/19	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:	9/16/19 1720	TAOR		9/17/19 900	EA TAL
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.: 481127, 481125, 481126	Cooler Temperature(s) °C and Other Remarks: 2.3, 1.7, 1.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-89180-1

Login Number: 89180

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Antonson, Angeline D

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: 580-89180-1

Login Number: 89180
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89180-1

Login Number: 89180
List Number: 2
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/17/19 12:50 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	481125,481126, 481127
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	1.7c, 1.7C, 2.3C
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?	N/A	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

580-89180 Field Sheet

Tracking # : 1028 3892 0567

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 48125

Sample Custody Seal: —

Cooler ID: 3 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☐	☐

Initials: ET Date: 8/17/19

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

w/4P N21A

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Sacramento
Sample Receiving Notes

Tracking # : 1028 3892 0545

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet ✓ Gel _____ Other _____

Cooler Custody Seal: 481627

Sample Custody Seal: —

Cooler ID: 1 of 3

Temp Observed: 2.3 Corrected: 2.3

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: ST Date: 9/17/19

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

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Sacramento
Sample Receiving Notes

Tracking # : 1028 3892 0556

Job: _____

SO / PO / FO / 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: AK10 Corr. Factor: —

Ice ✓ Wet — Gel _____ Other _____

Cooler Custody Seal: 481124

Sample Custody Seal: —

Cooler ID: 2 of 3

Temp Observed: 1.7 Corrected: 1.7

From: Temp Blank ☐ Sample ☑

NCM Filed: Yes ☐ No ☐

	Yes	No	NA
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☑
Alkalinity has no headspace?	☐	☐	☑
CoC is complete w/o discrepancies?	☑	☐	☐
Samples received within holding time?	☑	☐	☐
Sample preservatives verified?	☐	☐	☑
Cooler compromised/tampered with?	☐	☑	☐
Samples compromised/tampered with?	☐	☑	☐
Samples w/o discrepancies?	☑	☐	☐
Sample containers have legible labels?	☑	☐	☐
Containers are not broken or leaking?	☑	☐	☐
Sample date/times are provided.	☑	☐	☐
Appropriate containers are used?	☑	☐	☐
Sample bottles are completely filled?	☑	☐	☐
Zero headspace?*	☐	☐	☑
Multiphasic samples are not present?	☑	☐	☐
Sample temp OK?	☑	☐	☐
Sample out of temp?	☐	☑	☐

Initials: SD Date: 9/17/19

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

Appendix D

TestAmerica, Level III Data Package

(Electronic files provided on enclosed CD)

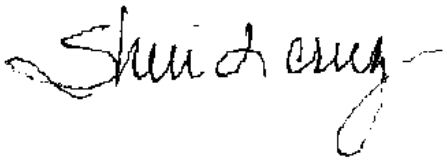
ANALYTICAL REPORT

Job Number: 580-89081-1

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
10/3/2019 3:24 PM

Sheri L Cruz, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
sheri.cruz@testamericainc.com
10/03/2019

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

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time

LCMS

Qualifier	Qualifier Description
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)

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020
Report Number: 580-89081-1

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 09/11/2019; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 3.5º C and 4.8º 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 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3), 03Q19LCMW140W (580-89081-4) and 091019TB (580-89081-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 09/19/2019.

1,2,4-Trichlorobenzene failed the recovery criteria low for the MS of sample 03Q19LCMW03DWMS (580-89081-3) in batch 580-311626.

1,2,4-Trichlorobenzene failed the recovery criteria low for the MSD of sample 03Q19LCMW03DWMSD (580-89081-3) in batch 580-311626. 1,4-Dichlorobenzene exceeded the RPD limit.

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-311626 was outside criteria for the following analyte(s): 2-Butanone (MEK), 2-Hexanone, and 4-Methyl-2-pentanone (MIBK). 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.

PERCHLORATE
Samples 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3) and 03Q19LCMW140W (580-89081-4) were analyzed for Perchlorate in accordance with SW846 6860. The samples were analyzed on 09/23/2019.

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

EXPLOSIVES
Samples 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3) and 03Q19LCMW140W (580-89081-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 09/17/2019 and 09/30/2019 and analyzed on 09/27/2019, 10/01/2019 and 10/02/2019.

2,4,6-Trinitrotoluene and Tetryl failed the recovery criteria low for the MS of sample 03Q19LCMW03DWMS (580-89081-3) in batch 320-326491.

Tetryl failed the recovery criteria low for the MSD of sample 03Q19LCMW03DWMSD (580-89081-3) in batch 320-326491.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

The laboratory control sample duplicate (LCSD) for preparation batch 320-324018 and analytical batch 320-327493 recovered outside control limits for the following analytes:Tetryl . The associated samples were re-prepared and/or re-analyzed outside holding time. Both sets of data have been reported.

Sample 03Q19LC15SW (580-89081-1) was filtered due to presence of large particulates in solution for method 8330B aqueous in preparation batch 320-327235.

The following samples were re-prepared outside of preparation holding time due to a potential label switch occurring between sample 580-89081-3MSD and 580-89177-3 for method 8330B water in preparation batch 320-327235. 03Q19LC15SW (580-89081-1), 03Q19LCMW03SW (580-89081-2), 03Q19LCMW03DW (580-89081-3), 03Q19LCMW03DW (580-89081-3[MS]), 03Q19LCMW03DW (580-89081-3[MSD]) and 03Q19LCMW140W (580-89081-4).

During analysis of 320-324018 it became apparent that the extracts for the matrix spike duplicate (MSD) and 580-89177-B-3-A were switched. All samples in the affected batch were re-extracted outside of hold time and both sets of data are being reported for supporting evidence. The reported data from the original extraction will be corrected to properly reflect the actual QC and samples tested since the re-extraction confirmed the label switch between the two samples. 03Q19LCMW03DW (580-89081-3[MSD])

No additional 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: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LC15SW — Lab Sample ID: 580-89081-1

No Detections.

Client Sample ID: 03Q19LCMW03SW — Lab Sample ID: 580-89081-2

No Detections.

Client Sample ID: 03Q19LCMW03DW — Lab Sample ID: 580-89081-3

No Detections.

Client Sample ID: 03Q19LCMW140W — Lab Sample ID: 580-89081-4

No Detections.

Client Sample ID: 091019TB — Lab Sample ID: 580-89081-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 03Q19LC15SW
Lab Sample ID: 580-89081-1
Date Collected: 09/10/19 10:10
Matrix: Water
Date Received: 09/11/19 13:33

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 14:15*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND	H	0.099		ug/L		09/30/19 07:12	10/01/19 23:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*85*		*79 - 111*	*09/30/19 07:12*	*10/01/19 23:41*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:33	1

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:32	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 04:32	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 04:32	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 04:32	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 04:32	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:32	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 04:32	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 04:32	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 04:32	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 04:32	1
Benzene	ND		0.20		ug/L			09/19/19 04:32	1
Bromobenzene	ND		0.20		ug/L			09/19/19 04:32	1
Bromoform	ND		0.50		ug/L			09/19/19 04:32	1
Bromomethane	ND		0.50		ug/L			09/19/19 04:32	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 04:32	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 04:32	1

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2

Date Collected: 09/10/19 13:10
Matrix: Water

Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Chloroethane	ND		0.50		ug/L			09/19/19 04:32	1
Chloroform	ND		0.20		ug/L			09/19/19 04:32	1
Chloromethane	ND		0.50		ug/L			09/19/19 04:32	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
Dibromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 04:32	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 04:32	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 04:32	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 04:32	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 04:32	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 04:32	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 04:32	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 04:32	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 04:32	1
Naphthalene	ND		1.0		ug/L			09/19/19 04:32	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 04:32	1
o-Xylene	ND		0.50		ug/L			09/19/19 04:32	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 04:32	1
Styrene	ND		0.50		ug/L			09/19/19 04:32	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 04:32	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 04:32	1
Toluene	ND		0.20		ug/L			09/19/19 04:32	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:32	1
Trichloroethene	ND		0.20		ug/L			09/19/19 04:32	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 04:32	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 04:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/19/19 04:32*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/19/19 04:32*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/19/19 04:32*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/19/19 04:32*	*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		09/17/19 10:52	09/27/19 15:09	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 15:09	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 15:09	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2

Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Tetryl	ND	*	0.10		ug/L		09/17/19 10:52	09/27/19 15:09	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 15:09	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 15:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/17/19 10:52*	*09/27/19 15:09*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 00:35	1
2-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1
3-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1
4-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 00:35	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 00:35	1
Nitroglycerin	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 00:35	1
PETN	ND	H	0.66		ug/L		09/30/19 07:12	10/02/19 00:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*09/30/19 07:12*	*10/02/19 00:35*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:39	1

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3

Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 04:59	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 04:59	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 04:59	1

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3

Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	F1	0.30		ug/L			09/19/19 04:59	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 04:59	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 04:59	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 04:59	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 04:59	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 04:59	1
1,4-Dichlorobenzene	ND	F2	0.30		ug/L			09/19/19 04:59	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 04:59	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 04:59	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 04:59	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 04:59	1
Benzene	ND		0.20		ug/L			09/19/19 04:59	1
Bromobenzene	ND		0.20		ug/L			09/19/19 04:59	1
Bromoform	ND		0.50		ug/L			09/19/19 04:59	1
Bromomethane	ND		0.50		ug/L			09/19/19 04:59	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 04:59	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 04:59	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Chloroethane	ND		0.50		ug/L			09/19/19 04:59	1
Chloroform	ND		0.20		ug/L			09/19/19 04:59	1
Chloromethane	ND		0.50		ug/L			09/19/19 04:59	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
Dibromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 04:59	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 04:59	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 04:59	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 04:59	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 04:59	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 04:59	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 04:59	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 04:59	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 04:59	1
Naphthalene	ND		1.0		ug/L			09/19/19 04:59	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 04:59	1
o-Xylene	ND		0.50		ug/L			09/19/19 04:59	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 04:59	1
Styrene	ND		0.50		ug/L			09/19/19 04:59	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 04:59	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 04:59	1
Toluene	ND		0.20		ug/L			09/19/19 04:59	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 04:59	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 04:59	1
Trichloroethene	ND		0.20		ug/L			09/19/19 04:59	1

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3

Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 04:59	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/19/19 04:59*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/19/19 04:59*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/19/19 04:59*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*09/19/19 04:59*	*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		09/17/19 10:52	09/27/19 16:03	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,4,6-Trinitrotoluene	ND	F1	0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 16:03	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 16:03	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Tetryl	ND	* F1	0.10		ug/L		09/17/19 10:52	09/27/19 16:03	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 16:03	1
PETN	ND	F1	0.65		ug/L		09/17/19 10:52	09/27/19 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 16:03*	*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	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		09/30/19 07:12	10/02/19 01:28	1
2-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1
3-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1
4-Nitrotoluene	ND	H	0.50		ug/L		09/30/19 07:12	10/02/19 01:28	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 01:28	1
Nitroglycerin	ND	H	0.65		ug/L		09/30/19 07:12	10/02/19 01:28	1
PETN	ND	H	0.65		ug/L		09/30/19 07:12	10/02/19 01:28	1

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3

Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*09/30/19 07:12*	*10/02/19 01:28*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 14:59	1

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4

Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 22:18	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 22:18	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 22:18	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 22:18	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 22:18	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:18	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 22:18	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 22:18	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 22:18	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 22:18	1
Benzene	ND		0.20		ug/L			09/19/19 22:18	1
Bromobenzene	ND		0.20		ug/L			09/19/19 22:18	1
Bromoform	ND		0.50		ug/L			09/19/19 22:18	1
Bromomethane	ND		0.50		ug/L			09/19/19 22:18	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 22:18	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 22:18	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Chloroethane	ND		0.50		ug/L			09/19/19 22:18	1
Chloroform	ND		0.20		ug/L			09/19/19 22:18	1
Chloromethane	ND		0.50		ug/L			09/19/19 22:18	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
Dibromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 22:18	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 22:18	1

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4

Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.20		ug/L			09/19/19 22:18	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 22:18	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 22:18	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 22:18	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 22:18	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 22:18	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 22:18	1
Naphthalene	ND		1.0		ug/L			09/19/19 22:18	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 22:18	1
o-Xylene	ND		0.50		ug/L			09/19/19 22:18	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 22:18	1
Styrene	ND		0.50		ug/L			09/19/19 22:18	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 22:18	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 22:18	1
Toluene	ND		0.20		ug/L			09/19/19 22:18	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:18	1
Trichloroethene	ND		0.20		ug/L			09/19/19 22:18	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 22:18	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/19/19 22:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/19/19 22:18*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*09/19/19 22:18*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/19/19 22:18*	*1*
Trifluorotoluene (Surr)	*106*		*80 - 120*		*09/19/19 22:18*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
1,3-Dinitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,4,6-Trinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,4-Dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2,6-Dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 20:31	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 20:31	1
4-Amino-2,6-dinitrotoluene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
HMX	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
RDX	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Nitrobenzene	ND		0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Tetryl	ND	*	0.099		ug/L		09/17/19 10:52	09/27/19 20:31	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 20:31	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 20:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*93*		*79 - 111*	*09/17/19 10:52*	*09/27/19 20:31*	*1*

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4

Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
2-Amino-4,6-dinitrotoluene	ND	H	0.21		ug/L		09/30/19 07:12	10/02/19 05:57	1
2-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1
3-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1
4-Nitrotoluene	ND	H	0.52		ug/L		09/30/19 07:12	10/02/19 05:57	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
HMX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
RDX	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Nitrobenzene	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Tetryl	ND	H	0.10		ug/L		09/30/19 07:12	10/02/19 05:57	1
Nitroglycerin	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 05:57	1
PETN	ND	H	0.67		ug/L		09/30/19 07:12	10/02/19 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*09/30/19 07:12*	*10/02/19 05:57*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 15:04	1

Client Sample ID: 091019TB
Lab Sample ID: 580-89081-5

Date Collected: 09/10/19 00:00
Matrix: Water
Date Received: 09/11/19 13:33

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			09/19/19 22:44	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 22:44	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 22:44	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 22:44	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 22:44	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 22:44	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 22:44	1

Client Sample ID: 091019TB
Date Collected: 09/10/19 00:00
Date Received: 09/11/19 13:33

Lab Sample ID: 580-89081-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 22:44	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 22:44	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 22:44	1
Benzene	ND		0.20		ug/L			09/19/19 22:44	1
Bromobenzene	ND		0.20		ug/L			09/19/19 22:44	1
Bromoform	ND		0.50		ug/L			09/19/19 22:44	1
Bromomethane	ND		0.50		ug/L			09/19/19 22:44	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 22:44	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 22:44	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Chloroethane	ND		0.50		ug/L			09/19/19 22:44	1
Chloroform	ND		0.20		ug/L			09/19/19 22:44	1
Chloromethane	ND		0.50		ug/L			09/19/19 22:44	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
Dibromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 22:44	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 22:44	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 22:44	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 22:44	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 22:44	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 22:44	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 22:44	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 22:44	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 22:44	1
Naphthalene	ND		1.0		ug/L			09/19/19 22:44	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 22:44	1
o-Xylene	ND		0.50		ug/L			09/19/19 22:44	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 22:44	1
Styrene	ND		0.50		ug/L			09/19/19 22:44	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 22:44	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 22:44	1
Toluene	ND		0.20		ug/L			09/19/19 22:44	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 22:44	1
Trichloroethene	ND		0.20		ug/L			09/19/19 22:44	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 22:44	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 22:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*114*		*80 - 120*		*09/19/19 22:44*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*09/19/19 22:44*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*09/19/19 22:44*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/19/19 22:44*	*1*
Trifluorotoluene (Surr)	*114*		*80 - 120*		*09/19/19 22:44*	*1*

Default Detection Limits

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
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: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	RL	MDL	Units
Perchlorate	0.50	0.0040	ug/L

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
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)
580-89081-2	03Q19LCMW03SW	108	94	110	99	
580-89081-3	03Q19LCMW03DW	111	93	110	101	
580-89081-3 MS	03Q19LCMW03DW	95	106	92	101	
580-89081-3 MSD	03Q19LCMW03DW	99	105	95	101	
580-89081-4	03Q19LCMW140W	112	98	107	100	106
580-89081-5	091019TB	114	91	112	100	114
LCS 580-311626/4	Lab Control Sample	97	105	97	100	
LCS 580-311739/4	Lab Control Sample	96	104	92	100	92
LCSD 580-311626/5	Lab Control Sample Dup	94	105	96	102	
LCSD 580-311739/5	Lab Control Sample Dup	97	108	94	99	92
MB 580-311626/7	Method Blank	105	94	108	102	
MB 580-311739/7	Method Blank	108	98	105	97	107

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)
580-89081-1	03Q19LC15SW	93
580-89081-1 - RE	03Q19LC15SW	85
580-89081-2	03Q19LCMW03SW	95
580-89081-2 - RE	03Q19LCMW03SW	86
580-89081-3	03Q19LCMW03DW	93
580-89081-3 - RE	03Q19LCMW03DW	88
580-89081-3 MS	03Q19LCMW03DW	93
580-89081-3 MS - RE	03Q19LCMW03DW	88
580-89081-3 MSD	03Q19LCMW03DW	91
580-89081-3 MSD - RE	03Q19LCMW03DW	84
580-89081-4	03Q19LCMW140W	93
580-89081-4 - RE	03Q19LCMW140W	86
LCS 320-324018/2-A	Lab Control Sample	97
LCS 320-327235/2-A	Lab Control Sample	91
LCSD 320-324018/3-A	Lab Control Sample Dup	97
MB 320-324018/1-A	Method Blank	94
MB 320-327235/1-A	Method Blank	84
PB 320-327235/3-A	Method Blank	88

Surrogate Legend

DNT = 3,4-Dinitrotoluene

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
1,1-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/18/19 21:27	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,2-Dichloroethane	ND		0.20		ug/L			09/18/19 21:27	1
1,2-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
1,3-Dichloropropane	ND		0.20		ug/L			09/18/19 21:27	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/18/19 21:27	1
2,2-Dichloropropane	ND		0.50		ug/L			09/18/19 21:27	1
2-Chlorotoluene	ND		0.50		ug/L			09/18/19 21:27	1
4-Chlorotoluene	ND		0.30		ug/L			09/18/19 21:27	1
4-Isopropyltoluene	ND		0.30		ug/L			09/18/19 21:27	1
Benzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Bromoform	ND		0.50		ug/L			09/18/19 21:27	1
Bromomethane	ND		0.50		ug/L			09/18/19 21:27	1
Carbon tetrachloride	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobenzene	ND		0.20		ug/L			09/18/19 21:27	1
Chlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chlorodibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Chloroethane	ND		0.50		ug/L			09/18/19 21:27	1
Chloroform	ND		0.20		ug/L			09/18/19 21:27	1
Chloromethane	ND		0.50		ug/L			09/18/19 21:27	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Dibromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorobromomethane	ND		0.20		ug/L			09/18/19 21:27	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/18/19 21:27	1
Ethylbenzene	ND		0.20		ug/L			09/18/19 21:27	1
Ethylene Dibromide	ND		0.10		ug/L			09/18/19 21:27	1
Hexachlorobutadiene	ND		0.50		ug/L			09/18/19 21:27	1
Isopropylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/18/19 21:27	1
Methylene Chloride	ND		5.0		ug/L			09/18/19 21:27	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
Naphthalene	ND		1.0		ug/L			09/18/19 21:27	1
n-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1

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

Lab Sample ID: MB 580-311626/7
Matrix: Water
Analysis Batch: 311626

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			09/18/19 21:27	1
o-Xylene	ND		0.50		ug/L			09/18/19 21:27	1
sec-Butylbenzene	ND		1.0		ug/L			09/18/19 21:27	1
Styrene	ND		0.50		ug/L			09/18/19 21:27	1
tert-Butylbenzene	ND		0.50		ug/L			09/18/19 21:27	1
Tetrachloroethene	ND		0.50		ug/L			09/18/19 21:27	1
Toluene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/18/19 21:27	1
Trichloroethene	ND		0.20		ug/L			09/18/19 21:27	1
Trichlorofluoromethane	ND		0.50		ug/L			09/18/19 21:27	1
Vinyl chloride	ND		0.020		ug/L			09/18/19 21:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*09/18/19 21:27*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/18/19 21:27*	*1*
Dibromofluoromethane (Surr)	*108*		*80 - 120*		*09/18/19 21:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*09/18/19 21:27*	*1*

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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	5.02		ug/L		100	79 - 127
1,1,1-Trichloroethane	5.00	4.84		ug/L		97	74 - 128
1,1,2,2-Tetrachloroethane	5.00	4.85		ug/L		97	69 - 139
1,1,2-Trichloroethane	5.00	5.11		ug/L		102	80 - 127
1,1-Dichloroethane	5.00	5.00		ug/L		100	74 - 135
1,1-Dichloroethene	5.00	5.25		ug/L		105	71 - 126
1,1-Dichloropropene	5.00	4.98		ug/L		100	72 - 132
1,2,3-Trichlorobenzene	5.00	4.98		ug/L		100	75 - 137
1,2,3-Trichloropropane	5.00	4.90		ug/L		98	80 - 127
1,2,4-Trichlorobenzene	5.00	4.44		ug/L		89	79 - 130
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	4.54		ug/L		91	69 - 130
1,2-Dichlorobenzene	5.00	5.01		ug/L		100	80 - 129
1,2-Dichloroethane	5.00	5.14		ug/L		103	74 - 130
1,2-Dichloropropane	5.00	4.93		ug/L		99	80 - 130
1,3,5-Trimethylbenzene	5.00	4.78		ug/L		96	80 - 139
1,3-Dichlorobenzene	5.00	5.11		ug/L		102	80 - 130
1,3-Dichloropropane	5.00	4.96		ug/L		99	80 - 130
1,4-Dichlorobenzene	5.00	4.82		ug/L		96	80 - 129
2,2-Dichloropropane	5.00	5.03		ug/L		101	58 - 150
2-Chlorotoluene	5.00	4.64		ug/L		93	80 - 136
4-Chlorotoluene	5.00	4.74		ug/L		95	80 - 130
4-Isopropyltoluene	5.00	4.99		ug/L		100	78 - 132
Benzene	5.00	5.29		ug/L		106	73 - 133

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

Lab Sample ID: LCS 580-311626/4
Matrix: Water
Analysis Batch: 311626

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	5.00	4.61		ug/L		92	80 - 130
Bromoform	5.00	4.65		ug/L		93	69 - 137
Bromomethane	5.00	5.46		ug/L		109	68 - 120
Carbon tetrachloride	5.00	4.86		ug/L		97	71 - 132
Chlorobenzene	5.00	4.98		ug/L		100	80 - 123
Chlorobromomethane	5.00	5.17		ug/L		103	79 - 131
Chlorodibromomethane	5.00	5.05		ug/L		101	76 - 131
Chloroethane	5.00	5.68		ug/L		114	49 - 135
Chloroform	5.00	4.89		ug/L		98	80 - 130
Chloromethane	5.00	5.80		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130
cis-1,3-Dichloropropene	5.00	4.59		ug/L		92	66 - 141
Dibromomethane	5.00	4.78		ug/L		96	65 - 141
Dichlorobromomethane	5.00	5.04		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.68		ug/L		114	20 - 137
Ethylbenzene	5.00	4.90		ug/L		98	80 - 130
Ethylene Dibromide	5.00	4.87		ug/L		97	80 - 126
Hexachlorobutadiene	5.00	5.05		ug/L		101	72 - 138
Isopropylbenzene	5.00	4.94		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.68		ug/L		94	60 - 150
Methylene Chloride	5.00	5.03		ug/L		101	75 - 134
m-Xylene & p-Xylene	5.00	4.81		ug/L		96	78 - 130
Naphthalene	5.00	4.34		ug/L		87	64 - 132
n-Butylbenzene	5.00	4.68		ug/L		94	73 - 135
N-Propylbenzene	5.00	4.72		ug/L		94	77 - 142
o-Xylene	5.00	4.81		ug/L		96	80 - 139
sec-Butylbenzene	5.00	5.05		ug/L		101	78 - 140
Styrene	5.00	4.90		ug/L		98	74 - 136
tert-Butylbenzene	5.00	4.66		ug/L		93	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.37		ug/L		107	80 - 126
trans-1,2-Dichloroethene	5.00	5.16		ug/L		103	63 - 133
trans-1,3-Dichloropropene	5.00	4.61		ug/L		92	71 - 128
Trichloroethene	5.00	4.83		ug/L		97	72 - 136
Trichlorofluoromethane	5.00	5.52		ug/L		110	60 - 132
Vinyl chloride	5.00	5.53		ug/L		111	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	5.00		ug/L		100	79 - 127	1	20
1,1,1-Trichloroethane	5.00	4.89		ug/L		98	74 - 128	1	14
1,1,2,2-Tetrachloroethane	5.00	4.59		ug/L		92	69 - 139	6	22
1,1,2-Trichloroethane	5.00	4.83		ug/L		97	80 - 127	6	19
1,1-Dichloroethane	5.00	4.96		ug/L		99	74 - 135	1	20
1,1-Dichloroethene	5.00	5.31		ug/L		106	71 - 126	1	17
1,1-Dichloropropene	5.00	4.76		ug/L		95	72 - 132	5	13
1,2,3-Trichlorobenzene	5.00	4.76		ug/L		95	75 - 137	4	20
1,2,3-Trichloropropane	5.00	4.76		ug/L		95	80 - 127	3	20
1,2,4-Trichlorobenzene	5.00	4.33		ug/L		87	79 - 130	2	20
1,2,4-Trimethylbenzene	5.00	4.99		ug/L		100	78 - 136	2	20
1,2-Dibromo-3-Chloropropane	5.00	4.08		ug/L		82	69 - 130	11	26
1,2-Dichlorobenzene	5.00	4.86		ug/L		97	80 - 129	3	14
1,2-Dichloroethane	5.00	4.70		ug/L		94	74 - 130	9	15
1,2-Dichloropropane	5.00	4.57		ug/L		91	80 - 130	8	14
1,3,5-Trimethylbenzene	5.00	4.68		ug/L		94	80 - 139	2	20
1,3-Dichlorobenzene	5.00	4.82		ug/L		96	80 - 130	6	12
1,3-Dichloropropane	5.00	4.64		ug/L		93	80 - 130	7	19
1,4-Dichlorobenzene	5.00	4.70		ug/L		94	80 - 129	2	11
2,2-Dichloropropane	5.00	4.87		ug/L		97	58 - 150	3	28
2-Chlorotoluene	5.00	4.49		ug/L		90	80 - 136	3	20
4-Chlorotoluene	5.00	4.44		ug/L		89	80 - 130	7	20
4-Isopropyltoluene	5.00	4.89		ug/L		98	78 - 132	2	14
Benzene	5.00	5.00		ug/L		100	73 - 133	6	20
Bromobenzene	5.00	4.27		ug/L		85	80 - 130	8	20
Bromoform	5.00	4.57		ug/L		91	69 - 137	2	20
Bromomethane	5.00	5.82		ug/L		116	68 - 120	6	18
Carbon tetrachloride	5.00	4.88		ug/L		98	71 - 132	1	15
Chlorobenzene	5.00	4.77		ug/L		95	80 - 123	4	12
Chlorobromomethane	5.00	4.94		ug/L		99	79 - 131	5	20
Chlorodibromomethane	5.00	4.70		ug/L		94	76 - 131	7	20
Chloroethane	5.00	5.51		ug/L		110	49 - 135	3	27
Chloroform	5.00	4.75		ug/L		95	80 - 130	3	20
Chloromethane	5.00	5.68		ug/L		114	32 - 143	2	23
cis-1,2-Dichloroethene	5.00	5.09		ug/L		102	72 - 130	3	20
cis-1,3-Dichloropropene	5.00	4.38		ug/L		88	66 - 141	5	22
Dibromomethane	5.00	4.59		ug/L		92	65 - 141	4	20
Dichlorobromomethane	5.00	4.62		ug/L		92	74 - 131	9	20
Dichlorodifluoromethane	5.00	5.24		ug/L		105	20 - 137	8	22
Ethylbenzene	5.00	4.79		ug/L		96	80 - 130	2	20
Ethylene Dibromide	5.00	4.61		ug/L		92	80 - 126	5	20
Hexachlorobutadiene	5.00	4.93		ug/L		99	72 - 138	3	20
Isopropylbenzene	5.00	4.95		ug/L		99	75 - 137	0	20
Methyl tert-butyl ether	5.00	4.74		ug/L		95	60 - 150	1	25
Methylene Chloride	5.00	5.30		ug/L		106	75 - 134	5	18
m-Xylene & p-Xylene	5.00	4.68		ug/L		94	78 - 130	3	20
Naphthalene	5.00	4.19		ug/L		84	64 - 132	4	20
n-Butylbenzene	5.00	4.54		ug/L		91	73 - 135	3	18

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

Lab Sample ID: LCSD 580-311626/5
Matrix: Water
Analysis Batch: 311626

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	4.52		ug/L		90	77 - 142	4	20
o-Xylene			5.00	4.78		ug/L		96	80 - 139	1	20
sec-Butylbenzene			5.00	4.93		ug/L		99	78 - 140	2	20
Styrene			5.00	4.79		ug/L		96	74 - 136	2	20
tert-Butylbenzene			5.00	4.43		ug/L		89	77 - 140	5	20
Tetrachloroethene			5.00	4.79		ug/L		96	75 - 131	4	20
Toluene			5.00	5.21		ug/L		104	80 - 126	3	20
trans-1,2-Dichloroethene			5.00	5.11		ug/L		102	63 - 133	1	17
trans-1,3-Dichloropropene			5.00	4.24		ug/L		85	71 - 128	9	21
Trichloroethene			5.00	4.61		ug/L		92	72 - 136	5	14
Trichlorofluoromethane			5.00	5.49		ug/L		110	60 - 132	0	20
Vinyl chloride			5.00	5.57		ug/L		111	52 - 128	1	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*80 - 120*
Toluene-d8 (Surr)	*102*		*80 - 120*

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
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	5.04		ug/L		101	79 - 127
1,1,1-Trichloroethane	ND		5.00	5.13		ug/L		103	74 - 128
1,1,2,2-Tetrachloroethane	ND		5.00	5.04		ug/L		101	69 - 139
1,1,2-Trichloroethane	ND		5.00	5.41		ug/L		108	80 - 127
1,1-Dichloroethane	ND		5.00	5.06		ug/L		101	74 - 135
1,1-Dichloroethene	ND		5.00	5.34		ug/L		107	71 - 126
1,1-Dichloropropene	ND		5.00	5.19		ug/L		104	72 - 132
1,2,3-Trichlorobenzene	ND		5.00	4.49		ug/L		90	75 - 137
1,2,3-Trichloropropane	ND		5.00	5.06		ug/L		101	80 - 127
1,2,4-Trichlorobenzene	ND	F1	5.00	3.89	F1	ug/L		78	79 - 130
1,2,4-Trimethylbenzene	ND		5.00	5.19		ug/L		104	78 - 136
1,2-Dibromo-3-Chloropropane	ND		5.00	4.57		ug/L		91	69 - 130
1,2-Dichlorobenzene	ND		5.00	5.15		ug/L		103	80 - 129
1,2-Dichloroethane	ND		5.00	5.42		ug/L		108	74 - 130
1,2-Dichloropropane	ND		5.00	5.37		ug/L		107	80 - 130
1,3,5-Trimethylbenzene	ND		5.00	4.93		ug/L		99	80 - 139
1,3-Dichlorobenzene	ND		5.00	5.12		ug/L		102	80 - 130
1,3-Dichloropropane	ND		5.00	5.26		ug/L		105	80 - 130
1,4-Dichlorobenzene	ND	F2	5.00	5.01		ug/L		100	80 - 129
2,2-Dichloropropane	ND		5.00	4.18		ug/L		84	58 - 150
2-Chlorotoluene	ND		5.00	4.88		ug/L		98	80 - 136
4-Chlorotoluene	ND		5.00	5.11		ug/L		102	80 - 130
4-Isopropyltoluene	ND		5.00	4.97		ug/L		99	78 - 132
Benzene	ND		5.00	5.56		ug/L		111	73 - 133

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

Lab Sample ID: 580-89081-3 MS
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 311626

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromobenzene	ND		5.00	4.95		ug/L		99	80 - 130
Bromoform	ND		5.00	4.83		ug/L		97	69 - 137
Bromomethane	ND		5.00	5.60		ug/L		112	68 - 120
Carbon tetrachloride	ND		5.00	5.18		ug/L		104	71 - 132
Chlorobenzene	ND		5.00	5.26		ug/L		105	80 - 123
Chlorobromomethane	ND		5.00	5.22		ug/L		104	79 - 131
Chlorodibromomethane	ND		5.00	5.22		ug/L		104	76 - 131
Chloroethane	ND		5.00	5.62		ug/L		112	49 - 135
Chloroform	ND		5.00	5.07		ug/L		101	80 - 130
Chloromethane	ND		5.00	5.67		ug/L		110	32 - 143
cis-1,2-Dichloroethene	ND		5.00	5.28		ug/L		106	72 - 130
cis-1,3-Dichloropropene	ND		5.00	4.53		ug/L		91	66 - 141
Dibromomethane	ND		5.00	5.05		ug/L		101	65 - 141
Dichlorobromomethane	ND		5.00	5.24		ug/L		105	74 - 131
Dichlorodifluoromethane	ND		5.00	5.70		ug/L		114	20 - 137
Ethylbenzene	ND		5.00	5.17		ug/L		103	80 - 130
Ethylene Dibromide	ND		5.00	5.13		ug/L		103	80 - 126
Hexachlorobutadiene	ND		5.00	4.61		ug/L		92	72 - 138
Isopropylbenzene	ND		5.00	5.01		ug/L		100	75 - 137
Methyl tert-butyl ether	ND		5.00	4.40		ug/L		88	60 - 150
Methylene Chloride	ND		5.00	ND		ug/L		91	75 - 134
m-Xylene & p-Xylene	ND		5.00	5.00		ug/L		100	78 - 130
Naphthalene	ND		5.00	3.85		ug/L		77	64 - 132
n-Butylbenzene	ND		5.00	4.44		ug/L		89	73 - 135
N-Propylbenzene	ND		5.00	4.83		ug/L		97	77 - 142
o-Xylene	ND		5.00	4.91		ug/L		98	80 - 139
sec-Butylbenzene	ND		5.00	5.21		ug/L		104	78 - 140
Styrene	ND		5.00	5.29		ug/L		106	74 - 136
tert-Butylbenzene	ND		5.00	4.92		ug/L		98	77 - 140
Tetrachloroethene	ND		5.00	5.00		ug/L		100	75 - 131
Toluene	ND		5.00	5.67		ug/L		113	80 - 126
trans-1,2-Dichloroethene	ND		5.00	5.05		ug/L		101	63 - 133
trans-1,3-Dichloropropene	ND		5.00	4.61		ug/L		92	71 - 128
Trichloroethene	ND		5.00	5.10		ug/L		102	72 - 136
Trichlorofluoromethane	ND		5.00	5.88		ug/L		118	60 - 132
Vinyl chloride	ND		5.00	5.49		ug/L		110	52 - 128

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 311626

Client Sample ID: 03Q19LCMW03DW
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	5.04		ug/L		101	79 - 127	0	20
1,1,1-Trichloroethane	ND		5.00	5.15		ug/L		103	74 - 128	0	14
1,1,2,2-Tetrachloroethane	ND		5.00	4.84		ug/L		97	69 - 139	4	22
1,1,2-Trichloroethane	ND		5.00	5.14		ug/L		103	80 - 127	5	19
1,1-Dichloroethane	ND		5.00	5.08		ug/L		102	74 - 135	0	20
1,1-Dichloroethene	ND		5.00	5.52		ug/L		110	71 - 126	3	17
1,1-Dichloropropene	ND		5.00	4.86		ug/L		97	72 - 132	7	13
1,2,3-Trichlorobenzene	ND		5.00	4.46		ug/L		89	75 - 137	1	20
1,2,3-Trichloropropane	ND		5.00	4.89		ug/L		98	80 - 127	3	20
1,2,4-Trichlorobenzene	ND	F1	5.00	3.81	F1	ug/L		76	79 - 130	2	20
1,2,4-Trimethylbenzene	ND		5.00	4.93		ug/L		99	78 - 136	5	20
1,2-Dibromo-3-Chloropropane	ND		5.00	4.56		ug/L		91	69 - 130	0	26
1,2-Dichlorobenzene	ND		5.00	4.81		ug/L		96	80 - 129	7	14
1,2-Dichloroethane	ND		5.00	5.22		ug/L		104	74 - 130	4	15
1,2-Dichloropropane	ND		5.00	5.09		ug/L		102	80 - 130	5	14
1,3,5-Trimethylbenzene	ND		5.00	4.51		ug/L		90	80 - 139	9	20
1,3-Dichlorobenzene	ND		5.00	4.64		ug/L		93	80 - 130	10	12
1,3-Dichloropropane	ND		5.00	4.94		ug/L		99	80 - 130	6	19
1,4-Dichlorobenzene	ND	F2	5.00	4.46	F2	ug/L		89	80 - 129	12	11
2,2-Dichloropropane	ND		5.00	4.16		ug/L		83	58 - 150	0	28
2-Chlorotoluene	ND		5.00	4.43		ug/L		89	80 - 136	10	20
4-Chlorotoluene	ND		5.00	4.50		ug/L		90	80 - 130	12	20
4-Isopropyltoluene	ND		5.00	4.42		ug/L		88	78 - 132	12	14
Benzene	ND		5.00	5.31		ug/L		106	73 - 133	5	20
Bromobenzene	ND		5.00	4.53		ug/L		91	80 - 130	9	20
Bromoform	ND		5.00	4.75		ug/L		95	69 - 137	2	20
Bromomethane	ND		5.00	5.78		ug/L		116	68 - 120	3	18
Carbon tetrachloride	ND		5.00	5.18		ug/L		104	71 - 132	0	15
Chlorobenzene	ND		5.00	4.87		ug/L		97	80 - 123	8	12
Chlorobromomethane	ND		5.00	5.22		ug/L		104	79 - 131	0	20
Chlorodibromomethane	ND		5.00	4.99		ug/L		100	76 - 131	5	20
Chloroethane	ND		5.00	5.82		ug/L		116	49 - 135	3	27
Chloroform	ND		5.00	4.95		ug/L		99	80 - 130	2	20
Chloromethane	ND		5.00	5.97		ug/L		116	32 - 143	5	23
cis-1,2-Dichloroethene	ND		5.00	5.08		ug/L		102	72 - 130	4	20
cis-1,3-Dichloropropene	ND		5.00	4.41		ug/L		88	66 - 141	3	22
Dibromomethane	ND		5.00	4.93		ug/L		99	65 - 141	2	20
Dichlorobromomethane	ND		5.00	5.10		ug/L		102	74 - 131	3	20
Dichlorodifluoromethane	ND		5.00	5.72		ug/L		114	20 - 137	0	22
Ethylbenzene	ND		5.00	4.70		ug/L		94	80 - 130	10	20
Ethylene Dibromide	ND		5.00	5.08		ug/L		102	80 - 126	1	20
Hexachlorobutadiene	ND		5.00	4.11		ug/L		82	72 - 138	11	20
Isopropylbenzene	ND		5.00	4.67		ug/L		93	75 - 137	7	20
Methyl tert-butyl ether	ND		5.00	4.56		ug/L		91	60 - 150	4	25
Methylene Chloride	ND		5.00	ND		ug/L		91	75 - 134	0	18
m-Xylene & p-Xylene	ND		5.00	4.49		ug/L		90	78 - 130	11	20
Naphthalene	ND		5.00	4.14		ug/L		83	64 - 132	7	20
n-Butylbenzene	ND		5.00	3.74		ug/L		75	73 - 135	17	18

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

Lab Sample ID: 580-89081-3 MSD
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 311626

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Propylbenzene	ND		5.00	4.28		ug/L		86	77 - 142	12	20
o-Xylene	ND		5.00	4.62		ug/L		92	80 - 139	6	20
sec-Butylbenzene	ND		5.00	4.68		ug/L		94	78 - 140	11	20
Styrene	ND		5.00	4.77		ug/L		95	74 - 136	10	20
tert-Butylbenzene	ND		5.00	4.62		ug/L		92	77 - 140	6	20
Tetrachloroethene	ND		5.00	4.42		ug/L		88	75 - 131	12	20
Toluene	ND		5.00	5.31		ug/L		106	80 - 126	7	20
trans-1,2-Dichloroethene	ND		5.00	5.14		ug/L		103	63 - 133	2	17
trans-1,3-Dichloropropene	ND		5.00	4.35		ug/L		87	71 - 128	6	21
Trichloroethene	ND		5.00	4.72		ug/L		94	72 - 136	8	14
Trichlorofluoromethane	ND		5.00	5.70		ug/L		114	60 - 132	3	20
Vinyl chloride	ND		5.00	5.73		ug/L		115	52 - 128	4	21

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

Lab Sample ID: MB 580-311739/7
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 311739

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.30		ug/L			09/19/19 17:26	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
1,1-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/19/19 17:26	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,2-Dichloroethane	ND		0.20		ug/L			09/19/19 17:26	1
1,2-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
1,3-Dichloropropane	ND		0.20		ug/L			09/19/19 17:26	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/19/19 17:26	1
2,2-Dichloropropane	ND		0.50		ug/L			09/19/19 17:26	1
2-Chlorotoluene	ND		0.50		ug/L			09/19/19 17:26	1
4-Chlorotoluene	ND		0.30		ug/L			09/19/19 17:26	1
4-Isopropyltoluene	ND		0.30		ug/L			09/19/19 17:26	1
Benzene	ND		0.20		ug/L			09/19/19 17:26	1

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

Lab Sample ID: MB 580-311739/7
Matrix: Water
Analysis Batch: 311739

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Bromoform	ND		0.50		ug/L			09/19/19 17:26	1
Bromomethane	ND		0.50		ug/L			09/19/19 17:26	1
Carbon tetrachloride	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobenzene	ND		0.20		ug/L			09/19/19 17:26	1
Chlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chlorodibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Chloroethane	ND		0.50		ug/L			09/19/19 17:26	1
Chloroform	ND		0.20		ug/L			09/19/19 17:26	1
Chloromethane	ND		0.50		ug/L			09/19/19 17:26	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Dibromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorobromomethane	ND		0.20		ug/L			09/19/19 17:26	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/19/19 17:26	1
Ethylbenzene	ND		0.20		ug/L			09/19/19 17:26	1
Ethylene Dibromide	ND		0.10		ug/L			09/19/19 17:26	1
Hexachlorobutadiene	ND		0.50		ug/L			09/19/19 17:26	1
Isopropylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/19/19 17:26	1
Methylene Chloride	ND		5.0		ug/L			09/19/19 17:26	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
Naphthalene	ND		1.0		ug/L			09/19/19 17:26	1
n-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
N-Propylbenzene	ND		0.30		ug/L			09/19/19 17:26	1
o-Xylene	ND		0.50		ug/L			09/19/19 17:26	1
sec-Butylbenzene	ND		1.0		ug/L			09/19/19 17:26	1
Styrene	ND		0.50		ug/L			09/19/19 17:26	1
tert-Butylbenzene	ND		0.50		ug/L			09/19/19 17:26	1
Tetrachloroethene	ND		0.50		ug/L			09/19/19 17:26	1
Toluene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/19/19 17:26	1
Trichloroethene	ND		0.20		ug/L			09/19/19 17:26	1
Trichlorofluoromethane	ND		0.50		ug/L			09/19/19 17:26	1
Vinyl chloride	ND		0.020		ug/L			09/19/19 17:26	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*09/19/19 17:26*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*09/19/19 17:26*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/19/19 17:26*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*09/19/19 17:26*	*1*
Trifluorotoluene (Surr)	*107*		*80 - 120*		*09/19/19 17:26*	*1*

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

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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	4.81		ug/L		96	79 - 127
1,1,1-Trichloroethane	5.00	4.75		ug/L		95	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.17		ug/L		103	69 - 139
1,1,2-Trichloroethane	5.00	5.29		ug/L		106	80 - 127
1,1-Dichloroethane	5.00	4.82		ug/L		96	74 - 135
1,1-Dichloroethene	5.00	5.11		ug/L		102	71 - 126
1,1-Dichloropropene	5.00	4.95		ug/L		99	72 - 132
1,2,3-Trichlorobenzene	5.00	5.17		ug/L		103	75 - 137
1,2,3-Trichloropropane	5.00	5.24		ug/L		105	80 - 127
1,2,4-Trichlorobenzene	5.00	4.72		ug/L		94	79 - 130
1,2,4-Trimethylbenzene	5.00	5.25		ug/L		105	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.03		ug/L		101	69 - 130
1,2-Dichlorobenzene	5.00	5.21		ug/L		104	80 - 129
1,2-Dichloroethane	5.00	5.32		ug/L		106	74 - 130
1,2-Dichloropropane	5.00	5.14		ug/L		103	80 - 130
1,3,5-Trimethylbenzene	5.00	4.85		ug/L		97	80 - 139
1,3-Dichlorobenzene	5.00	5.27		ug/L		105	80 - 130
1,3-Dichloropropane	5.00	5.35		ug/L		107	80 - 130
1,4-Dichlorobenzene	5.00	5.16		ug/L		103	80 - 129
2,2-Dichloropropane	5.00	4.45		ug/L		89	58 - 150
2-Chlorotoluene	5.00	4.87		ug/L		97	80 - 136
4-Chlorotoluene	5.00	5.03		ug/L		101	80 - 130
4-Isopropyltoluene	5.00	5.16		ug/L		103	78 - 132
Benzene	5.00	5.30		ug/L		106	73 - 133
Bromobenzene	5.00	4.88		ug/L		98	80 - 130
Bromoform	5.00	5.00		ug/L		100	69 - 137
Bromomethane	5.00	5.51		ug/L		110	68 - 120
Carbon tetrachloride	5.00	4.83		ug/L		97	71 - 132
Chlorobenzene	5.00	5.14		ug/L		103	80 - 123
Chlorobromomethane	5.00	4.92		ug/L		98	79 - 131
Chlorodibromomethane	5.00	5.08		ug/L		102	76 - 131
Chloroethane	5.00	5.49		ug/L		110	49 - 135
Chloroform	5.00	4.73		ug/L		95	80 - 130
Chloromethane	5.00	5.62		ug/L		112	32 - 143
cis-1,2-Dichloroethene	5.00	4.98		ug/L		100	72 - 130
cis-1,3-Dichloropropene	5.00	4.75		ug/L		95	66 - 141
Dibromomethane	5.00	4.98		ug/L		100	65 - 141
Dichlorobromomethane	5.00	5.03		ug/L		101	74 - 131
Dichlorodifluoromethane	5.00	5.82		ug/L		116	20 - 137
Ethylbenzene	5.00	4.99		ug/L		100	80 - 130
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126
Hexachlorobutadiene	5.00	5.09		ug/L		102	72 - 138
Isopropylbenzene	5.00	4.96		ug/L		99	75 - 137
Methyl tert-butyl ether	5.00	4.57		ug/L		91	60 - 150
Methylene Chloride	5.00	5.00		ug/L		100	75 - 134
m-Xylene & p-Xylene	5.00	4.91		ug/L		98	78 - 130
Naphthalene	5.00	4.59		ug/L		92	64 - 132
n-Butylbenzene	5.00	4.71		ug/L		94	73 - 135

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

Lab Sample ID: LCS 580-311739/4
Matrix: Water
Analysis Batch: 311739

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Propylbenzene	5.00	4.85		ug/L		97	77 - 142
o-Xylene	5.00	4.85		ug/L		97	80 - 139
sec-Butylbenzene	5.00	5.16		ug/L		103	78 - 140
Styrene	5.00	5.14		ug/L		103	74 - 136
tert-Butylbenzene	5.00	4.84		ug/L		97	77 - 140
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 131
Toluene	5.00	5.38		ug/L		108	80 - 126
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	63 - 133
trans-1,3-Dichloropropene	5.00	4.64		ug/L		93	71 - 128
Trichloroethene	5.00	4.78		ug/L		96	72 - 136
Trichlorofluoromethane	5.00	5.54		ug/L		111	60 - 132
Vinyl chloride	5.00	5.39		ug/L		108	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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	4.61		ug/L		92	79 - 127	4	20
1,1,1-Trichloroethane	5.00	4.66		ug/L		93	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	4.85		ug/L		97	69 - 139	6	22
1,1,2-Trichloroethane	5.00	5.08		ug/L		102	80 - 127	4	19
1,1-Dichloroethane	5.00	4.70		ug/L		94	74 - 135	3	20
1,1-Dichloroethene	5.00	4.97		ug/L		99	71 - 126	3	17
1,1-Dichloropropene	5.00	4.72		ug/L		94	72 - 132	5	13
1,2,3-Trichlorobenzene	5.00	4.83		ug/L		97	75 - 137	7	20
1,2,3-Trichloropropane	5.00	5.13		ug/L		103	80 - 127	2	20
1,2,4-Trichlorobenzene	5.00	4.31		ug/L		86	79 - 130	9	20
1,2,4-Trimethylbenzene	5.00	5.04		ug/L		101	78 - 136	4	20
1,2-Dibromo-3-Chloropropane	5.00	4.46		ug/L		89	69 - 130	12	26
1,2-Dichlorobenzene	5.00	5.01		ug/L		100	80 - 129	4	14
1,2-Dichloroethane	5.00	5.01		ug/L		100	74 - 130	6	15
1,2-Dichloropropane	5.00	5.02		ug/L		100	80 - 130	2	14
1,3,5-Trimethylbenzene	5.00	4.73		ug/L		95	80 - 139	3	20
1,3-Dichlorobenzene	5.00	5.10		ug/L		102	80 - 130	3	12
1,3-Dichloropropane	5.00	5.15		ug/L		103	80 - 130	4	19
1,4-Dichlorobenzene	5.00	4.96		ug/L		99	80 - 129	4	11
2,2-Dichloropropane	5.00	4.28		ug/L		86	58 - 150	4	28
2-Chlorotoluene	5.00	4.72		ug/L		94	80 - 136	3	20
4-Chlorotoluene	5.00	4.87		ug/L		97	80 - 130	3	20
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 132	4	14

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

Lab Sample ID: LCSD 580-311739/5
Matrix: Water
Analysis Batch: 311739

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
Benzene			5.00	5.09		ug/L		102	73 - 133	4	20
Bromobenzene			5.00	4.77		ug/L		95	80 - 130	2	20
Bromoform			5.00	4.63		ug/L		93	69 - 137	8	20
Bromomethane			5.00	5.30		ug/L		106	68 - 120	4	18
Carbon tetrachloride			5.00	4.63		ug/L		93	71 - 132	4	15
Chlorobenzene			5.00	4.88		ug/L		98	80 - 123	5	12
Chlorobromomethane			5.00	4.79		ug/L		96	79 - 131	3	20
Chlorodibromomethane			5.00	4.84		ug/L		97	76 - 131	5	20
Chloroethane			5.00	5.28		ug/L		106	49 - 135	4	27
Chloroform			5.00	4.62		ug/L		92	80 - 130	2	20
Chloromethane			5.00	5.39		ug/L		108	32 - 143	4	23
cis-1,2-Dichloroethene			5.00	4.96		ug/L		99	72 - 130	0	20
cis-1,3-Dichloropropene			5.00	4.50		ug/L		90	66 - 141	5	22
Dibromomethane			5.00	4.83		ug/L		97	65 - 141	3	20
Dichlorobromomethane			5.00	4.84		ug/L		97	74 - 131	4	20
Dichlorodifluoromethane			5.00	5.37		ug/L		107	20 - 137	8	22
Ethylbenzene			5.00	4.80		ug/L		96	80 - 130	4	20
Ethylene Dibromide			5.00	5.05		ug/L		101	80 - 126	4	20
Hexachlorobutadiene			5.00	4.95		ug/L		99	72 - 138	3	20
Isopropylbenzene			5.00	4.80		ug/L		96	75 - 137	3	20
Methyl tert-butyl ether			5.00	4.63		ug/L		93	60 - 150	1	25
Methylene Chloride			5.00	4.98	J	ug/L		100	75 - 134	0	18
m-Xylene & p-Xylene			5.00	4.78		ug/L		96	78 - 130	3	20
Naphthalene			5.00	4.30		ug/L		86	64 - 132	6	20
n-Butylbenzene			5.00	4.61		ug/L		92	73 - 135	2	18
N-Propylbenzene			5.00	4.70		ug/L		94	77 - 142	3	20
o-Xylene			5.00	4.72		ug/L		94	80 - 139	3	20
sec-Butylbenzene			5.00	5.03		ug/L		101	78 - 140	3	20
Styrene			5.00	4.97		ug/L		99	74 - 136	3	20
tert-Butylbenzene			5.00	4.67		ug/L		93	77 - 140	4	20
Tetrachloroethene			5.00	4.65		ug/L		93	75 - 131	7	20
Toluene			5.00	5.19		ug/L		104	80 - 126	4	20
trans-1,2-Dichloroethene			5.00	4.83		ug/L		97	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.52		ug/L		90	71 - 128	3	21
Trichloroethene			5.00	4.62		ug/L		92	72 - 136	3	14
Trichlorofluoromethane			5.00	5.31		ug/L		106	60 - 132	4	20
Vinyl chloride			5.00	5.10		ug/L		102	52 - 128	6	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
Trifluorotoluene (Surr)	*92*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324018/1-A
Matrix: Water
Analysis Batch: 326491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324018

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/17/19 10:52	09/27/19 11:34	1
2-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
3-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Nitrotoluene	ND		0.50		ug/L		09/17/19 10:52	09/27/19 11:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
HMX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
RDX	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitrobenzene	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Tetryl	ND		0.10		ug/L		09/17/19 10:52	09/27/19 11:34	1
Nitroglycerin	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1
PETN	ND		0.65		ug/L		09/17/19 10:52	09/27/19 11:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*94*		*79 - 111*	*09/17/19 10:52*	*09/27/19 11:34*	*1*

Lab Sample ID: LCS 320-324018/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324018

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	1.01		ug/L		101	74 - 120		
1,3-Dinitrobenzene			1.00	0.986		ug/L		99	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.698		ug/L		70	69 - 111		
2,4-Dinitrotoluene			1.00	0.979		ug/L		98	70 - 119		
2,6-Dinitrotoluene			1.00	0.947		ug/L		95	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.03		ug/L		103	77 - 123		
2-Nitrotoluene			1.00	0.923		ug/L		92	64 - 120		
3-Nitrotoluene			1.00	1.01		ug/L		101	67 - 114		
4-Nitrotoluene			1.00	0.922		ug/L		92	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.04		ug/L		104	68 - 113		
HMX			1.00	0.995		ug/L		100	67 - 115		
RDX			1.00	1.07		ug/L		107	68 - 122		
Nitrobenzene			1.00	0.960		ug/L		96	69 - 119		
Tetryl			1.00	0.656		ug/L		66	66 - 105		
Nitroglycerin			5.00	4.99		ug/L		100	85 - 115		
PETN			5.00	4.76		ug/L		95	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

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

Lab Sample ID: LCSD 320-324018/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 327493
Prep Batch: 324018

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.996		ug/L		100	74 - 120	1	29
1,3-Dinitrobenzene			1.00	0.981		ug/L		98	72 - 123	0	29
2,4,6-Trinitrotoluene			1.00	0.693		ug/L		69	69 - 111	1	28
2,4-Dinitrotoluene			1.00	0.976		ug/L		98	70 - 119	0	30
2,6-Dinitrotoluene			1.00	0.949		ug/L		95	71 - 119	0	29
2-Amino-4,6-dinitrotoluene			1.00	1.02		ug/L		102	77 - 123	2	27
2-Nitrotoluene			1.00	0.921		ug/L		92	64 - 120	0	36
3-Nitrotoluene			1.00	0.999		ug/L		100	67 - 114	1	31
4-Nitrotoluene			1.00	0.919		ug/L		92	67 - 115	0	32
4-Amino-2,6-dinitrotoluene			1.00	1.03		ug/L		103	68 - 113	1	30
HMX			1.00	0.981		ug/L		98	67 - 115	1	32
RDX			1.00	1.06		ug/L		106	68 - 122	0	32
Nitrobenzene			1.00	0.958		ug/L		96	69 - 119	0	31
Tetryl			1.00	0.653	*	ug/L		65	66 - 105	1	26
Nitroglycerin			5.00	4.74		ug/L		95	85 - 115	5	15
PETN			5.00	4.65		ug/L		93	84 - 117	2	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

Lab Sample ID: 580-89081-3 MS
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 326491
Prep Batch: 324018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene	ND		1.01	0.948		ug/L		94	74 - 120		
1,3-Dinitrobenzene	ND		1.01	0.964		ug/L		95	72 - 123		
2,4,6-Trinitrotoluene	ND	F1	1.01	0.668	F1	ug/L		66	69 - 111		
2,4-Dinitrotoluene	ND		1.01	0.934		ug/L		92	70 - 119		
2,6-Dinitrotoluene	ND		1.01	0.905		ug/L		89	71 - 119		
2-Amino-4,6-dinitrotoluene	ND		1.01	0.972		ug/L		96	77 - 123		
2-Nitrotoluene	ND		1.01	0.883		ug/L		87	64 - 120		
3-Nitrotoluene	ND		1.01	0.964		ug/L		95	67 - 114		
4-Nitrotoluene	ND		1.01	0.867		ug/L		86	67 - 115		
4-Amino-2,6-dinitrotoluene	ND		1.01	0.983		ug/L		97	68 - 113		
HMX	ND		1.01	1.01		ug/L		99	67 - 115		
RDX	ND		1.01	1.01		ug/L		100	68 - 122		
Nitrobenzene	ND		1.01	0.938		ug/L		93	69 - 119		
Tetryl	ND	* F1	1.01	0.627	F1	ug/L		62	66 - 105		
Nitroglycerin	ND		5.06	4.65		ug/L		92	85 - 115		
PETN	ND	F1	5.06	4.52		ug/L		89	84 - 117		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
3,4-Dinitrotoluene	*93*		*79 - 111*

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

Lab Sample ID: 580-89081-3 MSD
Matrix: Water
Analysis Batch: 326491

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 324018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene	ND		1.05	1.03		ug/L		98	74 - 120	8	29
1,3-Dinitrobenzene	ND		1.05	1.03		ug/L		99	72 - 123	7	29
2,4,6-Trinitrotoluene	ND	F1	1.05	0.727		ug/L		70	69 - 111	9	28
2,4-Dinitrotoluene	ND		1.05	1.01		ug/L		97	70 - 119	8	30
2,6-Dinitrotoluene	ND		1.05	0.975		ug/L		93	71 - 119	7	29
2-Amino-4,6-dinitrotoluene	ND		1.05	1.04		ug/L		99	77 - 123	6	27
2-Nitrotoluene	ND		1.05	0.969		ug/L		93	64 - 120	9	36
3-Nitrotoluene	ND		1.05	1.06		ug/L		101	67 - 114	9	31
4-Nitrotoluene	ND		1.05	0.969		ug/L		93	67 - 115	11	32
4-Amino-2,6-dinitrotoluene	ND		1.05	1.06		ug/L		101	68 - 113	7	30
HMX	ND		1.05	1.08		ug/L		103	67 - 115	7	32
RDX	ND		1.05	1.09		ug/L		104	68 - 122	8	32
Nitrobenzene	ND		1.05	1.01		ug/L		97	69 - 119	8	31
Tetryl	ND	* F1	1.05	0.680	* F1	ug/L		65	66 - 105	8	26
Nitroglycerin	ND		5.23	4.68		ug/L		89	85 - 115	1	15
PETN	ND	F1	5.23	4.59		ug/L		88	84 - 117	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

Lab Sample ID: MB 320-327235/1-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 327235

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/30/19 07:12	10/01/19 21:00	1
2-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
3-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Nitrotoluene	ND		0.50		ug/L		09/30/19 07:12	10/01/19 21:00	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
HMX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
RDX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitrobenzene	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Tetryl	ND		0.10		ug/L		09/30/19 07:12	10/01/19 21:00	1
Nitroglycerin	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1
PETN	ND		0.65		ug/L		09/30/19 07:12	10/01/19 21:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*84*		*79 - 111*	*09/30/19 07:12*	*10/01/19 21:00*	*1*

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

Lab Sample ID: PB 320-327235/3-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 327235

Analyte	PB Result	PB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	ND		0.10		ug/L		09/30/19 07:12	10/01/19 22:48	1

Surrogate	*PB %Recovery*	*PB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*09/30/19 07:12*	*10/01/19 22:48*	*1*

Lab Sample ID: LCS 320-327235/2-A
Matrix: Water
Analysis Batch: 327493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 327235

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	0.957		ug/L		96	72 - 123
2,4,6-Trinitrotoluene	1.00	0.778		ug/L		78	69 - 111
2,4-Dinitrotoluene	1.00	0.930		ug/L		93	70 - 119
2,6-Dinitrotoluene	1.00	0.930		ug/L		93	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.985		ug/L		99	77 - 123
2-Nitrotoluene	1.00	0.911		ug/L		91	64 - 120
3-Nitrotoluene	1.00	0.934		ug/L		93	67 - 114
4-Nitrotoluene	1.00	0.917		ug/L		92	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.962		ug/L		96	68 - 113
HMX	1.00	0.973		ug/L		97	67 - 115
RDX	1.00	0.983		ug/L		98	68 - 122
Nitrobenzene	1.00	0.948		ug/L		95	69 - 119
Tetryl	1.00	0.739		ug/L		74	66 - 105
Nitroglycerin	5.00	4.86		ug/L		97	85 - 115
PETN	5.00	4.87		ug/L		97	84 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*91*		*79 - 111*

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

Lab Sample ID: 580-89081-3 MS
Matrix: Water
Analysis Batch: 327493

Client Sample ID: 03Q19LCMW03DW
Prep Type: Total/NA
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene - RE	ND	H	1.00	0.910	H	ug/L		91	74 - 120
1,3-Dinitrobenzene - RE	ND	H	1.00	0.926	H	ug/L		92	72 - 123
2,4,6-Trinitrotoluene - RE	ND	H	1.00	0.760	H	ug/L		76	69 - 111
2,4-Dinitrotoluene - RE	ND	H	1.00	0.898	H	ug/L		90	70 - 119
2,6-Dinitrotoluene - RE	ND	H	1.00	0.887	H	ug/L		88	71 - 119
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.00	0.959	H	ug/L		96	77 - 123
2-Nitrotoluene - RE	ND	H	1.00	0.862	H	ug/L		86	64 - 120
3-Nitrotoluene - RE	ND	H	1.00	0.896	H	ug/L		89	67 - 114
4-Nitrotoluene - RE	ND	H	1.00	0.881	H	ug/L		88	67 - 115
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.00	0.935	H	ug/L		93	68 - 113
HMX - RE	ND	H	1.00	0.956	H	ug/L		95	67 - 115

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

Lab Sample ID: 580-89081-3 MS
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 327493
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
RDX - RE	ND	H	1.00	0.968	H	ug/L		97	68 - 122
Nitrobenzene - RE	ND	H	1.00	0.913	H	ug/L		91	69 - 119
Tetryl - RE	ND	H	1.00	0.707	H	ug/L		70	66 - 105
Nitroglycerin - RE	ND	H	5.02	4.54	H	ug/L		91	85 - 115
PETN - RE	ND	H	5.02	4.53	H	ug/L		90	84 - 117

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

Lab Sample ID: 580-89081-3 MSD
Client Sample ID: 03Q19LCMW03DW
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 327493
Prep Batch: 327235

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene - RE	ND	H	1.02	0.893	H	ug/L		88	74 - 120	2	29
1,3-Dinitrobenzene - RE	ND	H	1.02	0.913	H	ug/L		90	72 - 123	1	29
2,4,6-Trinitrotoluene - RE	ND	H	1.02	0.741	H	ug/L		73	69 - 111	2	28
2,4-Dinitrotoluene - RE	ND	H	1.02	0.888	H	ug/L		87	70 - 119	1	30
2,6-Dinitrotoluene - RE	ND	H	1.02	0.889	H	ug/L		87	71 - 119	0	29
2-Amino-4,6-dinitrotoluene - RE	ND	H	1.02	0.922	H	ug/L		91	77 - 123	4	27
2-Nitrotoluene - RE	ND	H	1.02	0.847	H	ug/L		83	64 - 120	2	36
3-Nitrotoluene - RE	ND	H	1.02	0.878	H	ug/L		86	67 - 114	2	31
4-Nitrotoluene - RE	ND	H	1.02	0.860	H	ug/L		84	67 - 115	2	32
4-Amino-2,6-dinitrotoluene - RE	ND	H	1.02	0.894	H	ug/L		88	68 - 113	5	30
HMX - RE	ND	H	1.02	0.939	H	ug/L		92	67 - 115	2	32
RDX - RE	ND	H	1.02	0.956	H	ug/L		94	68 - 122	1	32
Nitrobenzene - RE	ND	H	1.02	0.885	H	ug/L		87	69 - 119	3	31
Tetryl - RE	ND	H	1.02	0.694	H	ug/L		68	66 - 105	2	26
Nitroglycerin - RE	ND	H	5.09	4.41	H	ug/L		87	85 - 115	3	15
PETN - RE	ND	H	5.09	4.40	H	ug/L		87	84 - 117	3	15

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

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: MB 280-471409/13
Client Sample ID: Method Blank
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 471409

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L			09/23/19 12:20	1

Lab Sample ID: DLCK 280-471409/12
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 471409

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	ND		ug/L		97	70 - 130

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: LCS 280-471409/14
Matrix: Water
Analysis Batch: 471409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0520	J	ug/L		104	70 - 130

Lab Sample ID: INF 280-471409/15
Matrix: Water
Analysis Batch: 471409

Client Sample ID: Lab Control Sample

Analyte	Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	0.0500	0.0559		ug/L		112	70 - 130

GC/MS VOA

Analysis Batch: 311626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-2	03Q19LCMW03SW	Total/NA	Water	8260C	
580-89081-3	03Q19LCMW03DW	Total/NA	Water	8260C	
MB 580-311626/7	Method Blank	Total/NA	Water	8260C	
LCS 580-311626/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-311626/5	Lab Control Sample Dup	Total/NA	Water	8260C	
580-89081-3 MS	03Q19LCMW03DW	Total/NA	Water	8260C	
580-89081-3 MSD	03Q19LCMW03DW	Total/NA	Water	8260C	

Analysis Batch: 311739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-4	03Q19LCMW140W	Total/NA	Water	8260C	
580-89081-5	091019TB	Total/NA	Water	8260C	
MB 580-311739/7	Method Blank	Total/NA	Water	8260C	
LCS 580-311739/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-311739/5	Lab Control Sample Dup	Total/NA	Water	8260C	

HPLC/IC

Prep Batch: 324018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-1	03Q19LC15SW	Total/NA	Water	8330-Prep	
580-89081-2	03Q19LCMW03SW	Total/NA	Water	8330-Prep	
580-89081-3	03Q19LCMW03DW	Total/NA	Water	8330-Prep	
580-89081-4	03Q19LCMW140W	Total/NA	Water	8330-Prep	
MB 320-324018/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-324018/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
LCSD 320-324018/3-A	Lab Control Sample Dup	Total/NA	Water	8330-Prep	
580-89081-3 MS	03Q19LCMW03DW	Total/NA	Water	8330-Prep	
580-89081-3 MSD	03Q19LCMW03DW	Total/NA	Water	8330-Prep	

Analysis Batch: 326491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-1	03Q19LC15SW	Total/NA	Water	8330B	324018
580-89081-2	03Q19LCMW03SW	Total/NA	Water	8330B	324018
580-89081-3	03Q19LCMW03DW	Total/NA	Water	8330B	324018
580-89081-4	03Q19LCMW140W	Total/NA	Water	8330B	324018
MB 320-324018/1-A	Method Blank	Total/NA	Water	8330B	324018
580-89081-3 MS	03Q19LCMW03DW	Total/NA	Water	8330B	324018
580-89081-3 MSD	03Q19LCMW03DW	Total/NA	Water	8330B	324018

Prep Batch: 327235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-1 - RE	03Q19LC15SW	Total/NA	Water	8330-Prep	
580-89081-2 - RE	03Q19LCMW03SW	Total/NA	Water	8330-Prep	
580-89081-3 - RE	03Q19LCMW03DW	Total/NA	Water	8330-Prep	
580-89081-4 - RE	03Q19LCMW140W	Total/NA	Water	8330-Prep	
MB 320-327235/1-A	Method Blank	Total/NA	Water	8330-Prep	
PB 320-327235/3-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-327235/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
580-89081-3 MS - RE	03Q19LCMW03DW	Total/NA	Water	8330-Prep	
580-89081-3 MSD - RE	03Q19LCMW03DW	Total/NA	Water	8330-Prep	

QC Association Summary

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

HPLC/IC

Analysis Batch: 327493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-1 - RE	03Q19LC15SW	Total/NA	Water	8330B	327235
580-89081-2 - RE	03Q19LCMW03SW	Total/NA	Water	8330B	327235
580-89081-3 - RE	03Q19LCMW03DW	Total/NA	Water	8330B	327235
580-89081-4 - RE	03Q19LCMW140W	Total/NA	Water	8330B	327235
MB 320-327235/1-A	Method Blank	Total/NA	Water	8330B	327235
PB 320-327235/3-A	Method Blank	Total/NA	Water	8330B	327235
LCS 320-324018/2-A	Lab Control Sample	Total/NA	Water	8330B	324018
LCS 320-327235/2-A	Lab Control Sample	Total/NA	Water	8330B	327235
LCSD 320-324018/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	324018
580-89081-3 MS - RE	03Q19LCMW03DW	Total/NA	Water	8330B	327235
580-89081-3 MSD - RE	03Q19LCMW03DW	Total/NA	Water	8330B	327235

LCMS

Analysis Batch: 471409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89081-1	03Q19LC15SW	Total/NA	Water	6860	
580-89081-2	03Q19LCMW03SW	Total/NA	Water	6860	
580-89081-3	03Q19LCMW03DW	Total/NA	Water	6860	
580-89081-4	03Q19LCMW140W	Total/NA	Water	6860	
MB 280-471409/13	Method Blank	Total/NA	Water	6860	
DLCK 280-471409/12	Lab Control Sample	Total/NA	Water	6860	
INF 280-471409/15	Lab Control Sample		Water	6860	
LCS 280-471409/14	Lab Control Sample	Total/NA	Water	6860	

Lab Chronicle

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19LC15SW
Lab Sample ID: 580-89081-1
Date Collected: 09/10/19 10:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 14:15	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/01/19 23:41	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:33	CBB	TAL DEN

Client Sample ID: 03Q19LCMW03SW
Lab Sample ID: 580-89081-2
Date Collected: 09/10/19 13:10
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 04:32	DSO	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 15:09	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 00:35	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:39	CBB	TAL DEN

Client Sample ID: 03Q19LCMW03DW
Lab Sample ID: 580-89081-3
Date Collected: 09/10/19 12:30
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311626	09/19/19 04:59	DSO	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 16:03	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 01:28	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 14:59	CBB	TAL DEN

Client Sample ID: 03Q19LCMW140W
Lab Sample ID: 580-89081-4
Date Collected: 09/10/19 13:00
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311739	09/19/19 22:18	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324018	09/17/19 10:52	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326491	09/27/19 20:31	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		327235	09/30/19 07:12	NGK	TAL SAC
Total/NA	Analysis	8330B	RE	1	327493	10/02/19 05:57	AJC	TAL SAC
Total/NA	Analysis	6860		1	471409	09/23/19 15:04	CBB	TAL DEN

Client: PBS Engineering and Environmental
Job ID: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 091019TB
Lab Sample ID: 580-89081-5
Date Collected: 09/10/19 00:00
Matrix: Water
Date Received: 09/11/19 13:33

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311739	09/19/19 22:44	JSM	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89081-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	08-05-20
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-18-15	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20
West Virginia DEP	State Program	354	11-30-19

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

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89081-1
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
6860	Perchlorate by IC/MS or IC/MS/MS	EPA	TAL DEN
5030B	Purge and Trap	SW846	TAL SEA
8330-Prep	Solid-Phase Extraction (Explosives)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89081-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89081-1	03Q19LC15SW	Water	09/10/19 10:10	09/11/19 13:33	
580-89081-2	03Q19LCMW03SW	Water	09/10/19 13:10	09/11/19 13:33	
580-89081-3	03Q19LCMW03DW	Water	09/10/19 12:30	09/11/19 13:33	
580-89081-4	03Q19LCMW140W	Water	09/10/19 13:00	09/11/19 13:33	
580-89081-5	091019TB	Water	09/10/19 00:00	09/11/19 13:33	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 15:04
Chloromethane	2.03	Incomplete Integration	thaneerat w	09/18/19 15:04
Vinyl chloride	2.18	Incomplete Integration	thaneerat w	09/18/19 15:04
Bromomethane	2.55	Incomplete Integration	thaneerat w	09/18/19 15:15
Chloroethane	2.68	Incomplete Integration	thaneerat w	09/18/19 15:15
Trichlorofluoromethane	3.04	Incomplete Integration	thaneerat w	09/18/19 15:16
1,1-Dichloroethene	3.76	Incomplete Integration	thaneerat w	09/18/19 15:16
1,1,2-Trichloro-1,2,2-trifluoroethane	3.85	Incomplete Integration	thaneerat w	09/18/19 15:18
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 15:18
Iodomethane	3.96	Incomplete Integration	thaneerat w	09/18/19 15:18
Carbon disulfide	4.08	Incomplete Integration	thaneerat w	09/18/19 15:19
TBA-d9 (IS)	4.86	Incomplete Integration	thaneerat w	09/18/19 15:03
Acrylonitrile	5.18	Incomplete Integration	thaneerat w	09/18/19 15:19
trans-1,2-Dichloroethene	5.18	Incomplete Integration	thaneerat w	09/18/19 15:19
Methyl tert-butyl ether	5.22	Incomplete Integration	thaneerat w	09/18/19 15:19
Hexane	5.77	Incomplete Integration	thaneerat w	09/18/19 15:19
1,1-Dichloroethane	6.04	Incomplete Integration	thaneerat w	09/18/19 15:19

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 15:19
cis-1,2-Dichloroethene	7.05	Incomplete Integration	thaneerat w	09/18/19 15:20
Chlorobromomethane	7.43	Incomplete Integration	thaneerat w	09/18/19 15:20
Chloroform	7.62	Incomplete Integration	thaneerat w	09/18/19 15:20
Carbon tetrachloride	8.01	Incomplete Integration	thaneerat w	09/18/19 15:20
1,1-Dichloropropene	8.05	Incomplete Integration	thaneerat w	09/18/19 15:21
1,2-Dichloroethane	8.38	Incomplete Integration	thaneerat w	09/18/19 15:21
Tert-amyl methyl ether	8.48	Incomplete Integration	thaneerat w	09/18/19 15:21
Trichloroethene	9.10	Incomplete Integration	thaneerat w	09/18/19 15:22
1,2-Dichloropropane	9.37	Incomplete Integration	thaneerat w	09/18/19 15:22
Dibromomethane	9.46	Incomplete Integration	thaneerat w	09/18/19 15:22
Dichlorobromomethane	9.66	Incomplete Integration	thaneerat w	09/18/19 15:22
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneerat w	09/18/19 15:22
Tetrachloroethene	10.86	Incomplete Integration	thaneerat w	09/18/19 15:22
1,3-Dichloropropane	10.93	Incomplete Integration	thaneerat w	09/18/19 15:22
Chlorobenzene	11.65	Incomplete Integration	thaneerat w	09/18/19 15:23
Styrene	12.18	Incomplete Integration	thaneerat w	09/18/19 15:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2,2-Tetrachloroethane	12.70	Incomplete Integration	thaneeratw	09/18/19 15:24
Bromobenzene	12.73	Incomplete Integration	thaneeratw	09/18/19 15:24
trans-1,4-Dichloro-2-butene	12.73	Incomplete Integration	thaneeratw	09/18/19 15:24
2-Chlorotoluene	12.86	Incomplete Integration	thaneeratw	09/18/19 15:24
4-Chlorotoluene	12.96	Incomplete Integration	thaneeratw	09/18/19 15:24
tert-Butylbenzene	13.18	Incomplete Integration	thaneeratw	09/18/19 15:24
1,4-Dichlorobenzene	13.54	Incomplete Integration	thaneeratw	09/18/19 15:25
1,2-Dichlorobenzene	13.83	Incomplete Integration	thaneeratw	09/18/19 15:25
Hexachlorobutadiene	15.17	Incomplete Integration	thaneeratw	09/18/19 15:25
Naphthalene	15.30	Incomplete Integration	thaneeratw	09/18/19 15:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.84	Incomplete Integration	thaneerat w	09/18/19 14:55
Chloromethane	2.04	Incomplete Integration	thaneerat w	09/18/19 14:55
Vinyl chloride	2.22	Incomplete Integration	thaneerat w	09/18/19 14:55
Bromomethane	2.56	Incomplete Integration	thaneerat w	09/18/19 14:55
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:55
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:56
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:56
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:56
1,1,2-Trichloro-1,2,2-trifluoroethane	3.85	Incomplete Integration	thaneerat w	09/18/19 14:56
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:56
Iodomethane	3.99	Incomplete Integration	thaneerat w	09/18/19 14:56
Carbon disulfide	4.07	Incomplete Integration	thaneerat w	09/18/19 14:57
TBA-d9 (IS)	4.87	Peak assignment corrected	thaneerat w	09/18/19 14:54
2-Methyl-2-propanol	5.03	Incomplete Integration	thaneerat w	09/18/19 14:57
trans-1,2-Dichloroethene	5.22	Incomplete Integration	thaneerat w	09/18/19 14:57
Methyl tert-butyl ether	5.24	Incomplete Integration	thaneerat w	09/18/19 14:57
Acrylonitrile	5.25	Incomplete Integration	thaneerat w	09/18/19 14:57

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Hexane	5.76	Incomplete Integration	thaneerat w	09/18/19 14:57
1,1-Dichloroethane	6.04	Incomplete Integration	thaneerat w	09/18/19 14:57
Tert-butyl ethyl ether	6.20	Incomplete Integration	thaneerat w	09/18/19 14:57
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 14:58
cis-1,2-Dichloroethene	7.05	Incomplete Integration	thaneerat w	09/18/19 14:58
Chlorobromomethane	7.41	Incomplete Integration	thaneerat w	09/18/19 14:58
Chloroform	7.62	Incomplete Integration	thaneerat w	09/18/19 14:58
1,1,1-Trichloroethane	7.81	Incomplete Integration	thaneerat w	09/18/19 14:58
Carbon tetrachloride	8.00	Incomplete Integration	thaneerat w	09/18/19 14:58
1,2-Dichloroethane	8.38	Incomplete Integration	thaneerat w	09/18/19 14:58
Tert-amyl methyl ether	8.50	Incomplete Integration	thaneerat w	09/18/19 14:58
Trichloroethene	9.09	Incomplete Integration	thaneerat w	09/18/19 14:59
1,2-Dichloropropane	9.36	Incomplete Integration	thaneerat w	09/18/19 14:59
Dibromomethane	9.45	Incomplete Integration	thaneerat w	09/18/19 14:59
2-Chloroethyl vinyl ether	9.95	Incomplete Integration	thaneerat w	09/18/19 14:59
cis-1,3-Dichloropropene	10.09	Incomplete Integration	thaneerat w	09/18/19 14:59
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneerat w	09/18/19 14:59

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,3-Dichloropropene	10.63	Incomplete Integration	thaneerat w	09/18/19 15:00
1,1,2-Trichloroethane	10.79	Incomplete Integration	thaneerat w	09/18/19 15:00
2-Hexanone	10.99	Incomplete Integration	thaneerat w	09/18/19 15:01
Ethylene Dibromide	11.21	Incomplete Integration	thaneerat w	09/18/19 15:01
Chlorobenzene	11.65	Incomplete Integration	thaneerat w	09/18/19 15:01
1,2,3-Trichloropropane	12.75	Incomplete Integration	thaneerat w	09/18/19 15:01
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,4-Trimethylbenzene	13.56	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,4-Trichlorobenzene	15.08	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,3-Trichlorobenzene	15.47	Incomplete Integration	thaneerat w	09/18/19 15:02

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.80	Incomplete Integration	thaneerat w	09/18/19 14:46
Chloromethane	2.03	Incomplete Integration	thaneerat w	09/18/19 14:46
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:46
Bromomethane	2.54	Incomplete Integration	thaneerat w	09/18/19 14:47
Chloroethane	2.66	Incomplete Integration	thaneerat w	09/18/19 14:47
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:47
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:47
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:48
1,1,2-Trichloro-1,2,2-trifluoroethane	3.81	Incomplete Integration	thaneerat w	09/18/19 14:48
Acetone	3.88	Incomplete Integration	thaneerat w	09/18/19 14:48
Iodomethane	3.97	Incomplete Integration	thaneerat w	09/18/19 14:48
Carbon disulfide	4.06	Incomplete Integration	thaneerat w	09/18/19 14:48
Methylene Chloride	4.65	Incomplete Integration	thaneerat w	09/18/19 14:48
TBA-d9 (IS)	4.85	Peak assignment corrected	thaneerat w	09/18/19 14:46
2-Methyl-2-propanol	5.05	Incomplete Integration	thaneerat w	09/18/19 14:49
trans-1,2-Dichloroethene	5.20	Incomplete Integration	thaneerat w	09/18/19 14:49
Acrylonitrile	5.22	Incomplete Integration	thaneerat w	09/18/19 14:49

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl tert-butyl ether	5.23	Incomplete Integration	thaneerat w	09/18/19 14:49
Hexane	5.76	Incomplete Integration	thaneerat w	09/18/19 14:49
1,1-Dichloroethane	6.03	Incomplete Integration	thaneerat w	09/18/19 14:49
Vinyl acetate	6.14	Incomplete Integration	thaneerat w	09/18/19 14:49
Tert-butyl ethyl ether	6.19	Incomplete Integration	thaneerat w	09/18/19 14:49
2,2-Dichloropropane	7.01	Incomplete Integration	thaneerat w	09/18/19 14:50
cis-1,2-Dichloroethene	7.04	Incomplete Integration	thaneerat w	09/18/19 14:50
Chlorobromomethane	7.41	Incomplete Integration	thaneerat w	09/18/19 14:50
1,1,1-Trichloroethane	7.80	Incomplete Integration	thaneerat w	09/18/19 14:50
Carbon tetrachloride	7.99	Incomplete Integration	thaneerat w	09/18/19 14:51
Benzene	8.27	Incomplete Integration	thaneerat w	09/18/19 14:51
Tert-amyl methyl ether	8.49	Incomplete Integration	thaneerat w	09/18/19 14:51
Trichloroethene	9.08	Incomplete Integration	thaneerat w	09/18/19 14:51
Dibromomethane	9.45	Incomplete Integration	thaneerat w	09/18/19 14:51
2-Chloroethyl vinyl ether	9.94	Incomplete Integration	thaneerat w	09/18/19 14:51
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneerat w	09/18/19 14:52
trans-1,3-Dichloropropene	10.62	Incomplete Integration	thaneerat w	09/18/19 14:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Hexanone	11.00	Incomplete Integration	thaneerat w	09/18/19 14:52
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:52
Styrene	12.17	Incomplete Integration	thaneerat w	09/18/19 14:52
Bromoform	12.33	Incomplete Integration	thaneerat w	09/18/19 14:53
1,2,3-Trichloropropane	12.74	Incomplete Integration	thaneerat w	09/18/19 14:53
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:53
1,2-Dibromo-3-Chloropropane	14.43	Incomplete Integration	thaneerat w	09/18/19 14:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/6 IC Client Sample ID:

Date Analyzed: 09/17/19 22:01 Lab File ID: 091719B _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.80	Incomplete Integration	thaneerat w	09/18/19 14:26
Chloromethane	2.04	Incomplete Integration	thaneerat w	09/18/19 14:26
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:26
Bromomethane	2.54	Incomplete Integration	thaneerat w	09/18/19 14:26
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:27
Trichlorofluoromethane	3.00	Incomplete Integration	thaneerat w	09/18/19 14:27
Acrolein	3.62	Incomplete Integration	thaneerat w	09/18/19 14:27
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:27
1,1,2-Trichloro-1,2,2-trifluoroethane	3.82	Incomplete Integration	thaneerat w	09/18/19 14:27
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:27
Iodomethane	3.98	Incomplete Integration	thaneerat w	09/18/19 14:27
Carbon disulfide	4.07	Incomplete Integration	thaneerat w	09/18/19 14:27
2-Methyl-2-propanol	5.01	Incomplete Integration	thaneerat w	09/18/19 14:37
trans-1,2-Dichloroethene	5.19	Incomplete Integration	thaneerat w	09/18/19 14:38
Acrylonitrile	5.20	Incomplete Integration	thaneerat w	09/18/19 14:38
Methyl tert-butyl ether	5.24	Incomplete Integration	thaneerat w	09/18/19 14:38
Hexane	5.75	Incomplete Integration	thaneerat w	09/18/19 14:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/6 IC Client Sample ID:

Date Analyzed: 09/17/19 22:01 Lab File ID: 091719B _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethane	6.03	Incomplete Integration	thaneerat w	09/18/19 14:38
Vinyl acetate	6.12	Incomplete Integration	thaneerat w	09/18/19 14:38
Tert-butyl ethyl ether	6.19	Incomplete Integration	thaneerat w	09/18/19 14:38
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 14:38
2-Butanone (MEK)	7.11	Incomplete Integration	thaneerat w	09/18/19 14:38
Chlorobromomethane	7.42	Incomplete Integration	thaneerat w	09/18/19 14:39
Carbon tetrachloride	8.00	Incomplete Integration	thaneerat w	09/18/19 14:39
Dibromomethane	9.46	Incomplete Integration	thaneerat w	09/18/19 14:39
2-Chloroethyl vinyl ether	9.94	Incomplete Integration	thaneerat w	09/18/19 14:39
Ethylene Dibromide	11.23	Incomplete Integration	thaneerat w	09/18/19 14:39
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:39
trans-1,4-Dichloro-2-butene	12.74	Incomplete Integration	thaneerat w	09/18/19 14:39
1,4-Dichlorobenzene	13.54	Incomplete Integration	thaneerat w	09/18/19 14:40
1,2,4-Trimethylbenzene	13.56	Incomplete Integration	thaneerat w	09/18/19 14:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/7 IC Client Sample ID:

Date Analyzed: 09/17/19 22:28 Lab File ID: 091719B _006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 14:20
Vinyl chloride	2.18	Incomplete Integration	thaneerat w	09/18/19 14:20
Trichlorofluoromethane	2.97	Incomplete Integration	thaneerat w	09/18/19 14:20
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:20
1,1,2-Trichloro-1,2,2-trifluoroethane	3.83	Incomplete Integration	thaneerat w	09/18/19 14:20
Acetone	3.88	Incomplete Integration	thaneerat w	09/18/19 14:21
2-Methyl-2-propanol	5.01	Incomplete Integration	thaneerat w	09/18/19 14:21
Acrylonitrile	5.19	Incomplete Integration	thaneerat w	09/18/19 14:21
trans-1,2-Dichloroethene	5.19	Incomplete Integration	thaneerat w	09/18/19 14:21
Hexane	5.75	Incomplete Integration	thaneerat w	09/18/19 14:21
Vinyl acetate	6.14	Assign Peak	overmand	09/18/19 10:45
Tert-butyl ethyl ether	6.18	Incomplete Integration	thaneerat w	09/18/19 14:21
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 14:21
cis-1,2-Dichloroethene	7.03	Incomplete Integration	thaneerat w	09/18/19 14:21
2-Butanone (MEK)	7.11	Incomplete Integration	thaneerat w	09/18/19 14:22
2-Chloroethyl vinyl ether	9.96	Incomplete Integration	thaneerat w	09/18/19 14:23
4-Methyl-2-pentanone (MIBK)	10.24	Incomplete Integration	thaneerat w	09/18/19 14:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/7 IC Client Sample ID:

Date Analyzed: 09/17/19 22:28 Lab File ID: 091719B _006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:23
1,1,1,2-Tetrachloroethane	11.72	Incomplete Integration	thaneerat w	09/18/19 14:25
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/8 IC Client Sample ID:

Date Analyzed: 09/17/19 22:55 Lab File ID: 091719B _007.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 14:13
Vinyl chloride	2.19	Incomplete Integration	thaneerat w	09/18/19 14:14
Bromomethane	2.55	Incomplete Integration	thaneerat w	09/18/19 14:14
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:14
Trichlorofluoromethane	3.02	Incomplete Integration	thaneerat w	09/18/19 14:14
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:14
1,1,2-Trichloro-1,2,2-trifluoroethane	3.83	Incomplete Integration	thaneerat w	09/18/19 14:15
Methylene Chloride	4.65	Incomplete Integration	thaneerat w	09/18/19 14:15
2-Methyl-2-propanol	5.03	Incomplete Integration	thaneerat w	09/18/19 14:15
Acrylonitrile	5.18	Incomplete Integration	thaneerat w	09/18/19 14:17
trans-1,2-Dichloroethene	5.20	Incomplete Integration	thaneerat w	09/18/19 14:17
Vinyl acetate	6.12	Assign Peak	overmand	09/18/19 10:46
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 14:18
2-Butanone (MEK)	7.09	Incomplete Integration	thaneerat w	09/18/19 14:19
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:18
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:19

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/9 IC Client Sample ID:

Date Analyzed: 09/17/19 23:21 Lab File ID: 091719B _008.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:11
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:11
TBA-d9 (IS)	4.86	Peak assignment corrected	thaneerat w	09/18/19 14:11
Vinyl acetate	6.12	Assign Peak	overmand	09/18/19 10:46
2-Butanone (MEK)	7.09	Incomplete Integration	thaneerat w	09/18/19 14:12

Lab Sample ID: ICIS 580-311508/10 Client Sample ID:

Date Analyzed: 09/17/19 23:48 Lab File ID: 091719B _009.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:10
TBA-d9 (IS)	4.86	Incomplete Integration	thaneerat w	09/18/19 14:09
Vinyl acetate	6.13	Assign Peak	overmand	09/18/19 10:47
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 14:10
2-Butanone (MEK)	7.09	Peak assignment corrected	thaneerat w	09/18/19 14:12

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/11 IC Client Sample ID:

Date Analyzed: 09/18/19 00:14 Lab File ID: 091719B _010.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	thaneerat w	09/18/19 15:30
TBA-d9 (IS)	4.87	Incomplete Integration	thaneerat w	09/18/19 15:28

Lab Sample ID: STD 580-311508/12 IC Client Sample ID:

Date Analyzed: 09/18/19 00:41 Lab File ID: 091719B _011.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	thaneerat w	09/18/19 15:33

Lab Sample ID: STD 580-311508/13 IC Client Sample ID:

Date Analyzed: 09/18/19 01:07 Lab File ID: 091719B _012.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 15:38
TBA-d9 (IS)	4.84	Incomplete Integration	thaneerat w	09/18/19 15:37
1,4-Dichlorobenzene-d4	13.53	Incomplete Integration	thaneerat w	09/18/19 15:37

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: ICV 580-311508/15 Client Sample ID:

Date Analyzed: 09/18/19 02:00 Lab File ID: 091719B _014.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.00	Incomplete Integration	thaneerat w	09/18/19 17:31
2-Methyl-2-propanol	5.02	Incomplete Integration	thaneerat w	09/18/19 17:32
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 17:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: CCVIS 580-311626/3 Client Sample ID:

Date Analyzed: 09/18/19 19:41 Lab File ID: 091819 _018.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	wongsakul t	09/19/19 11:09
2-Methyl-2-propanol	5.02	Incomplete Integration	wongsakul t	09/19/19 11:10

Lab Sample ID: LCS 580-311626/4 Client Sample ID:

Date Analyzed: 09/18/19 20:08 Lab File ID: 091819 _019.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	wongsakul t	09/19/19 11:24
Methyl tert-butyl ether	5.22	Incomplete Integration	wongsakul t	09/19/19 11:24

Lab Sample ID: LCSD 580-311626/5 Client Sample ID:

Date Analyzed: 09/18/19 20:35 Lab File ID: 091819 _020.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	2.17	Incomplete Integration	wongsakul t	09/19/19 11:25
Bromomethane	2.54	Incomplete Integration	wongsakul t	09/19/19 11:26
Trichlorofluoromethane	2.99	Incomplete Integration	wongsakul t	09/19/19 11:26
o-Xylene	12.15	Incomplete Integration	wongsakul t	09/19/19 11:27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: CCVL 580-311626/6 Client Sample ID:

Date Analyzed: 09/18/19 21:01 Lab File ID: 091819 _021.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.82	Incomplete Integration	wongsakul t	09/19/19 11:33
Chloromethane	2.05	Incomplete Integration	wongsakul t	09/19/19 11:33
Vinyl chloride	2.19	Incomplete Integration	wongsakul t	09/19/19 11:34
Bromomethane	2.53	Incomplete Integration	wongsakul t	09/19/19 11:34
Chloroethane	2.68	Incomplete Integration	wongsakul t	09/19/19 11:34
Trichlorofluoromethane	3.02	Incomplete Integration	wongsakul t	09/19/19 11:34
Acrolein	3.62	Incomplete Integration	wongsakul t	09/19/19 11:34
1,1-Dichloroethene	3.74	Incomplete Integration	wongsakul t	09/19/19 11:34
1,1,2-Trichloro-1,2,2-trifluoroet hane	3.83	Incomplete Integration	wongsakul t	09/19/19 11:34
Acetone	3.87	Incomplete Integration	wongsakul t	09/19/19 11:35
Iodomethane	3.96	Incomplete Integration	wongsakul t	09/19/19 11:35
2-Methyl-2-propanol	5.02	Incomplete Integration	wongsakul t	09/19/19 11:35
trans-1,2-Dichloroethene	5.19	Incomplete Integration	wongsakul t	09/19/19 11:35
Acrylonitrile	5.20	Incomplete Integration	wongsakul t	09/19/19 11:35
Methyl tert-butyl ether	5.21	Incomplete Integration	wongsakul t	09/19/19 11:35
Hexane	5.76	Incomplete Integration	wongsakul t	09/19/19 11:35
1,1-Dichloroethane	6.03	Incomplete Integration	wongsakul t	09/19/19 11:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: CCVL 580-311626/6 Client Sample ID:

Date Analyzed: 09/18/19 21:01 Lab File ID: 091819 _021.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl acetate	6.14	Incomplete Integration	wongsakul t	09/19/19 11:35
2,2-Dichloropropane	7.03	Incomplete Integration	wongsakul t	09/19/19 11:35
cis-1,2-Dichloroethene	7.05	Incomplete Integration	wongsakul t	09/19/19 11:36
2-Butanone (MEK)	7.09	Incomplete Integration	wongsakul t	09/19/19 11:36
Chlorobromomethane	7.41	Incomplete Integration	wongsakul t	09/19/19 11:36
Dichlorobromomethane	9.64	Incomplete Integration	wongsakul t	09/19/19 11:49
Chlorobenzene	11.64	Incomplete Integration	wongsakul t	09/19/19 11:49
1,4-Dichlorobenzene	13.55	Incomplete Integration	wongsakul t	09/19/19 11:49

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: MB 580-311626/7 Client Sample ID:

Date Analyzed: 09/18/19 21:27 Lab File ID: 091819 _022.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.65	Assign Peak	wongsakul t	09/19/19 11:55
1,1,1-Trichloroethane		Invalid Compound ID	wongsakul t	09/19/19 11:55
1,1,2-Trichloroethane		Invalid Compound ID	wongsakul t	09/19/19 11:56
1,1-Dichloroethene		Invalid Compound ID	wongsakul t	09/19/19 11:55
1,1-Dichloropropene		Invalid Compound ID	wongsakul t	09/19/19 11:55
1,2,4-Trimethylbenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
1,2-Dichlorobenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
1,2-Dichloroethane		Invalid Compound ID	wongsakul t	09/19/19 11:55
1,2-Dichloropropane		Invalid Compound ID	wongsakul t	09/19/19 11:55
1,3,5-Trimethylbenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
1,3-Dichlorobenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
1,3-Dichloropropane		Invalid Compound ID	wongsakul t	09/19/19 11:56
2-Chlorotoluene		Invalid Compound ID	wongsakul t	09/19/19 11:56
4-Chlorotoluene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Benzene		Invalid Compound ID	wongsakul t	09/19/19 11:55
Bromobenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Bromomethane		Invalid Compound ID	wongsakul t	09/19/19 11:55

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: MB 580-311626/7 Client Sample ID:

Date Analyzed: 09/18/19 21:27 Lab File ID: 091819 _022.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon tetrachloride		Invalid Compound ID	wongsakul t	09/19/19 11:55
Chlorobenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Chloroethane		Invalid Compound ID	wongsakul t	09/19/19 11:55
Chloromethane		Invalid Compound ID	wongsakul t	09/19/19 11:55
cis-1,3-Dichloropropene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Hexachlorobutadiene		Invalid Compound ID	wongsakul t	09/19/19 11:56
n-Butylbenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
N-Propylbenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
sec-Butylbenzene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Tetrachloroethene		Invalid Compound ID	wongsakul t	09/19/19 11:56
Trichloroethene		Invalid Compound ID	wongsakul t	09/19/19 11:55
Trichlorofluoromethane		Invalid Compound ID	wongsakul t	09/19/19 11:55
Vinyl chloride		Invalid Compound ID	wongsakul t	09/19/19 11:55
Ethylbenzene	11.72	Invalid Compound ID	wongsakul t	09/19/19 11:56
1,2,4-Trichlorobenzene	15.09	Assign Peak	wongsakul t	09/19/19 11:56
Naphthalene	15.29	Assign Peak	wongsakul t	09/19/19 11:57

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: 580-89081-2 Client Sample ID: 03Q19LCMW03SW

Date Analyzed: 09/19/19 04:32 Lab File ID: 091819 _038.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.03	Assign Peak	overmand	09/19/19 11:21
Methylene Chloride	4.66	Assign Peak	overmand	09/19/19 11:21
1,1-Dichloroethane	6.04	Assign Peak	overmand	09/19/19 11:22
1,2,3-Trichlorobenzene		Invalid Compound ID	overmand	09/19/19 11:22
1,2,4-Trichlorobenzene		Invalid Compound ID	overmand	09/19/19 11:22
1,2,4-Trimethylbenzene		Invalid Compound ID	overmand	09/19/19 11:22
2-Chlorotoluene		Invalid Compound ID	overmand	09/19/19 11:22
4-Chlorotoluene		Invalid Compound ID	overmand	09/19/19 11:22
4-Isopropyltoluene		Invalid Compound ID	overmand	09/19/19 11:22
Ethylbenzene		Invalid Compound ID	overmand	09/19/19 11:22
Isopropylbenzene		Invalid Compound ID	overmand	09/19/19 11:22
Methyl tert-butyl ether		Invalid Compound ID	overmand	09/19/19 11:21
m-Xylene & p-Xylene		Invalid Compound ID	overmand	09/19/19 11:22
n-Butylbenzene		Invalid Compound ID	overmand	09/19/19 11:22
o-Xylene		Invalid Compound ID	overmand	09/19/19 11:22
Styrene		Invalid Compound ID	overmand	09/19/19 11:22
tert-Butylbenzene		Invalid Compound ID	overmand	09/19/19 11:22
trans-1,3-Dichloropropene		Invalid Compound ID	overmand	09/19/19 11:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: 580-89081-3 Client Sample ID: 03Q19LCMW03DW

Date Analyzed: 09/19/19 04:59 Lab File ID: 091819 _039.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.06	Assign Peak	overmand	09/19/19 11:23
Methylene Chloride	4.67	Assign Peak	overmand	09/19/19 11:23
1,2,3-Trichlorobenzene		Invalid Compound ID	overmand	09/19/19 11:24
1,2,4-Trimethylbenzene		Invalid Compound ID	overmand	09/19/19 11:24
1,3,5-Trimethylbenzene		Invalid Compound ID	overmand	09/19/19 11:24
2-Chlorotoluene		Invalid Compound ID	overmand	09/19/19 11:24
4-Chlorotoluene		Invalid Compound ID	overmand	09/19/19 11:24
4-Isopropyltoluene		Invalid Compound ID	overmand	09/19/19 11:24
Ethylbenzene		Invalid Compound ID	overmand	09/19/19 11:23
Isopropylbenzene		Invalid Compound ID	overmand	09/19/19 11:23
m-Xylene & p-Xylene		Invalid Compound ID	overmand	09/19/19 11:23
n-Butylbenzene		Invalid Compound ID	overmand	09/19/19 11:24
N-Propylbenzene		Invalid Compound ID	overmand	09/19/19 11:24
o-Xylene		Invalid Compound ID	overmand	09/19/19 11:23
Styrene		Invalid Compound ID	overmand	09/19/19 11:23

Lab Sample ID: 580-89081-3 MS Client Sample ID: 03Q19LCMW03DW MS

Date Analyzed: 09/19/19 05:26 Lab File ID: 091819 _040.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Assign Peak	overmand	09/19/19 11:25
Trichlorofluoromethane	2.98	Assign Peak	overmand	09/19/19 11:24
Methyl tert-butyl ether	5.22	Assign Peak	overmand	09/19/19 11:24
2,2-Dichloropropane	7.03	Assign Peak	overmand	09/19/19 11:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311626

Lab Sample ID: 580-89081-3 MSD Client Sample ID: 03Q19LCMW03DW MSD

Date Analyzed: 09/19/19 05:52 Lab File ID: 091819 _041.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Assign Peak	overmand	09/19/19 11:25
Methyl tert-butyl ether	5.21	Assign Peak	overmand	09/19/19 11:26
2,2-Dichloropropane	7.02	Assign Peak	overmand	09/19/19 11:26

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311739

Lab Sample ID: CCVIS 580-311739/3 Client Sample ID:

Date Analyzed: 09/19/19 15:40 Lab File ID: 09119 _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Assign Peak	mckelljs	09/20/19 12:55
2-Methyl-2-propanol	5.02	Assign Peak	mckelljs	09/20/19 12:55

Lab Sample ID: LCS 580-311739/4 Client Sample ID:

Date Analyzed: 09/19/19 16:07 Lab File ID: 09119 _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/20/19 13:47

Lab Sample ID: LCSD 580-311739/5 Client Sample ID:

Date Analyzed: 09/19/19 16:33 Lab File ID: 09119 _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.55	Incomplete Integration	thaneerat w	09/20/19 13:51
Trichlorofluoromethane	2.98	Incomplete Integration	thaneerat w	09/20/19 13:51
Methyl tert-butyl ether	5.21	Incomplete Integration	thaneerat w	09/20/19 13:52
o-Xylene	12.15	Incomplete Integration	thaneerat w	09/20/19 13:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311739

Lab Sample ID: MB 580-311739/7 Client Sample ID:

Date Analyzed: 09/19/19 17:26 Lab File ID: 09119 _007.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,3-Trichlorobenzene		Invalid Compound ID	thaneerat w	09/20/19 13:59
1,2,4-Trimethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
1,3,5-Trimethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
2-Chlorotoluene		Invalid Compound ID	thaneerat w	09/20/19 13:58
4-Chlorotoluene		Invalid Compound ID	thaneerat w	09/20/19 13:58
4-Isopropyltoluene		Invalid Compound ID	thaneerat w	09/20/19 13:58
Ethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
Hexachlorobutadiene		Invalid Compound ID	thaneerat w	09/20/19 13:58
Isopropylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
m-Xylene & p-Xylene		Invalid Compound ID	thaneerat w	09/20/19 13:58
n-Butylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
sec-Butylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
tert-Butylbenzene		Invalid Compound ID	thaneerat w	09/20/19 13:58
trans-1,3-Dichloropropene		Invalid Compound ID	thaneerat w	09/20/19 13:58

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311739

Lab Sample ID: 580-89081-4 Client Sample ID: 03Q19LCMW140W

Date Analyzed: 09/19/19 22:18 Lab File ID: 09119 _018.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloropropene		Invalid Compound ID	thaneerat w	09/20/19 14:36
1,3,5-Trimethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 14:40
2-Chlorotoluene		Invalid Compound ID	thaneerat w	09/20/19 14:40
Ethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 14:37
Ethylene Dibromide		Invalid Compound ID	thaneerat w	09/20/19 14:36
Methyl tert-butyl ether		Invalid Compound ID	thaneerat w	09/20/19 14:36
m-Xylene & p-Xylene		Invalid Compound ID	thaneerat w	09/20/19 14:37
n-Butylbenzene		Invalid Compound ID	thaneerat w	09/20/19 14:40
N-Propylbenzene		Invalid Compound ID	thaneerat w	09/20/19 14:38
o-Xylene		Invalid Compound ID	thaneerat w	09/20/19 14:37
Styrene		Invalid Compound ID	thaneerat w	09/20/19 14:37
trans-1,3-Dichloropropene		Invalid Compound ID	thaneerat w	09/20/19 14:36

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311739

Lab Sample ID: 580-89081-5 Client Sample ID: 091019TB

Date Analyzed: 09/19/19 22:44 Lab File ID: 09119 _019.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4-Trichlorobenzene		Invalid Compound ID	thaneerat w	09/20/19 15:13
1,2,4-Trimethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 15:13
1,3,5-Trimethylbenzene		Invalid Compound ID	thaneerat w	09/20/19 15:13
4-Chlorotoluene		Invalid Compound ID	thaneerat w	09/20/19 15:13
4-Isopropyltoluene		Invalid Compound ID	thaneerat w	09/20/19 15:13
cis-1,3-Dichloropropene		Invalid Compound ID	thaneerat w	09/20/19 15:12
Methyl tert-butyl ether		Invalid Compound ID	thaneerat w	09/20/19 15:12
m-Xylene & p-Xylene		Invalid Compound ID	thaneerat w	09/20/19 15:12
N-Propylbenzene		Invalid Compound ID	thaneerat w	09/20/19 15:13
tert-Butylbenzene		Invalid Compound ID	thaneerat w	09/20/19 15:13
Styrene	12.17	Invalid Compound ID	thaneerat w	09/20/19 15:13

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: STD020 280-471409/4 IC Client Sample ID:

Date Analyzed: 09/23/19 11:34 Lab File ID: IC819I23002.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.64	Baseline	beckerc	09/23/19 17:20

Lab Sample ID: STD050 280-471409/5 IC Client Sample ID:

Date Analyzed: 09/23/19 11:39 Lab File ID: IC819I23003.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:21
Perchlorate	2.65	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: STD100 280-471409/6 IC Client Sample ID:

Date Analyzed: 09/23/19 11:44 Lab File ID: IC819I23004.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.62	Baseline	beckerc	09/23/19 17:21

Lab Sample ID: STD200 280-471409/7 ICI Client Sample ID:

Date Analyzed: 09/23/19 11:49 Lab File ID: IC819I23005.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:21

Lab Sample ID: STD1000 280-471409/9 IC Client Sample ID:

Date Analyzed: 09/23/19 11:59 Lab File ID: IC819I23007.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:21

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: ICB 280-471409/10 Client Sample ID:

Date Analyzed: 09/23/19 12:05 Lab File ID: IC819I23008.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	beckerc	09/23/19 17:22
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:22

Lab Sample ID: ICV 280-471409/11 Client Sample ID:

Date Analyzed: 09/23/19 12:10 Lab File ID: IC819I23009.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: DLCK 280-471409/12 Client Sample ID:

Date Analyzed: 09/23/19 12:15 Lab File ID: IC819I23010.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.63	Baseline	beckerc	09/23/19 17:25
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: MB 280-471409/13 Client Sample ID:

Date Analyzed: 09/23/19 12:20 Lab File ID: IC819I23011.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/23/19 17:25
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:25

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: LCS 280-471409/14 Client Sample ID:

Date Analyzed: 09/23/19 12:25 Lab File ID: IC819I23012.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/23/19 17:25

Lab Sample ID: INF 280-471409/15 Client Sample ID:

Date Analyzed: 09/23/19 12:30 Lab File ID: IC819I23013.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:25

Lab Sample ID: CCV 280-471409/23 Client Sample ID:

Date Analyzed: 09/23/19 13:12 Lab File ID: IC819I23021.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:30

Lab Sample ID: CCB 280-471409/25 Client Sample ID:

Date Analyzed: 09/23/19 13:47 Lab File ID: IC819I23026.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:31
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:31

Lab Sample ID: 580-89081-2 Client Sample ID:

Date Analyzed: 09/23/19 14:39 Lab File ID: IC819I23036.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:33

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: CCV 280-471409/36 Client Sample ID:

Date Analyzed: 09/23/19 14:44 Lab File ID: IC819I23037.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/23/19 17:33

Lab Sample ID: CCVL 280-471409/37 Client Sample ID:

Date Analyzed: 09/23/19 14:49 Lab File ID: IC819I23038.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	beckerc	09/23/19 17:34

Lab Sample ID: CCB 280-471409/38 Client Sample ID:

Date Analyzed: 09/23/19 14:54 Lab File ID: IC819I23039.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:34

Lab Sample ID: 580-89081-3 Client Sample ID:

Date Analyzed: 09/23/19 14:59 Lab File ID: IC819I23040.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.57	Baseline	beckerc	09/23/19 17:34

Lab Sample ID: 580-89081-4 Client Sample ID:

Date Analyzed: 09/23/19 15:04 Lab File ID: IC819I23041.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:35

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: CCV 280-471409/41 Client Sample ID:

Date Analyzed: 09/23/19 15:09 Lab File ID: IC819I23042.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/23/19 17:36

Lab Sample ID: CCB 280-471409/43 Client Sample ID:

Date Analyzed: 09/23/19 15:19 Lab File ID: IC819I23044.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.57	Baseline	beckerc	09/23/19 17:36
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:36

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326139

Lab Sample ID: STD1 320-326139/4 IC Client Sample ID:

Date Analyzed: 09/25/19 22:31 Lab File ID: YA0000011.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	33.95	Incomplete Integration	cartiera	09/26/19 14:56
4-Nitrotoluene	35.45	Incomplete Integration	cartiera	09/26/19 14:57

Lab Sample ID: STD2 320-326139/5 IC Client Sample ID:

Date Analyzed: 09/25/19 23:24 Lab File ID: YA0000012.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	38.38	Incomplete Integration	cartiera	09/26/19 16:13

Lab Sample ID: STD3 320-326139/6 IC Client Sample ID:

Date Analyzed: 09/26/19 00:18 Lab File ID: YA0000013.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	33.98	Baseline Smoothing	cartiera	09/26/19 13:16

Lab Sample ID: STD6 320-326139/9 IC Client Sample ID:

Date Analyzed: 09/26/19 02:59 Lab File ID: YA0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.58	Peak assignment corrected	cartiera	09/26/19 13:19
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/26/19 13:19

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326139

Lab Sample ID: STD7 320-326139/10 IC Client Sample ID:

Date Analyzed: 09/26/19 03:52 Lab File ID: YA0000017.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.59	Peak assignment corrected	cartiera	09/26/19 13:20
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/26/19 13:20

Lab Sample ID: ICV 320-326139/12 Client Sample ID:

Date Analyzed: 09/26/19 05:40 Lab File ID: YA0000019.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	19.72	Split Peak	cartiera	09/26/19 13:26

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326491

Lab Sample ID: CCVRT 320-326491/3 Client Sample ID:

Date Analyzed: 09/26/19 18:35 Lab File ID: Z0000003.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.53	Peak assignment corrected	cartiera	09/26/19 20:39
3,4-Dinitrotoluene	28.90	Peak assignment corrected	cartiera	09/26/19 20:39

Lab Sample ID: MB 320-324018/1-A Client Sample ID:

Date Analyzed: 09/27/19 11:34 Lab File ID: Z0000022.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN		Invalid Compound ID	cartiera	09/27/19 13:32

Lab Sample ID: 580-89081-2 Client Sample ID: 03Q19LCMW03SW

Date Analyzed: 09/27/19 15:09 Lab File ID: Z0000026.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	09/27/19 16:51
4-Nitrotoluene		Invalid Compound ID	cartiera	09/27/19 16:51
HMX		Invalid Compound ID	cartiera	09/27/19 16:50
Nitrobenzene		Invalid Compound ID	cartiera	09/27/19 16:50
PETN		Invalid Compound ID	cartiera	09/27/19 16:51
RDX		Invalid Compound ID	cartiera	09/27/19 16:50
1,3,5-Trinitrobenzene	22.01	Peak assignment corrected	cartiera	09/27/19 16:50

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326491

Lab Sample ID: 580-89081-3 Client Sample ID: 03Q19LCMW03DW

Date Analyzed: 09/27/19 16:03 Lab File ID: Z0000027.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	09/30/19 15:35
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:35
4-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:35
Nitrobenzene		Invalid Compound ID	cartiera	09/30/19 15:35
PETN	38.52	Wrong Peak	cartiera	09/30/19 15:35

Lab Sample ID: CCV 320-326491/28 Client Sample ID:

Date Analyzed: 09/27/19 16:56 Lab File ID: Z0000028.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.58	Peak assignment corrected	cartiera	09/27/19 20:53
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/27/19 20:52

Lab Sample ID: 580-89081-3 MS Client Sample ID: 03Q19LCMW03DW MS

Date Analyzed: 09/27/19 18:43 Lab File ID: Z0000030.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.57	Peak assignment corrected	cartiera	09/30/19 15:36
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/30/19 15:36

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326491

Lab Sample ID: 580-89081-4 Client Sample ID: 03Q19LCMW140W

Date Analyzed: 09/27/19 20:31 Lab File ID: Z0000032.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	09/30/19 15:40
2-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:43
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:43
PETN		Invalid Compound ID	cartiera	09/30/19 15:43

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 327493

Lab Sample ID: LCS 320-324018/2-A Client Sample ID:

Date Analyzed: 10/01/19 19:13 Lab File ID: ZD0000008.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.49	Peak assignment corrected	cartiera	10/02/19 13:27
3,4-Dinitrotoluene	28.86	Peak assignment corrected	cartiera	10/02/19 13:27

Lab Sample ID: LCSD 320-324018/3-A Client Sample ID:

Date Analyzed: 10/01/19 20:07 Lab File ID: ZD0000009.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.51	Peak assignment corrected	cartiera	10/02/19 13:27
3,4-Dinitrotoluene	28.87	Incomplete Integration	cartiera	10/02/19 13:27

Lab Sample ID: MB 320-327235/1-A Client Sample ID:

Date Analyzed: 10/01/19 21:00 Lab File ID: ZD0000010.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:28
Tetryl		Invalid Compound ID	cartiera	10/02/19 13:28

Lab Sample ID: LCS 320-327235/2-A Client Sample ID:

Date Analyzed: 10/01/19 21:54 Lab File ID: ZD0000011.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.51	Peak assignment corrected	cartiera	10/02/19 13:28
3,4-Dinitrotoluene	28.87	Incomplete Integration	cartiera	10/02/19 13:28

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 327493

Lab Sample ID: 580-89081-2 RE Client Sample ID: 03Q19LCMW03SW RE

Date Analyzed: 10/02/19 00:35 Lab File ID: ZD0000014.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	10/02/19 13:30
2-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:30
3-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:30
4-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:30
PETN	38.39	Incomplete Integration	cartiera	10/02/19 13:31

Lab Sample ID: 580-89081-3 RE Client Sample ID: 03Q19LCMW03DW RE

Date Analyzed: 10/02/19 01:28 Lab File ID: ZD0000015.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	10/02/19 13:31
2-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:31
3-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:31
PETN		Invalid Compound ID	cartiera	10/02/19 13:31

Lab Sample ID: CCV 320-327493/55 Client Sample ID:

Date Analyzed: 10/02/19 02:22 Lab File ID: ZD0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.52	Peak assignment corrected	cartiera	10/02/19 13:31
3,4-Dinitrotoluene	28.88	Peak assignment corrected	cartiera	10/02/19 13:31

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 327493

Lab Sample ID: 580-89081-3 MS RE Client Sample ID: 03Q19LCMW03DW MS RE

Date Analyzed: 10/02/19 04:09 Lab File ID: ZD0000018.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.49	Peak assignment corrected	cartiera	10/02/19 13:32
3,4-Dinitrotoluene	28.86	Incomplete Integration	cartiera	10/02/19 13:32

Lab Sample ID: 580-89081-3 MSD RE Client Sample ID: 03Q19LCMW03DW MSD RE

Date Analyzed: 10/02/19 05:03 Lab File ID: ZD0000019.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.52	Peak assignment corrected	cartiera	10/02/19 13:34
3,4-Dinitrotoluene	28.89	Peak assignment corrected	cartiera	10/02/19 13:34

Lab Sample ID: 580-89081-4 RE Client Sample ID: 03Q19LCMW140W RE

Date Analyzed: 10/02/19 05:57 Lab File ID: ZD0000020.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	10/02/19 13:34
3-Nitrotoluene		Invalid Compound ID	cartiera	10/02/19 13:34
HMX		Invalid Compound ID	cartiera	10/02/19 13:34
RDX		Invalid Compound ID	cartiera	10/02/19 13:34
PETN	38.48	Incomplete Integration	cartiera	10/02/19 13:34

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

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_00010							1,1,1,2-Tetrachloroethane	
							1,1,1-Trichloroethane	
							1,1,2,2-Tetrachloroethane	
							1,1,2-Trichloro-1,2,2-trifluoroethane	
							1,1,2-Trichloroethane	
							1,1-Dichloroethane	
							1,1-Dichloroethene	
							1,1-Dichloropropene	
							1,2,3-Trichlorobenzene	
							1,2,3-Trichloropropane	
							1,2,4-Trichlorobenzene	
							1,2,4-Trimethylbenzene	
							1,2-Dibromo-3-Chloropropane	
							1,2-Dichlorobenzene	
							1,2-Dichloroethane	
							1,2-Dichloropropane	
							1,3,5-Trichlorobenzene	
							1,3,5-Trimethylbenzene	
							1,3-Dichlorobenzene	
							1,3-Dichloropropane	
							1,4-Dichlorobenzene	
							2,2-Dichloropropane	
							2-Butanone (MEK)	
							2-Chloroethyl vinyl ether	
							2-Chlorotoluene	
							2-Hexanone	
							2-Methyl-2-propanol	
							4-Chlorotoluene	
							4-Isopropyltoluene	
							4-Methyl-2-pentanone (MIBK)	
							Acetone	
							Acrolein	
							Acrylonitrile	
							Benzene	
							Bromobenzene	
							Bromoform	
							Bromomethane	
							Carbon disulfide	
							Carbon tetrachloride	
							Chlorobenzene	
							Chlorobromomethane	
							Chlorodibromomethane	
							Chloroethane	
							Chloroform	
							Chloromethane	
							cis-1,2-Dichloroethene	
							cis-1,3-Dichloropropene	

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromomethane	
							Dichlorobromomethane	
							Dichlorodifluoromethane	
							Ethylbenzene	
							Ethylene Dibromide	
							Hexachlorobutadiene	
							Hexane	
							Iodomethane	
							Isopropylbenzene	
							m-Xylene & p-Xylene	
							Methyl tert-butyl ether	
							Methylene Chloride	
							n-Butylbenzene	
							N-Propylbenzene	
							Naphthalene	
							o-Xylene	
							sec-Butylbenzene	
							Styrene	
							Tentatively Identified Compound	
							Tert-amyl methyl ether	
							Tert-butyl ethyl ether	
							tert-Butylbenzene	
							Tetrachloroethene	
							Toluene	
							trans-1,2-Dichloroethene	
							trans-1,3-Dichloropropene	
							trans-1,4-Dichloro-2-butene	
							Trichloroethene	
							Trichlorofluoromethane	
							Vinyl acetate	
							Vinyl chloride	
							Xylenes, Total	
					SURR/IS/TFT_00106	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_00106	03/12/20	03/19/19	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00042	09/30/19	08/15/19	MeOH, Lot 198123	50 mL	VOAR2CEVE__00020	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					VOARAcrolein_00055	750 uL	Acrolein	300 ug/mL
					VOARADDCOM__00024	1000 uL	1,3,5-Trichlorobenzene	50 ug/mL
					VOARGAS__00021	1 mL	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__00023	1 mL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOARMegMix__00031	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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__00016	1250 uL	Tert-amyl methyl ether	62.5 ug/mL
							Tert-butyl ethyl ether	62.5 ug/mL
					VOARVA__00044	1250 uL	Vinyl acetate	125 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.VOAR2CEVE__00020	02/28/22		Restek, Lot A0146250		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.VOARAcrolein_00055	10/31/19		Restek, Lot A0147676		(Purchased Reagent)		Acrolein	20000 ug/mL
.VOARADDCOM__00024	07/31/20		Restek, Lot A0145375		(Purchased Reagent)		1,3,5-Trichlorobenzene	2500 ug/mL
.VOARGAS__00021	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__00023	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__00031	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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__00016	01/31/21		Restek, Lot A0144915		(Purchased Reagent)		Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.VOARVA__00044	09/30/19		Restek, Lot A0147136		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VOAMasterSEC_00035	09/30/19	08/15/19	MeOH, Lot 198123	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

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
.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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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, Denver Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
6860-IS-Spike_00087	03/11/20	06/06/19	Di Water, Lot HPLC water 217510	100 mL	6860-ISStock2_00022	2 mL	Perchlorate-18O	0.0204 ug/mL
.6860-ISStock2_00022	03/11/20	03/11/19	H2O, Lot 209218	50 mL	6860-ISStock1_00015	0.5 mL	Perchlorate-18O	1.02 ug/mL
..6860-ISStock1_00015	03/11/20	Cambridge, Lot SDFF-012			(Purchased Reagent)		Perchlorate-18O	102 ug/mL
6860CalStockW_00110	10/04/19	05/29/19	H2O, Lot 217510	100 mL	6860CalStock3_00026	1 mL	Perchlorate	0.001 ug/mL
.6860CalStock3_00026	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860CalStock2_00021	0.1 mL	Perchlorate	0.1 ug/mL
..6860CalStock2_00021	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860StockClO4_00014	0.1 mL	Perchlorate	10 ug/mL
...6860StockClO4_00014	07/25/20	Accustandard, Lot 216095148			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860ICVStockW_00043	09/28/19	03/28/19	H2O, Lot 217519	50 mL	6860ICVStock3_00034	0.5 mL	Perchlorate	0.001 ug/mL
.6860ICVStock3_00034	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock2_00023	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00023	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock1_00010	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00010	06/19/21	Absolute Standards, Lot 061918			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860LCS_00024	03/28/20	07/30/19	HPLC water, Lot 217519	50 mL	6860ICVStock3_00034	2.5 mL	Perchlorate	5 ug/L
.6860ICVStock3_00034	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock2_00023	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00023	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock1_00010	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00010	06/19/21	Absolute Standards, Lot 061918			(Purchased Reagent)		Perchlorate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
HP34DNTSU_00123	03/16/20	09/16/19	Acetonitrile, Lot 0000231453	25 mL	HP8330SU_00084	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
.HP8330SU_00084	09/16/19		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
HP8330IC_00066	10/17/19	09/03/19	25% 0.1%HOAc in ACN, Lot 0.1% AC/ACN/H2O_039	25 mL	HP8330TA_00063	10 uL	RDX	200 ng/mL
.HP8330TA_00063	12/06/19		AccuStandard, Lot 217101413		(Purchased Reagent)		RDX	500 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
							HMX	5 ng/mL
							Nitrobenzene	5 ng/mL
							RDX	5 ng/mL
							Tetryl	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
..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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..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
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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
					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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					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
							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_00066	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 7036	200 mL	HP8330L7_00038	20 mL	3,4-Dinitrotoluene	50 ng/mL
.HP8330L7_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 0037	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HP8330L4_00066	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_7036	200 mL	HP8330L7_00038	20 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_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	200 mL	HP8330SP_00110	2 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_00079	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
...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
..HPNGPETNSP_00079	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
...HPNGTA_00066	06/30/24		Restek, Lot A0149738		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00064	04/30/24		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00068	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	100 mL	HP8330L7_00041	10 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_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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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_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
..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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
HP8330L5_00072	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 0037	100 mL	HP8330L7_00038	20 mL	3,4-Dinitrotoluene	100 ng/mL
.HP8330L7_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 0037	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	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
HP8330L5_00072	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 0037	100 mL	HP8330L7_00038	20 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_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20 0037	200 mL	HP8330SP_00110	2 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_00079	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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	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
..HPNGPETNSP_00079	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
...HPNGTA_00066	06/30/24		Restek, Lot A0149738		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00064	04/30/24		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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
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
							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
					HPNGPETNSP_00082	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
..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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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_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
.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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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
HP8330SP_00110	01/15/20	07/15/19	Acetonitrile, Lot Acetonitrile_00145	25 mL	HP35DNATA_00067	1.25 mL	3,5-Dinitroaniline	50 ug/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
.HP35DNATA_00067	10/31/22	Restek, Lot A0136481			(Purchased Reagent)		3,5-Dinitroaniline	1000 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
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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

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_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
HPMETSP_00055	11/07/19	05/07/19	Acetonitrile, Lot Acetonitrile_00123	10 mL	HPMETTA_00008	0.5 mL	DNX	50.2 ug/mL
							MNX	58.5 ug/mL
							TNX	50 ug/mL
.HPMETTA_00008	01/31/20	Agilent Technologies, Lot CS-6254			(Purchased Reagent)		DNX	1004 ug/mL
							MNX	1170 ug/mL
							TNX	1000 ug/mL
HPNGPETNSP_00080	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
.HPNGTA_00066	06/30/24	Restek, Lot A0149738			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.HPPETNTA_00064	04/30/24	Restek, Lot A0147962			(Purchased Reagent)		PETN	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): 624SIL-MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TFT #	TOL #	BFB #
03Q19LCMW140W	580-89081-4	107	112	106	100	98
091019TB	580-89081-5	112	114	114	100	91
	MB 580-311739/7	105	108	107	97	98
	LCS 580-311739/4	92	96	92	100	104
	LCSD 580-311739/5	94	97	92	99	108

	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 II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): 624SIL-MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
03Q19LCMW03SW	580-89081-2	110	108	99	94
03Q19LCMW03DW	580-89081-3	110	111	101	93
	MB 580-311626/7	108	105	102	94
	LCS 580-311626/4	97	97	100	105
	LCSD 580-311626/5	96	94	102	105
03Q19LCMW03DW MS	580-89081-3 MS	92	95	101	106
03Q19LCMW03DW MSD	580-89081-3 MSD	95	99	101	105

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _019.D

Lab ID: LCS 580-311626/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.02	100	79-127	
1,1,1-Trichloroethane	5.00	4.84	97	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.85	97	69-139	
1,1,2-Trichloroethane	5.00	5.11	102	80-127	
1,1-Dichloroethane	5.00	5.00	100	74-135	
1,1-Dichloroethene	5.00	5.25	105	71-126	
1,1-Dichloropropene	5.00	4.98	100	72-132	
1,2,3-Trichlorobenzene	5.00	4.98	100	75-137	
1,2,3-Trichloropropane	5.00	4.90	98	80-127	
1,2,4-Trichlorobenzene	5.00	4.44	89	79-130	
1,2,4-Trimethylbenzene	5.00	5.12	102	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.54	91	69-130	
1,2-Dichlorobenzene	5.00	5.01	100	80-129	
1,2-Dichloroethane	5.00	5.14	103	74-130	
1,2-Dichloropropane	5.00	4.93	99	80-130	
1,3,5-Trimethylbenzene	5.00	4.78	96	80-139	
1,3-Dichlorobenzene	5.00	5.11	102	80-130	
1,3-Dichloropropane	5.00	4.96	99	80-130	
1,4-Dichlorobenzene	5.00	4.82	96	80-129	
2,2-Dichloropropane	5.00	5.03	101	58-150	
2-Chlorotoluene	5.00	4.64	93	80-136	
4-Chlorotoluene	5.00	4.74	95	80-130	
4-Isopropyltoluene	5.00	4.99	100	78-132	
Benzene	5.00	5.29	106	73-133	
Bromobenzene	5.00	4.61	92	80-130	
Bromoform	5.00	4.65	93	69-137	
Bromomethane	5.00	5.46	109	68-120	
Carbon tetrachloride	5.00	4.86	97	71-132	
Chlorobenzene	5.00	4.98	100	80-123	
Chlorobromomethane	5.00	5.17	103	79-131	
Chlorodibromomethane	5.00	5.05	101	76-131	
Chloroethane	5.00	5.68	114	49-135	
Chloroform	5.00	4.89	98	80-130	
Chloromethane	5.00	5.80	116	32-143	
cis-1,2-Dichloroethene	5.00	5.25	105	72-130	
cis-1,3-Dichloropropene	5.00	4.59	92	66-141	
Dibromomethane	5.00	4.78	96	65-141	
Dichlorobromomethane	5.00	5.04	101	74-131	
Dichlorodifluoromethane	5.00	5.68	114	20-137	
Ethylbenzene	5.00	4.90	98	80-130	
Ethylene Dibromide	5.00	4.87	97	80-126	
Hexachlorobutadiene	5.00	5.05	101	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _019.D

Lab ID: LCS 580-311626/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	4.94	99	75-137	
Methyl tert-butyl ether	5.00	4.68	94	60-150	
Methylene Chloride	5.00	5.03	101	75-134	
m-Xylene & p-Xylene	5.00	4.81	96	78-130	
Naphthalene	5.00	4.34	87	64-132	
n-Butylbenzene	5.00	4.68	94	73-135	
N-Propylbenzene	5.00	4.72	94	77-142	
o-Xylene	5.00	4.81	96	80-139	
sec-Butylbenzene	5.00	5.05	101	78-140	
Styrene	5.00	4.90	98	74-136	
tert-Butylbenzene	5.00	4.66	93	77-140	
Tetrachloroethene	5.00	4.97	99	75-131	
Toluene	5.00	5.37	107	80-126	
trans-1,2-Dichloroethene	5.00	5.16	103	63-133	
trans-1,3-Dichloropropene	5.00	4.61	92	71-128	
Trichloroethene	5.00	4.83	97	72-136	
Trichlorofluoromethane	5.00	5.52	110	60-132	
Vinyl chloride	5.00	5.53	111	52-128	

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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09119 _004.D

Lab ID: LCS 580-311739/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.81	96	79-127	
1,1,1-Trichloroethane	5.00	4.75	95	74-128	
1,1,2,2-Tetrachloroethane	5.00	5.17	103	69-139	
1,1,2-Trichloroethane	5.00	5.29	106	80-127	
1,1-Dichloroethane	5.00	4.82	96	74-135	
1,1-Dichloroethene	5.00	5.11	102	71-126	
1,1-Dichloropropene	5.00	4.95	99	72-132	
1,2,3-Trichlorobenzene	5.00	5.17	103	75-137	
1,2,3-Trichloropropane	5.00	5.24	105	80-127	
1,2,4-Trichlorobenzene	5.00	4.72	94	79-130	
1,2,4-Trimethylbenzene	5.00	5.25	105	78-136	
1,2-Dibromo-3-Chloropropane	5.00	5.03	101	69-130	
1,2-Dichlorobenzene	5.00	5.21	104	80-129	
1,2-Dichloroethane	5.00	5.32	106	74-130	
1,2-Dichloropropane	5.00	5.14	103	80-130	
1,3,5-Trimethylbenzene	5.00	4.85	97	80-139	
1,3-Dichlorobenzene	5.00	5.27	105	80-130	
1,3-Dichloropropane	5.00	5.35	107	80-130	
1,4-Dichlorobenzene	5.00	5.16	103	80-129	
2,2-Dichloropropane	5.00	4.45	89	58-150	
2-Chlorotoluene	5.00	4.87	97	80-136	
4-Chlorotoluene	5.00	5.03	101	80-130	
4-Isopropyltoluene	5.00	5.16	103	78-132	
Benzene	5.00	5.30	106	73-133	
Bromobenzene	5.00	4.88	98	80-130	
Bromoform	5.00	5.00	100	69-137	
Bromomethane	5.00	5.51	110	68-120	
Carbon tetrachloride	5.00	4.83	97	71-132	
Chlorobenzene	5.00	5.14	103	80-123	
Chlorobromomethane	5.00	4.92	98	79-131	
Chlorodibromomethane	5.00	5.08	102	76-131	
Chloroethane	5.00	5.49	110	49-135	
Chloroform	5.00	4.73	95	80-130	
Chloromethane	5.00	5.62	112	32-143	
cis-1,2-Dichloroethene	5.00	4.98	100	72-130	
cis-1,3-Dichloropropene	5.00	4.75	95	66-141	
Dibromomethane	5.00	4.98	100	65-141	
Dichlorobromomethane	5.00	5.03	101	74-131	
Dichlorodifluoromethane	5.00	5.82	116	20-137	
Ethylbenzene	5.00	4.99	100	80-130	
Ethylene Dibromide	5.00	5.26	105	80-126	
Hexachlorobutadiene	5.00	5.09	102	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09119 _004.D

Lab ID: LCS 580-311739/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	4.96	99	75-137	
Methyl tert-butyl ether	5.00	4.57	91	60-150	
Methylene Chloride	5.00	5.00	100	75-134	
m-Xylene & p-Xylene	5.00	4.91	98	78-130	
Naphthalene	5.00	4.59	92	64-132	
n-Butylbenzene	5.00	4.71	94	73-135	
N-Propylbenzene	5.00	4.85	97	77-142	
o-Xylene	5.00	4.85	97	80-139	
sec-Butylbenzene	5.00	5.16	103	78-140	
Styrene	5.00	5.14	103	74-136	
tert-Butylbenzene	5.00	4.84	97	77-140	
Tetrachloroethene	5.00	4.97	99	75-131	
Toluene	5.00	5.38	108	80-126	
trans-1,2-Dichloroethene	5.00	4.90	98	63-133	
trans-1,3-Dichloropropene	5.00	4.64	93	71-128	
Trichloroethene	5.00	4.78	96	72-136	
Trichlorofluoromethane	5.00	5.54	111	60-132	
Vinyl chloride	5.00	5.39	108	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _020.D

Lab ID: LCSD 580-311626/5 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	5.00	100	1	20	79-127	
1,1,1-Trichloroethane	5.00	4.89	98	1	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.59	92	6	22	69-139	
1,1,2-Trichloroethane	5.00	4.83	97	6	19	80-127	
1,1-Dichloroethane	5.00	4.96	99	1	20	74-135	
1,1-Dichloroethene	5.00	5.31	106	1	17	71-126	
1,1-Dichloropropene	5.00	4.76	95	5	13	72-132	
1,2,3-Trichlorobenzene	5.00	4.76	95	4	20	75-137	
1,2,3-Trichloropropane	5.00	4.76	95	3	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.33	87	2	20	79-130	
1,2,4-Trimethylbenzene	5.00	4.99	100	2	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.08	82	11	26	69-130	
1,2-Dichlorobenzene	5.00	4.86	97	3	14	80-129	
1,2-Dichloroethane	5.00	4.70	94	9	15	74-130	
1,2-Dichloropropane	5.00	4.57	91	8	14	80-130	
1,3,5-Trimethylbenzene	5.00	4.68	94	2	20	80-139	
1,3-Dichlorobenzene	5.00	4.82	96	6	12	80-130	
1,3-Dichloropropane	5.00	4.64	93	7	19	80-130	
1,4-Dichlorobenzene	5.00	4.70	94	2	11	80-129	
2,2-Dichloropropane	5.00	4.87	97	3	28	58-150	
2-Chlorotoluene	5.00	4.49	90	3	20	80-136	
4-Chlorotoluene	5.00	4.44	89	7	20	80-130	
4-Isopropyltoluene	5.00	4.89	98	2	14	78-132	
Benzene	5.00	5.00	100	6	20	73-133	
Bromobenzene	5.00	4.27	85	8	20	80-130	
Bromoform	5.00	4.57	91	2	20	69-137	
Bromomethane	5.00	5.82	116	6	18	68-120	
Carbon tetrachloride	5.00	4.88	98	1	15	71-132	
Chlorobenzene	5.00	4.77	95	4	12	80-123	
Chlorobromomethane	5.00	4.94	99	5	20	79-131	
Chlorodibromomethane	5.00	4.70	94	7	20	76-131	
Chloroethane	5.00	5.51	110	3	27	49-135	
Chloroform	5.00	4.75	95	3	20	80-130	
Chloromethane	5.00	5.68	114	2	23	32-143	
cis-1,2-Dichloroethene	5.00	5.09	102	3	20	72-130	
cis-1,3-Dichloropropene	5.00	4.38	88	5	22	66-141	
Dibromomethane	5.00	4.59	92	4	20	65-141	
Dichlorobromomethane	5.00	4.62	92	9	20	74-131	
Dichlorodifluoromethane	5.00	5.24	105	8	22	20-137	
Ethylbenzene	5.00	4.79	96	2	20	80-130	
Ethylene Dibromide	5.00	4.61	92	5	20	80-126	
Hexachlorobutadiene	5.00	4.93	99	3	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _020.D

Lab ID: LCSD 580-311626/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	4.95	99	0	20	75-137	
Methyl tert-butyl ether	5.00	4.74	95	1	25	60-150	
Methylene Chloride	5.00	5.30	106	5	18	75-134	
m-Xylene & p-Xylene	5.00	4.68	94	3	20	78-130	
Naphthalene	5.00	4.19	84	4	20	64-132	
n-Butylbenzene	5.00	4.54	91	3	18	73-135	
N-Propylbenzene	5.00	4.52	90	4	20	77-142	
o-Xylene	5.00	4.78	96	1	20	80-139	
sec-Butylbenzene	5.00	4.93	99	2	20	78-140	
Styrene	5.00	4.79	96	2	20	74-136	
tert-Butylbenzene	5.00	4.43	89	5	20	77-140	
Tetrachloroethene	5.00	4.79	96	4	20	75-131	
Toluene	5.00	5.21	104	3	20	80-126	
trans-1,2-Dichloroethene	5.00	5.11	102	1	17	63-133	
trans-1,3-Dichloropropene	5.00	4.24	85	9	21	71-128	
Trichloroethene	5.00	4.61	92	5	14	72-136	
Trichlorofluoromethane	5.00	5.49	110	0	20	60-132	
Vinyl chloride	5.00	5.57	111	1	21	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09119 _005.D

Lab ID: LCSD 580-311739/5 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	4.61	92	4	20	79-127	
1,1,1-Trichloroethane	5.00	4.66	93	2	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.85	97	6	22	69-139	
1,1,2-Trichloroethane	5.00	5.08	102	4	19	80-127	
1,1-Dichloroethane	5.00	4.70	94	3	20	74-135	
1,1-Dichloroethene	5.00	4.97	99	3	17	71-126	
1,1-Dichloropropene	5.00	4.72	94	5	13	72-132	
1,2,3-Trichlorobenzene	5.00	4.83	97	7	20	75-137	
1,2,3-Trichloropropane	5.00	5.13	103	2	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.31	86	9	20	79-130	
1,2,4-Trimethylbenzene	5.00	5.04	101	4	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.46	89	12	26	69-130	
1,2-Dichlorobenzene	5.00	5.01	100	4	14	80-129	
1,2-Dichloroethane	5.00	5.01	100	6	15	74-130	
1,2-Dichloropropane	5.00	5.02	100	2	14	80-130	
1,3,5-Trimethylbenzene	5.00	4.73	95	3	20	80-139	
1,3-Dichlorobenzene	5.00	5.10	102	3	12	80-130	
1,3-Dichloropropane	5.00	5.15	103	4	19	80-130	
1,4-Dichlorobenzene	5.00	4.96	99	4	11	80-129	
2,2-Dichloropropane	5.00	4.28	86	4	28	58-150	
2-Chlorotoluene	5.00	4.72	94	3	20	80-136	
4-Chlorotoluene	5.00	4.87	97	3	20	80-130	
4-Isopropyltoluene	5.00	4.97	99	4	14	78-132	
Benzene	5.00	5.09	102	4	20	73-133	
Bromobenzene	5.00	4.77	95	2	20	80-130	
Bromoform	5.00	4.63	93	8	20	69-137	
Bromomethane	5.00	5.30	106	4	18	68-120	
Carbon tetrachloride	5.00	4.63	93	4	15	71-132	
Chlorobenzene	5.00	4.88	98	5	12	80-123	
Chlorobromomethane	5.00	4.79	96	3	20	79-131	
Chlorodibromomethane	5.00	4.84	97	5	20	76-131	
Chloroethane	5.00	5.28	106	4	27	49-135	
Chloroform	5.00	4.62	92	2	20	80-130	
Chloromethane	5.00	5.39	108	4	23	32-143	
cis-1,2-Dichloroethene	5.00	4.96	99	0	20	72-130	
cis-1,3-Dichloropropene	5.00	4.50	90	5	22	66-141	
Dibromomethane	5.00	4.83	97	3	20	65-141	
Dichlorobromomethane	5.00	4.84	97	4	20	74-131	
Dichlorodifluoromethane	5.00	5.37	107	8	22	20-137	
Ethylbenzene	5.00	4.80	96	4	20	80-130	
Ethylene Dibromide	5.00	5.05	101	4	20	80-126	
Hexachlorobutadiene	5.00	4.95	99	3	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 09119 _005.D

Lab ID: LCSD 580-311739/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	4.80	96	3	20	75-137	
Methyl tert-butyl ether	5.00	4.63	93	1	25	60-150	
Methylene Chloride	5.00	4.98 J	100	0	18	75-134	
m-Xylene & p-Xylene	5.00	4.78	96	3	20	78-130	
Naphthalene	5.00	4.30	86	6	20	64-132	
n-Butylbenzene	5.00	4.61	92	2	18	73-135	
N-Propylbenzene	5.00	4.70	94	3	20	77-142	
o-Xylene	5.00	4.72	94	3	20	80-139	
sec-Butylbenzene	5.00	5.03	101	3	20	78-140	
Styrene	5.00	4.97	99	3	20	74-136	
tert-Butylbenzene	5.00	4.67	93	4	20	77-140	
Tetrachloroethene	5.00	4.65	93	7	20	75-131	
Toluene	5.00	5.19	104	4	20	80-126	
trans-1,2-Dichloroethene	5.00	4.83	97	2	17	63-133	
trans-1,3-Dichloropropene	5.00	4.52	90	3	21	71-128	
Trichloroethene	5.00	4.62	92	3	14	72-136	
Trichlorofluoromethane	5.00	5.31	106	4	20	60-132	
Vinyl chloride	5.00	5.10	102	6	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _040.D

Lab ID: 580-89081-3 MS Client ID: 03Q19LCMW03DW 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	5.04	101	79-127	
1,1,1-Trichloroethane	5.00	ND	5.13	103	74-128	
1,1,2,2-Tetrachloroethane	5.00	ND	5.04	101	69-139	
1,1,2-Trichloroethane	5.00	ND	5.41	108	80-127	
1,1-Dichloroethane	5.00	ND	5.06	101	74-135	
1,1-Dichloroethene	5.00	ND	5.34	107	71-126	
1,1-Dichloropropene	5.00	ND	5.19	104	72-132	
1,2,3-Trichlorobenzene	5.00	ND	4.49	90	75-137	
1,2,3-Trichloropropane	5.00	ND	5.06	101	80-127	
1,2,4-Trichlorobenzene	5.00	ND	3.89	78	79-130	F1
1,2,4-Trimethylbenzene	5.00	ND	5.19	104	78-136	
1,2-Dibromo-3-Chloropropane	5.00	ND	4.57	91	69-130	
1,2-Dichlorobenzene	5.00	ND	5.15	103	80-129	
1,2-Dichloroethane	5.00	ND	5.42	108	74-130	
1,2-Dichloropropane	5.00	ND	5.37	107	80-130	
1,3,5-Trimethylbenzene	5.00	ND	4.93	99	80-139	
1,3-Dichlorobenzene	5.00	ND	5.12	102	80-130	
1,3-Dichloropropane	5.00	ND	5.26	105	80-130	
1,4-Dichlorobenzene	5.00	ND	5.01	100	80-129	
2,2-Dichloropropane	5.00	ND	4.18	84	58-150	
2-Chlorotoluene	5.00	ND	4.88	98	80-136	
4-Chlorotoluene	5.00	ND	5.11	102	80-130	
4-Isopropyltoluene	5.00	ND	4.97	99	78-132	
Benzene	5.00	ND	5.56	111	73-133	
Bromobenzene	5.00	ND	4.95	99	80-130	
Bromoform	5.00	ND	4.83	97	69-137	
Bromomethane	5.00	ND	5.60	112	68-120	
Carbon tetrachloride	5.00	ND	5.18	104	71-132	
Chlorobenzene	5.00	ND	5.26	105	80-123	
Chlorobromomethane	5.00	ND	5.22	104	79-131	
Chlorodibromomethane	5.00	ND	5.22	104	76-131	
Chloroethane	5.00	ND	5.62	112	49-135	
Chloroform	5.00	ND	5.07	101	80-130	
Chloromethane	5.00	ND	5.67	110	32-143	
cis-1,2-Dichloroethene	5.00	ND	5.28	106	72-130	
cis-1,3-Dichloropropene	5.00	ND	4.53	91	66-141	
Dibromomethane	5.00	ND	5.05	101	65-141	
Dichlorobromomethane	5.00	ND	5.24	105	74-131	
Dichlorodifluoromethane	5.00	ND	5.70	114	20-137	
Ethylbenzene	5.00	ND	5.17	103	80-130	
Ethylene Dibromide	5.00	ND	5.13	103	80-126	
Hexachlorobutadiene	5.00	ND	4.61	92	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _040.D

Lab ID: 580-89081-3 MS Client ID: 03Q19LCMW03DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	ND	5.01	100	75-137	
Methyl tert-butyl ether	5.00	ND	4.40	88	60-150	
Methylene Chloride	5.00	ND	ND	91	75-134	
m-Xylene & p-Xylene	5.00	ND	5.00	100	78-130	
Naphthalene	5.00	ND	3.85	77	64-132	
n-Butylbenzene	5.00	ND	4.44	89	73-135	
N-Propylbenzene	5.00	ND	4.83	97	77-142	
o-Xylene	5.00	ND	4.91	98	80-139	
sec-Butylbenzene	5.00	ND	5.21	104	78-140	
Styrene	5.00	ND	5.29	106	74-136	
tert-Butylbenzene	5.00	ND	4.92	98	77-140	
Tetrachloroethene	5.00	ND	5.00	100	75-131	
Toluene	5.00	ND	5.67	113	80-126	
trans-1,2-Dichloroethene	5.00	ND	5.05	101	63-133	
trans-1,3-Dichloropropene	5.00	ND	4.61	92	71-128	
Trichloroethene	5.00	ND	5.10	102	72-136	
Trichlorofluoromethane	5.00	ND	5.88	118	60-132	
Vinyl chloride	5.00	ND	5.49	110	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _041.D

Lab ID: 580-89081-3 MSD Client ID: 03Q19LCMW03DW 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	5.04	101	0	20	79-127	
1,1,1-Trichloroethane	5.00	5.15	103	0	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	4.84	97	4	22	69-139	
1,1,2-Trichloroethane	5.00	5.14	103	5	19	80-127	
1,1-Dichloroethane	5.00	5.08	102	0	20	74-135	
1,1-Dichloroethene	5.00	5.52	110	3	17	71-126	
1,1-Dichloropropene	5.00	4.86	97	7	13	72-132	
1,2,3-Trichlorobenzene	5.00	4.46	89	1	20	75-137	
1,2,3-Trichloropropane	5.00	4.89	98	3	20	80-127	
1,2,4-Trichlorobenzene	5.00	3.81	76	2	20	79-130	F1
1,2,4-Trimethylbenzene	5.00	4.93	99	5	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	4.56	91	0	26	69-130	
1,2-Dichlorobenzene	5.00	4.81	96	7	14	80-129	
1,2-Dichloroethane	5.00	5.22	104	4	15	74-130	
1,2-Dichloropropane	5.00	5.09	102	5	14	80-130	
1,3,5-Trimethylbenzene	5.00	4.51	90	9	20	80-139	
1,3-Dichlorobenzene	5.00	4.64	93	10	12	80-130	
1,3-Dichloropropane	5.00	4.94	99	6	19	80-130	
1,4-Dichlorobenzene	5.00	4.46	89	12	11	80-129	F2
2,2-Dichloropropane	5.00	4.16	83	0	28	58-150	
2-Chlorotoluene	5.00	4.43	89	10	20	80-136	
4-Chlorotoluene	5.00	4.50	90	12	20	80-130	
4-Isopropyltoluene	5.00	4.42	88	12	14	78-132	
Benzene	5.00	5.31	106	5	20	73-133	
Bromobenzene	5.00	4.53	91	9	20	80-130	
Bromoform	5.00	4.75	95	2	20	69-137	
Bromomethane	5.00	5.78	116	3	18	68-120	
Carbon tetrachloride	5.00	5.18	104	0	15	71-132	
Chlorobenzene	5.00	4.87	97	8	12	80-123	
Chlorobromomethane	5.00	5.22	104	0	20	79-131	
Chlorodibromomethane	5.00	4.99	100	5	20	76-131	
Chloroethane	5.00	5.82	116	3	27	49-135	
Chloroform	5.00	4.95	99	2	20	80-130	
Chloromethane	5.00	5.97	116	5	23	32-143	
cis-1,2-Dichloroethene	5.00	5.08	102	4	20	72-130	
cis-1,3-Dichloropropene	5.00	4.41	88	3	22	66-141	
Dibromomethane	5.00	4.93	99	2	20	65-141	
Dichlorobromomethane	5.00	5.10	102	3	20	74-131	
Dichlorodifluoromethane	5.00	5.72	114	0	22	20-137	
Ethylbenzene	5.00	4.70	94	10	20	80-130	
Ethylene Dibromide	5.00	5.08	102	1	20	80-126	
Hexachlorobutadiene	5.00	4.11	82	11	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 091819 _041.D

Lab ID: 580-89081-3 MSD Client ID: 03Q19LCMW03DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	4.67	93	7	20	75-137	
Methyl tert-butyl ether	5.00	4.56	91	4	25	60-150	
Methylene Chloride	5.00	ND	91	0	18	75-134	
m-Xylene & p-Xylene	5.00	4.49	90	11	20	78-130	
Naphthalene	5.00	4.14	83	7	20	64-132	
n-Butylbenzene	5.00	3.74	75	17	18	73-135	
N-Propylbenzene	5.00	4.28	86	12	20	77-142	
o-Xylene	5.00	4.62	92	6	20	80-139	
sec-Butylbenzene	5.00	4.68	94	11	20	78-140	
Styrene	5.00	4.77	95	10	20	74-136	
tert-Butylbenzene	5.00	4.62	92	6	20	77-140	
Tetrachloroethene	5.00	4.42	88	12	20	75-131	
Toluene	5.00	5.31	106	7	20	80-126	
trans-1,2-Dichloroethene	5.00	5.14	103	2	17	63-133	
trans-1,3-Dichloropropene	5.00	4.35	87	6	21	71-128	
Trichloroethene	5.00	4.72	94	8	14	72-136	
Trichlorofluoromethane	5.00	5.70	114	3	20	60-132	
Vinyl chloride	5.00	5.73	115	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.: 580-89081-1

SDG No.:

Lab File ID: 091819 _022.D Lab Sample ID: MB 580-311626/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC048 Date Analyzed: 09/18/2019 21:27

GC Column: 624SIL-MS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-311626/4	091819 _019.D	09/18/2019 20:08
	LCSD 580-311626/5	091819 020.D	09/18/2019 20:35
03Q19LCMW03SW	580-89081-2	091819 038.D	09/19/2019 04:32
03Q19LCMW03DW	580-89081-3	091819 _039.D	09/19/2019 04:59
03Q19LCMW03DW MS	580-89081-3 MS	091819 _040.D	09/19/2019 05:26
03Q19LCMW03DW MSD	580-89081-3 MSD	091819 _041.D	09/19/2019 05:52

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab File ID: 09119 _007.D Lab Sample ID: MB 580-311739/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC048 Date Analyzed: 09/19/2019 17:26

GC Column: 624SIL-MS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-311739/4	09119 _004.D	09/19/2019 16:07
	LCSD 580-311739/5	09119 005.D	09/19/2019 16:33
03Q19LCMW140W	580-89081-4	09119 018.D	09/19/2019 22:18
091019TB	580-89081-5	09119 _019.D	09/19/2019 22:44

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab File ID: 091719B _001.D BFB Injection Date: 09/17/2019

Instrument ID: TAC048 BFB Injection Time: 20:15

Analysis Batch No.: 311508

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	46.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	1.3	(1.7) 1
174	50.0 - 120.00 % of mass 95	77.5	
175	5.0 - 9.0 % of mass 174	6.3	(8.1) 1
176	95.0 - 101.0 % of mass 174	74.1	(95.5) 1
177	5.0 - 9.0 % of mass 176	5.0	(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
	STD 580-311508/3	091719B _002.D	09/17/2019	20:42
	STD 580-311508/4	091719B _003.D	09/17/2019	21:08
	STD 580-311508/5	091719B _004.D	09/17/2019	21:35
	STD 580-311508/6	091719B _005.D	09/17/2019	22:01
	STD 580-311508/7	091719B _006.D	09/17/2019	22:28
	STD 580-311508/8	091719B _007.D	09/17/2019	22:55
	STD 580-311508/9	091719B _008.D	09/17/2019	23:21
	ICIS 580-311508/10	091719B _009.D	09/17/2019	23:48
	STD 580-311508/11	091719B _010.D	09/18/2019	00:14
	STD 580-311508/12	091719B _011.D	09/18/2019	00:41
	STD 580-311508/13	091719B _012.D	09/18/2019	01:07
	ICV 580-311508/15	091719B _014.D	09/18/2019	02:00

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab File ID: 091819 _017.D BFB Injection Date: 09/18/2019

Instrument ID: TAC048 BFB Injection Time: 19:15

Analysis Batch No.: 311626

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.2	
75	30.0 - 60.0 % of mass 95	45.5	
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	1.2	(1.5) 1
174	50.0 - 120.00 % of mass 95	79.8	
175	5.0 - 9.0 % of mass 174	6.1	(7.6) 1
176	95.0 - 101.0 % of mass 174	77.1	(96.6) 1
177	5.0 - 9.0 % of mass 176	5.1	(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 580-311626/3	091819 _018.D	09/18/2019	19:41
	LCS 580-311626/4	091819 _019.D	09/18/2019	20:08
	LCSD 580-311626/5	091819 _020.D	09/18/2019	20:35
	CCVL 580-311626/6	091819 _021.D	09/18/2019	21:01
	MB 580-311626/7	091819 _022.D	09/18/2019	21:27
03Q19LCMW03SW	580-89081-2	091819 _038.D	09/19/2019	04:32
03Q19LCMW03DW	580-89081-3	091819 _039.D	09/19/2019	04:59
03Q19LCMW03DW MS	580-89081-3 MS	091819 _040.D	09/19/2019	05:26
03Q19LCMW03DW MSD	580-89081-3 MSD	091819 _041.D	09/19/2019	05:52

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab File ID: 09119 _003-BFB.d BFB Injection Date: 09/19/2019

Instrument ID: TAC048 BFB Injection Time: 15:40

Analysis Batch No.: 311739

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.4	
75	30.0 - 60.0 % of mass 95	46.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.7	(0.9) 1
174	50.0 - 120.00 % of mass 95	78.2	
175	5.0 - 9.0 % of mass 174	5.8	(7.4) 1
176	95.0 - 101.0 % of mass 174	74.4	(95.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(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
	CCVIS 580-311739/3	09119 _003.D	09/19/2019	15:40
	LCS 580-311739/4	09119 _004.D	09/19/2019	16:07
	LCSD 580-311739/5	09119 _005.D	09/19/2019	16:33
	MB 580-311739/7	09119 _007.D	09/19/2019	17:26
03Q19LCMW140W	580-89081-4	09119 _018.D	09/19/2019	22:18
091019TB	580-89081-5	09119 _019.D	09/19/2019	22:44

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Sample No.: ICIS 580-311508/10 Date Analyzed: 09/17/2019 23:48

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 091719B _009.D Heated Purge: (Y/N) N

Calibration ID: 28235

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		86259	4.86	594659	8.67	386442	11.62
UPPER LIMIT			5.02		8.84		11.78
LOWER LIMIT			4.69		8.50		11.45
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-311508/15		98734	4.86	640043	8.67	408860	11.62

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.: 580-89081-1

SDG No.:

Sample No.: ICIS 580-311508/10 Date Analyzed: 09/17/2019 23:48

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 091719B _009.D Heated Purge: (Y/N) N

Calibration ID: 28235

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		208996	13.53				
UPPER LIMIT			13.69				
LOWER LIMIT			13.36				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-311508/15		204880	13.53				

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.: 580-89081-1

SDG No.:

Sample No.: CCVIS 580-311626/3 Date Analyzed: 09/18/2019 19:41

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 091819 _018.D Heated Purge: (Y/N) N

Calibration ID: 28235

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		589871	8.67	391405	11.62	207350	13.53
UPPER LIMIT			8.83		11.78		13.69
LOWER LIMIT			8.50		11.45		13.36
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-311626/4		586512	8.67	381489	11.62	205716	13.53
LCSD 580-311626/5		575221	8.67	361227	11.62	201405	13.53
CCVL 580-311626/6		511629	8.67	315993	11.62	175317	13.53
MB 580-311626/7		480064	8.67	308485	11.62	147822	13.53
580-89081-2	03Q19LCMW03SW	458835	8.67	308353	11.62	147887	13.53
580-89081-3	03Q19LCMW03DW	462533	8.67	308231	11.62	144643	13.53
580-89081-3 MS	03Q19LCMW03DW MS	605399	8.67	405429	11.62	212353	13.53
580-89081-3 MSD	03Q19LCMW03DW MSD	575880	8.67	376292	11.62	199804	13.53

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 VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Sample No.: CCVIS 580-311739/3 Date Analyzed: 09/19/2019 15:40

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 09119 _003.D Heated Purge: (Y/N) N

Calibration ID: 28235

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		605719	8.67	405286	11.62	216618	13.53
UPPER LIMIT			8.83		11.78		13.69
LOWER LIMIT			8.50		11.45		13.36
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-311739/4		606094	8.67	405956	11.62	213624	13.53
LCSD 580-311739/5		604091	8.67	407033	11.62	212806	13.53
MB 580-311739/7		498364	8.67	335605	11.62	162734	13.53
580-89081-4	03Q19LCMW140W	483952	8.67	334632	11.62	167674	13.53
580-89081-5	091019TB	462755	8.67	313090	11.62	149346	13.53

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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03SW Lab Sample ID: 580-89081-2

Matrix: Water Lab File ID: 091819 _038.D

Analysis Method: 8260C Date Collected: 09/10/2019 13:10

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 04:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03SW Lab Sample ID: 580-89081-2

Matrix: Water Lab File ID: 091819 _038.D

Analysis Method: 8260C Date Collected: 09/10/2019 13:10

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 04:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW Lab Sample ID: 580-89081-3

Matrix: Water Lab File ID: 091819 _039.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 04:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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	F1	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	F2	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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW Lab Sample ID: 580-89081-3

Matrix: Water Lab File ID: 091819 _039.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 04:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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)	111		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW140W Lab Sample ID: 580-89081-4

Matrix: Water Lab File ID: 09119 _018.D

Analysis Method: 8260C Date Collected: 09/10/2019 13:00

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 22:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW140W Lab Sample ID: 580-89081-4

Matrix: Water Lab File ID: 09119 _018.D

Analysis Method: 8260C Date Collected: 09/10/2019 13:00

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 22:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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)	112		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
98-08-8	Trifluorotoluene (Surr)	106		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 091019TB Lab Sample ID: 580-89081-5

Matrix: Water Lab File ID: 09119 _019.D

Analysis Method: 8260C Date Collected: 09/10/2019 00:00

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 22:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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.: 580-89081-1

SDG No.:

Client Sample ID: 091019TB Lab Sample ID: 580-89081-5

Matrix: Water Lab File ID: 09119 _019.D

Analysis Method: 8260C Date Collected: 09/10/2019 00:00

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 22:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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)	114		80-120
460-00-4	4-Bromofluorobenzene (Surr)	91		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
98-08-8	Trifluorotoluene (Surr)	114		80-120

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	+++++ 0.3206 0.2736	0.2657 0.2743	0.3066 0.3019	0.3248 0.2774	0.2536 0.2800	Lin1	0.0027	0.2774			0.1000	11.9			0.9990		0.9900
Chloromethane	+++++ 0.5190 0.4244	+++++ 0.4545	+++++ 0.4714	0.5152 0.4353	0.3852 0.4342	Lin1	0.0228	0.4310			0.1000	11.7			0.9990		0.9900
Vinyl chloride	0.5177 0.4534 0.4015	0.5367 0.4141	0.5286 0.4335	0.4495 0.4077	0.4157 0.4134	Qua1	0.0042	0.4215	-0.000198		0.1000	11.8			1.0000		0.9900
Bromomethane	+++++ 0.3011 0.2498	+++++ 0.2740	0.4150 0.2738	0.3427 0.2531	0.2946 0.2520	Lin1	0.0210	0.2522			0.1000	9.4			0.9990		0.9900
Chloroethane	+++++ 0.1051 0.0817	+++++ 0.0901	+++++ 0.0867	0.1209 0.0807	0.0936 0.0825	Lin1	0.0101	0.0821			0.0600	10.3			0.9990		0.9900
Trichlorofluoromethane	+++++ 0.4631 0.3949	+++++ 0.4369	+++++ 0.4290	0.5506 0.3977	0.4493 0.4031	Lin1	0.0394	0.3993			0.1000	7.3			0.9990		0.9900
Acrolein	+++++ 0.0279 0.0245	+++++ 0.0258	+++++ 0.0246	0.0317 0.0255	0.0267 0.0250	Lin1	0.0099	0.0247				4.3			1.0000		0.9900
1,1-Dichloroethene	+++++ 0.2950 0.2617	+++++ 0.2765	0.3483 0.2705	0.3548 0.2557	0.2759 0.2593	Lin2	0.0097	0.2687			0.1000	7.0			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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.2260 0.1896	+++++ 0.2035	0.2612 0.2004	0.2411 0.1877	0.2068 0.1912	Lin2	0.0069	0.1979			0.1000	5.5			0.9970		0.9900
Acetone	+++++ 0.0436 0.0309	+++++ 0.0327	+++++ 0.0340	+++++ 0.0321	0.0578 0.0321	Lin1	0.0663	0.0312			0.0200	3.2			1.0000		0.9900
Iodomethane	+++++ 0.5030 0.4457	+++++ 0.4790	0.6026 0.4687	0.5104 0.4451	0.4787 0.4487	Lin2	0.0137	0.4589				3.9			0.9980		0.9900
Carbon disulfide	+++++ 1.0870 1.0312	+++++ 1.0558	+++++ 1.0644	1.1729 1.0072	0.9733 1.0218	Lin2	0.0227	1.0279			0.1000	4.8			0.9980		0.9900
Methylene Chloride	+++++ 0.5262 0.3027	+++++ 0.3492	+++++ 0.3300	+++++ 0.3087	+++++ 0.3061	Lin1	0.2307	0.3007			0.1000	1.5			1.0000		0.9900
2-Methyl-2-propanol	+++++ 0.0098 0.0090	+++++ 0.0084	+++++ 0.0082	+++++ 0.0086	0.0080 0.0088	Lin2	-0.001	0.0087				7.7			0.9940		0.9900
Acrylonitrile	+++++ 0.0361 0.0466	+++++ 0.0401	+++++ 0.0439	+++++ 0.0477	0.0318 0.0489	Lin1	-0.107	0.0473				7.9			0.9990		0.9900
trans-1,2-Dichloroethene	+++++ 0.3114 0.3203	+++++ 0.3097	0.3343 0.3180	0.3153 0.3092	0.2753 0.3202	Lin2	0.0017	0.3092			0.1000	5.2			0.9970		0.9900
Methyl tert-butyl ether	+++++ 0.3204 0.4708	+++++ 0.4238	+++++ 0.4451	0.3756 0.4618	0.3219 0.4905	Qua1	-0.054	0.4682	0.0000755		0.1000	19.9			0.9990		0.9900
Hexane	+++++ 0.3174 0.4553	+++++ 0.3610	+++++ 0.3955	0.3399 0.4390	0.3150 0.4598	Qua1	-0.046	0.4260	0.0003410			18.2			0.9990		0.9900
1,1-Dichloroethane	+++++ 0.6033 0.5753	+++++ 0.5774	0.6172 0.5772	0.6327 0.5627	0.5801 0.5768	Ave		0.5892			0.2000	3.9		20.0			
Vinyl acetate	+++++ 0.0198 0.0325	+++++ 0.0233	+++++ 0.0261	+++++ 0.0310	0.0196 0.0322	Qua2	-0.010	0.0262	0.0000316			9.9			0.9920		0.9900
Tert-butyl ethyl ether	+++++ 0.1771 0.2511	+++++ 0.2343	+++++ 0.2447	0.1581 0.2482	0.1786 0.2534	Qua1	-0.038	0.2489	0.0000264			13.3			1.0000		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.3873 0.3679	+++++ 0.3847	0.4289 0.3749	0.4242 0.3599	0.3640 0.3653	Ave		0.3841				6.7		20.0			
cis-1,2-Dichloroethene	+++++ 0.2919 0.3332	+++++ 0.3106	0.2853 0.3242	0.2870 0.3241	0.2724 0.3337	Ave		0.3069			0.1000	7.5		20.0			
2-Butanone (MEK)	+++++ 0.0067 +++++	+++++ 0.0102	+++++ 0.0107	+++++ 0.0112	0.0071 0.0134	Qua1	-0.010	0.0101	0.0000135	*	0.0200	10.4			1.0000		0.9900
Chlorobromomethane	+++++ 0.1641 0.1493	+++++ 0.1576	+++++ 0.1578	0.1705 0.1554	0.1632 0.1550	Ave		0.1591				4.1		20.0			
Chloroform	+++++ 0.5236 0.4945	0.6129 0.5080	0.5477 0.5100	0.5984 0.4941	0.5279 0.5016	Ave		0.5319			0.2000	8.0		20.0			
1,1,1-Trichloroethane	+++++ 0.4218 0.4164	0.4229 0.4128	0.4863 0.4195	0.4344 0.4016	0.4174 0.4112	Ave		0.4244			0.1000	5.5		20.0			
Carbon tetrachloride	+++++ 0.3660 0.3502	0.3883 0.3548	0.3912 0.3562	0.4142 0.3421	0.3477 0.3508	Ave		0.3662			0.1000	6.5		20.0			
1,1-Dichloropropene	+++++ 0.3409 0.4395	+++++ 0.3812	+++++ 0.4035	0.3254 0.4207	0.3138 0.4379	Qua1	-0.037	0.4157	0.0002651			12.0			1.0000		0.9900
Benzene	+++++ 1.2052 1.2145	1.1881 1.1942	1.1991 1.2286	1.1658 1.2420	1.1941 1.2554	Ave		1.2087			0.5000	2.2		20.0			
1,2-Dichloroethane	+++++ 0.2641 0.2305	0.5014 0.2309	0.3805 0.2319	0.3091 0.2427	0.2885 0.2401	Lin1	0.0150	0.2342			0.1000	7.0			0.9990		0.9900
Tert-amyl methyl ether	+++++ 0.4580 0.5874	+++++ 0.5487	+++++ 0.5670	0.3678 0.5874	0.3888 0.6101	Qua1	-0.096	0.5955	-0.000027			13.5			0.9990		0.9900
Trichloroethene	0.4131 0.2689 0.2807	0.3164 0.2576	0.2871 0.2643	0.2788 0.2793	0.2833 0.2866	Lin1	0.0015	0.2805			0.2000	8.1			0.9990		0.9900
1,2-Dichloropropane	+++++ 0.2897 0.2940	0.2684 0.2763	0.3037 0.2818	0.3225 0.2964	0.2974 0.3023	Ave		0.2932			0.1000	5.2		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.1198 0.1043	+++++ 0.1076	0.1376 0.1064	0.1245 0.1118	0.1232 0.1110	Ave		0.1162				9.4		20.0			
Dichlorobromomethane	+++++ 0.3086 0.3040	0.3480 0.2895	0.3493 0.2915	0.3228 0.3062	0.3314 0.3131	Lin1	0.0028	0.3056			0.2000	4.3			1.0000		0.9900
2-Chloroethyl vinyl ether	+++++ 0.0159 0.0298	+++++ 0.0201	+++++ 0.0224	+++++ 0.0271	+++++ 0.0316	Qua1	-0.020	0.0284	0.0000223			20.0			0.9950		0.9900
cis-1,3-Dichloropropene	+++++ 0.4534 0.5814	+++++ 0.4537	+++++ 0.4907	0.4083 0.5545	0.4441 0.5768	Qua1	-0.046	0.5308	0.0005577		0.2000	11.9			0.9990		0.9900
4-Methyl-2-pentanone (MIBK)	+++++ 0.0446 0.0702	+++++ 0.0573	+++++ 0.0599	+++++ 0.0663	0.0382 0.0707	Qua1	-0.096	0.0661	0.0000098		0.0600	9.8			0.9990		0.9900
Toluene	+++++ 1.9091 1.7495	+++++ 1.8669	1.9892 1.8465	1.8859 1.8435	1.9896 1.8204	Lin1	0.0447	1.7865			0.4000	7.0			0.9990		0.9900
trans-1,3-Dichloropropene	+++++ 0.3622 0.4228	+++++ 0.3510	+++++ 0.3685	0.3293 0.4090	0.3262 0.4231	Lin1	-0.042	0.4177			0.1000	13.9			0.9990		0.9900
1,1,2-Trichloroethane	+++++ 0.2378 0.2175	+++++ 0.2200	0.3003 0.2138	0.2545 0.2203	0.2579 0.2200	Lin2	0.0080	0.2217			0.1000	4.3			0.9980		0.9900
Tetrachloroethene	+++++ 0.3596 0.3477	0.3154 0.3395	0.4189 0.3338	0.3974 0.3332	0.3761 0.3356	Lin2	0.0002	0.3550			0.2000	9.7			0.9900		0.9900
1,3-Dichloropropane	+++++ 0.4173 0.4125	+++++ 0.3908	0.4064 0.3936	0.3771 0.4149	0.4083 0.4177	Ave		0.4043				3.5		20.0			
2-Hexanone	+++++ 0.0353 0.0582	+++++ 0.0440	+++++ 0.0473	+++++ 0.0554	0.0322 0.0600	Qua2	-0.047	0.0486	0.0000258	*	0.0600	8.8			0.9930		0.9900
Chlorodibromomethane	+++++ 0.2539 0.2687	+++++ 0.2530	+++++ 0.2525	0.2682 0.2625	0.2584 0.2681	Ave		0.2607			0.1000	2.7		20.0			
Ethylene Dibromide	+++++ 0.1952 0.1994	+++++ 0.1893	0.2188 0.1865	0.1895 0.1971	0.1785 0.2008	Lin1	-0.002	0.1986			0.1000	8.4			1.0000		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 1.1748 1.0807	+++++ 1.1350	1.3300 1.1031	1.1718 1.1060	1.2004 1.1064	Ave		1.1565			0.5000	6.6		20.0			
1,1,1,2-Tetrachloroethane	+++++ 0.4145 0.3818	+++++ 0.3944	+++++ 0.3802	0.3781 0.3701	0.3801 0.3765	Ave		0.3845				3.6		20.0			
Ethylbenzene	+++++ 1.7124 1.8585	+++++ 1.9807	1.4998 1.9771	1.6167 2.0068	1.7168 2.0168	Qua1	-0.100	2.0647	-0.001938		0.1000	10.6			1.0000		0.9900
m-Xylene & p-Xylene	+++++ 1.1839 1.5879	+++++ 1.4663	+++++ 1.4878	1.1184 1.5341	1.2645 1.5822	Lin1	-0.165	1.5755			0.1000	11.5			1.0000		0.9900
o-Xylene	+++++ 1.1953 1.5631	+++++ 1.4931	+++++ 1.5754	1.0811 1.6010	1.1414 1.6162	Lin1	-0.167	1.5837			0.3000	10.9			1.0000		0.9900
Styrene	+++++ 0.8094 1.1243	+++++ 1.0552	+++++ 1.0795	0.6581 1.1128	0.7654 1.1330	Qua1	-0.142	1.1117	0.0001774		0.3000	12.5			1.0000		0.9900
Bromoform	+++++ 0.1397 0.1386	+++++ 0.1324	0.1557 0.1277	0.1317 0.1300	0.1160 0.1367	Lin1	-0.001	0.1364			0.1000	10.3			0.9990		0.9900
Isopropylbenzene	+++++ 1.4145 1.8582	+++++ 1.8543	1.0956 1.9992	1.2206 2.0163	1.2963 1.9941	Lin1	-0.138	1.9207			0.1000	15.2			0.9980		0.9900
1,1,2,2-Tetrachloroethane	+++++ 0.5606 0.4907	+++++ 0.5176	0.7239 0.4942	0.6300 0.4986	0.5633 0.5166	Qua1	0.0226	0.5130	-0.000199		0.3000	3.2			1.0000		0.9900
Bromobenzene	+++++ 0.7853 0.8023	0.9595 0.7415	0.8235 0.7274	0.8383 0.7626	0.8806 0.8137	Ave		0.8135				8.5		20.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1016 0.1136	+++++ 0.1063	+++++ 0.0984	0.1028 0.1074	0.1054 0.1151	Lin1	-0.006	0.1125				9.4			0.9990		0.9900
1,2,3-Trichloropropane	+++++ 0.1401 0.1252	+++++ 0.1319	+++++ 0.1192	0.1430 0.1261	0.1388 0.1307	Lin2	0.0036	0.1281				4.6			0.9980		0.9900
N-Propylbenzene	+++++ 3.8270 4.0862	+++++ 4.4349	+++++ 4.6200	3.7812 4.6972	3.8807 4.7664	Qua1	-0.490	4.9683	-0.008282			13.7			0.9990		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.7675 0.9454	0.7085 0.8518	0.8807 0.8932	0.6964 0.8911	0.8248 0.9484	Lin1	-0.024	0.9348				14.8			0.9990		0.9900
1,3,5-Trimethylbenzene	+++++ 2.5617 3.2080	+++++ 3.1653	+++++ 3.3035	+++++ 3.3466	2.3910 3.4656	Qua1	-0.768	3.5049	-0.002660			7.4			0.9990		0.9900
4-Chlorotoluene	+++++ 0.7977 0.9437	+++++ 0.8673	0.6402 0.8814	0.6357 0.9016	0.8322 0.9427	Lin1	-0.053	0.9345				10.6			0.9990		0.9900
tert-Butylbenzene	+++++ 1.9100 2.8293	+++++ 2.4125	+++++ 2.6601	+++++ 2.8244	1.9934 2.9392	Lin1	-0.721	2.8579				11.1			0.9990		0.9900
sec-Butylbenzene	+++++ 3.2851 3.8782	+++++ 4.0099	+++++ 4.3158	2.6060 4.3612	3.0677 4.4010	Lin1	-0.348	4.1051				8.2			0.9960		0.9900
1,3-Dichlorobenzene	+++++ 1.7885 1.6801	+++++ 1.7270	1.6648 1.7129	1.6780 1.7013	1.6793 1.7266	Ave		1.7065			0.6000	2.2		20.0			
4-Isopropyltoluene	+++++ 2.6103 3.3682	+++++ 3.4886	2.0357 3.7183	2.0388 3.7128	2.3905 3.7555	Lin1	-0.255	3.5342				15.7			0.9970		0.9900
1,4-Dichlorobenzene	+++++ 1.8715 1.6572	1.8992 1.7328	2.0339 1.6997	1.9485 1.6825	1.9441 1.7048	Lin2	0.0123	1.7701			0.5000	6.6			0.9950		0.9900
1,2,4-Trimethylbenzene	+++++ 3.1474 3.1708	2.8505 3.3982	2.7583 3.4507	2.7482 3.3998	3.0398 3.4598	Lin1	-0.040	3.2946				6.8			0.9980		0.9900
n-Butylbenzene	+++++ 0.6725 0.9525	+++++ 0.8203	+++++ 0.8970	0.6224 0.9037	0.6284 0.9368	Qua1	-0.101	0.8955	0.0006112			13.8			1.0000		0.9900
1,2-Dichlorobenzene	+++++ 1.6359 1.5378	+++++ 1.6345	1.6630 1.5698	1.4740 1.5379	1.5606 1.5683	Ave		1.5758			0.4000	3.8		20.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0820 0.0789	+++++ 0.0788	+++++ 0.0718	+++++ 0.0733	+++++ 0.0792	Lin2	0.0058	0.0760			0.0500	4.7			0.9980		0.9900
1,3,5-Trichlorobenzene	+++++ 1.2685 1.3531	1.3015 1.3237	1.4447 1.3576	1.2742 1.3454	1.2605 1.3536	Lin1	-0.006	1.3515				5.5			1.0000		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.7965 0.9989	+++++ 0.9100	+++++ 0.9810	0.7162 1.0249	0.7462 1.0267	Lin1	-0.103	1.0082			0.2000	10.9			0.9990		0.9900
Hexachlorobutadiene	+++++ 0.6450 0.5937	+++++ 0.6269	0.9213 0.6228	0.6863 0.6050	0.6216 0.5763	Lin1	0.0312	0.5918				5.6			1.0000		0.9900
Naphthalene	+++++ 0.9207 +++++	+++++ 1.1719	+++++ 1.3404	0.7932 1.4848	0.8230 1.5514	Qua1	-0.190	1.3225	0.0048559			19.3			0.9980		0.9900
1,2,3-Trichlorobenzene	+++++ 0.6953 0.7513	+++++ 0.7831	0.7971 0.8350	0.6401 0.8296	0.5984 0.7966	Lin1	-0.015	0.7770				12.5			0.9980		0.9900
Dibromofluoromethane (Surr)	0.2551 0.2340 0.2173	0.2570 0.2308	0.2574 0.2291	0.2447 0.2192	0.2285 0.2187	Ave		0.2356				6.6		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2146 0.1944 0.1782	0.2149 0.1885	0.2157 0.1851	0.2031 0.1876	0.1935 0.1841	Ave		0.1963				6.9		20.0			
Trifluorotoluene (Surr)	1.5679 1.3052 1.2896	1.4442 1.2614	1.4398 1.2285	1.3800 1.2256	1.4097 1.2702	Ave		1.3475				8.1		20.0			
Toluene-d8 (Surr)	1.4794 1.4668 1.4734	1.4562 1.5234	1.4723 1.4685	1.4475 1.4409	1.4818 1.4130	Ave		1.4657				1.9		20.0			
4-Bromofluorobenzene (Surr)	0.3119 0.3410 0.3604	0.3260 0.3560	0.3286 0.3492	0.3285 0.3435	0.3350 0.3451	Ave		0.3387				4.2		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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	Lin1	+++++ 17779 2049649	691 80957	1513 184140	3431 375675	7473 1004203	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloromethane	FB	Lin1	+++++ 28778 3178835	+++++ 134127	+++++ 287500	5443 589452	11353 1557264	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Vinyl chloride	FB	Qua1	510 25142 3007532	1396 122203	2609 264421	4749 551988	12252 1482701	0.0200 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromomethane	FB	Lin1	+++++ 16697 1870984	+++++ 80876	2048 167020	3620 342677	8681 903652	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroethane	FB	Lin1	+++++ 5825 611835	+++++ 26577	+++++ 52872	1277 109288	2758 295995	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Trichlorofluoromethane	FB	Lin1	+++++ 25678 2958008	+++++ 128937	+++++ 261677	5817 538507	13240 1445829	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Acrolein	FB	Lin1	+++++ 9285 1099395	+++++ 45605	+++++ 89901	2012 207274	4720 538956	+++++ 6.00 600	+++++ 30.0	+++++ 60.0	1.20 120	3.00 300
1,1-Dichloroethene	FB	Lin2	+++++ 16356 1960007	+++++ 81617	1719 164994	3748 346252	8132 930015	+++++ 1.00 100	+++++ 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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin2	+++++ 12531 1420320	+++++ 60062	1289 122242	2547 254125	6094 685663	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acetone	FB	Lin1	+++++ 12087 1156104	+++++ 48259	+++++ 103686	+++++ 217250	8522 576329	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Iodomethane	FB	Lin2	+++++ 27891 3338935	+++++ 141377	2974 285842	5392 602744	14107 1609093	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon disulfide	FB	Lin2	+++++ 60276 7724265	+++++ 311598	+++++ 649176	12391 1363789	28684 3664648	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Methylene Chloride	FB	Lin1	+++++ 29177 2267684	+++++ 103047	+++++ 201249	+++++ 417940	+++++ 1097650	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
2-Methyl-2-propanol	FB	Lin2	+++++ 5438 672309	+++++ 24830	+++++ 49719	+++++ 115785	2344 316907	+++++ 10.0 1000	+++++ 50.0	+++++ 100	+++++ 200	5.00 500
Acrylonitrile	FB	Lin1	+++++ 19996 3490855	+++++ 118430	+++++ 267789	+++++ 646504	9372 1754921	+++++ 10.0 1000	+++++ 50.0	+++++ 100	+++++ 200	5.00 500
trans-1,2-Dichloroethene	FB	Lin2	+++++ 17265 2399231	+++++ 91397	1650 193948	3331 418687	8112 1148212	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methyl tert-butyl ether	FB	Qua1	+++++ 17764 3526787	+++++ 125078	+++++ 271444	3968 625300	9487 1759239	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Hexane	FB	Qua1	+++++ 17602 3410816	+++++ 106538	+++++ 241248	3591 594472	9284 1649147	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1-Dichloroethane	FB	Ave	+++++ 33454 4309510	+++++ 170401	3046 352026	6684 761932	17097 2068673	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Vinyl acetate	FB	Qua2	+++++ 2749 608401	+++++ 17183	+++++ 39780	+++++ 105015	1446 288531	+++++ 2.50 250	+++++ 12.5	+++++ 25.0	+++++ 50.0	1.25 125
Tert-butyl ethyl ether	FB	Qua1	+++++ 12276 2350817	+++++ 86434	+++++ 186570	2088 420174	6578 1136125	+++++ 1.25 125	+++++ 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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Ave	+++++ 21473 2756082	+++++ 113547	2117 228668	4481 487365	10727 1310252	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
cis-1,2-Dichloroethene	FB	Ave	+++++ 16187 2495763	+++++ 91655	1408 197707	3032 438896	8028 1196717	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Butanone (MEK)	FB	Qua1	+++++ 1847 +++++	+++++ 15002	+++++ 32781	+++++ 75920	1047 241055	+++++ 5.00 +++++	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Chlorobromomethane	FB	Ave	+++++ 9099 1118535	+++++ 46499	+++++ 96252	1801 210455	4810 555956	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Chloroform	FB	Ave	+++++ 29031 3704502	1594 149938	2703 311043	6322 669069	15557 1799136	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1-Trichloroethane	FB	Ave	+++++ 23390 3118888	1100 121841	2400 255837	4589 543761	12301 1474763	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon tetrachloride	FB	Ave	+++++ 20293 2622930	1010 104711	1931 217230	4376 463228	10248 1258028	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1-Dichloropropene	FB	Qua1	+++++ 18905 3292505	+++++ 112510	+++++ 246108	3438 569625	9248 1570511	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Benzene	FB	Ave	+++++ 66830 9097161	3090 352452	5918 749316	12316 1681691	35190 4502532	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloroethane	FB	Lin1	+++++ 14645 1726594	1304 68141	1878 141424	3265 328594	8503 861143	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tert-amyl methyl ether	FB	Qua1	+++++ 31745 5499722	+++++ 202423	+++++ 432273	4857 994188	14324 2735320	+++++ 1.25 125	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5
Trichloroethene	FB	Lin1	407 14911 2102788	823 76025	1417 161195	2945 378128	8350 1027888	0.0200 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloropropane	FB	Ave	+++++ 16066 2202546	698 81531	1499 171842	3407 401317	8764 1084298	+++++ 1.00 100	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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 6641 781111	+++++ 31751	679 64886	1315 151334	3631 398076	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dichlorobromomethane	FB	Lin1	+++++ 17113 2277370	905 85454	1724 177795	3410 414660	9767 1122991	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Chloroethyl vinyl ether	CBNZ d5	Qua1	+++++ 551 141857	+++++ 3691	+++++ 8874	+++++ 24679	+++++ 76908	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
cis-1,3-Dichloropropene	CBNZ d5	Qua1	+++++ 15748 2763037	+++++ 83383	+++++ 194474	2880 504471	8603 1404374	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Qua1	+++++ 7748 1669020	+++++ 52644	+++++ 118755	+++++ 301630	3699 860282	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Toluene	CBNZ d5	Lin1	+++++ 66308 8314343	+++++ 343132	6373 731868	13303 1677070	38546 4432402	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
trans-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ 12581 2009549	+++++ 64515	+++++ 146053	2323 372055	6319 1030158	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1,2-Trichloroethane	CBNZ d5	Lin2	+++++ 8261 1033774	+++++ 40434	962 84725	1795 200429	4996 535544	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tetrachloroethene	CBNZ d5	Lin2	+++++ 12491 1652508	540 62404	1342 132284	2803 303095	7287 817210	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3-Dichloropropane	CBNZ d5	Ave	+++++ 14495 1960239	+++++ 71825	1302 156018	2660 377477	7911 1017075	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Hexanone	CBNZ d5	Qua2	+++++ 6138 1383225	+++++ 40426	+++++ 93704	+++++ 251918	3122 730589	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Chlorodibromomethane	CBNZ d5	Ave	+++++ 8817 1276935	+++++ 46505	+++++ 100068	1892 238845	5006 652860	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Ethylene Dibromide	CBNZ d5	Lin1	+++++ 6779 947850	+++++ 34788	701 73906	1337 179274	3458 488897	+++++ 1.00 100	+++++ 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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 40803 5135963	+++++ 208601	4261 437200	8266 1006177	23257 2693919	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ 14395 1814552	+++++ 72488	+++++ 150694	2667 336707	7364 916828	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Ethylbenzene	CBNZ d5	Qua1	+++++ 59475 8832369	+++++ 364044	4805 783638	11404 1825674	33261 4910573	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
m-Xylene & p-Xylene	CBNZ d5	Lin1	+++++ 41118 7546510	+++++ 269503	+++++ 589684	7889 1395598	24499 3852445	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
o-Xylene	CBNZ d5	Lin1	+++++ 41515 7428634	+++++ 274426	+++++ 624427	7626 1456487	22113 3935138	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Styrene	CBNZ d5	Qua1	+++++ 28112 5343476	+++++ 193943	+++++ 427846	4642 1012375	14829 2758686	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Bromoform	CBNZ d5	Lin1	+++++ 4853 658815	+++++ 24327	499 50598	929 118271	2248 332768	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Isopropylbenzene	CBNZ d5	Lin1	+++++ 49130 8831413	+++++ 340804	3510 792399	8610 1834284	25115 4855271	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,2,2-Tetrachloroethane	DCBd 4	Qua1	+++++ 10550 1197132	+++++ 52821	1177 105930	2317 236963	5440 624843	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromobenzene	DCBd 4	Ave	+++++ 14779 1957257	822 75675	1339 155928	3083 362485	8504 984319	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	+++++ 1912 277111	+++++ 10844	+++++ 21087	378 51042	1018 139189	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichloropropane	DCBd 4	Lin2	+++++ 2636 305497	+++++ 13466	+++++ 25543	526 59955	1340 158039	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
N-Propylbenzene	DCBd 4	Qua1	+++++ 72020 9968069	+++++ 452612	+++++ 990315	13906 2232603	37478 5765620	+++++ 1.00 100	+++++ 5.00	+++++ 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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin1	+++++ 14444 2306145	607 86929	1432 191469	2561 423555	7966 1147269	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3,5-Trimethylbenzene	DCBd 4	Qua1	+++++ 48209 7825750	+++++ 323041	+++++ 708114	+++++ 1590653	23091 4192155	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
4-Chlorotoluene	DCBd 4	Lin1	+++++ 15012 2302054	+++++ 88510	1041 188938	2338 428552	8037 1140313	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
tert-Butylbenzene	DCBd 4	Lin1	+++++ 35945 6901949	+++++ 246206	+++++ 570202	+++++ 1342428	19251 3555311	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
sec-Butylbenzene	DCBd 4	Lin1	+++++ 61823 9460620	+++++ 409237	+++++ 925120	9584 2072883	29626 5323617	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,3-Dichlorobenzene	DCBd 4	Ave	+++++ 33657 4098558	+++++ 176247	2707 367169	6171 808639	16218 2088605	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Isopropyltoluene	DCBd 4	Lin1	+++++ 49123 8216624	+++++ 356028	3310 797032	7498 1764686	23086 4542823	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,4-Dichlorobenzene	DCBd 4	Lin2	+++++ 35220 4042552	1627 176838	3307 364341	7166 799714	18775 2062242	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2,4-Trimethylbenzene	DCBd 4	Lin1	+++++ 59231 7735118	2442 346806	4485 739684	10107 1615946	29357 4185043	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
n-Butylbenzene	DCBd 4	Qua1	+++++ 12656 2323560	+++++ 83714	+++++ 192287	2289 429535	6069 1133155	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2-Dichlorobenzene	DCBd 4	Ave	+++++ 30786 3751510	+++++ 166809	2704 336486	5421 730988	15072 1897104	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 1543 192489	+++++ 8042	+++++ 15401	+++++ 34820	+++++ 95813	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
1,3,5-Trichlorobenzene	DCBd 4	Lin1	+++++ 23871 3300859	1115 135088	2349 291012	4686 639481	12173 1637423	+++++ 1.00 100	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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin1	+++++ 14989 2436868	+++++ 92875	+++++ 210276	2634 487143	7206 1241932	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Hexachlorobutadiene	DCBd 4	Lin1	+++++ 12138 1448280	+++++ 63978	1498 133506	2524 287561	6003 697063	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Naphthalene	DCBd 4	Qua1	+++++ 17327 +++++	+++++ 119596	+++++ 287318	2917 705709	7948 1876646	+++++ 1.00 +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichlorobenzene	DCBd 4	Lin1	+++++ 13085 1832718	+++++ 79925	1296 178994	2354 394326	5779 963653	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dibromofluoromethane (Surr)	FB	Ave	122525 126486 158713	130341 132844	123864 136266	126025 144696	131289 152923	9.75 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	103078 105087 130175	108974 108473	103784 110054	104600 123856	111218 128773	9.75 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	239573 245536 314477	247344 257363	234009 263229	253655 291159	272183 307173	10.00 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	465212 496722 682729	486202 545979	459925 567484	497766 639021	559797 670884	9.75 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	98067 115493 166998	108844 127573	102661 134942	112955 152346	126562 163859	9.75 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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	+++++	-23.9						30				
Chloromethane	+++++	+++++	+++++	-6.9						30		
Vinyl chloride	-27.2						30					
Bromomethane	+++++	+++++	-18.7						30			
Chloroethane	+++++	+++++	+++++	-14.3						30		
Trichlorofluoromethane	+++++	+++++	+++++	-11.4						30		
Acrolein	+++++	+++++	+++++	-5.0						30		
1,1-Dichloroethene	+++++	+++++	-6.7						30			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	+++++	-2.8						30			
Acetone	+++++	+++++	+++++	+++++	0.3						30	
Iodomethane	+++++	+++++	1.5						30			
Carbon disulfide	+++++	+++++	+++++	3.0						30		
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.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	+++++	+++++	-6.2						30	
Acrylonitrile	+++++	+++++	+++++	+++++	12.4						30	
trans-1,2-Dichloroethene	+++++	+++++	2.7						30			
Methyl tert-butyl ether	+++++	+++++	+++++	37.5 *						30		
Hexane	+++++	+++++	+++++	34.2 *						30		
1,1-Dichloroethane	+++++	+++++	4.7						50			
Vinyl acetate	+++++	+++++	+++++	+++++	5.3						30	
Tert-butyl ethyl ether	+++++	+++++	+++++	23.9						30		
2,2-Dichloropropane	+++++	+++++	11.7						50			
cis-1,2-Dichloroethene	+++++	+++++	-7.1						50			
2-Butanone (MEK)	+++++	+++++	+++++	+++++	11.4 +++++						30	
Chlorobromomethane	+++++	+++++	+++++	7.1						50		
Chloroform	+++++	15.2						50				
1,1,1-Trichloroethane	+++++	-0.4						50				
Carbon tetrachloride	+++++	6.1						50				
1,1-Dichloropropene	+++++	+++++	+++++	23.1						30		
Benzene	+++++	-1.7						50				
1,2-Dichloroethane	+++++	-14.4						30				
Tert-amyl methyl ether	+++++	+++++	+++++	26.1						30		
Trichloroethene	21.0						30					
1,2-Dichloropropane	+++++	-8.5						50				

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	18.4						50			
Dichlorobromomethane	+++++	-4.6						30				
2-Chloroethyl vinyl ether	+++++	+++++	+++++	+++++	+++++	25.9						30
cis-1,3-Dichloropropene	+++++	+++++	+++++	20.5						30		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	+++++	15.6						30	
Toluene	+++++	+++++	-13.7						30			
trans-1,3-Dichloropropene	+++++	+++++	+++++	28.8						30		
1,1,2-Trichloroethane	+++++	+++++	-0.5						30			
Tetrachloroethene	+++++	-12.2						30				
1,3-Dichloropropane	+++++	+++++	0.5						50			
2-Hexanone	+++++	+++++	+++++	+++++	4.7						30	
Chlorodibromomethane	+++++	+++++	+++++	2.9						50		
Ethylene Dibromide	+++++	+++++	19.0						30			
Chlorobenzene	+++++	+++++	15.0						50			
1,1,1,2-Tetrachloroethane	+++++	+++++	+++++	-1.7						50		
Ethylbenzene	+++++	+++++	21.0						30			
m-Xylene & p-Xylene	+++++	+++++	+++++	23.2						30		
o-Xylene	+++++	+++++	+++++	21.1						30		
Styrene	+++++	+++++	+++++	23.0						30		
Bromoform	+++++	+++++	21.9						30			
Isopropylbenzene	+++++	+++++	28.9						30			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	-3.0						30			
Bromobenzene	+++++	18.0						50				
trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	17.5						30		
1,2,3-Trichloropropane	+++++	+++++	+++++	-2.3						30		
N-Propylbenzene	+++++	+++++	+++++	25.5						30		
2-Chlorotoluene	+++++	28.2						30				
1,3,5-Trimethylbenzene	+++++	+++++	+++++	+++++	12.1						30	
4-Chlorotoluene	+++++	+++++	24.9						30			
tert-Butylbenzene	+++++	+++++	+++++	+++++	20.2						30	
sec-Butylbenzene	+++++	+++++	+++++	5.9						30		
1,3-Dichlorobenzene	+++++	+++++	-2.4						50			
4-Isopropyltoluene	+++++	+++++	29.8						30			
1,4-Dichlorobenzene	+++++	-6.6						30				
1,2,4-Trimethylbenzene	+++++	10.6						30				
n-Butylbenzene	+++++	+++++	+++++	25.7						30		
1,2-Dichlorobenzene	+++++	+++++	5.5						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	0.3						30
1,3,5-Trichlorobenzene	+++++	5.2						30				
1,2,4-Trichlorobenzene	+++++	+++++	+++++	22.2						30		
Hexachlorobutadiene	+++++	+++++	3.0						30			
Naphthalene	+++++	+++++	+++++	31.8 *	+++++					30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	21.3						30			
Dibromofluoromethane (Surr)	8.3						50					
1,2-Dichloroethane-d4 (Surr)	9.3						50					
Trifluorotoluene (Surr)	16.4						50					
Toluene-d8 (Surr)	0.9						50					
4-Bromofluorobenzene (Surr)	-7.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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	Lin1		0.2564	0.1000	9.23	10.0	-7.7	30.0
Chloromethane	Lin1		0.4833	0.1000	11.2	10.0	11.6	30.0
Vinyl chloride	Qua1		0.4434	0.1000	10.6	10.0	5.6	30.0
Bromomethane	Lin1		0.2762	0.1000	10.9	10.0	8.7	30.0
Chloroethane	Lin1		0.0923	0.0600	11.1	10.0	11.3	30.0
Trichlorofluoromethane	Lin1		0.4259	0.1000	10.6	10.0	5.7	30.0
Acrolein	Lin1		0.0278		66.9	60.0	11.5	30.0
1,1-Dichloroethene	Lin2		0.2866	0.1000	10.6	10.0	6.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.1965	0.1000	9.90	10.0	-1.0	30.0
Acetone	Lin1		0.0328	0.0200	50.4	50.0	0.8	30.0
Iodomethane	Lin2		0.4986		10.8	10.0	8.4	30.0
Carbon disulfide	Lin2		1.105	0.1000	10.7	10.0	7.2	30.0
Methylene Chloride	Lin1		0.3343	0.1000	10.3	10.0	3.5	30.0
2-Methyl-2-propanol	Lin2		0.0093		106	100	6.3	30.0
Acrylonitrile	Lin1		0.0452		97.6	100	-2.4	30.0
trans-1,2-Dichloroethene	Lin2		0.3373	0.1000	10.9	10.0	9.0	30.0
Methyl tert-butyl ether	Qua1		0.4616	0.1000	9.96	10.0	-0.4	30.0
Hexane	Qua1		0.4305		10.1	10.0	1.3	30.0
1,1-Dichloroethane	Ave	0.5892	0.6051	0.2000	10.3	10.0	2.7	30.0
Vinyl acetate	Qua2		0.0282		26.5	25.0	6.0	30.0
Tert-butyl ethyl ether	Qua1		0.2498		12.7	12.5	1.4	30.0
2,2-Dichloropropane	Ave	0.3841	0.3830		9.97	10.0	-0.3	30.0
cis-1,2-Dichloroethene	Ave	0.3069	0.3445	0.1000	11.2	10.0	12.2	30.0
2-Butanone (MEK)	Qua1		0.0105*	0.0200	49.9	50.0	-0.2	30.0
Chlorobromomethane	Ave	0.1591	0.1556		9.78	10.0	-2.2	30.0
Chloroform	Ave	0.5319	0.5119	0.2000	9.62	10.0	-3.8	30.0
1,1,1-Trichloroethane	Ave	0.4244	0.4283	0.1000	10.1	10.0	0.9	30.0
Carbon tetrachloride	Ave	0.3662	0.3522	0.1000	9.62	10.0	-3.8	30.0
1,1-Dichloropropene	Qua1		0.4081		9.84	10.0	-1.6	30.0
Benzene	Ave	1.209	1.273	0.5000	10.5	10.0	5.3	30.0
1,2-Dichloroethane	Lin1		0.2346	0.1000	9.95	10.0	-0.5	30.0
Tert-amyl methyl ether	Qua1		0.5896		12.5	12.5	0.4	30.0
Trichloroethene	Lin1		0.2749	0.2000	9.80	10.0	-2.0	30.0
1,2-Dichloropropane	Ave	0.2932	0.2871	0.1000	9.79	10.0	-2.1	30.0
Dibromomethane	Ave	0.1162	0.1080		9.29	10.0	-7.1	30.0
Dichlorobromomethane	Lin1		0.3078	0.2000	10.1	10.0	0.6	30.0
2-Chloroethyl vinyl ether	Qua1		0.0262		9.88	10.0	-1.2	30.0
cis-1,3-Dichloropropene	Qua1		0.5514	0.2000	10.4	10.0	3.6	30.0
4-Methyl-2-pentanone (MIBK)	Qua1		0.0644	0.0600	49.8	50.0	-0.4	30.0
Toluene	Lin1		1.935	0.4000	10.8	10.0	8.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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		0.3796	0.1000	9.19	10.0	-8.1	30.0
1,1,2-Trichloroethane	Lin2		0.2251	0.1000	10.1	10.0	1.1	30.0
Tetrachloroethene	Lin2		0.3487	0.2000	9.82	10.0	-1.8	30.0
1,3-Dichloropropane	Ave	0.4043	0.4113		10.2	10.0	1.7	30.0
2-Hexanone	Qua2		0.0519*	0.0600	52.9	50.0	5.8	30.0
Chlorodibromomethane	Ave	0.2607	0.2638	0.1000	10.1	10.0	1.2	30.0
Ethylene Dibromide	Lin1		0.1992	0.1000	10.0	10.0	0.4	30.0
Chlorobenzene	Ave	1.156	1.150	0.5000	9.95	10.0	-0.5	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.3857		10.0	10.0	0.3	30.0
Ethylbenzene	Qua1		2.092	0.1000	10.3	10.0	2.8	30.0
m-Xylene & p-Xylene	Lin1		1.597	0.1000	10.2	10.0	2.4	30.0
o-Xylene	Lin1		1.681	0.3000	10.7	10.0	7.2	30.0
Styrene	Qua1		1.161	0.3000	10.6	10.0	5.5	30.0
Bromoform	Lin1		0.1327	0.1000	9.73	10.0	-2.7	30.0
Isopropylbenzene	Lin1		2.120	0.1000	11.1	10.0	11.1	30.0
1,1,2,2-Tetrachloroethane	Qua1		0.5243	0.3000	10.2	10.0	2.2	30.0
Bromobenzene	Ave	0.8135	0.8131		10.0	10.0	-0.0	30.0
trans-1,4-Dichloro-2-butene	Lin1		0.1158		10.3	10.0	3.5	30.0
1,2,3-Trichloropropane	Lin2		0.1353		10.5	10.0	5.4	30.0
N-Propylbenzene	Qua1		5.100		10.5	10.0	5.5	30.0
2-Chlorotoluene	Lin1		0.9856		10.6	10.0	5.7	30.0
1,3,5-Trimethylbenzene	Qua1		3.670		10.8	10.0	7.8	30.0
4-Chlorotoluene	Lin1		0.9777		10.5	10.0	5.2	30.0
tert-Butylbenzene	Lin1		3.007		10.8	10.0	7.7	30.0
sec-Butylbenzene	Lin1		4.746		11.6	10.0	16.5	30.0
1,3-Dichlorobenzene	Ave	1.707	1.857	0.6000	10.9	10.0	8.8	30.0
4-Isopropyltoluene	Lin1		4.059		11.6	10.0	15.6	30.0
1,4-Dichlorobenzene	Lin2		1.859	0.5000	10.5	10.0	5.0	30.0
1,2,4-Trimethylbenzene	Lin1		3.757		11.4	10.0	14.2	30.0
n-Butylbenzene	Qua1		0.9644		10.8	10.0	8.0	30.0
1,2-Dichlorobenzene	Ave	1.576	1.655	0.4000	10.5	10.0	5.1	30.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0836	0.0500	10.9	10.0	9.3	30.0
1,3,5-Trichlorobenzene	Lin1		1.498		11.1	10.0	10.9	30.0
1,2,4-Trichlorobenzene	Lin1		1.113	0.2000	11.1	10.0	11.4	30.0
Hexachlorobutadiene	Lin1		0.6908		11.6	10.0	16.2	30.0
Naphthalene	Qua1		1.499		11.0	10.0	10.3	30.0
1,2,3-Trichlorobenzene	Lin1		0.8968		11.6	10.0	15.6	30.0
Dibromofluoromethane (Surr)	Ave	0.2356	0.2208		9.14	9.75	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1807		8.97	9.75	-8.0	30.0
Trifluorotoluene (Surr)	Ave	1.347	1.322		9.81	10.0	-1.9	30.0
Toluene-d8 (Surr)	Ave	1.466	1.462		9.73	9.75	-0.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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	0.3387	0.3461		9.97	9.75	2.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVIS 580-311626/3 Calibration Date: 09/18/2019 19:41

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091819 _018.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	Lin1		0.2958	0.1000	10.7	10.0	6.6	20.0
Chloromethane	Lin1		0.4506	0.1000	10.4	10.0	4.0	20.0
Vinyl chloride	Qua1		0.4227	0.1000	10.1	10.0	0.7	20.0
Bromomethane	Lin1		0.2677	0.1000	10.5	10.0	5.3	20.0
Chloroethane	Lin1		0.0888	0.0600	10.7	10.0	7.0	20.0
Trichlorofluoromethane	Lin1		0.4329	0.1000	10.7	10.0	7.4	20.0
Acrolein	Lin1		0.0237		57.0	60.0	-5.0	20.0
1,1-Dichloroethene	Lin2		0.2690	0.1000	9.97	10.0	-0.3	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.2012	0.1000	10.1	10.0	1.3	20.0
Acetone	Lin1		0.0308	0.0200	47.2	50.0	-5.5	20.0
Iodomethane	Lin2		0.4548		9.88	10.0	-1.2	20.0
Carbon disulfide	Lin2		1.040	0.1000	10.1	10.0	0.9	20.0
Methylene Chloride	Lin1		0.3277	0.1000	10.1	10.0	1.3	20.0
2-Methyl-2-propanol	Lin2		0.0071		82.0	100	-18.0	20.0
Acrylonitrile	Lin1		0.0402		87.2	100	-12.8	20.0
trans-1,2-Dichloroethene	Lin2		0.3129	0.1000	10.1	10.0	1.1	20.0
Methyl tert-butyl ether	Qua1		0.4121	0.1000	8.90	10.0	-11.0	20.0
Hexane	Qua1		0.4119		9.70	10.0	-3.0	20.0
1,1-Dichloroethane	Ave	0.5892	0.5704	0.2000	9.68	10.0	-3.2	20.0
Vinyl acetate	Qua2		0.0253		23.8	25.0	-4.7	20.0
Tert-butyl ethyl ether	Qua1		0.2328		11.8	12.5	-5.4	20.0
2,2-Dichloropropane	Ave	0.3841	0.3483		9.07	10.0	-9.3	20.0
cis-1,2-Dichloroethene	Ave	0.3069	0.3142	0.1000	10.2	10.0	2.4	20.0
2-Butanone (MEK)	Qua1		0.0093*	0.0200	44.4	50.0	-11.2	20.0
Chlorobromomethane	Ave	0.1591	0.1547		9.72	10.0	-2.8	20.0
Chloroform	Ave	0.5319	0.5000	0.2000	9.40	10.0	-6.0	20.0
1,1,1-Trichloroethane	Ave	0.4244	0.4021	0.1000	9.47	10.0	-5.3	20.0
Carbon tetrachloride	Ave	0.3662	0.3491	0.1000	9.53	10.0	-4.7	20.0
1,1-Dichloropropene	Qua1		0.4066		9.81	10.0	-1.9	20.0
Benzene	Ave	1.209	1.254	0.5000	10.4	10.0	3.8	20.0
1,2-Dichloroethane	Lin1		0.2351	0.1000	9.97	10.0	-0.3	20.0
Tert-amyl methyl ether	Qua1		0.5305		11.3	12.5	-9.6	20.0
Trichloroethene	Lin1		0.2704	0.2000	9.63	10.0	-3.7	20.0
1,2-Dichloropropane	Ave	0.2932	0.2840	0.1000	9.68	10.0	-3.2	20.0
Dibromomethane	Ave	0.1162	0.1077		9.27	10.0	-7.3	20.0
Dichlorobromomethane	Lin1		0.2998	0.2000	9.80	10.0	-2.0	20.0
2-Chloroethyl vinyl ether	Qua1		0.0157		6.21	10.0	-37.9*	20.0
cis-1,3-Dichloropropene	Qua1		0.4871	0.2000	9.18	10.0	-8.2	20.0
4-Methyl-2-pentanone (MIBK)	Qua1		0.0583*	0.0600	45.2	50.0	-9.5	20.0
Toluene	Lin1		1.868	0.4000	10.4	10.0	4.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVIS 580-311626/3 Calibration Date: 09/18/2019 19:41

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091819 _018.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		0.3658	0.1000	8.86	10.0	-11.4	20.0
1,1,2-Trichloroethane	Lin2		0.2147	0.1000	9.65	10.0	-3.5	20.0
Tetrachloroethene	Lin2		0.3380	0.2000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.4043	0.3901		9.65	10.0	-3.5	20.0
2-Hexanone	Qua2		0.0515*	0.0600	52.6	50.0	5.1	20.0
Chlorodibromomethane	Ave	0.2607	0.2526	0.1000	9.69	10.0	-3.1	20.0
Ethylene Dibromide	Lin1		0.1928	0.1000	9.72	10.0	-2.8	20.0
Chlorobenzene	Ave	1.156	1.114	0.5000	9.63	10.0	-3.7	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.3681		9.57	10.0	-4.3	20.0
Ethylbenzene	Qua1		1.996	0.1000	9.80	10.0	-2.0	20.0
m-Xylene & p-Xylene	Lin1		1.493	0.1000	9.58	10.0	-4.2	20.0
o-Xylene	Lin1		1.525	0.3000	9.74	10.0	-2.6	20.0
Styrene	Qua1		1.115	0.3000	10.1	10.0	1.4	20.0
Bromoform	Lin1		0.1242	0.1000	9.11	10.0	-8.9	20.0
Isopropylbenzene	Lin1		1.942	0.1000	10.2	10.0	1.9	20.0
1,1,2,2-Tetrachloroethane	Qua1		0.4813	0.3000	9.37	10.0	-6.3	20.0
Bromobenzene	Ave	0.8135	0.7457		9.17	10.0	-8.3	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1014		9.07	10.0	-9.3	20.0
1,2,3-Trichloropropane	Lin2		0.1208		9.40	10.0	-6.0	20.0
N-Propylbenzene	Qua1		4.711		9.74	10.0	-2.6	20.0
2-Chlorotoluene	Lin1		0.8800		9.44	10.0	-5.6	20.0
1,3,5-Trimethylbenzene	Qua1		3.318		9.76	10.0	-2.4	20.0
4-Chlorotoluene	Lin1		0.9125		9.82	10.0	-1.8	20.0
tert-Butylbenzene	Lin1		2.679		9.63	10.0	-3.7	20.0
sec-Butylbenzene	Lin1		4.300		10.6	10.0	5.6	20.0
1,3-Dichlorobenzene	Ave	1.707	1.731	0.6000	10.1	10.0	1.4	20.0
4-Isopropyltoluene	Lin1		3.659		10.4	10.0	4.3	20.0
1,4-Dichlorobenzene	Lin2		1.735	0.5000	9.80	10.0	-2.0	20.0
1,2,4-Trimethylbenzene	Lin1		3.402		10.3	10.0	3.4	20.0
n-Butylbenzene	Qua1		0.8915		10.0	10.0	0.0	20.0
1,2-Dichlorobenzene	Ave	1.576	1.567	0.4000	9.94	10.0	-0.6	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0662	0.0500	8.64	10.0	-13.6	20.0
1,3,5-Trichlorobenzene	Lin1		1.325		9.81	10.0	-1.9	20.0
1,2,4-Trichlorobenzene	Lin1		0.9195	0.2000	9.22	10.0	-7.8	20.0
Hexachlorobutadiene	Lin1		0.6167		10.4	10.0	3.7	20.0
Naphthalene	Qua1		1.193		8.88	10.0	-11.2	20.0
1,2,3-Trichlorobenzene	Lin1		0.7816		10.1	10.0	0.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2356	0.2221		9.19	9.75	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1833		9.10	9.75	-6.7	20.0
Toluene-d8 (Surr)	Ave	1.466	1.456		9.68	9.75	-0.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.3387	0.3492		10.1	9.75	3.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVL 580-311626/6 Calibration Date: 09/18/2019 21:01

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091819 _021.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	Lin1		0.3972	0.1000	0.277	0.200	38.3	
Chloromethane	Lin1		0.7563	0.1000	0.298	0.200	49.0	
Vinyl chloride	Qua1		0.6284	0.1000	0.288	0.200	44.1	
Bromomethane	Lin1		0.4463	0.1000	0.271	0.200	35.3	
Chloroethane	Lin1		0.1497	0.0600	0.242	0.200	20.8	
Trichlorofluoromethane	Lin1		0.6012	0.1000	0.202	0.200	1.2	
Acrolein	Lin1		0.0691		2.95	1.20	145.8	
1,1-Dichloroethene	Lin2		0.4036	0.1000	0.264	0.200	32.1	
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.2780	0.1000	0.246	0.200	23.1	
Acetone	Lin1		0.1397	0.0200		1.00	135.3	
Iodomethane	Lin2		0.5858		0.225	0.200	12.7	
Carbon disulfide	Lin2		1.475	0.1000	0.265	0.200	32.5	
Methylene Chloride	Lin1		1.369	0.1000		0.200	-28.5	
2-Methyl-2-propanol	Lin2		0.0373		8.69	2.00	334.6	
trans-1,2-Dichloroethene	Lin2		0.3704	0.1000	0.234	0.200	17.1	
Acrylonitrile	Lin1		0.0448		4.15	2.00	107.7	
Methyl tert-butyl ether	Qua1		0.5083	0.1000	0.332	0.200	65.9	
Hexane	Qua1		0.3764		0.286	0.200	42.8	
1,1-Dichloroethane	Ave	0.5892	0.6897	0.2000	0.234	0.200	17.1	
Vinyl acetate	Qua2		0.0130		0.629	0.500	25.8	
Tert-butyl ethyl ether	Qua1		0.1793		0.331	0.250	32.4	
2,2-Dichloropropane	Ave	0.3841	0.3888		0.202	0.200	1.2	
cis-1,2-Dichloroethene	Ave	0.3069	0.3281	0.1000	0.214	0.200	6.9	
2-Butanone (MEK)	Qua1		0.0102*	0.0200		1.00	104.2	
Chlorobromomethane	Ave	0.1591	0.1570		0.197	0.200	-1.3	
Chloroform	Ave	0.5319	0.6233	0.2000	0.234	0.200	17.2	
1,1,1-Trichloroethane	Ave	0.4244	0.4923	0.1000	0.232	0.200	16.0	
Carbon tetrachloride	Ave	0.3662	0.4203	0.1000	0.230	0.200	14.8	
1,1-Dichloropropene	Qua1		0.3836		0.274	0.200	37.1	
Benzene	Ave	1.209	1.267	0.5000	0.210	0.200	4.8	
1,2-Dichloroethane	Lin1		0.3132	0.1000	0.203	0.200	1.6	
Tert-amyl methyl ether	Qua1		0.5739		0.402	0.250	60.8	
Trichloroethene	Lin1		0.3079	0.2000	0.214	0.200	7.1	
1,2-Dichloropropane	Ave	0.2932	0.3674	0.1000	0.251	0.200	25.3	
Dibromomethane	Ave	0.1162	0.1394		0.240	0.200	19.9	
Dichlorobromomethane	Lin1		0.4808	0.2000	0.305	0.200	52.7	
2-Chloroethyl vinyl ether	Qua1		0.0142		0.801	0.200	300.3	
cis-1,3-Dichloropropene	Qua1		0.6335	0.2000	0.326	0.200	62.9	
4-Methyl-2-pentanone (MIBK)	Qua1		0.1317	0.0600	3.44	1.00	243.8	
Toluene	Lin1		2.378	0.4000	0.241	0.200	20.6	

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVL 580-311626/6 Calibration Date: 09/18/2019 21:01

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091819 _021.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		0.6106	0.1000	0.392	0.200	96.1	
1,1,2-Trichloroethane	Lin2		0.5540	0.1000	0.464	0.200	131.9	
Tetrachloroethene	Lin2		0.4405	0.2000	0.248	0.200	23.8	
1,3-Dichloropropane	Ave	0.4043	0.6716		0.332	0.200	66.1	
2-Hexanone	Qua2		0.1129	0.0600	3.28	1.00	228.1	
Chlorodibromomethane	Ave	0.2607	0.6103	0.1000	0.468	0.200	134.1	
Ethylene Dibromide	Lin1		0.3373	0.1000	0.348	0.200	74.2	
Chlorobenzene	Ave	1.156	1.980	0.5000	0.342	0.200	71.2	
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.9557		0.497	0.200	148.6	
Ethylbenzene	Qua1		2.465	0.1000	0.287	0.200	43.6	
m-Xylene & p-Xylene	Lin1		1.833	0.1000	0.337	0.200	68.5	
o-Xylene	Lin1		2.091	0.3000	0.370	0.200	84.9	
Styrene	Qua1		1.568	0.3000	0.410	0.200	104.8	
Bromoform	Lin1		0.4224	0.1000	0.627	0.200	213.5	
Isopropylbenzene	Lin1		2.481	0.1000	0.330	0.200	65.1	
1,1,2,2-Tetrachloroethane	Qua1		2.067	0.3000	0.762	0.200	281.1	
Bromobenzene	Ave	0.8135	2.054		0.505	0.200	152.4	
trans-1,4-Dichloro-2-butene	Lin1		0.3620		0.696	0.200	248.0	
1,2,3-Trichloropropane	Lin2		0.4955		0.746	0.200	272.8	
N-Propylbenzene	Qua1		7.471		0.400	0.200	99.8	
2-Chlorotoluene	Lin1		1.913		0.436	0.200	117.8	
1,3,5-Trimethylbenzene	Qua1		5.141		0.513	0.200	156.4	
4-Chlorotoluene	Lin1		1.950		0.474	0.200	136.8	
tert-Butylbenzene	Lin1		4.018		0.533	0.200	166.7	
sec-Butylbenzene	Lin1		6.289		0.391	0.200	95.6	
1,3-Dichlorobenzene	Ave	1.707	5.269	0.6000	0.618	0.200	208.8	
4-Isopropyltoluene	Lin1		5.410		0.378	0.200	89.2	
1,4-Dichlorobenzene	Lin2		5.944	0.5000	0.665	0.200	232.3	
1,2,4-Trimethylbenzene	Lin1		8.176		0.508	0.200	154.2	
n-Butylbenzene	Qua1		1.567		0.462	0.200	131.1	
1,2-Dichlorobenzene	Ave	1.576	5.638	0.4000	0.716	0.200	257.8	
1,2-Dibromo-3-Chloropropane	Lin2		0.3323	0.0500	0.798	0.200	299.2	
1,3,5-Trichlorobenzene	Lin1		4.126		0.615	0.200	207.5	
1,2,4-Trichlorobenzene	Lin1		2.972	0.2000	0.692	0.200	246.0	
Hexachlorobutadiene	Lin1		1.775		0.547	0.200	173.6	
Naphthalene	Qua1		3.764		0.711	0.200	255.7	
1,2,3-Trichlorobenzene	Lin1		2.608		0.690	0.200	245.0	
Dibromofluoromethane (Surr)	Ave	0.2356	0.2370		9.81	9.75	0.6	
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1964		9.75	9.75	0.0	
Toluene-d8 (Surr)	Ave	1.466	1.518		10.1	9.75	3.5	
4-Bromofluorobenzene (Surr)	Ave	0.3387	0.3390		9.76	9.75	0.1	

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVIS 580-311739/3 Calibration Date: 09/19/2019 15:40

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 09119 _003.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	Lin1		0.3036	0.1000	10.9	10.0	9.3	20.0
Chloromethane	Lin1		0.4865	0.1000	11.2	10.0	12.3	20.0
Vinyl chloride	Qua1		0.4642	0.1000	11.1	10.0	10.6	20.0
Bromomethane	Lin1		0.2861	0.1000	11.3	10.0	12.6	20.0
Chloroethane	Lin1		0.0902	0.0600	10.9	10.0	8.7	20.0
Trichlorofluoromethane	Lin1		0.4469	0.1000	11.1	10.0	10.9	20.0
Acrolein	Lin1		0.0252		60.8	60.0	1.4	20.0
1,1-Dichloroethene	Lin2		0.2788	0.1000	10.3	10.0	3.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.2147	0.1000	10.8	10.0	8.1	20.0
Acetone	Lin1		0.0347	0.0200	53.4	50.0	6.9	20.0
Iodomethane	Lin2		0.4778		10.4	10.0	3.8	20.0
Carbon disulfide	Lin2		1.105	0.1000	10.7	10.0	7.3	20.0
Methylene Chloride	Lin1		0.3378	0.1000	10.5	10.0	4.7	20.0
2-Methyl-2-propanol	Lin2		0.0078		89.2	100	-10.8	20.0
Acrylonitrile	Lin1		0.0428		92.7	100	-7.3	20.0
trans-1,2-Dichloroethene	Lin2		0.3240	0.1000	10.5	10.0	4.7	20.0
Methyl tert-butyl ether	Qua1		0.4239	0.1000	9.15	10.0	-8.5	20.0
Hexane	Qua1		0.4257		10.0	10.0	0.2	20.0
1,1-Dichloroethane	Ave	0.5892	0.5830	0.2000	9.89	10.0	-1.1	20.0
Vinyl acetate	Qua2		0.0281		26.4	25.0	5.5	20.0
Tert-butyl ethyl ether	Qua1		0.2478		12.6	12.5	0.6	20.0
2,2-Dichloropropane	Ave	0.3841	0.3484		9.07	10.0	-9.3	20.0
cis-1,2-Dichloroethene	Ave	0.3069	0.3296	0.1000	10.7	10.0	7.4	20.0
2-Butanone (MEK)	Qua1		0.0114*	0.0200	53.8	50.0	7.6	20.0
Chlorobromomethane	Ave	0.1591	0.1615		10.2	10.0	1.5	20.0
Chloroform	Ave	0.5319	0.5185	0.2000	9.75	10.0	-2.5	20.0
1,1,1-Trichloroethane	Ave	0.4244	0.4229	0.1000	9.96	10.0	-0.4	20.0
Carbon tetrachloride	Ave	0.3662	0.3718	0.1000	10.2	10.0	1.5	20.0
1,1-Dichloropropene	Qua1		0.4304		10.4	10.0	3.7	20.0
Benzene	Ave	1.209	1.317	0.5000	10.9	10.0	8.9	20.0
1,2-Dichloroethane	Lin1		0.2481	0.1000	10.5	10.0	5.3	20.0
Tert-amyl methyl ether	Qua1		0.5287		11.3	12.5	-9.9	20.0
Trichloroethene	Lin1		0.2914	0.2000	10.4	10.0	3.8	20.0
1,2-Dichloropropane	Ave	0.2932	0.3050	0.1000	10.4	10.0	4.0	20.0
Dibromomethane	Ave	0.1162	0.1168		10.0	10.0	0.5	20.0
Dichlorobromomethane	Lin1		0.3176	0.2000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Qua1		0.0100			10.0	-57.8*	20.0
cis-1,3-Dichloropropene	Qua1		0.5314	0.2000	9.99	10.0	-0.0	20.0
4-Methyl-2-pentanone (MIBK)	Qua1		0.0631	0.0600	48.8	50.0	-2.4	20.0
Toluene	Lin1		2.007	0.4000	11.2	10.0	12.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVIS 580-311739/3 Calibration Date: 09/19/2019 15:40

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 09119 _003.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		0.3984	0.1000	9.64	10.0	-3.6	20.0
1,1,2-Trichloroethane	Lin2		0.2317	0.1000	10.4	10.0	4.1	20.0
Tetrachloroethene	Lin2		0.3663	0.2000	10.3	10.0	3.2	20.0
1,3-Dichloropropane	Ave	0.4043	0.4317		10.7	10.0	6.8	20.0
2-Hexanone	Qua2		0.0573*	0.0600	58.2	50.0	16.4	20.0
Chlorodibromomethane	Ave	0.2607	0.2722	0.1000	10.4	10.0	4.4	20.0
Ethylene Dibromide	Lin1		0.2015	0.1000	10.2	10.0	1.6	20.0
Chlorobenzene	Ave	1.156	1.212	0.5000	10.5	10.0	4.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.3931		10.2	10.0	2.2	20.0
Ethylbenzene	Qua1		2.184	0.1000	10.7	10.0	7.3	20.0
m-Xylene & p-Xylene	Lin1		1.646	0.1000	10.6	10.0	5.5	20.0
o-Xylene	Lin1		1.686	0.3000	10.8	10.0	7.5	20.0
Styrene	Qua1		1.215	0.3000	11.0	10.0	10.4	20.0
Bromoform	Lin1		0.1345	0.1000	9.87	10.0	-1.3	20.0
Isopropylbenzene	Lin1		2.120	0.1000	11.1	10.0	11.1	20.0
1,1,2,2-Tetrachloroethane	Qua1		0.5068	0.3000	9.87	10.0	-1.3	20.0
Bromobenzene	Ave	0.8135	0.8136		10.0	10.0	0.0	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1142		10.2	10.0	2.0	20.0
1,2,3-Trichloropropane	Lin2		0.1330		10.4	10.0	3.5	20.0
N-Propylbenzene	Qua1		5.047		10.4	10.0	4.4	20.0
2-Chlorotoluene	Lin1		0.9493		10.2	10.0	1.8	20.0
1,3,5-Trimethylbenzene	Qua1		3.573		10.5	10.0	5.0	20.0
4-Chlorotoluene	Lin1		0.9845		10.6	10.0	5.9	20.0
tert-Butylbenzene	Lin1		2.898		10.4	10.0	3.9	20.0
sec-Butylbenzene	Lin1		4.577		11.2	10.0	12.3	20.0
1,3-Dichlorobenzene	Ave	1.707	1.840	0.6000	10.8	10.0	7.8	20.0
4-Isopropyltoluene	Lin1		3.907		11.1	10.0	11.3	20.0
1,4-Dichlorobenzene	Lin2		1.839	0.5000	10.4	10.0	3.8	20.0
1,2,4-Trimethylbenzene	Lin1		3.583		10.9	10.0	8.9	20.0
n-Butylbenzene	Qua1		0.9467		10.6	10.0	6.1	20.0
1,2-Dichlorobenzene	Ave	1.576	1.642	0.4000	10.4	10.0	4.2	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0683	0.0500	8.91	10.0	-10.9	20.0
1,3,5-Trichlorobenzene	Lin1		1.382		10.2	10.0	2.3	20.0
1,2,4-Trichlorobenzene	Lin1		0.9632	0.2000	9.66	10.0	-3.4	20.0
Hexachlorobutadiene	Lin1		0.6228		10.5	10.0	4.7	20.0
Naphthalene	Qua1		1.268		9.41	10.0	-5.9	20.0
1,2,3-Trichlorobenzene	Lin1		0.8118		10.5	10.0	4.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2356	0.2149		8.89	9.75	-8.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1823		9.05	9.75	-7.1	20.0
Trifluorotoluene (Surr)	Ave	1.347	1.213		9.00	10.0	-9.9	20.0
Toluene-d8 (Surr)	Ave	1.466	1.463		9.73	9.75	-0.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVIS 580-311739/3 Calibration Date: 09/19/2019 15:40

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 09119 _003.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	0.3387	0.3609		10.4	9.75	6.6	20.0

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311626/7

Matrix: Water Lab File ID: 091819 _022.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 21:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311626/7

Matrix: Water Lab File ID: 091819 _022.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 21:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 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)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311739/7

Matrix: Water Lab File ID: 09119 _007.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 17:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311739/7

Matrix: Water Lab File ID: 09119 _007.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 17:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 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)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120
98-08-8	Trifluorotoluene (Surr)	107		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311626/4

Matrix: Water Lab File ID: 091819 _019.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 20:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.02		0.30	
71-55-6	1,1,1-Trichloroethane	4.84		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.85		0.20	
79-00-5	1,1,2-Trichloroethane	5.11		0.20	
75-34-3	1,1-Dichloroethane	5.00		0.20	
75-35-4	1,1-Dichloroethene	5.25		0.20	
563-58-6	1,1-Dichloropropene	4.98		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.98		0.50	
96-18-4	1,2,3-Trichloropropane	4.90		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.44		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.12		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.54		2.0	
95-50-1	1,2-Dichlorobenzene	5.01		0.30	
107-06-2	1,2-Dichloroethane	5.14		0.20	
78-87-5	1,2-Dichloropropane	4.93		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.78		0.50	
541-73-1	1,3-Dichlorobenzene	5.11		0.30	
142-28-9	1,3-Dichloropropane	4.96		0.20	
106-46-7	1,4-Dichlorobenzene	4.82		0.30	
594-20-7	2,2-Dichloropropane	5.03		0.50	
95-49-8	2-Chlorotoluene	4.64		0.50	
106-43-4	4-Chlorotoluene	4.74		0.30	
99-87-6	4-Isopropyltoluene	4.99		0.30	
71-43-2	Benzene	5.29		0.20	
108-86-1	Bromobenzene	4.61		0.20	
75-25-2	Bromoform	4.65		0.50	
74-83-9	Bromomethane	5.46		0.50	
56-23-5	Carbon tetrachloride	4.86		0.20	
108-90-7	Chlorobenzene	4.98		0.20	
74-97-5	Chlorobromomethane	5.17		0.20	
124-48-1	Chlorodibromomethane	5.05		0.20	
75-00-3	Chloroethane	5.68		0.50	
67-66-3	Chloroform	4.89		0.20	
74-87-3	Chloromethane	5.80		0.50	
156-59-2	cis-1,2-Dichloroethene	5.25		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.59		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311626/4

Matrix: Water Lab File ID: 091819 _019.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 20:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.78		0.20	
75-27-4	Dichlorobromomethane	5.04		0.20	
75-71-8	Dichlorodifluoromethane	5.68		0.40	
100-41-4	Ethylbenzene	4.90		0.20	
106-93-4	Ethylene Dibromide	4.87		0.10	
87-68-3	Hexachlorobutadiene	5.05		0.50	
98-82-8	Isopropylbenzene	4.94		1.0	
1634-04-4	Methyl tert-butyl ether	4.68		0.30	
75-09-2	Methylene Chloride	5.03		5.0	
179601-23-1	m-Xylene & p-Xylene	4.81		0.50	
91-20-3	Naphthalene	4.34		1.0	
104-51-8	n-Butylbenzene	4.68		0.50	
103-65-1	N-Propylbenzene	4.72		0.30	
95-47-6	o-Xylene	4.81		0.50	
135-98-8	sec-Butylbenzene	5.05		1.0	
100-42-5	Styrene	4.90		0.50	
98-06-6	tert-Butylbenzene	4.66		0.50	
127-18-4	Tetrachloroethene	4.97		0.50	
108-88-3	Toluene	5.37		0.20	
156-60-5	trans-1,2-Dichloroethene	5.16		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.61		0.20	
79-01-6	Trichloroethene	4.83		0.20	
75-69-4	Trichlorofluoromethane	5.52		0.50	
75-01-4	Vinyl chloride	5.53		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311739/4

Matrix: Water Lab File ID: 09119 _004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 16:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	4.81		0.30	
71-55-6	1,1,1-Trichloroethane	4.75		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	5.17		0.20	
79-00-5	1,1,2-Trichloroethane	5.29		0.20	
75-34-3	1,1-Dichloroethane	4.82		0.20	
75-35-4	1,1-Dichloroethene	5.11		0.20	
563-58-6	1,1-Dichloropropene	4.95		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.17		0.50	
96-18-4	1,2,3-Trichloropropane	5.24		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.72		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.25		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	5.03		2.0	
95-50-1	1,2-Dichlorobenzene	5.21		0.30	
107-06-2	1,2-Dichloroethane	5.32		0.20	
78-87-5	1,2-Dichloropropane	5.14		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.85		0.50	
541-73-1	1,3-Dichlorobenzene	5.27		0.30	
142-28-9	1,3-Dichloropropane	5.35		0.20	
106-46-7	1,4-Dichlorobenzene	5.16		0.30	
594-20-7	2,2-Dichloropropane	4.45		0.50	
95-49-8	2-Chlorotoluene	4.87		0.50	
106-43-4	4-Chlorotoluene	5.03		0.30	
99-87-6	4-Isopropyltoluene	5.16		0.30	
71-43-2	Benzene	5.30		0.20	
108-86-1	Bromobenzene	4.88		0.20	
75-25-2	Bromoform	5.00		0.50	
74-83-9	Bromomethane	5.51		0.50	
56-23-5	Carbon tetrachloride	4.83		0.20	
108-90-7	Chlorobenzene	5.14		0.20	
74-97-5	Chlorobromomethane	4.92		0.20	
124-48-1	Chlorodibromomethane	5.08		0.20	
75-00-3	Chloroethane	5.49		0.50	
67-66-3	Chloroform	4.73		0.20	
74-87-3	Chloromethane	5.62		0.50	
156-59-2	cis-1,2-Dichloroethene	4.98		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.75		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311739/4

Matrix: Water Lab File ID: 09119 _004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 16:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.98		0.20	
75-27-4	Dichlorobromomethane	5.03		0.20	
75-71-8	Dichlorodifluoromethane	5.82		0.40	
100-41-4	Ethylbenzene	4.99		0.20	
106-93-4	Ethylene Dibromide	5.26		0.10	
87-68-3	Hexachlorobutadiene	5.09		0.50	
98-82-8	Isopropylbenzene	4.96		1.0	
1634-04-4	Methyl tert-butyl ether	4.57		0.30	
75-09-2	Methylene Chloride	5.00		5.0	
179601-23-1	m-Xylene & p-Xylene	4.91		0.50	
91-20-3	Naphthalene	4.59		1.0	
104-51-8	n-Butylbenzene	4.71		0.50	
103-65-1	N-Propylbenzene	4.85		0.30	
95-47-6	o-Xylene	4.85		0.50	
135-98-8	sec-Butylbenzene	5.16		1.0	
100-42-5	Styrene	5.14		0.50	
98-06-6	tert-Butylbenzene	4.84		0.50	
127-18-4	Tetrachloroethene	4.97		0.50	
108-88-3	Toluene	5.38		0.20	
156-60-5	trans-1,2-Dichloroethene	4.90		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.64		0.20	
79-01-6	Trichloroethene	4.78		0.20	
75-69-4	Trichlorofluoromethane	5.54		0.50	
75-01-4	Vinyl chloride	5.39		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		80-120
460-00-4	4-Bromofluorobenzene (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
98-08-8	Trifluorotoluene (Surr)	92		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311626/5

Matrix: Water Lab File ID: 091819 _020.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 20:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.00		0.30	
71-55-6	1,1,1-Trichloroethane	4.89		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.59		0.20	
79-00-5	1,1,2-Trichloroethane	4.83		0.20	
75-34-3	1,1-Dichloroethane	4.96		0.20	
75-35-4	1,1-Dichloroethene	5.31		0.20	
563-58-6	1,1-Dichloropropene	4.76		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.76		0.50	
96-18-4	1,2,3-Trichloropropane	4.76		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.33		0.30	
95-63-6	1,2,4-Trimethylbenzene	4.99		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.08		2.0	
95-50-1	1,2-Dichlorobenzene	4.86		0.30	
107-06-2	1,2-Dichloroethane	4.70		0.20	
78-87-5	1,2-Dichloropropane	4.57		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.68		0.50	
541-73-1	1,3-Dichlorobenzene	4.82		0.30	
142-28-9	1,3-Dichloropropane	4.64		0.20	
106-46-7	1,4-Dichlorobenzene	4.70		0.30	
594-20-7	2,2-Dichloropropane	4.87		0.50	
95-49-8	2-Chlorotoluene	4.49		0.50	
106-43-4	4-Chlorotoluene	4.44		0.30	
99-87-6	4-Isopropyltoluene	4.89		0.30	
71-43-2	Benzene	5.00		0.20	
108-86-1	Bromobenzene	4.27		0.20	
75-25-2	Bromoform	4.57		0.50	
74-83-9	Bromomethane	5.82		0.50	
56-23-5	Carbon tetrachloride	4.88		0.20	
108-90-7	Chlorobenzene	4.77		0.20	
74-97-5	Chlorobromomethane	4.94		0.20	
124-48-1	Chlorodibromomethane	4.70		0.20	
75-00-3	Chloroethane	5.51		0.50	
67-66-3	Chloroform	4.75		0.20	
74-87-3	Chloromethane	5.68		0.50	
156-59-2	cis-1,2-Dichloroethene	5.09		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.38		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311626/5

Matrix: Water Lab File ID: 091819 _020.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/18/2019 20:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.59		0.20	
75-27-4	Dichlorobromomethane	4.62		0.20	
75-71-8	Dichlorodifluoromethane	5.24		0.40	
100-41-4	Ethylbenzene	4.79		0.20	
106-93-4	Ethylene Dibromide	4.61		0.10	
87-68-3	Hexachlorobutadiene	4.93		0.50	
98-82-8	Isopropylbenzene	4.95		1.0	
1634-04-4	Methyl tert-butyl ether	4.74		0.30	
75-09-2	Methylene Chloride	5.30		5.0	
179601-23-1	m-Xylene & p-Xylene	4.68		0.50	
91-20-3	Naphthalene	4.19		1.0	
104-51-8	n-Butylbenzene	4.54		0.50	
103-65-1	N-Propylbenzene	4.52		0.30	
95-47-6	o-Xylene	4.78		0.50	
135-98-8	sec-Butylbenzene	4.93		1.0	
100-42-5	Styrene	4.79		0.50	
98-06-6	tert-Butylbenzene	4.43		0.50	
127-18-4	Tetrachloroethene	4.79		0.50	
108-88-3	Toluene	5.21		0.20	
156-60-5	trans-1,2-Dichloroethene	5.11		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.24		0.20	
79-01-6	Trichloroethene	4.61		0.20	
75-69-4	Trichlorofluoromethane	5.49		0.50	
75-01-4	Vinyl chloride	5.57		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311739/5

Matrix: Water Lab File ID: 09119 _005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 16:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	4.61		0.30	
71-55-6	1,1,1-Trichloroethane	4.66		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.85		0.20	
79-00-5	1,1,2-Trichloroethane	5.08		0.20	
75-34-3	1,1-Dichloroethane	4.70		0.20	
75-35-4	1,1-Dichloroethene	4.97		0.20	
563-58-6	1,1-Dichloropropene	4.72		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.83		0.50	
96-18-4	1,2,3-Trichloropropane	5.13		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.31		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.04		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.46		2.0	
95-50-1	1,2-Dichlorobenzene	5.01		0.30	
107-06-2	1,2-Dichloroethane	5.01		0.20	
78-87-5	1,2-Dichloropropane	5.02		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.73		0.50	
541-73-1	1,3-Dichlorobenzene	5.10		0.30	
142-28-9	1,3-Dichloropropane	5.15		0.20	
106-46-7	1,4-Dichlorobenzene	4.96		0.30	
594-20-7	2,2-Dichloropropane	4.28		0.50	
95-49-8	2-Chlorotoluene	4.72		0.50	
106-43-4	4-Chlorotoluene	4.87		0.30	
99-87-6	4-Isopropyltoluene	4.97		0.30	
71-43-2	Benzene	5.09		0.20	
108-86-1	Bromobenzene	4.77		0.20	
75-25-2	Bromoform	4.63		0.50	
74-83-9	Bromomethane	5.30		0.50	
56-23-5	Carbon tetrachloride	4.63		0.20	
108-90-7	Chlorobenzene	4.88		0.20	
74-97-5	Chlorobromomethane	4.79		0.20	
124-48-1	Chlorodibromomethane	4.84		0.20	
75-00-3	Chloroethane	5.28		0.50	
67-66-3	Chloroform	4.62		0.20	
74-87-3	Chloromethane	5.39		0.50	
156-59-2	cis-1,2-Dichloroethene	4.96		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.50		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311739/5

Matrix: Water Lab File ID: 09119 _005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 16:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311739 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.83		0.20	
75-27-4	Dichlorobromomethane	4.84		0.20	
75-71-8	Dichlorodifluoromethane	5.37		0.40	
100-41-4	Ethylbenzene	4.80		0.20	
106-93-4	Ethylene Dibromide	5.05		0.10	
87-68-3	Hexachlorobutadiene	4.95		0.50	
98-82-8	Isopropylbenzene	4.80		1.0	
1634-04-4	Methyl tert-butyl ether	4.63		0.30	
75-09-2	Methylene Chloride	4.98	J	5.0	
179601-23-1	m-Xylene & p-Xylene	4.78		0.50	
91-20-3	Naphthalene	4.30		1.0	
104-51-8	n-Butylbenzene	4.61		0.50	
103-65-1	N-Propylbenzene	4.70		0.30	
95-47-6	o-Xylene	4.72		0.50	
135-98-8	sec-Butylbenzene	5.03		1.0	
100-42-5	Styrene	4.97		0.50	
98-06-6	tert-Butylbenzene	4.67		0.50	
127-18-4	Tetrachloroethene	4.65		0.50	
108-88-3	Toluene	5.19		0.20	
156-60-5	trans-1,2-Dichloroethene	4.83		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.52		0.20	
79-01-6	Trichloroethene	4.62		0.20	
75-69-4	Trichlorofluoromethane	5.31		0.50	
75-01-4	Vinyl chloride	5.10		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		80-120
460-00-4	4-Bromofluorobenzene (Surr)	108		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120
98-08-8	Trifluorotoluene (Surr)	92		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MS Lab Sample ID: 580-89081-3 MS

Matrix: Water Lab File ID: 091819 _040.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 05:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.04		0.30	
71-55-6	1,1,1-Trichloroethane	5.13		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	5.04		0.20	
79-00-5	1,1,2-Trichloroethane	5.41		0.20	
75-34-3	1,1-Dichloroethane	5.06		0.20	
75-35-4	1,1-Dichloroethene	5.34		0.20	
563-58-6	1,1-Dichloropropene	5.19		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.49		0.50	
96-18-4	1,2,3-Trichloropropane	5.06		0.20	
120-82-1	1,2,4-Trichlorobenzene	3.89		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.19		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.57		2.0	
95-50-1	1,2-Dichlorobenzene	5.15		0.30	
107-06-2	1,2-Dichloroethane	5.42		0.20	
78-87-5	1,2-Dichloropropane	5.37		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.93		0.50	
541-73-1	1,3-Dichlorobenzene	5.12		0.30	
142-28-9	1,3-Dichloropropane	5.26		0.20	
106-46-7	1,4-Dichlorobenzene	5.01		0.30	
594-20-7	2,2-Dichloropropane	4.18		0.50	
95-49-8	2-Chlorotoluene	4.88		0.50	
106-43-4	4-Chlorotoluene	5.11		0.30	
99-87-6	4-Isopropyltoluene	4.97		0.30	
71-43-2	Benzene	5.56		0.20	
108-86-1	Bromobenzene	4.95		0.20	
75-25-2	Bromoform	4.83		0.50	
74-83-9	Bromomethane	5.60		0.50	
56-23-5	Carbon tetrachloride	5.18		0.20	
108-90-7	Chlorobenzene	5.26		0.20	
74-97-5	Chlorobromomethane	5.22		0.20	
124-48-1	Chlorodibromomethane	5.22		0.20	
75-00-3	Chloroethane	5.62		0.50	
67-66-3	Chloroform	5.07		0.20	
74-87-3	Chloromethane	5.67		0.50	
156-59-2	cis-1,2-Dichloroethene	5.28		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.53		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MS Lab Sample ID: 580-89081-3 MS

Matrix: Water Lab File ID: 091819 _040.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 05:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	5.05		0.20	
75-27-4	Dichlorobromomethane	5.24		0.20	
75-71-8	Dichlorodifluoromethane	5.70		0.40	
100-41-4	Ethylbenzene	5.17		0.20	
106-93-4	Ethylene Dibromide	5.13		0.10	
87-68-3	Hexachlorobutadiene	4.61		0.50	
98-82-8	Isopropylbenzene	5.01		1.0	
1634-04-4	Methyl tert-butyl ether	4.40		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	5.00		0.50	
91-20-3	Naphthalene	3.85		1.0	
104-51-8	n-Butylbenzene	4.44		0.50	
103-65-1	N-Propylbenzene	4.83		0.30	
95-47-6	o-Xylene	4.91		0.50	
135-98-8	sec-Butylbenzene	5.21		1.0	
100-42-5	Styrene	5.29		0.50	
98-06-6	tert-Butylbenzene	4.92		0.50	
127-18-4	Tetrachloroethene	5.00		0.50	
108-88-3	Toluene	5.67		0.20	
156-60-5	trans-1,2-Dichloroethene	5.05		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.61		0.20	
79-01-6	Trichloroethene	5.10		0.20	
75-69-4	Trichlorofluoromethane	5.88		0.50	
75-01-4	Vinyl chloride	5.49		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		80-120
460-00-4	4-Bromofluorobenzene (Surr)	106		80-120
1868-53-7	Dibromofluoromethane (Surr)	92		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MSD Lab Sample ID: 580-89081-3 MSD

Matrix: Water Lab File ID: 091819 _041.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 05:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.04		0.30	
71-55-6	1,1,1-Trichloroethane	5.15		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	4.84		0.20	
79-00-5	1,1,2-Trichloroethane	5.14		0.20	
75-34-3	1,1-Dichloroethane	5.08		0.20	
75-35-4	1,1-Dichloroethene	5.52		0.20	
563-58-6	1,1-Dichloropropene	4.86		0.20	
87-61-6	1,2,3-Trichlorobenzene	4.46		0.50	
96-18-4	1,2,3-Trichloropropane	4.89		0.20	
120-82-1	1,2,4-Trichlorobenzene	3.81		0.30	
95-63-6	1,2,4-Trimethylbenzene	4.93		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	4.56		2.0	
95-50-1	1,2-Dichlorobenzene	4.81		0.30	
107-06-2	1,2-Dichloroethane	5.22		0.20	
78-87-5	1,2-Dichloropropane	5.09		0.20	
108-67-8	1,3,5-Trimethylbenzene	4.51		0.50	
541-73-1	1,3-Dichlorobenzene	4.64		0.30	
142-28-9	1,3-Dichloropropane	4.94		0.20	
106-46-7	1,4-Dichlorobenzene	4.46		0.30	
594-20-7	2,2-Dichloropropane	4.16		0.50	
95-49-8	2-Chlorotoluene	4.43		0.50	
106-43-4	4-Chlorotoluene	4.50		0.30	
99-87-6	4-Isopropyltoluene	4.42		0.30	
71-43-2	Benzene	5.31		0.20	
108-86-1	Bromobenzene	4.53		0.20	
75-25-2	Bromoform	4.75		0.50	
74-83-9	Bromomethane	5.78		0.50	
56-23-5	Carbon tetrachloride	5.18		0.20	
108-90-7	Chlorobenzene	4.87		0.20	
74-97-5	Chlorobromomethane	5.22		0.20	
124-48-1	Chlorodibromomethane	4.99		0.20	
75-00-3	Chloroethane	5.82		0.50	
67-66-3	Chloroform	4.95		0.20	
74-87-3	Chloromethane	5.97		0.50	
156-59-2	cis-1,2-Dichloroethene	5.08		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.41		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MSD Lab Sample ID: 580-89081-3 MSD

Matrix: Water Lab File ID: 091819 _041.D

Analysis Method: 8260C Date Collected: 09/10/2019 12:30

Sample wt/vol: 10(mL) Date Analyzed: 09/19/2019 05:52

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311626 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.93		0.20	
75-27-4	Dichlorobromomethane	5.10		0.20	
75-71-8	Dichlorodifluoromethane	5.72		0.40	
100-41-4	Ethylbenzene	4.70		0.20	
106-93-4	Ethylene Dibromide	5.08		0.10	
87-68-3	Hexachlorobutadiene	4.11		0.50	
98-82-8	Isopropylbenzene	4.67		1.0	
1634-04-4	Methyl tert-butyl ether	4.56		0.30	
75-09-2	Methylene Chloride	ND		5.0	
179601-23-1	m-Xylene & p-Xylene	4.49		0.50	
91-20-3	Naphthalene	4.14		1.0	
104-51-8	n-Butylbenzene	3.74		0.50	
103-65-1	N-Propylbenzene	4.28		0.30	
95-47-6	o-Xylene	4.62		0.50	
135-98-8	sec-Butylbenzene	4.68		1.0	
100-42-5	Styrene	4.77		0.50	
98-06-6	tert-Butylbenzene	4.62		0.50	
127-18-4	Tetrachloroethene	4.42		0.50	
108-88-3	Toluene	5.31		0.20	
156-60-5	trans-1,2-Dichloroethene	5.14		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.35		0.20	
79-01-6	Trichloroethene	4.72		0.20	
75-69-4	Trichlorofluoromethane	5.70		0.50	
75-01-4	Vinyl chloride	5.73		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)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Start Date: 09/17/2019 20:15

Analysis Batch Number: 311508 End Date: 09/18/2019 02:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-311508/2		09/17/2019 20:15	1	091719B _001.D	624SIL-MS 0.25(mm)
STD 580-311508/3 IC		09/17/2019 20:42	1	091719B _002.D	624SIL-MS 0.25(mm)
STD 580-311508/4 IC		09/17/2019 21:08	1	091719B _003.D	624SIL-MS 0.25(mm)
STD 580-311508/5 IC		09/17/2019 21:35	1	091719B _004.D	624SIL-MS 0.25(mm)
STD 580-311508/6 IC		09/17/2019 22:01	1	091719B _005.D	624SIL-MS 0.25(mm)
STD 580-311508/7 IC		09/17/2019 22:28	1	091719B _006.D	624SIL-MS 0.25(mm)
STD 580-311508/8 IC		09/17/2019 22:55	1	091719B _007.D	624SIL-MS 0.25(mm)
STD 580-311508/9 IC		09/17/2019 23:21	1	091719B _008.D	624SIL-MS 0.25(mm)
ICIS 580-311508/10		09/17/2019 23:48	1	091719B _009.D	624SIL-MS 0.25(mm)
STD 580-311508/11 IC		09/18/2019 00:14	1	091719B _010.D	624SIL-MS 0.25(mm)
STD 580-311508/12 IC		09/18/2019 00:41	1	091719B _011.D	624SIL-MS 0.25(mm)
STD 580-311508/13 IC		09/18/2019 01:07	1	091719B _012.D	624SIL-MS 0.25(mm)
ICV 580-311508/15		09/18/2019 02:00	1	091719B _014.D	624SIL-MS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Start Date: 09/18/2019 19:15

Analysis Batch Number: 311626 End Date: 09/19/2019 06:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-311626/2		09/18/2019 19:15	1	091819 _017.D	624SIL-MS 0.25(mm)
CCVIS 580-311626/3		09/18/2019 19:41	1	091819 _018.D	624SIL-MS 0.25(mm)
LCS 580-311626/4		09/18/2019 20:08	1	091819 _019.D	624SIL-MS 0.25(mm)
LCSD 580-311626/5		09/18/2019 20:35	1	091819 _020.D	624SIL-MS 0.25(mm)
CCVL 580-311626/6		09/18/2019 21:01	1	091819 _021.D	624SIL-MS 0.25(mm)
MB 580-311626/7		09/18/2019 21:27	1	091819 _022.D	624SIL-MS 0.25(mm)
ZZZZZ		09/18/2019 21:54	1		624SIL-MS 0.25(mm)
ZZZZZ		09/18/2019 22:21	1		624SIL-MS 0.25(mm)
ZZZZZ		09/18/2019 22:47	1		624SIL-MS 0.25(mm)
ZZZZZ		09/18/2019 23:14	1		624SIL-MS 0.25(mm)
ZZZZZ		09/18/2019 23:41	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 00:07	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 00:33	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 01:00	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 01:27	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 01:53	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 02:20	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 02:46	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 03:13	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 03:39	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 04:06	1		624SIL-MS 0.25(mm)
580-89081-2		09/19/2019 04:32	1	091819 _038.D	624SIL-MS 0.25(mm)
580-89081-3		09/19/2019 04:59	1	091819 _039.D	624SIL-MS 0.25(mm)
580-89081-3 MS		09/19/2019 05:26	1	091819 _040.D	624SIL-MS 0.25(mm)
580-89081-3 MSD		09/19/2019 05:52	1	091819 _041.D	624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 06:19	1		624SIL-MS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Instrument ID: TAC048 Start Date: 09/19/2019 15:40

Analysis Batch Number: 311739 End Date: 09/20/2019 00:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 580-311739/3		09/19/2019 15:40	1	09119 _003.D	624SIL-MS 0.25(mm)
BFB 580-311739/1003		09/19/2019 15:40	1	09119 003-BFB.d	624SIL-MS 0.25(mm)
LCS 580-311739/4		09/19/2019 16:07	1	09119 _004.D	624SIL-MS 0.25(mm)
LCSD 580-311739/5		09/19/2019 16:33	1	09119 _005.D	624SIL-MS 0.25(mm)
MB 580-311739/7		09/19/2019 17:26	1	09119 _007.D	624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 17:53	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 18:19	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 18:46	1		624SIL-MS 0.25(mm)
580-89081-4		09/19/2019 22:18	1	09119 _018.D	624SIL-MS 0.25(mm)
580-89081-5		09/19/2019 22:44	1	09119 _019.D	624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 23:10	1		624SIL-MS 0.25(mm)
ZZZZZ		09/19/2019 23:37	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 00:04	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 00:30	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 00:56	1		624SIL-MS 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Batch Number: 311508 Batch Start Date: 09/17/19 20:15 Batch Analyst: Jantanu, Charinporn

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS/TFT 00010	VOAMasterMix 00042	VOAMasterSEC 00035	
BFB 580-311508/2		8260C		10 mL	10 mL	2 uL			
STD 580-311508/3 IC		8260C		10 mL	10 mL	2 uL	0.02 uL		
STD 580-311508/4 IC		8260C		10 mL	10 mL	2 uL	0.05 uL		
STD 580-311508/5 IC		8260C		10 mL	10 mL	2 uL	0.1 uL		
STD 580-311508/6 IC		8260C		10 mL	10 mL	2 uL	0.2 uL		
STD 580-311508/7 IC		8260C		10 mL	10 mL	2 uL	0.5 uL		
STD 580-311508/8 IC		8260C		10 mL	10 mL	2 uL	1 uL		
STD 580-311508/9 IC		8260C		10 mL	10 mL	2 uL	5 uL		
ICIS 580-311508/10		8260C		10 mL	10 mL	2 uL	10 uL		
STD 580-311508/11 IC		8260C		10 mL	10 mL	2 uL	20 uL		
STD 580-311508/12 IC		8260C		10 mL	10 mL	2 uL	50 uL		
STD 580-311508/13 IC		8260C		10 mL	10 mL	2 uL	100 uL		
ICV 580-311508/15		8260C		10 mL	10 mL	2 uL		10 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.: 580-89081-1

SDG No.:

Batch Number: 311626 Batch Start Date: 09/18/19 19:15 Batch Analyst: Overman, Derek S

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00010	VOAMasterMix 00042	
BFB 580-311626/2		8260C		10 mL	10 mL		2 uL		
CCVIS 580-311626/3		8260C		10 mL	10 mL		2 uL	10 uL	
LCS 580-311626/4		8260C		10 mL	10 mL		2 uL	5 uL	
LCSD 580-311626/5		8260C		10 mL	10 mL		2 uL	5 uL	
CCVL 580-311626/6		8260C		10 mL	10 mL		2 uL	0.2 uL	
MB 580-311626/7		8260C		10 mL	10 mL		2 uL		
580-89081-D-2	03Q19LCMW03SW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89081-F-3	03Q19LCMW03DW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89081-C-3 MS	03Q19LCMW03DW	8260C	T	10 mL	10 mL	<2 SU	2 uL	4.3 uL	
580-89081-C-3 MSD	03Q19LCMW03DW	8260C	T	10 mL	10 mL	<2 SU	2 uL	4.3 uL	

Batch Notes	
Vial Lot Number	0103701E

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 VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89081-1

SDG No.:

Batch Number: 311739 Batch Start Date: 09/19/19 15:40 Batch Analyst: McKell, Justin S

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00010	VOAMasterMix 00042	
CCVIS 580-311739/3		8260C		10 mL	10 mL		2 uL	10 uL	
LCS 580-311739/4		8260C		10 mL	10 mL		2 uL	5 uL	
LCSD 580-311739/5		8260C		10 mL	10 mL		2 uL	5 uL	
MB 580-311739/7		8260C		10 mL	10 mL		2 uL		
580-89081-D-4	03Q19LCMW140W	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89081-C-5	091019TB	8260C	T	10 mL	10 mL	<2 SU	2 uL		
BFB 580-311739/1003		8260C		10 mL	10 mL		2 uL	10 uL	

Batch Notes	
Vial Lot Number	0103701E

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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): Synergi C18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	DNT1 #
03Q19LC15SW	580-89081-1	93
03Q19LC15SW RE	580-89081-1 RE	85
03Q19LCMW03SW	580-89081-2	95
03Q19LCMW03SW RE	580-89081-2 RE	86
03Q19LCMW03DW	580-89081-3	93
03Q19LCMW03DW RE	580-89081-3 RE	88
03Q19LCMW140W	580-89081-4	93
03Q19LCMW140W RE	580-89081-4 RE	86
	MB 320-324018/1-A	94
	MB 320-327235/1-A	84
	PB 320-327235/3-A	88
	LCS 320-324018/2-A	97
	LCS 320-327235/2-A	91
	LCSD 320-324018/3-A	97
03Q19LCMW03DW MS	580-89081-3 MS	93
03Q19LCMW03DW MS RE	580-89081-3 MS RE	88
03Q19LCMW03DW MSD	580-89081-3 MSD	91
03Q19LCMW03DW MSD RE	580-89081-3 MSD RE	84

	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ZD0000008.D

Lab ID: LCS 320-324018/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	1.01	101	74-120	
1,3-Dinitrobenzene	1.00	0.986	99	72-123	
2,4,6-Trinitrotoluene	1.00	0.698	70	69-111	
2,4-Dinitrotoluene	1.00	0.979	98	70-119	
2,6-Dinitrotoluene	1.00	0.947	95	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.03	103	77-123	
2-Nitrotoluene	1.00	0.923	92	64-120	
3-Nitrotoluene	1.00	1.01	101	67-114	
4-Nitrotoluene	1.00	0.922	92	67-115	
4-Amino-2,6-dinitrotoluene	1.00	1.04	104	68-113	
HMX	1.00	0.995	100	67-115	
RDX	1.00	1.07	107	68-122	
Nitrobenzene	1.00	0.960	96	69-119	
Tetryl	1.00	0.656	66	66-105	
Nitroglycerin	5.00	4.99	100	85-115	
PETN	5.00	4.76	95	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ZD0000011.D

Lab ID: LCS 320-327235/2-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	0.957	96	72-123	
2,4,6-Trinitrotoluene	1.00	0.778	78	69-111	
2,4-Dinitrotoluene	1.00	0.930	93	70-119	
2,6-Dinitrotoluene	1.00	0.930	93	71-119	
2-Amino-4,6-dinitrotoluene	1.00	0.985	99	77-123	
2-Nitrotoluene	1.00	0.911	91	64-120	
3-Nitrotoluene	1.00	0.934	93	67-114	
4-Nitrotoluene	1.00	0.917	92	67-115	
4-Amino-2,6-dinitrotoluene	1.00	0.962	96	68-113	
HMX	1.00	0.973	97	67-115	
RDX	1.00	0.983	98	68-122	
Nitrobenzene	1.00	0.948	95	69-119	
Tetryl	1.00	0.739	74	66-105	
Nitroglycerin	5.00	4.86	97	85-115	
PETN	5.00	4.87	97	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ZD0000009.D

Lab ID: LCSD 320-324018/3-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	0.996	100	1	29	74-120	
1,3-Dinitrobenzene	1.00	0.981	98	0	29	72-123	
2,4,6-Trinitrotoluene	1.00	0.693	69	1	28	69-111	
2,4-Dinitrotoluene	1.00	0.976	98	0	30	70-119	
2,6-Dinitrotoluene	1.00	0.949	95	0	29	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.02	102	2	27	77-123	
2-Nitrotoluene	1.00	0.921	92	0	36	64-120	
3-Nitrotoluene	1.00	0.999	100	1	31	67-114	
4-Nitrotoluene	1.00	0.919	92	0	32	67-115	
4-Amino-2,6-dinitrotoluene	1.00	1.03	103	1	30	68-113	
HMX	1.00	0.981	98	1	32	67-115	
RDX	1.00	1.06	106	0	32	68-122	
Nitrobenzene	1.00	0.958	96	0	31	69-119	
Tetryl	1.00	0.653	65	1	26	66-105	*
Nitroglycerin	5.00	4.74	95	5	15	85-115	
PETN	5.00	4.65	93	2	15	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0000030.D

Lab ID: 580-89081-3 MS Client ID: 03Q19LCMW03DW MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.01	ND	0.948	94	74-120	
1,3-Dinitrobenzene	1.01	ND	0.964	95	72-123	
2,4,6-Trinitrotoluene	1.01	ND	0.668	66	69-111	F1
2,4-Dinitrotoluene	1.01	ND	0.934	92	70-119	
2,6-Dinitrotoluene	1.01	ND	0.905	89	71-119	
2-Amino-4,6-dinitrotoluene	1.01	ND	0.972	96	77-123	
2-Nitrotoluene	1.01	ND	0.883	87	64-120	
3-Nitrotoluene	1.01	ND	0.964	95	67-114	
4-Nitrotoluene	1.01	ND	0.867	86	67-115	
4-Amino-2,6-dinitrotoluene	1.01	ND	0.983	97	68-113	
HMX	1.01	ND	1.01	99	67-115	
RDX	1.01	ND	1.01	100	68-122	
Nitrobenzene	1.01	ND	0.938	93	69-119	
Tetryl	1.01	ND	0.627	62	66-105	F1
Nitroglycerin	5.06	ND	4.65	92	85-115	
PETN	5.06	ND	4.52	89	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ZD0000018.D

Lab ID: 580-89081-3 MS RE Client ID: 03Q19LCMW03DW MS RE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	ND	0.910	91	74-120	H
1,3-Dinitrobenzene	1.00	ND	0.926	92	72-123	H
2,4,6-Trinitrotoluene	1.00	ND	0.760	76	69-111	H
2,4-Dinitrotoluene	1.00	ND	0.898	90	70-119	H
2,6-Dinitrotoluene	1.00	ND	0.887	88	71-119	H
2-Amino-4,6-dinitrotoluene	1.00	ND	0.959	96	77-123	H
2-Nitrotoluene	1.00	ND	0.862	86	64-120	H
3-Nitrotoluene	1.00	ND	0.896	89	67-114	H
4-Nitrotoluene	1.00	ND	0.881	88	67-115	H
4-Amino-2,6-dinitrotoluene	1.00	ND	0.935	93	68-113	H
HMX	1.00	ND	0.956	95	67-115	H
RDX	1.00	ND	0.968	97	68-122	H
Nitrobenzene	1.00	ND	0.913	91	69-119	H
Tetryl	1.00	ND	0.707	70	66-105	H
Nitroglycerin	5.02	ND	4.54	91	85-115	H
PETN	5.02	ND	4.53	90	84-117	H

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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0000035.D

Lab ID: 580-89081-3 MSD Client ID: 03Q19LCMW03DW MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.05	1.03	98	8	29	74-120	
1,3-Dinitrobenzene	1.05	1.03	99	7	29	72-123	
2,4,6-Trinitrotoluene	1.05	0.727	70	9	28	69-111	
2,4-Dinitrotoluene	1.05	1.01	97	8	30	70-119	
2,6-Dinitrotoluene	1.05	0.975	93	7	29	71-119	
2-Amino-4,6-dinitrotoluene	1.05	1.04	99	6	27	77-123	
2-Nitrotoluene	1.05	0.969	93	9	36	64-120	
3-Nitrotoluene	1.05	1.06	101	9	31	67-114	
4-Nitrotoluene	1.05	0.969	93	11	32	67-115	
4-Amino-2,6-dinitrotoluene	1.05	1.06	101	7	30	68-113	
HMX	1.05	1.08	103	7	32	67-115	
RDX	1.05	1.09	104	8	32	68-122	
Nitrobenzene	1.05	1.01	97	8	31	69-119	
Tetryl	1.05	0.680	65	8	26	66-105	* F1
Nitroglycerin	5.23	4.68	89	1	15	85-115	
PETN	5.23	4.59	88	2	15	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.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ZD0000019.D

Lab ID: 580-89081-3 MSD RE Client ID: 03Q19LCMW03DW MSD RE

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.02	0.893	88	2	29	74-120	H
1,3-Dinitrobenzene	1.02	0.913	90	1	29	72-123	H
2,4,6-Trinitrotoluene	1.02	0.741	73	2	28	69-111	H
2,4-Dinitrotoluene	1.02	0.888	87	1	30	70-119	H
2,6-Dinitrotoluene	1.02	0.889	87	0	29	71-119	H
2-Amino-4,6-dinitrotoluene	1.02	0.922	91	4	27	77-123	H
2-Nitrotoluene	1.02	0.847	83	2	36	64-120	H
3-Nitrotoluene	1.02	0.878	86	2	31	67-114	H
4-Nitrotoluene	1.02	0.860	84	2	32	67-115	H
4-Amino-2,6-dinitrotoluene	1.02	0.894	88	5	30	68-113	H
HMX	1.02	0.939	92	2	32	67-115	H
RDX	1.02	0.956	94	1	32	68-122	H
Nitrobenzene	1.02	0.885	87	3	31	69-119	H
Tetryl	1.02	0.694	68	2	26	66-105	H
Nitroglycerin	5.09	4.41	87	3	15	85-115	H
PETN	5.09	4.40	87	3	15	84-117	H

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.: 580-89081-1

SDG No.:

Lab Sample ID: MB 320-324018/1-A

Matrix: Water Date Extracted: 09/17/2019 10:52

Lab File ID:(1) Z0000022.D Lab File ID:(2)

Date Analyzed:(1) 09/27/2019 11:34 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
03Q19LC15SW	580-89081-1	09/27/2019 14:15	
03Q19LCMW03SW	580-89081-2	09/27/2019 15:09	
03Q19LCMW03DW	580-89081-3	09/27/2019 16:03	
03Q19LCMW03DW MS	580-89081-3 MS	09/27/2019 18:43	
03Q19LCMW140W	580-89081-4	09/27/2019 20:31	
03Q19LCMW03DW MSD	580-89081-3 MSD	09/27/2019 23:12	
	LCS 320-324018/2-A	10/01/2019 19:13	
	LCSD 320-324018/3-A	10/01/2019 20:07	

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: MB 320-327235/1-A

Matrix: Water Date Extracted: 09/30/2019 07:12

Lab File ID:(1) ZD0000010.D Lab File ID:(2)

Date Analyzed:(1) 10/01/2019 21:00 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 320-327235/2-A	10/01/2019 21:54	
	PB 320-327235/3-A	10/01/2019 22:48	
03Q19LC15SW RE	580-89081-1 RE	10/01/2019 23:41	
03Q19LCMW03SW RE	580-89081-2 RE	10/02/2019 00:35	
03Q19LCMW03DW RE	580-89081-3 RE	10/02/2019 01:28	
03Q19LCMW03DW MS RE	580-89081-3 MS RE	10/02/2019 04:09	
03Q19LCMW03DW MSD RE	580-89081-3 MSD RE	10/02/2019 05:03	
03Q19LCMW140W RE	580-89081-4 RE	10/02/2019 05:57	

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Sample No.: CCVRT 320-326491/3 Date Analyzed: 09/26/2019 18:35

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): Z0000003.D Heated Purge: (Y/N) N

Calibration ID: 47644

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				28.90		
UPPER LIMIT				29.15		
LOWER LIMIT				28.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-326491/3		09/26/2019 18:35	Z0000003.D	28.90		
CCV 320-326491/16		09/27/2019 06:13	Z0000016.D	28.97		
MB 320-324018/1-A		09/27/2019 11:34	Z0000022.D	28.92		
580-89081-1	03Q19LC15SW	09/27/2019 14:15	Z0000025.D	28.93		
580-89081-2	03Q19LCMW03SW	09/27/2019 15:09	Z0000026.D	28.93		
580-89081-3	03Q19LCMW03DW	09/27/2019 16:03	Z0000027.D	28.94		
CCV 320-326491/28		09/27/2019 16:56	Z0000028.D	28.94		
580-89081-3 MS	03Q19LCMW03DW MS	09/27/2019 18:43	Z0000030.D	28.94		
580-89081-4	03Q19LCMW140W	09/27/2019 20:31	Z0000032.D	28.92		
580-89081-3 MSD	03Q19LCMW03DW MSD	09/27/2019 23:12	Z0000035.D	28.94		
CCV 320-326491/41		09/28/2019 03:40	Z0000040.D	28.92		

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.: 580-89081-1

SDG No.:

Sample No.: CCVRT 320-327493/3 Date Analyzed: 10/01/2019 14:45

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): ZD0000003.D Heated Purge: (Y/N) N

Calibration ID: 47644

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				28.93		
UPPER LIMIT				29.18		
LOWER LIMIT				28.68		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-327493/3		10/01/2019 14:45	ZD0000003.D	28.93		
LCS 320-324018/2-A		10/01/2019 19:13	ZD0000008.D	28.86		
LCSD 320-324018/3-A		10/01/2019 20:07	ZD0000009.D	28.87		
MB 320-327235/1-A		10/01/2019 21:00	ZD0000010.D	28.90		
LCS 320-327235/2-A		10/01/2019 21:54	ZD0000011.D	28.87		
PB 320-327235/3-A		10/01/2019 22:48	ZD0000012.D	28.89		
580-89081-1 RE	03Q19LC15SW RE	10/01/2019 23:41	ZD0000013.D	28.87		
580-89081-2 RE	03Q19LCMW03SW RE	10/02/2019 00:35	ZD0000014.D	28.87		
580-89081-3 RE	03Q19LCMW03DW RE	10/02/2019 01:28	ZD0000015.D	28.90		
CCV 320-327493/55		10/02/2019 02:22	ZD0000016.D	28.88		
580-89081-3 MS RE	03Q19LCMW03DW MS RE	10/02/2019 04:09	ZD0000018.D	28.86		
580-89081-3 MSD RE	03Q19LCMW03DW MSD RE	10/02/2019 05:03	ZD0000019.D	28.89		
580-89081-4 RE	03Q19LCMW140W RE	10/02/2019 05:57	ZD0000020.D	28.87		

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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LC15SW Lab Sample ID: 580-89081-1

Matrix: Water Lab File ID: Z0000025.D

Analysis Method: 8330B Date Collected: 09/10/2019 10:10

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 979.3(mL) Date Analyzed: 09/27/2019 14:15

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.: 326491 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	RDX	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LC15SW RE Lab Sample ID: 580-89081-1 RE

Matrix: Water Lab File ID: ZD0000013.D

Analysis Method: 8330B Date Collected: 09/10/2019 10:10

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 1006.6(mL) Date Analyzed: 10/01/2019 23:41

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	*RDX*	*ND*	*H*	*0.099*	

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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03SW Lab Sample ID: 580-89081-2

Matrix: Water Lab File ID: Z0000026.D

Analysis Method: 8330B Date Collected: 09/10/2019 13:10

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 992.4(mL) Date Analyzed: 09/27/2019 15:09

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.: 326491 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	95		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03SW RE Lab Sample ID: 580-89081-2 RE

Matrix: Water Lab File ID: ZD0000014.D

Analysis Method: 8330B Date Collected: 09/10/2019 13:10

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 991.8(mL) Date Analyzed: 10/02/2019 00:35

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.50*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.50*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*ND*	*H*	*0.10*	
121-82-4	*RDX*	*ND*	*H*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.66*	
78-11-5	*PETN*	*ND*	*H*	*0.66*	

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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW Lab Sample ID: 580-89081-3

Matrix: Water Lab File ID: Z0000027.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 993.6(mL) Date Analyzed: 09/27/2019 16:03

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.: 326491 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	F1	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	* F1	0.10	
55-63-0	Nitroglycerin	ND		0.65	
78-11-5	PETN	ND	F1	0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW RE Lab Sample ID: 580-89081-3 RE

Matrix: Water Lab File ID: ZD0000015.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 994.9(mL) Date Analyzed: 10/02/2019 01:28

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.50*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.50*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*ND*	*H*	*0.10*	
121-82-4	*RDX*	*ND*	*H*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.65*	
78-11-5	*PETN*	*ND*	*H*	*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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW140W Lab Sample ID: 580-89081-4

Matrix: Water Lab File ID: Z0000032.D

Analysis Method: 8330B Date Collected: 09/10/2019 13:00

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 1007.5(mL) Date Analyzed: 09/27/2019 20:31

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.: 326491 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	ND		0.099	
99-65-0	1,3-Dinitrobenzene	ND		0.099	
118-96-7	2,4,6-Trinitrotoluene	ND		0.099	
121-14-2	2,4-Dinitrotoluene	ND		0.099	
606-20-2	2,6-Dinitrotoluene	ND		0.099	
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		0.099	
2691-41-0	HMX	ND		0.099	
121-82-4	RDX	ND		0.099	
98-95-3	Nitrobenzene	ND		0.099	
479-45-8	Tetryl	ND	*	0.099	
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	93		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW140W RE Lab Sample ID: 580-89081-4 RE

Matrix: Water Lab File ID: ZD0000020.D

Analysis Method: 8330B Date Collected: 09/10/2019 13:00

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 970.5(mL) Date Analyzed: 10/02/2019 05:57

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.21*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.52*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.52*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.52*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*ND*	*H*	*0.10*	
121-82-4	*RDX*	*ND*	*H*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.67*	
78-11-5	*PETN*	*ND*	*H*	*0.67*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	86		79-111

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
HMX	17.803	17.818	17.805	17.801	17.801	17.822	17.770				17.551 - 18.051	17.803
RDX	20.386	20.388	20.391	20.391	20.391	20.388	20.374				20.141 - 20.641	20.387
1,3,5-Trinitrobenzene	22.140	22.131	22.138	22.135	22.135	22.128	22.124				21.885 - 22.385	22.133
1,3-Dinitrobenzene	24.320	24.325	24.328	24.325	24.325	24.312	24.314				24.075 - 24.575	24.321
3,5-Dinitroaniline	25.330	25.315	25.325	25.321	25.328	25.308	25.314				25.078 - 25.578	25.320
Nitrobenzene	25.840	25.835	25.835	25.835	25.838	25.818	25.830				25.588 - 26.088	25.833
Tetryl	26.443	26.438	26.448	26.441	26.445	26.432	26.430				26.195 - 26.695	26.440
Nitroglycerin		27.115	27.131	27.111	27.121	27.108	27.104				26.871 - 27.371	27.115
2,4,6-Trinitrotoluene	27.766	27.728	27.751	27.741	27.748	27.732	27.734				27.498 - 27.998	27.743
4-Amino-2,6-dinitrotoluene	28.570	28.591	28.598	28.598	28.605	28.582	28.587				28.265 - 28.945	28.590
2-Amino-4,6-dinitrotoluene	29.266	29.248	29.265	29.261	29.268	29.238	29.250				28.888 - 29.648	29.257
2,6-Dinitrotoluene	30.533	30.528	30.545	30.541	30.541	30.522	30.530				30.241 - 30.841	30.534
2,4-Dinitrotoluene	30.980	30.961	30.985	30.978	30.981	30.958	30.970				30.671 - 31.291	30.973
2-Nitrotoluene	33.950	33.948	33.978	33.951	33.961	33.932	33.957				33.631 - 34.291	33.954
4-Nitrotoluene	35.453	35.441	35.425	35.438	35.441	35.408	35.437				35.081 - 35.801	35.435
3-Nitrotoluene	36.966	36.988	37.001	36.981	36.988	36.952	36.980				36.588 - 37.388	36.979
PETN		38.378	38.434	38.418	38.425	38.402	38.400				38.015 - 38.835	38.410
3,4-Dinitrotoluene	28.946	28.955	28.948	28.955	28.958	28.935	28.944				28.708 - 29.208	28.949

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.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	76.600 70.280	72.600 68.605	70.500 61.926	70.320	Ave		70.1187143				6.3		20.0			
RDX	91.200 87.610	88.900 85.715	89.100 77.632	88.100	Ave		86.8938571				5.1		20.0			
1,3,5-Trinitrobenzene	223.20 219.20	222.80 216.75	217.30 204.84	219.96	Ave		217.721429				2.8		20.0			
1,3-Dinitrobenzene	207.00 204.30	203.70 202.60	203.40 190.48	204.04	Ave		202.217143				2.6		20.0			
3,5-Dinitroaniline	154.40 149.85	153.80 147.29	149.50 139.66	149.92	Ave		149.203143				3.3		20.0			
Nitrobenzene	119.60 115.13	118.10 114.17	115.00 107.45	114.70	Ave		114.877857				3.3		20.0			
Tetryl	115.20 113.80	116.10 113.62	113.95 110.05	113.46	Ave		113.739857				1.7		20.0			
Nitroglycerin	 93.220	99.900 96.660	92.750 91.932	92.880	Ave		94.5570000				3.3		20.0			
2,4,6-Trinitrotoluene	126.80 123.32	122.10 122.99	122.90 118.69	122.66	Ave		122.779714				1.9		20.0			
4-Amino-2,6-dinitrotoluene	86.400 81.690	84.600 80.250	81.350 77.622	81.600	Ave		81.9302857				3.5		20.0			
2-Amino-4,6-dinitrotoluene	115.60 111.17	108.90 110.15	109.90 105.60	110.22	Ave		110.218714				2.7		20.0			
2,6-Dinitrotoluene	73.200 71.190	73.300 71.100	71.300 68.332	70.860	Ave		71.3260000				2.3		20.0			
2,4-Dinitrotoluene	128.20 129.37	129.10 129.42	129.35 124.08	128.70	Ave		128.317143				1.5		20.0			
2-Nitrotoluene	1250.4 1138.2	1156.2 1132.8	1191.7 1101.0	1127.6	Lin2	612.834127	1122.95774							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.: 580-89081-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

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	1746.0 1507.6	1525.0 1516.7	1536.4 1470.7	1513.4	Lin2	1151.77687	1481.41748							0.9990		0.9900
3-Nitrotoluene	75.600 64.620	67.900 64.665	65.650 62.418	64.680	Lin2	58.2654696	63.2834662							1.0000		0.9900
PETN	 52.790	57.000 54.305	53.500 51.860	51.640	Ave		53.5158333				3.7		20.0			
3,4-Dinitrotoluene	79.200 72.960	72.200 72.870	71.800 70.336	72.280	Ave		73.0922857				3.9		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.: 580-89081-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.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	383 13721	726 30963	1410	3516	7028	5.00 200	10.0 500	20.0	50.0	100
RDX	Ave	456 17143	889 38816	1782	4405	8761	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	1116 43350	2228 102420	4346	10998	21920	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	1035 40520	2037 95240	4068	10202	20430	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	772 29458	1538 69831	2990	7496	14985	5.00 200	10.0 500	20.0	50.0	100
Nitrobenzene	Ave	598 22833	1181 53725	2300	5735	11513	5.00 200	10.0 500	20.0	50.0	100
Tetryl	Ave	576 22723	1161 55027	2279	5673	11380	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Ave	 19332	999 45966	1855	4644	9322	 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	634 24598	1221 59344	2458	6133	12332	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	432 16050	846 38811	1627	4080	8169	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	578 22029	1089 52798	2198	5511	11117	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	366 14220	733 34166	1426	3543	7119	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	641 25884	1291 62040	2587	6435	12937	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Lin2	6252 226563	11562 550513	23833	56381	113816	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Lin2	8730 303332	15250 735335	30727	75671	150756	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.: 580-89081-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

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	378 12933	679 31209	1313	3234	6462	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	 10861	570 25930	1070	2582	5279	 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	396 14574	722 35168	1436	3614	7296	5.00 200	10.0 500	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: YA0000019.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		109.8		198	200	-0.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: YA0000019.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.72	19.49	19.99

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: YA0000019.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.41		198	200	-1.0	20.0
RDX	Ave	86.89	87.64		202	200	0.9	20.0
1,3,5-Trinitrobenzene	Ave	217.7	220.2		202	200	1.1	20.0
1,3-Dinitrobenzene	Ave	202.2	208.6		206	200	3.2	20.0
3,5-Dinitroaniline	Ave	149.2	147.0		197	200	-1.4	20.0
Nitrobenzene	Ave	114.9	114.8		200	200	-0.0	20.0
Tetryl	Ave	113.7	111.0		195	200	-2.4	20.0
Nitroglycerin	Ave	94.56	96.99		205	200	2.6	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.4		198	200	-1.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	77.88		190	200	-4.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	108.9		198	200	-1.2	20.0
2,6-Dinitrotoluene	Ave	71.33	71.78		201	200	0.6	20.0
2,4-Dinitrotoluene	Ave	128.3	130.9		204	200	2.0	20.0
2-Nitrotoluene	Lin2		1116		198	200	-0.9	20.0
4-Nitrotoluene	Lin2		1471		198	200	-1.1	20.0
3-Nitrotoluene	Lin2		66.26		208	200	4.2	20.0
PETN	Ave	53.52	50.06		187	200	-6.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: YA0000019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.79	17.55	18.05
RDX	20.38	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.89	22.39
1,3-Dinitrobenzene	24.32	24.08	24.58
3,5-Dinitroaniline	25.32	25.08	25.58
Nitrobenzene	25.84	25.59	26.09
Tetryl	26.44	26.20	26.70
Nitroglycerin	27.11	26.87	27.37
2,4,6-Trinitrotoluene	27.74	27.50	28.00
4-Amino-2,6-dinitrotoluene	28.60	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.26	28.89	29.65
2,6-Dinitrotoluene	30.53	30.24	30.84
2,4-Dinitrotoluene	30.98	30.67	31.29
2-Nitrotoluene	33.96	33.63	34.29
4-Nitrotoluene	35.44	35.08	35.80
3-Nitrotoluene	36.98	36.59	37.39
PETN	38.42	38.02	38.84

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVRT 320-326491/3 Calibration Date: 09/26/2019 18:35

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.94		98.3	100	-1.7	20.0
RDX	Ave	86.89	86.18		99.2	100	-0.8	20.0
1,3,5-Trinitrobenzene	Ave	217.7	217.4		99.9	100	-0.1	20.0
1,3-Dinitrobenzene	Ave	202.2	204.4		101	100	1.1	20.0
3,5-Dinitroaniline	Ave	149.2	149.9		100	100	0.5	20.0
Nitrobenzene	Ave	114.9	115.5		101	100	0.5	20.0
Tetryl	Ave	113.7	113.8		100	100	0.0	20.0
Nitroglycerin	Ave	94.56	96.67		102	100	2.2	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.4		101	100	0.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.83		99.9	100	-0.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	113.0		103	100	2.6	20.0
2,6-Dinitrotoluene	Ave	71.33	71.55		100	100	0.3	20.0
2,4-Dinitrotoluene	Ave	128.3	130.0		101	100	1.3	20.0
2-Nitrotoluene	Lin2		1133		100	100	0.3	20.0
4-Nitrotoluene	Lin2		1526		102	100	2.2	20.0
3-Nitrotoluene	Lin2		65.26		102	100	2.2	20.0
PETN	Ave	53.52	52.14		97.4	100	-2.6	20.0
3,4-Dinitrotoluene	Ave	73.09	73.50		101	100	0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVRT 320-326491/3 Calibration Date: 09/26/2019 18:35

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.82	17.57	18.07
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.10	21.85	22.35
1,3-Dinitrobenzene	24.26	24.01	24.51
3,5-Dinitroaniline	25.26	25.01	25.51
Nitrobenzene	25.75	25.50	26.00
Tetryl	26.42	26.17	26.67
Nitroglycerin	27.09	26.84	27.34
2,4,6-Trinitrotoluene	27.70	27.45	27.95
4-Amino-2,6-dinitrotoluene	28.53	28.19	28.87
2-Amino-4,6-dinitrotoluene	29.17	28.79	29.55
2,6-Dinitrotoluene	30.45	30.15	30.75
2,4-Dinitrotoluene	30.88	30.57	31.19
2-Nitrotoluene	33.82	33.49	34.15
4-Nitrotoluene	35.30	34.94	35.66
3-Nitrotoluene	36.84	36.44	37.24
PETN	38.40	37.99	38.81
3,4-Dinitrotoluene	28.90	28.65	29.15

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/16 Calibration Date: 09/27/2019 06:13

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.70		49.7	50.0	-0.6	20.0
RDX	Ave	86.89	87.78		50.5	50.0	1.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	218.9		50.3	50.0	0.5	20.0
1,3-Dinitrobenzene	Ave	202.2	202.8		50.2	50.0	0.3	20.0
3,5-Dinitroaniline	Ave	149.2	149.4		50.1	50.0	0.1	20.0
Nitrobenzene	Ave	114.9	114.7		49.9	50.0	-0.2	20.0
Tetryl	Ave	113.7	112.7		49.6	50.0	-0.9	20.0
Nitroglycerin	Ave	94.56	91.98		48.6	50.0	-2.7	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.2		50.2	50.0	0.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.48		49.7	50.0	-0.5	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.4		50.5	50.0	1.1	20.0
2,6-Dinitrotoluene	Ave	71.33	71.68		50.2	50.0	0.5	20.0
2,4-Dinitrotoluene	Ave	128.3	129.6		50.5	50.0	1.0	20.0
2-Nitrotoluene	Lin2		1135		50.0	50.0	-0.0	20.0
4-Nitrotoluene	Lin2		1486		49.4	50.0	-1.3	20.0
3-Nitrotoluene	Lin2		64.86		50.3	50.0	0.6	20.0
PETN	Ave	53.52	51.96		48.5	50.0	-2.9	20.0
3,4-Dinitrotoluene	Ave	73.09	72.66		49.7	50.0	-0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/16 Calibration Date: 09/27/2019 06:13

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.81	17.56	18.06
RDX	20.39	20.14	20.64
1,3,5-Trinitrobenzene	22.14	21.89	22.39
1,3-Dinitrobenzene	24.33	24.08	24.58
3,5-Dinitroaniline	25.33	25.08	25.58
Nitrobenzene	25.84	25.59	26.09
Tetryl	26.46	26.21	26.71
Nitroglycerin	27.14	26.89	27.39
2,4,6-Trinitrotoluene	27.76	27.51	28.01
4-Amino-2,6-dinitrotoluene	28.61	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.27	28.89	29.65
2,6-Dinitrotoluene	30.54	30.24	30.84
2,4-Dinitrotoluene	30.98	30.67	31.29
2-Nitrotoluene	33.93	33.60	34.26
4-Nitrotoluene	35.42	35.06	35.78
3-Nitrotoluene	36.96	36.56	37.36
PETN	38.48	38.07	38.89
3,4-Dinitrotoluene	28.97	28.72	29.22

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/28 Calibration Date: 09/27/2019 16:56

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000028.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.90		49.8	50.0	-0.3	20.0
RDX	Ave	86.89	87.72		50.5	50.0	1.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	219.6		50.4	50.0	0.8	20.0
1,3-Dinitrobenzene	Ave	202.2	204.1		50.5	50.0	0.9	20.0
3,5-Dinitroaniline	Ave	149.2	150.2		50.3	50.0	0.7	20.0
Nitrobenzene	Ave	114.9	111.3		48.4	50.0	-3.1	20.0
Tetryl	Ave	113.7	113.9		50.1	50.0	0.1	20.0
Nitroglycerin	Ave	94.56	96.92		51.2	50.0	2.5	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.5		50.3	50.0	0.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	82.12		50.1	50.0	0.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.9		50.8	50.0	1.5	20.0
2,6-Dinitrotoluene	Ave	71.33	71.26		50.0	50.0	-0.0	20.0
2,4-Dinitrotoluene	Ave	128.3	129.5		50.5	50.0	0.9	20.0
2-Nitrotoluene	Lin2		1066		46.9	50.0	-6.1	20.0
4-Nitrotoluene	Lin2		1456		48.3	50.0	-3.3	20.0
3-Nitrotoluene	Lin2		63.06		48.9	50.0	-2.2	20.0
PETN	Ave	53.52	51.72		48.3	50.0	-3.4	20.0
3,4-Dinitrotoluene	Ave	73.09	72.90		49.9	50.0	-0.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/28 Calibration Date: 09/27/2019 16:56

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000028.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.82	17.57	18.07
RDX	20.39	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.31	25.06	25.56
Nitrobenzene	25.82	25.57	26.07
Tetryl	26.44	26.19	26.69
Nitroglycerin	27.12	26.87	27.37
2,4,6-Trinitrotoluene	27.74	27.49	27.99
4-Amino-2,6-dinitrotoluene	28.58	28.24	28.92
2-Amino-4,6-dinitrotoluene	29.23	28.85	29.61
2,6-Dinitrotoluene	30.51	30.21	30.81
2,4-Dinitrotoluene	30.95	30.64	31.26
2-Nitrotoluene	33.90	33.57	34.23
4-Nitrotoluene	35.38	35.02	35.74
3-Nitrotoluene	36.92	36.52	37.32
PETN	38.38	37.97	38.79
3,4-Dinitrotoluene	28.94	28.69	29.19

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/41 Calibration Date: 09/28/2019 03:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000040.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.26		50.1	50.0	0.2	20.0
RDX	Ave	86.89	87.64		50.4	50.0	0.9	20.0
1,3,5-Trinitrobenzene	Ave	217.7	218.9		50.3	50.0	0.6	20.0
1,3-Dinitrobenzene	Ave	202.2	204.0		50.5	50.0	0.9	20.0
3,5-Dinitroaniline	Ave	149.2	149.1		50.0	50.0	-0.0	20.0
Nitrobenzene	Ave	114.9	114.3		49.7	50.0	-0.5	20.0
Tetryl	Ave	113.7	112.7		49.6	50.0	-0.9	20.0
Nitroglycerin	Ave	94.56	95.36		50.4	50.0	0.8	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.3		50.2	50.0	0.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.60		49.8	50.0	-0.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.6		50.6	50.0	1.3	20.0
2,6-Dinitrotoluene	Ave	71.33	71.26		50.0	50.0	-0.0	20.0
2,4-Dinitrotoluene	Ave	128.3	129.0		50.3	50.0	0.5	20.0
2-Nitrotoluene	Lin2		1151		50.7	50.0	1.4	20.0
4-Nitrotoluene	Lin2		1522		50.6	50.0	1.2	20.0
3-Nitrotoluene	Lin2		64.72		50.2	50.0	0.4	20.0
PETN	Ave	53.52	50.54		47.2	50.0	-5.6	20.0
3,4-Dinitrotoluene	Ave	73.09	73.22		50.1	50.0	0.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-326491/41 Calibration Date: 09/28/2019 03:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000040.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.79	17.54	18.04
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.30	24.05	24.55
3,5-Dinitroaniline	25.29	25.04	25.54
Nitrobenzene	25.81	25.56	26.06
Tetryl	26.42	26.17	26.67
Nitroglycerin	27.09	26.84	27.34
2,4,6-Trinitrotoluene	27.71	27.46	27.96
4-Amino-2,6-dinitrotoluene	28.56	28.22	28.90
2-Amino-4,6-dinitrotoluene	29.22	28.84	29.60
2,6-Dinitrotoluene	30.49	30.19	30.79
2,4-Dinitrotoluene	30.92	30.61	31.23
2-Nitrotoluene	33.88	33.55	34.21
4-Nitrotoluene	35.37	35.01	35.73
3-Nitrotoluene	36.91	36.51	37.31
PETN	38.35	37.94	38.76
3,4-Dinitrotoluene	28.92	28.67	29.17

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVRT 320-327493/3 Calibration Date: 10/01/2019 14:45

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.63		97.9	100	-2.1	20.0
RDX	Ave	86.89	85.60		98.5	100	-1.5	20.0
1,3,5-Trinitrobenzene	Ave	217.7	214.5		98.5	100	-1.5	20.0
1,3-Dinitrobenzene	Ave	202.2	201.0		99.4	100	-0.6	20.0
3,5-Dinitroaniline	Ave	149.2	147.0		98.5	100	-1.5	20.0
Nitrobenzene	Ave	114.9	112.8		98.1	100	-1.9	20.0
Tetryl	Ave	113.7	112.3		98.7	100	-1.3	20.0
Nitroglycerin	Ave	94.56	94.66		100	100	0.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	122.0		99.4	100	-0.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.32		99.3	100	-0.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.8		101	100	1.4	20.0
2,6-Dinitrotoluene	Ave	71.33	70.75		99.2	100	-0.8	20.0
2,4-Dinitrotoluene	Ave	128.3	128.5		100	100	0.1	20.0
2-Nitrotoluene	Lin2		1136		101	100	0.6	20.0
4-Nitrotoluene	Lin2		1513		101	100	1.4	20.0
3-Nitrotoluene	Lin2		64.64		101	100	1.2	20.0
PETN	Ave	53.52	52.79		98.6	100	-1.4	20.0
3,4-Dinitrotoluene	Ave	73.09	73.01		99.9	100	-0.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVRT 320-327493/3 Calibration Date: 10/01/2019 14:45

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.78	17.53	18.03
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.31	25.06	25.56
Nitrobenzene	25.82	25.57	26.07
Tetryl	26.42	26.17	26.67
Nitroglycerin	27.10	26.85	27.35
2,4,6-Trinitrotoluene	27.72	27.47	27.97
4-Amino-2,6-dinitrotoluene	28.57	28.23	28.91
2-Amino-4,6-dinitrotoluene	29.22	28.84	29.60
2,6-Dinitrotoluene	30.49	30.19	30.79
2,4-Dinitrotoluene	30.93	30.62	31.24
2-Nitrotoluene	33.88	33.55	34.21
4-Nitrotoluene	35.35	34.99	35.71
3-Nitrotoluene	36.88	36.48	37.28
PETN	38.30	37.89	38.71
3,4-Dinitrotoluene	28.93	28.68	29.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-327493/55 Calibration Date: 10/02/2019 02:22

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.98		49.2	50.0	-1.6	20.0
RDX	Ave	86.89	86.46		49.8	50.0	-0.5	20.0
1,3,5-Trinitrobenzene	Ave	217.7	215.8		49.6	50.0	-0.9	20.0
1,3-Dinitrobenzene	Ave	202.2	202.2		50.0	50.0	-0.0	20.0
3,5-Dinitroaniline	Ave	149.2	147.8		49.5	50.0	-0.9	20.0
Nitrobenzene	Ave	114.9	113.1		49.2	50.0	-1.5	20.0
Tetryl	Ave	113.7	111.9		49.2	50.0	-1.6	20.0
Nitroglycerin	Ave	94.56	99.22		52.5	50.0	4.9	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.7		49.5	50.0	-0.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	80.78		49.3	50.0	-1.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.4		50.5	50.0	1.1	20.0
2,6-Dinitrotoluene	Ave	71.33	70.86		49.7	50.0	-0.7	20.0
2,4-Dinitrotoluene	Ave	128.3	127.7		49.8	50.0	-0.5	20.0
2-Nitrotoluene	Lin2		1110		48.9	50.0	-2.3	20.0
4-Nitrotoluene	Lin2		1487		49.4	50.0	-1.2	20.0
3-Nitrotoluene	Lin2		63.84		49.5	50.0	-1.0	20.0
PETN	Ave	53.52	49.70		46.4	50.0	-7.1	20.0
3,4-Dinitrotoluene	Ave	73.09	72.34		49.5	50.0	-1.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-327493/55 Calibration Date: 10/02/2019 02:22

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.76	17.51	18.01
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.10	21.85	22.35
1,3-Dinitrobenzene	24.27	24.02	24.52
3,5-Dinitroaniline	25.26	25.01	25.51
Nitrobenzene	25.78	25.53	26.03
Tetryl	26.39	26.14	26.64
Nitroglycerin	27.06	26.81	27.31
2,4,6-Trinitrotoluene	27.68	27.43	27.93
4-Amino-2,6-dinitrotoluene	28.52	28.18	28.86
2-Amino-4,6-dinitrotoluene	29.17	28.79	29.55
2,6-Dinitrotoluene	30.46	30.16	30.76
2,4-Dinitrotoluene	30.89	30.58	31.20
2-Nitrotoluene	33.86	33.53	34.19
4-Nitrotoluene	35.33	34.97	35.69
3-Nitrotoluene	36.86	36.46	37.26
PETN	38.32	37.91	38.73
3,4-Dinitrotoluene	28.88	28.63	29.13

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-327493/16 Calibration Date: 10/02/2019 13:59

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000029.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.18		49.3	50.0	-1.3	20.0
RDX	Ave	86.89	86.86		50.0	50.0	-0.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	215.8		49.5	50.0	-0.9	20.0
1,3-Dinitrobenzene	Ave	202.2	202.6		50.1	50.0	0.2	20.0
3,5-Dinitroaniline	Ave	149.2	148.5		49.8	50.0	-0.4	20.0
Nitrobenzene	Ave	114.9	108.3		47.1	50.0	-5.7	20.0
Tetryl	Ave	113.7	112.3		49.4	50.0	-1.2	20.0
Nitroglycerin	Ave	94.56	94.46		49.9	50.0	-0.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	122.6		49.9	50.0	-0.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.24		49.6	50.0	-0.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.4		51.0	50.0	2.0	20.0
2,6-Dinitrotoluene	Ave	71.33	70.52		49.4	50.0	-1.1	20.0
2,4-Dinitrotoluene	Ave	128.3	128.8		50.2	50.0	0.4	20.0
2-Nitrotoluene	Lin2		1077		47.4	50.0	-5.2	20.0
4-Nitrotoluene	Lin2		1482		49.3	50.0	-1.5	20.0
3-Nitrotoluene	Lin2		61.20		47.4	50.0	-5.1	20.0
PETN	Ave	53.52	51.00		47.6	50.0	-4.7	20.0
3,4-Dinitrotoluene	Ave	73.09	72.62		49.7	50.0	-0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 320-327493/16 Calibration Date: 10/02/2019 13:59

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000029.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.77	17.52	18.02
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.09	21.84	22.34
1,3-Dinitrobenzene	24.26	24.01	24.51
3,5-Dinitroaniline	25.25	25.00	25.50
Nitrobenzene	25.76	25.51	26.01
Tetryl	26.38	26.13	26.63
Nitroglycerin	27.06	26.81	27.31
2,4,6-Trinitrotoluene	27.67	27.42	27.92
4-Amino-2,6-dinitrotoluene	28.51	28.17	28.85
2-Amino-4,6-dinitrotoluene	29.16	28.78	29.54
2,6-Dinitrotoluene	30.44	30.14	30.74
2,4-Dinitrotoluene	30.88	30.57	31.19
2-Nitrotoluene	33.84	33.51	34.17
4-Nitrotoluene	35.31	34.95	35.67
3-Nitrotoluene	36.84	36.44	37.24
PETN	38.30	37.89	38.71
3,4-Dinitrotoluene	28.88	28.63	29.13

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-324018/1-A

Matrix: Water Lab File ID: Z0000022.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 1000(mL) Date Analyzed: 09/27/2019 11:34

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.: 326491 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	94		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-327235/1-A

Matrix: Water Lab File ID: ZD0000010.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 1000(mL) Date Analyzed: 10/01/2019 21:00

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.: 327493 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	84		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: PB 320-327235/3-A

Matrix: Water Lab File ID: ZD0000012.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 1000(mL) Date Analyzed: 10/01/2019 22:48

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	RDX	ND		0.10	

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.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-324018/2-A

Matrix: Water Lab File ID: ZD0000008.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 1000(mL) Date Analyzed: 10/01/2019 19:13

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	1.01		0.10	
99-65-0	1,3-Dinitrobenzene	0.986		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.698		0.10	
121-14-2	2,4-Dinitrotoluene	0.979		0.10	
606-20-2	2,6-Dinitrotoluene	0.947		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.03		0.20	
88-72-2	2-Nitrotoluene	0.923		0.50	
99-08-1	3-Nitrotoluene	1.01		0.50	
99-99-0	4-Nitrotoluene	0.922		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	1.04		0.10	
2691-41-0	HMX	0.995		0.10	
121-82-4	RDX	1.07		0.10	
98-95-3	Nitrobenzene	0.960		0.10	
479-45-8	Tetryl	0.656		0.10	
55-63-0	Nitroglycerin	4.99		0.65	
78-11-5	PETN	4.76		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-327235/2-A

Matrix: Water Lab File ID: ZD0000011.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 1000(mL) Date Analyzed: 10/01/2019 21:54

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.: 327493 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	0.957		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.778		0.10	
121-14-2	2,4-Dinitrotoluene	0.930		0.10	
606-20-2	2,6-Dinitrotoluene	0.930		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	0.985		0.20	
88-72-2	2-Nitrotoluene	0.911		0.50	
99-08-1	3-Nitrotoluene	0.934		0.50	
99-99-0	4-Nitrotoluene	0.917		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.962		0.10	
2691-41-0	HMX	0.973		0.10	
121-82-4	RDX	0.983		0.10	
98-95-3	Nitrobenzene	0.948		0.10	
479-45-8	Tetryl	0.739		0.10	
55-63-0	Nitroglycerin	4.86		0.65	
78-11-5	PETN	4.87		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	91		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-324018/3-A

Matrix: Water Lab File ID: ZD0000009.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 1000(mL) Date Analyzed: 10/01/2019 20:07

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.996		0.10	
99-65-0	1,3-Dinitrobenzene	0.981		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.693		0.10	
121-14-2	2,4-Dinitrotoluene	0.976		0.10	
606-20-2	2,6-Dinitrotoluene	0.949		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.02		0.20	
88-72-2	2-Nitrotoluene	0.921		0.50	
99-08-1	3-Nitrotoluene	0.999		0.50	
99-99-0	4-Nitrotoluene	0.919		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	1.03		0.10	
2691-41-0	HMX	0.981		0.10	
121-82-4	RDX	1.06		0.10	
98-95-3	Nitrobenzene	0.958		0.10	
479-45-8	Tetryl	0.653		0.10	
55-63-0	Nitroglycerin	4.74		0.65	
78-11-5	PETN	4.65		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MS Lab Sample ID: 580-89081-3 MS

Matrix: Water Lab File ID: Z0000030.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 987.9(mL) Date Analyzed: 09/27/2019 18:43

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.: 326491 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.948		0.10	
99-65-0	1,3-Dinitrobenzene	0.964		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.668		0.10	
121-14-2	2,4-Dinitrotoluene	0.934		0.10	
606-20-2	2,6-Dinitrotoluene	0.905		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	0.972		0.20	
88-72-2	2-Nitrotoluene	0.883		0.51	
99-08-1	3-Nitrotoluene	0.964		0.51	
99-99-0	4-Nitrotoluene	0.867		0.51	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.983		0.10	
2691-41-0	HMX	1.01		0.10	
121-82-4	RDX	1.01		0.10	
98-95-3	Nitrobenzene	0.938		0.10	
479-45-8	Tetryl	0.627		0.10	
55-63-0	Nitroglycerin	4.65		0.66	
78-11-5	PETN	4.52		0.66	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MS RE Lab Sample ID: 580-89081-3 MS RE

Matrix: Water Lab File ID: ZD0000018.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 996.9(mL) Date Analyzed: 10/02/2019 04:09

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*0.910*		*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*0.926*		*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*0.760*		*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*0.898*		*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*0.887*		*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*0.959*		*0.20*	
88-72-2	*2-Nitrotoluene*	*0.862*		*0.50*	
99-08-1	*3-Nitrotoluene*	*0.896*		*0.50*	
99-99-0	*4-Nitrotoluene*	*0.881*		*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*0.935*		*0.10*	
2691-41-0	*HMX*	*0.956*		*0.10*	
121-82-4	*RDX*	*0.968*		*0.10*	
98-95-3	*Nitrobenzene*	*0.913*		*0.10*	
479-45-8	*Tetryl*	*0.707*		*0.10*	
55-63-0	*Nitroglycerin*	*4.54*		*0.65*	
78-11-5	*PETN*	*4.53*		*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.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MSD Lab Sample ID: 580-89081-3 MSD

Matrix: Water Lab File ID: Z0000035.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/17/2019 10:52

Sample wt/vol: 956.1(mL) Date Analyzed: 09/27/2019 23:12

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.: 326491 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	1.03		0.10	
99-65-0	1,3-Dinitrobenzene	1.03		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.727		0.10	
121-14-2	2,4-Dinitrotoluene	1.01		0.10	
606-20-2	2,6-Dinitrotoluene	0.975		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.04		0.21	
88-72-2	2-Nitrotoluene	0.969		0.52	
99-08-1	3-Nitrotoluene	1.06		0.52	
99-99-0	4-Nitrotoluene	0.969		0.52	
19406-51-0	4-Amino-2,6-dinitrotoluene	1.06		0.10	
2691-41-0	HMX	1.08		0.10	
121-82-4	RDX	1.09		0.10	
98-95-3	Nitrobenzene	1.01		0.10	
479-45-8	Tetryl	0.680		0.10	
55-63-0	Nitroglycerin	4.68		0.68	
78-11-5	PETN	4.59		0.68	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	91		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW MSD RE Lab Sample ID: 580-89081-3 MSD RE

Matrix: Water Lab File ID: ZD0000019.D

Analysis Method: 8330B Date Collected: 09/10/2019 12:30

Extraction Method: 8330-Prep Date Extracted: 09/30/2019 07:12

Sample wt/vol: 982.4(mL) Date Analyzed: 10/02/2019 05:03

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.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*0.893*		*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*0.913*		*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*0.741*		*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*0.888*		*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*0.889*		*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*0.922*		*0.20*	
88-72-2	*2-Nitrotoluene*	*0.847*		*0.51*	
99-08-1	*3-Nitrotoluene*	*0.878*		*0.51*	
99-99-0	*4-Nitrotoluene*	*0.860*		*0.51*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*0.894*		*0.10*	
2691-41-0	*HMX*	*0.939*		*0.10*	
121-82-4	*RDX*	*0.956*		*0.10*	
98-95-3	*Nitrobenzene*	*0.885*		*0.10*	
479-45-8	*Tetryl*	*0.694*		*0.10*	
55-63-0	*Nitroglycerin*	*4.41*		*0.66*	
78-11-5	*PETN*	*4.40*		*0.66*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	84		79-111

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Start Date: 09/25/2019 22:31

Analysis Batch Number: 326139 End Date: 09/26/2019 12:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-326139/4 IC		09/25/2019 22:31	1	YA0000011.D	Synergi C18 4.6(mm)
STD2 320-326139/5 IC		09/25/2019 23:24	1	YA0000012.D	Synergi C18 4.6(mm)
STD3 320-326139/6 IC		09/26/2019 00:18	1	YA0000013.D	Synergi C18 4.6(mm)
STD4 320-326139/7 IC		09/26/2019 01:11	1	YA0000014.D	Synergi C18 4.6(mm)
STD5 320-326139/8 IC		09/26/2019 02:05	1	YA0000015.D	Synergi C18 4.6(mm)
STD6 320-326139/9 IC		09/26/2019 02:59	1	YA0000016.D	Synergi C18 4.6(mm)
STD7 320-326139/10 IC		09/26/2019 03:52	1	YA0000017.D	Synergi C18 4.6(mm)
ICV 320-326139/12		09/26/2019 05:40	1	YA0000019.D	Synergi C18 4.6(mm)
STD 320-326139/13 IC		09/26/2019 06:33	1		Synergi C18 4.6(mm)
STD 320-326139/14 IC		09/26/2019 07:27	1		Synergi C18 4.6(mm)
STD 320-326139/15 IC		09/26/2019 08:20	1		Synergi C18 4.6(mm)
STD 320-326139/16 IC		09/26/2019 09:14	1		Synergi C18 4.6(mm)
STD 320-326139/17 IC		09/26/2019 10:08	1		Synergi C18 4.6(mm)
STD 320-326139/18 IC		09/26/2019 11:01	1		Synergi C18 4.6(mm)
ICV 320-326139/20		09/26/2019 12:49	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Start Date: 09/26/2019 18:35

Analysis Batch Number: 326491 End Date: 09/28/2019 12:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-326491/3		09/26/2019 18:35	1	Z0000003.D	Synergi C18 4.6(mm)
CCVRT 320-326491/4		09/26/2019 19:29	1		Synergi C18 4.6(mm)
ZZZZZ		09/26/2019 21:16	1		Synergi C18 4.6(mm)
ZZZZZ		09/26/2019 22:10	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 00:51	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 01:44	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 02:38	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 03:32	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 04:25	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 05:19	1		Synergi C18 4.6(mm)
CCV 320-326491/16		09/27/2019 06:13	1	Z0000016.D	Synergi C18 4.6(mm)
CCV 320-326491/17		09/27/2019 07:06	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 08:00	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 08:53	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 09:47	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 10:41	1		Synergi C18 4.6(mm)
MB 320-324018/1-A		09/27/2019 11:34	1	Z0000022.D	Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 12:28	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 13:22	1		Synergi C18 4.6(mm)
580-89081-1		09/27/2019 14:15	1	Z0000025.D	Synergi C18 4.6(mm)
580-89081-2		09/27/2019 15:09	1	Z0000026.D	Synergi C18 4.6(mm)
580-89081-3		09/27/2019 16:03	1	Z0000027.D	Synergi C18 4.6(mm)
CCV 320-326491/28		09/27/2019 16:56	1	Z0000028.D	Synergi C18 4.6(mm)
CCV 320-326491/29		09/27/2019 17:50	1		Synergi C18 4.6(mm)
580-89081-3 MS		09/27/2019 18:43	1	Z0000030.D	Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 19:37	1		Synergi C18 4.6(mm)
580-89081-4		09/27/2019 20:31	1	Z0000032.D	Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 21:24	1		Synergi C18 4.6(mm)
ZZZZZ		09/27/2019 22:18	1		Synergi C18 4.6(mm)
580-89081-3 MSD		09/27/2019 23:12	1	Z0000035.D	Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 00:05	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 00:59	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 01:53	1		Synergi C18 4.6(mm)
CCV 320-326491/41		09/28/2019 03:40	1	Z0000040.D	Synergi C18 4.6(mm)
CCV 320-326491/42		09/28/2019 04:34	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 05:27	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 06:21	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 07:15	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 08:08	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 09:02	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 09:55	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 10:49	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 11:43	1		Synergi C18 4.6(mm)
CCV 320-326491/50		09/28/2019 12:36	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89081-1

SDG No.:

Instrument ID: LC11 Start Date: 10/01/2019 14:45

Analysis Batch Number: 327493 End Date: 10/02/2019 13:59

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-327493/3		10/01/2019 14:45	1	ZD0000003.D	Synergi C18 4.6(mm)
CCVRT 320-327493/4		10/01/2019 15:39	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 17:26	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 18:20	1		Synergi C18 4.6(mm)
LCS 320-324018/2-A		10/01/2019 19:13	1	ZD0000008.D	Synergi C18 4.6(mm)
LCSD 320-324018/3-A		10/01/2019 20:07	1	ZD0000009.D	Synergi C18 4.6(mm)
MB 320-327235/1-A		10/01/2019 21:00	1	ZD0000010.D	Synergi C18 4.6(mm)
LCS 320-327235/2-A		10/01/2019 21:54	1	ZD0000011.D	Synergi C18 4.6(mm)
PB 320-327235/3-A		10/01/2019 22:48	1	ZD0000012.D	Synergi C18 4.6(mm)
580-89081-1 RE		10/01/2019 23:41	1	ZD0000013.D	Synergi C18 4.6(mm)
580-89081-2 RE		10/02/2019 00:35	1	ZD0000014.D	Synergi C18 4.6(mm)
580-89081-3 RE		10/02/2019 01:28	1	ZD0000015.D	Synergi C18 4.6(mm)
CCV 320-327493/55		10/02/2019 02:22	1	ZD0000016.D	Synergi C18 4.6(mm)
CCV 320-327493/56		10/02/2019 03:16	1		Synergi C18 4.6(mm)
580-89081-3 MS RE		10/02/2019 04:09	1	ZD0000018.D	Synergi C18 4.6(mm)
580-89081-3 MSD RE		10/02/2019 05:03	1	ZD0000019.D	Synergi C18 4.6(mm)
580-89081-4 RE		10/02/2019 05:57	1	ZD0000020.D	Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 06:50	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 08:38	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 09:31	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 10:24	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 11:18	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 12:12	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 13:05	4		Synergi C18 4.6(mm)
CCV 320-327493/16		10/02/2019 13:59	1	ZD0000029.D	Synergi C18 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-89081-1

SDG No.:

Batch Number: 324018 Batch Start Date: 09/17/19 10:51 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 09/20/19 11:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00121	HP8330SP 00110
MB 320-324018/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-324018/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
LCSD 320-324018/3		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
580-89081-B-1	03Q19LC15SW	8330-Prep, 8330B	T	1489.5 g	510.23 g	979.3 mL	20 mL	50 uL	
580-89081-B-2	03Q19LCMW03SW	8330-Prep, 8330B	T	1499.8 g	507.38 g	992.4 mL	20 mL	50 uL	
580-89081-B-3	03Q19LCMW03DW	8330-Prep, 8330B	T	1498.6 g	505.01 g	993.6 mL	20 mL	50 uL	
580-89081-B-3 MS	03Q19LCMW03DW	8330-Prep, 8330B	T	1493.3 g	505.39 g	987.9 mL	20 mL	50 uL	20 uL
580-89081-A-3 MSD	03Q19LCMW03DW	8330-Prep, 8330B	T	1499.9 g	543.79 g	956.1 mL	20 mL	50 uL	20 uL
580-89081-B-4	03Q19LCMW140W	8330-Prep, 8330B	T	1511.8 g	504.33 g	1007.5 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPMETSP 00055	HPNGPETNSP 00080	AnalysisComment			
MB 320-324018/1		8330-Prep, 8330B				SPE 4 Port 5			
LCS 320-324018/2		8330-Prep, 8330B		80 uL	100 uL	SPE 4 Port 6			
LCSD 320-324018/3		8330-Prep, 8330B		80 uL	100 uL	SPE 4 Port 3			
580-89081-B-1	03Q19LC15SW	8330-Prep, 8330B	T			SPE 3 Port 4			
580-89081-B-2	03Q19LCMW03SW	8330-Prep, 8330B	T			SPE 5 Port 1			
580-89081-B-3	03Q19LCMW03DW	8330-Prep, 8330B	T			SPE 3 Port 5			
580-89081-B-3 MS	03Q19LCMW03DW	8330-Prep, 8330B	T		100 uL	SPE 3 Port 6			
580-89081-A-3 MSD	03Q19LCMW03DW	8330-Prep, 8330B	T		100 uL	SPE 4 Port 6			
580-89081-B-4	03Q19LCMW140W	8330-Prep, 8330B	T			SPE 4 Port 2			

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.: 580-89081-1

SDG No.:

Batch Number: 324018 Batch Start Date: 09/17/19 10:51 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 09/20/19 11:12

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00112 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Client IDs match the labels; Pipette ID: 48487M; 2 mL pipette lot #11162018
Analyst ID - Concentration	JFA 9/17/19
Date of Clean up	9/20/19
Date Dilution Performed	9/20/19
Analyst ID - Dilution	NGK
Filter ID	R8PA33636
Date of Final Volume	9/20/19
Vendor lot number	0.1% HOAc/ACN_00112
Millipore Water Dispense Date	9/13/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	SC 9/17/19
Solvent	0.1% HOAc/ACN
SPE Cartridge Lot ID	005039021B

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.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-89081-1

SDG No.:

Batch Number: 327235 Batch Start Date: 09/30/19 07:09 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 10/01/19 09:32

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00123	HP8330SP 00112
MB 320-327235/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-327235/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
PB 320-327235/3		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
580-89081-A-1	03Q19LC15SW	8330-Prep, 8330B	T	1510.0 g	503.37 g	1006.6 mL	20 mL	50 uL	
580-89081-A-2	03Q19LCMW03SW	8330-Prep, 8330B	T	1497.2 g	505.43 g	991.8 mL	20 mL	50 uL	
580-89081-A-3	03Q19LCMW03DW	8330-Prep, 8330B	T	1500.6 g	505.73 g	994.9 mL	20 mL	50 uL	
580-89081-A-3 MS	03Q19LCMW03DW	8330-Prep, 8330B	T	1502.2 g	505.26 g	996.9 mL	20 mL	50 uL	20 uL
580-89081-B-3 MSD	03Q19LCMW03DW	8330-Prep, 8330B	T	1487.4 g	504.99 g	982.4 mL	20 mL	50 uL	20 uL
580-89081-A-4	03Q19LCMW140W	8330-Prep, 8330B	T	1476.5 g	506.02 g	970.5 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPNGPETNSP 00080	AnalysisComment				
MB 320-327235/1		8330-Prep, 8330B			SPE 3 Port 2				
LCS 320-327235/2		8330-Prep, 8330B		100 uL	SPE 3 Port 3				
PB 320-327235/3		8330-Prep, 8330B			SPE 3 Port 4				
580-89081-A-1	03Q19LC15SW	8330-Prep, 8330B	T		SPE 3 Port 5				
580-89081-A-2	03Q19LCMW03SW	8330-Prep, 8330B	T		SPE 3 Port 6				
580-89081-A-3	03Q19LCMW03DW	8330-Prep, 8330B	T		SPE 3 Port 1				
580-89081-A-3 MS	03Q19LCMW03DW	8330-Prep, 8330B	T	100 uL	SPE 4 Port 1				
580-89081-B-3 MSD	03Q19LCMW03DW	8330-Prep, 8330B	T	100 uL	SPE 4 Port 2				
580-89081-A-4	03Q19LCMW140W	8330-Prep, 8330B	T		SPE 4 Port 3				

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.: 580-89081-1

SDG No.:

Batch Number: 327235 Batch Start Date: 09/30/19 07:09 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 10/01/19 09:32

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00112 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Client IDs match the labels; Pipette ID: 48487M; 2 mL pipette lot #11162018
Analyst ID - Concentration	JFA 9/30/19
Date of Clean up	10/01/19
Date Dilution Performed	10/01/19
Analyst ID - Dilution	NGK
Filter ID	R8PA33636
Date of Final Volume	10/01/19
Vendor lot number	0.1% HOAc/ACN_00112
Millipore Water Dispense Date	9/25/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	SC 9/30/19
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 6860

Perchlorate (IC/MS) by Method 6860

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23012.d

Lab ID: LCS 280-471409/14 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0520 J	104	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23010.d

Lab ID: DLCK 280-471409/12 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perchlorate	0.0500	ND	97	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23013.d

Lab ID: INF 280-471409/15 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0559	112	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab File ID: IC819I23011.d Lab Sample ID: MB 280-471409/13

Matrix: Water Date Extracted:

Instrument ID: LC_LCMS8 Date Analyzed: 09/23/2019 12:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	ICB 280-471409/10	IC819I23008.d	09/23/2019 12:05
	DLCK 280-471409/12	IC819I23010.d	09/23/2019 12:15
	LCS 280-471409/14	IC819I23012.d	09/23/2019 12:25
	CCB 280-471409/25	IC819I23026.d	09/23/2019 13:47
03Q19LC15SW	580-89081-1	IC819I23035.d	09/23/2019 14:33
03Q19LCMW03SW	580-89081-2	IC819I23036.d	09/23/2019 14:39
	CCB 280-471409/38	IC819I23039.d	09/23/2019 14:54
03Q19LCMW03DW	580-89081-3	IC819I23040.d	09/23/2019 14:59
03Q19LCMW140W	580-89081-4	IC819I23041.d	09/23/2019 15:04
	CCB 280-471409/43	IC819I23044.d	09/23/2019 15:19

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Calibration Start Date: 09/23/2019 11:34

GC Column: ID: () Calibration End Date: 09/23/2019 11:59

Calibration ID: 38414

		ClO418					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		936976	2.62				
UPPER LIMIT		1405464	7.62				
LOWER LIMIT		468488	-2.38				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 280-471409/10		977999	2.61				
ICV 280-471409/11		1049880	2.61				
DLCK 280-471409/12		1021951	2.63				
MB 280-471409/13		988056	2.59				
LCS 280-471409/14		1077295	2.59				
INF 280-471409/15		865841	2.60				
CCV 280-471409/23		997859	2.60				
CCVL 280-471409/24		884970	2.59				
CCB 280-471409/25		978255	2.60				
580-89081-1	03Q19LC15SW	1071994	2.56				
580-89081-2	03Q19LCMW03SW	1060002	2.60				
CCV 280-471409/36		1010480	2.59				
CCVL 280-471409/37		872642	2.61				
CCB 280-471409/38		1015863	2.57				
580-89081-3	03Q19LCMW03DW	1105146	2.57				
580-89081-4	03Q19LCMW140W	1158735	2.60				
CCV 280-471409/41		1078049	2.59				
CCVL 280-471409/42		1019461	2.57				
CCB 280-471409/43		1016080	2.57				

ClO418 = Perchlorate-18O

Area Limit = 50%-150% of internal standard area
RT Limit = ± 5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6860

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LC15SW Lab Sample ID: 580-89081-1

Matrix: Water Lab File ID: IC819I23035.d

Analysis Method: 6860 Date Collected: 09/10/2019 10:10

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 14:33

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 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, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03SW Lab Sample ID: 580-89081-2

Matrix: Water Lab File ID: IC819I23036.d

Analysis Method: 6860 Date Collected: 09/10/2019 13:10

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 14:39

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 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, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW03DW Lab Sample ID: 580-89081-3

Matrix: Water Lab File ID: IC819I23040.d

Analysis Method: 6860 Date Collected: 09/10/2019 12:30

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 14:59

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 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, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: 03Q19LCMW140W Lab Sample ID: 580-89081-4

Matrix: Water Lab File ID: IC819I23041.d

Analysis Method: 6860 Date Collected: 09/10/2019 13:00

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:04

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 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, Denver Job No.: 580-89081-1 Analy Batch No.: 471409

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/23/2019 11:34 Calibration End Date: 09/23/2019 11:59 Calibration ID: 38414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-471409/4	IC819I23002.d
Level 2	STD050 280-471409/5	IC819I23003.d
Level 3	STD100 280-471409/6	IC819I23004.d
Level 4	STD200 280-471409/7	IC819I23005.d
Level 5	STD500 280-471409/8	IC819I23006.d
Level 6	STD1000 280-471409/9	IC819I23007.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 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.4742 1.2457	1.4658	1.3673	1.2688	1.2402	Lin1	7.1682	1.2385							1.0000		0.9900

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, Denver Job No.: 580-89081-1 Analy Batch No.: 471409

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/23/2019 11:34 Calibration End Date: 09/23/2019 11:59 Calibration ID: 38414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-471409/4	IC819I23002.d
Level 2	STD050 280-471409/5	IC819I23003.d
Level 3	STD100 280-471409/6	IC819I23004.d
Level 4	STD200 280-471409/7	IC819I23005.d
Level 5	STD500 280-471409/8	IC819I23006.d
Level 6	STD1000 280-471409/9	IC819I23007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	ClO4 18	Lin1	128859 5955955	345211	611865	1147610	2913868	20.0 1000	50.0	100	200	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: ICV 280-471409/11 Calibration Date: 09/23/2019 12:10

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23009.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.253		0.197	0.200	-1.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 280-471409/23 Calibration Date: 09/23/2019 13:12

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23021.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.228		0.193	0.200	-3.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVL 280-471409/24 Calibration Date: 09/23/2019 13:39

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23025.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.587		0.0198	0.0200	-0.8	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 280-471409/36 Calibration Date: 09/23/2019 14:44

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23037.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.206		0.189	0.200	-5.5	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVL 280-471409/37 Calibration Date: 09/23/2019 14:49

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23038.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.722		0.0220	0.0200	10.1	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCV 280-471409/41 Calibration Date: 09/23/2019 15:09

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23042.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.184		0.185	0.200	-7.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Lab Sample ID: CCVL 280-471409/42 Calibration Date: 09/23/2019 15:14

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23043.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.790		0.0231	0.0200	15.6	30.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-471409/13

Matrix: Water Lab File ID: IC819I23011.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:20

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 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, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471409/25

Matrix: Water Lab File ID: IC819I23026.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 13:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471409/38

Matrix: Water Lab File ID: IC819I23039.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 14:54

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471409/43

Matrix: Water Lab File ID: IC819I23044.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:19

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 280-471409/10

Matrix: Water Lab File ID: IC819I23008.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:05

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-471409/14

Matrix: Water Lab File ID: IC819I23012.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:25

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	0.0520	J	0.50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: DLCK 280-471409/12

Matrix: Water Lab File ID: IC819I23010.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:15

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 280-471409/15

Matrix: Water Lab File ID: IC819I23013.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:30

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	0.0559		0.050	

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Instrument ID: LC_LCMS8 Start Date: 09/23/2019 11:34

Analysis Batch Number: 471409 End Date: 09/23/2019 15:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD020 280-471409/4 IC		09/23/2019 11:34	1	IC819I23002.d	
STD050 280-471409/5 IC		09/23/2019 11:39	1	IC819I23003.d	
STD100 280-471409/6 IC		09/23/2019 11:44	1	IC819I23004.d	
STD200 280-471409/7 ICISAV		09/23/2019 11:49	1	IC819I23005.d	
STD500 280-471409/8 IC		09/23/2019 11:54	1	IC819I23006.d	
STD1000 280-471409/9 IC		09/23/2019 11:59	1	IC819I23007.d	
ICB 280-471409/10		09/23/2019 12:05	1	IC819I23008.d	
ICV 280-471409/11		09/23/2019 12:10	1	IC819I23009.d	
DLCK 280-471409/12		09/23/2019 12:15	1	IC819I23010.d	
MB 280-471409/13		09/23/2019 12:20	1	IC819I23011.d	
LCS 280-471409/14		09/23/2019 12:25	1	IC819I23012.d	
INF 280-471409/15		09/23/2019 12:30	1	IC819I23013.d	
ZZZZZ		09/23/2019 12:35	20		
ZZZZZ		09/23/2019 12:41	20		
ZZZZZ		09/23/2019 12:46	20		
ZZZZZ		09/23/2019 12:51	20		
ZZZZZ		09/23/2019 12:56	20		
ZZZZZ		09/23/2019 13:01	1		
ZZZZZ		09/23/2019 13:07	1		
CCV 280-471409/23		09/23/2019 13:12	1	IC819I23021.d	
CCVL 280-471409/24		09/23/2019 13:39	1	IC819I23025.d	
CCB 280-471409/25		09/23/2019 13:47	1	IC819I23026.d	
ZZZZZ		09/23/2019 13:53	10		
ZZZZZ		09/23/2019 13:58	1		
ZZZZZ		09/23/2019 14:03	1		
ZZZZZ		09/23/2019 14:08	1		
ZZZZZ		09/23/2019 14:13	1		
ZZZZZ		09/23/2019 14:18	1		
ZZZZZ		09/23/2019 14:23	1		
ZZZZZ		09/23/2019 14:28	1		
580-89081-1		09/23/2019 14:33	1	IC819I23035.d	
580-89081-2		09/23/2019 14:39	1	IC819I23036.d	
CCV 280-471409/36		09/23/2019 14:44	1	IC819I23037.d	
CCVL 280-471409/37		09/23/2019 14:49	1	IC819I23038.d	
CCB 280-471409/38		09/23/2019 14:54	1	IC819I23039.d	
580-89081-3		09/23/2019 14:59	1	IC819I23040.d	
580-89081-4		09/23/2019 15:04	1	IC819I23041.d	
CCV 280-471409/41		09/23/2019 15:09	1	IC819I23042.d	
CCVL 280-471409/42		09/23/2019 15:14	1	IC819I23043.d	
CCB 280-471409/43		09/23/2019 15:19	1	IC819I23044.d	

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Batch Number: 471409 Batch Start Date: 09/23/19 11:34 Batch Analyst: Becker, Chad B

Batch Method: 6860 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	6860-IS-Spike 00087	6860_INF_Soln 00017	6860CalStockW 00110	6860ICVStockW 00043	6860LCS 00024	
STD020 280-471409/4 IC		6860		50 uL		100 uL			
STD050 280-471409/5 IC		6860		50 uL		250 uL			
STD100 280-471409/6 IC		6860		50 uL		500 uL			
STD200 280-471409/7 ICISAV		6860		50 uL		1000 uL			
STD500 280-471409/8 IC		6860		50 uL		2500 uL			
STD1000 280-471409/9 IC		6860		50 uL		5000 uL			
ICB 280-471409/10		6860		50 uL					
ICV 280-471409/11		6860		50 uL			1000 uL		
DLCK 280-471409/12		6860		50 uL		250 uL			
MB 280-471409/13		6860		50 uL					
LCS 280-471409/14		6860		50 uL				50 uL	
INF 280-471409/15		6860		50 uL	4950 uL			50 uL	
CCV 280-471409/23		6860		50 uL		1000 uL			
CCVL 280-471409/24		6860		50 uL		100 uL			
CCB 280-471409/25		6860		50 uL					
580-89081-C-1	03Q19LC15SW	6860	T	50 uL					
580-89081-C-2	03Q19LCMW03SW	6860	T	50 uL					
CCV 280-471409/36		6860		50 uL		1000 uL			
CCVL 280-471409/37		6860		50 uL		100 uL			
CCB 280-471409/38		6860		50 uL					
580-89081-C-3	03Q19LCMW03DW	6860	T	50 uL					
580-89081-C-4	03Q19LCMW140W	6860	T	50 uL					

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.

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89081-1

SDG No.:

Batch Number: 471409 Batch Start Date: 09/23/19 11:34 Batch Analyst: Becker, Chad B

Batch Method: 6860 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	6860-IS-Spike 00087	6860_INF_Soln 00017	6860CalStockW 00110	6860ICVStockW 00043	6860LCS 00024	
CCV 280-471409/41		6860		50 uL		1000 uL			
CCVL 280-471409/42		6860		50 uL		100 uL			
CCB 280-471409/43		6860		50 uL					

Batch Notes	
Batch Comment	CB

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

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 & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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, 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_LL	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LC15SW	9/10/19	1010	G	W			X		X	3	
03Q19LCMW03SW		1310					X	X	X	6	
03Q19LCMW03DW		1230								14	MS/MSD
03QLCMW14OW		1300								6	
091019TB		—								3	

580-89081 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: Data Package 3 3.5, 4.8

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Tommy Laird	9/10/19 1900	PBS		9-11-19 / 1256	M.E
Relinquished by:	Date/Time: 9-11-19 / 1333	Company M.E	Received by:	Date/Time: 9/11/19 1353	Company TAOR
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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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	8330A Nitroaromatics and Nitramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19LC15SW	9/10/19	1010	G	W			X		X	3	
03Q19LCMW03SW		1310					X	X	X	6	
03Q19LCMW03DW		1230								14	MS/MSD
03QLCMW14OW		1300								6	
091019TB		—								3	

580-89081 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: Data Package 3 3.5, 4.8

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Tommy Laird	9/10/19 1900	PBS		9-11-19 / 1256	ME
Relinquished by:	Date/Time: 9-11-19 / 1333	Company ME	Received by:	Date/Time: 9/11/19 1333	Company TAOR
Relinquished by:	Date/Time: 9/11/19 1730	Company TAOR	Received by:	Date/Time: 9/12/19 0930	Company TAOR

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

Cooler Temperature(s) °C and Other Remarks:

IR5 = -0.5/-0.4

Ver: 08/04/2016

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89081-1
Address: 4955 Yarrow Street,	Due Date Requested: 9/27/2019			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19LC15SW (580-89081-1)	9/10/19	10:10 Pacific		Water			X	1	
03Q19LCMW03SW (580-89081-2)	9/10/19	13:10 Pacific		Water			X	1	
03Q19LCMW03DW (580-89081-3)	9/10/19	12:30 Pacific		Water			X	1	
03Q19LCMW140W (580-89081-4)	9/10/19	13:00 Pacific		Water			X	1	

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	[signature]	9/19/19 1630	FTDS	[signature]	9/18/19 0915	TAREN
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: 1.4, +0.1 IR, ~~SR~~, 9/18/19

Ver: 01 16 2019

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: 580-69794.1
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 #: 580-89081-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 9/27/2019			Preservation Codes:
City: West Sacramento	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: 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:							
03Q19LC15SW (580-89081-1)	9/10/19	10:10 Pacific		Water			X	X	3	
03Q19LC035W (580-89081-2)	9/10/19	13:10 Pacific		Water			X	X	3	
03Q19LC03DW (580-89081-3)	9/10/19	12:30 Pacific		Water			X	X	3	
03Q19LC03DW (580-89081-3MS)	9/10/19	12:30 Pacific	MS	Water				X	2	
03Q19LC03DW (580-89081-3MSD)	9/10/19	12:30 Pacific	MSD	Water				X	2	
03Q19LC140W (580-89081-4)	9/10/19	13:00 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:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/11/19 1700	TAPOR			
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: 580-89081-1

Login Number: 89081
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: 580-89081-1

Login Number: 89081
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89081-1

Login Number: 89081
List Number: 2
Creator: Oropeza, Salvador

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/12/19 01:07 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	481188, 481189
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	1.9c, 1.5c
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	

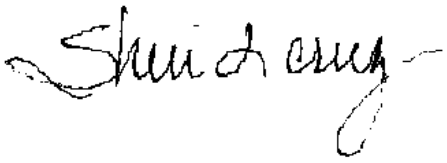
ANALYTICAL REPORT

Job Number: 580-89178-1

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
10/11/2019 4:57 PM

Sheri L Cruz, Project Manager I
5755 8th Street East, Tacoma, WA, 98424
(253)922-2310
sheri.cruz@testamericainc.com
10/11/2019

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

Table of Contents

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Table of Contents

Definitions/Glossary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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)

CASE NARRATIVE

Client: PBS Engineering and Environmental
Project: Camp Bonneville Groundwater 2019-2020
Report Number: 580-89178-1

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 09/13/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.9 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 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3), 03Q19L4MW10BW (580-89178-4) and 091219TB (580-89178-5) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260C. The samples were analyzed on 09/20/2019 and 09/21/2019.

The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-311759 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

PERCHLORATE
Samples 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and 03Q19L4MW10BW (580-89178-4) were analyzed for Perchlorate in accordance with SW846 6860. The samples were analyzed on 09/23/2019.

Samples 03Q19L4MW09AW (580-89178-1)[1000X], 03Q19L4MW09BW (580-89178-2)[1000X], 03Q19L4MW10AW (580-89178-3)[200X] and 03Q19L4MW10BW (580-89178-4)[1000X] 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.

EXPLOSIVES
Samples 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and 03Q19L4MW10BW (580-89178-4) were analyzed for explosives in accordance with 8330B. The samples were prepared on 09/19/2019 and 10/04/2019 and analyzed on 09/26/2019, 09/28/2019, 09/29/2019, 10/02/2019, 10/03/2019, 10/09/2019 and 10/10/2019.

Samples 03Q19L4MW09BW (580-89178-2)[4X] and 03Q19L4MW10BW (580-89178-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with method 8330_SPE_P_IVWT aqueous in preparation batch 320-324664.

The laboratory control sample duplicate (LCSD) for preparation batch 320-324664 and analytical batch 320-326750 recovered outside control limits for the following analytes: 2,4,6-Trinitrotoluene and Tetryl. The associated samples were re-extracted outside holding time. Both sets of data have been reported.

The following samples were re-prepared outside of preparation holding time due to the initial batch Laboratory Control Sample (LCS) recovering low for 2,4,6-Trinitrotoluene and/or Tetryl for method 8330B aqueous in preparation batch 320-328371: 03Q19L4MW09AW (580-89178-1), 03Q19L4MW09BW (580-89178-2), 03Q19L4MW10AW (580-89178-3) and 03Q19L4MW10BW (580-89178-4).

The following samples were diluted to bring the concentration of target analytes within the calibration range: 03Q19L4MW09BW (580-89178-2) and 03Q19L4MW10BW (580-89178-4). 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.

Detection Summary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Client Sample ID: 03Q19L4MW09AW — Lab Sample ID: 580-89178-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HMX	1.7		0.10		ug/L	1		8330B	Total/NA
RDX	6.7		0.10		ug/L	1		8330B	Total/NA
HMX - RE	1.7	H	0.10		ug/L	1		8330B	Total/NA
RDX - RE	6.1	H	0.10		ug/L	1		8330B	Total/NA
Perchlorate	360		50		ug/L	1000		6860	Total/NA

Client Sample ID: 03Q19L4MW09BW — Lab Sample ID: 580-89178-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	8.0		0.20		ug/L	1		8260C	Total/NA
1,1,2,2-Tetrachloroethane	2.4		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethane	12		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	8.1		0.20		ug/L	1		8260C	Total/NA
Dichlorodifluoromethane	18		0.40		ug/L	1		8260C	Total/NA
Trichloroethene	0.60		0.20		ug/L	1		8260C	Total/NA
HMX	1.7		0.10		ug/L	1		8330B	Total/NA
RDX	21	E	0.10		ug/L	1		8330B	Total/NA
RDX - DL	24		0.40		ug/L	4		8330B	Total/NA
HMX - RE	1.5	H	0.10		ug/L	1		8330B	Total/NA
RDX - RE	19	H E	0.10		ug/L	1		8330B	Total/NA
RDX - REDL	22	H	0.40		ug/L	4		8330B	Total/NA
Perchlorate	200		50		ug/L	1000		6860	Total/NA

Client Sample ID: 03Q19L4MW10AW — Lab Sample ID: 580-89178-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
HMX	0.42		0.10		ug/L	1		8330B	Total/NA
RDX	2.2		0.10		ug/L	1		8330B	Total/NA
HMX - RE	0.46	H	0.10		ug/L	1		8330B	Total/NA
RDX - RE	2.4	H	0.10		ug/L	1		8330B	Total/NA
Perchlorate	54		10		ug/L	200		6860	Total/NA

Client Sample ID: 03Q19L4MW10BW — Lab Sample ID: 580-89178-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	9.3		0.20		ug/L	1		8260C	Total/NA
1,1,2,2-Tetrachloroethane	0.86		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethane	11		0.20		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	11		0.20		ug/L	1		8260C	Total/NA
Dichlorodifluoromethane	26		0.40		ug/L	1		8260C	Total/NA
Trichloroethene	0.26		0.20		ug/L	1		8260C	Total/NA
RDX	11	E	0.10		ug/L	1		8330B	Total/NA
RDX - DL	12		0.20		ug/L	2		8330B	Total/NA
RDX - RE	11	H E	0.10		ug/L	1		8330B	Total/NA
RDX - REDL	13	H	0.20		ug/L	2		8330B	Total/NA
Perchlorate	190		50		ug/L	1000		6860	Total/NA

Client Sample ID: 091219TB — Lab Sample ID: 580-89178-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1

Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 22:15	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 22:15	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 22:15	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 22:15	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 22:15	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:15	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 22:15	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 22:15	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 22:15	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 22:15	1
Benzene	ND		0.20		ug/L			09/20/19 22:15	1
Bromobenzene	ND		0.20		ug/L			09/20/19 22:15	1
Bromoform	ND		0.50		ug/L			09/20/19 22:15	1
Bromomethane	ND		0.50		ug/L			09/20/19 22:15	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 22:15	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 22:15	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Chloroethane	ND		0.50		ug/L			09/20/19 22:15	1
Chloroform	ND		0.20		ug/L			09/20/19 22:15	1
Chloromethane	ND		0.50		ug/L			09/20/19 22:15	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
Dibromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 22:15	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 22:15	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 22:15	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 22:15	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 22:15	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 22:15	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 22:15	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 22:15	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 22:15	1
Naphthalene	ND		1.0		ug/L			09/20/19 22:15	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 22:15	1

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1

Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 22:15	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 22:15	1
Styrene	ND		0.50		ug/L			09/20/19 22:15	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 22:15	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 22:15	1
Toluene	ND		0.20		ug/L			09/20/19 22:15	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:15	1
Trichloroethene	ND		0.20		ug/L			09/20/19 22:15	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 22:15	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 22:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/20/19 22:15*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 22:15*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*09/20/19 22:15*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 22:15*	*1*
Trifluorotoluene (Surr)	*109*		*80 - 120*		*09/20/19 22:15*	*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		09/19/19 07:30	09/29/19 19:53	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 19:53	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 19:53	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
HMX	**1.7**		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
RDX	**6.7**		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 19:53	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 19:53	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/26/19 11:39*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 19:53*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 20:55	1

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1

Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
3-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
4-Nitrotoluene	ND	H	0.51		ug/L		10/04/19 07:06	10/09/19 20:55	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
HMX	**1.7**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
RDX	**6.1**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:55	1
Nitroglycerin	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 20:55	1
PETN	ND	H	0.66		ug/L		10/04/19 07:06	10/09/19 20:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 18:32*	*1*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:55*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**360**		50		ug/L			09/23/19 16:56	1000

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 22:41	1
1,1,1-Trichloroethane	**8.0**		0.20		ug/L			09/20/19 22:41	1
1,1,2,2-Tetrachloroethane	**2.4**		0.20		ug/L			09/20/19 22:41	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloroethane	**12**		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloroethene	**8.1**		0.20		ug/L			09/20/19 22:41	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 22:41	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 22:41	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 22:41	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 22:41	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 22:41	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 22:41	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 22:41	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 22:41	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 22:41	1
Benzene	ND		0.20		ug/L			09/20/19 22:41	1
Bromobenzene	ND		0.20		ug/L			09/20/19 22:41	1

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		0.50		ug/L			09/20/19 22:41	1
Bromomethane	ND		0.50		ug/L			09/20/19 22:41	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 22:41	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 22:41	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Chloroethane	ND		0.50		ug/L			09/20/19 22:41	1
Chloroform	ND		0.20		ug/L			09/20/19 22:41	1
Chloromethane	ND		0.50		ug/L			09/20/19 22:41	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:41	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
Dibromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 22:41	1
Dichlorodifluoromethane	**18**		0.40		ug/L			09/20/19 22:41	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 22:41	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 22:41	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 22:41	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 22:41	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 22:41	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 22:41	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 22:41	1
Naphthalene	ND		1.0		ug/L			09/20/19 22:41	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 22:41	1
o-Xylene	ND		0.50		ug/L			09/20/19 22:41	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 22:41	1
Styrene	ND		0.50		ug/L			09/20/19 22:41	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 22:41	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 22:41	1
Toluene	ND		0.20		ug/L			09/20/19 22:41	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 22:41	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 22:41	1
Trichloroethene	**0.60**		0.20		ug/L			09/20/19 22:41	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 22:41	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 22:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*09/20/19 22:41*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 22:41*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*09/20/19 22:41*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 22:41*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/20/19 22:41*	*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		09/19/19 07:30	09/29/19 21:40	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 21:40	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 21:40	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
HMX	**1.7**		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
RDX	**21**	**E**	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 21:40	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 21:40	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*103*		*79 - 111*	*09/19/19 07:30*	*09/26/19 12:37*	*1*
3,4-Dinitrotoluene	*99*		*79 - 111*	*09/19/19 07:30*	*09/29/19 21:40*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**24**		0.40		ug/L		09/19/19 07:30	10/02/19 13:05	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*98*		*79 - 111*	*09/19/19 07:30*	*10/02/19 13:05*	*4*
3,4-Dinitrotoluene	*109*		*79 - 111*	*09/19/19 07:30*	*10/02/19 23:14*	*4*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 19:08	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 19:08	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
HMX	**1.5**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
RDX	**19**	**H E**	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 19:08	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 19:08	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 19:08*	*1*
3,4-Dinitrotoluene	*95*		*79 - 111*	*10/04/19 07:06*	*10/09/19 19:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**22**	**H**	0.40		ug/L		10/04/19 07:06	10/10/19 00:30	4

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/10/19 00:30*	*4*
3,4-Dinitrotoluene	*93*		*79 - 111*	*10/04/19 07:06*	*10/10/19 02:12*	*4*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**200**		50		ug/L			09/23/19 17:01	1000

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3

Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 23:08	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 23:08	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 23:08	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 23:08	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 23:08	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:08	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 23:08	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 23:08	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 23:08	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 23:08	1
Benzene	ND		0.20		ug/L			09/20/19 23:08	1
Bromobenzene	ND		0.20		ug/L			09/20/19 23:08	1
Bromoform	ND		0.50		ug/L			09/20/19 23:08	1
Bromomethane	ND		0.50		ug/L			09/20/19 23:08	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 23:08	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 23:08	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Chloroethane	ND		0.50		ug/L			09/20/19 23:08	1
Chloroform	ND		0.20		ug/L			09/20/19 23:08	1
Chloromethane	ND		0.50		ug/L			09/20/19 23:08	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
Dibromomethane	ND		0.20		ug/L			09/20/19 23:08	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 23:08	1

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3

Date Collected: 09/12/19 14:10
Matrix: Water

Date Received: 09/13/19 13:55

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			09/20/19 23:08	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 23:08	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 23:08	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 23:08	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 23:08	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 23:08	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 23:08	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 23:08	1
Naphthalene	ND		1.0		ug/L			09/20/19 23:08	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 23:08	1
o-Xylene	ND		0.50		ug/L			09/20/19 23:08	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 23:08	1
Styrene	ND		0.50		ug/L			09/20/19 23:08	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 23:08	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 23:08	1
Toluene	ND		0.20		ug/L			09/20/19 23:08	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:08	1
Trichloroethene	ND		0.20		ug/L			09/20/19 23:08	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 23:08	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 23:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*09/20/19 23:08*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/20/19 23:08*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*09/20/19 23:08*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*09/20/19 23:08*	*1*
Trifluorotoluene (Surr)	*101*		*80 - 120*		*09/20/19 23:08*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 22:34	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 22:34	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
HMX	**0.42**		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
RDX	**2.2**		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 22:34	1
Nitroglycerin	ND		0.66		ug/L		09/19/19 07:30	09/29/19 22:34	1
PETN	ND		0.66		ug/L		09/19/19 07:30	09/29/19 22:34	1

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3

Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/28/19 00:09*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 22:34*	*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	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 20:02	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 20:02	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
HMX	**0.46**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
RDX	**2.4**	**H**	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 20:02	1
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 20:02	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*86*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:02*	*1*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 20:27*	*1*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**54**		10		ug/L			09/23/19 17:06	200

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4

Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/20/19 23:34	1
1,1,1-Trichloroethane	**9.3**		0.20		ug/L			09/20/19 23:34	1
1,1,2,2-Tetrachloroethane	**0.86**		0.20		ug/L			09/20/19 23:34	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloroethane	**11**		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloroethene	**11**		0.20		ug/L			09/20/19 23:34	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 23:34	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 23:34	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 23:34	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 23:34	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 23:34	1

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4

Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 23:34	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 23:34	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 23:34	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 23:34	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 23:34	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 23:34	1
Benzene	ND		0.20		ug/L			09/20/19 23:34	1
Bromobenzene	ND		0.20		ug/L			09/20/19 23:34	1
Bromoform	ND		0.50		ug/L			09/20/19 23:34	1
Bromomethane	ND		0.50		ug/L			09/20/19 23:34	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 23:34	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 23:34	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Chloroethane	ND		0.50		ug/L			09/20/19 23:34	1
Chloroform	ND		0.20		ug/L			09/20/19 23:34	1
Chloromethane	ND		0.50		ug/L			09/20/19 23:34	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:34	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
Dibromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 23:34	1
Dichlorodifluoromethane	**26**		0.40		ug/L			09/20/19 23:34	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 23:34	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 23:34	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 23:34	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 23:34	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 23:34	1
Methylene Chloride	ND	*	5.0		ug/L			09/20/19 23:34	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 23:34	1
Naphthalene	ND		1.0		ug/L			09/20/19 23:34	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
N-Propylbenzene	ND		0.30		ug/L			09/20/19 23:34	1
o-Xylene	ND		0.50		ug/L			09/20/19 23:34	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 23:34	1
Styrene	ND		0.50		ug/L			09/20/19 23:34	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 23:34	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 23:34	1
Toluene	ND		0.20		ug/L			09/20/19 23:34	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 23:34	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 23:34	1
Trichloroethene	**0.26**		0.20		ug/L			09/20/19 23:34	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 23:34	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 23:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*09/20/19 23:34*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 23:34*	*1*
Dibromofluoromethane (Surr)	*112*		*80 - 120*		*09/20/19 23:34*	*1*

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4

Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/20/19 23:34*	*1*
Trifluorotoluene (Surr)	*100*		*80 - 120*		*09/20/19 23:34*	*1*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,4,6-Trinitrotoluene	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 23:28	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 23:28	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
RDX	**11**	**E**	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Tetryl	ND	*	0.10		ug/L		09/19/19 07:30	09/29/19 23:28	1
Nitroglycerin	ND		0.66		ug/L		09/19/19 07:30	09/29/19 23:28	1
PETN	ND		0.66		ug/L		09/19/19 07:30	09/29/19 23:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	*92*		*79 - 111*	*09/19/19 07:30*	*09/28/19 01:06*	*1*
3,4-Dinitrotoluene	*97*		*79 - 111*	*09/19/19 07:30*	*09/29/19 23:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**12**		0.20		ug/L		09/19/19 07:30	10/02/19 16:40	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
3,4-Dinitrotoluene	*98*		*79 - 111*	*09/19/19 07:30*	*10/02/19 16:40*	*2*
3,4-Dinitrotoluene	*103*		*79 - 111*	*09/19/19 07:30*	*10/03/19 00:12*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
1,3-Dinitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,4,6-Trinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,4-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2,6-Dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
2-Amino-4,6-dinitrotoluene	ND	H	0.20		ug/L		10/04/19 07:06	10/09/19 21:49	1
2-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
3-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
4-Nitrotoluene	ND	H	0.50		ug/L		10/04/19 07:06	10/09/19 21:49	1
4-Amino-2,6-dinitrotoluene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
HMX	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
RDX	**11**	**H E**	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
Nitrobenzene	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1
Tetryl	ND	H	0.10		ug/L		10/04/19 07:06	10/09/19 21:49	1

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4
Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitroglycerin	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 21:49	1
PETN	ND	H	0.65		ug/L		10/04/19 07:06	10/09/19 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*90*		*79 - 111*	*10/04/19 07:06*	*10/09/19 21:25*	*1*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 21:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
RDX	**13**	**H**	0.20		ug/L		10/04/19 07:06	10/10/19 01:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*88*		*79 - 111*	*10/04/19 07:06*	*10/10/19 01:15*	*2*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/10/19 01:23*	*2*

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**190**		50		ug/L			09/23/19 17:11	1000

Client Sample ID: 091219TB
Lab Sample ID: 580-89178-5
Date Collected: 09/12/19 00:00
Matrix: Water
Date Received: 09/13/19 13:55

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			09/21/19 00:01	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
1,1-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/21/19 00:01	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/21/19 00:01	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,2-Dichloroethane	ND		0.20		ug/L			09/21/19 00:01	1
1,2-Dichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
1,3-Dichloropropane	ND		0.20		ug/L			09/21/19 00:01	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/21/19 00:01	1
2,2-Dichloropropane	ND		0.50		ug/L			09/21/19 00:01	1
2-Chlorotoluene	ND		0.50		ug/L			09/21/19 00:01	1
4-Chlorotoluene	ND		0.30		ug/L			09/21/19 00:01	1
4-Isopropyltoluene	ND		0.30		ug/L			09/21/19 00:01	1
Benzene	ND		0.20		ug/L			09/21/19 00:01	1
Bromobenzene	ND		0.20		ug/L			09/21/19 00:01	1
Bromoform	ND		0.50		ug/L			09/21/19 00:01	1

Client Sample ID: 091219TB
Lab Sample ID: 580-89178-5

Date Collected: 09/12/19 00:00
Matrix: Water

Date Received: 09/13/19 13:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.50		ug/L			09/21/19 00:01	1
Carbon tetrachloride	ND		0.20		ug/L			09/21/19 00:01	1
Chlorobenzene	ND		0.20		ug/L			09/21/19 00:01	1
Chlorobromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Chlorodibromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Chloroethane	ND		0.50		ug/L			09/21/19 00:01	1
Chloroform	ND		0.20		ug/L			09/21/19 00:01	1
Chloromethane	ND		0.50		ug/L			09/21/19 00:01	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
Dibromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Dichlorobromomethane	ND		0.20		ug/L			09/21/19 00:01	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/21/19 00:01	1
Ethylbenzene	ND		0.20		ug/L			09/21/19 00:01	1
Ethylene Dibromide	ND		0.10		ug/L			09/21/19 00:01	1
Hexachlorobutadiene	ND		0.50		ug/L			09/21/19 00:01	1
Isopropylbenzene	ND		1.0		ug/L			09/21/19 00:01	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/21/19 00:01	1
Methylene Chloride	ND	*	5.0		ug/L			09/21/19 00:01	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/21/19 00:01	1
Naphthalene	ND		1.0		ug/L			09/21/19 00:01	1
n-Butylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
N-Propylbenzene	ND		0.30		ug/L			09/21/19 00:01	1
o-Xylene	ND		0.50		ug/L			09/21/19 00:01	1
sec-Butylbenzene	ND		1.0		ug/L			09/21/19 00:01	1
Styrene	ND		0.50		ug/L			09/21/19 00:01	1
tert-Butylbenzene	ND		0.50		ug/L			09/21/19 00:01	1
Tetrachloroethene	ND		0.50		ug/L			09/21/19 00:01	1
Toluene	ND		0.20		ug/L			09/21/19 00:01	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/21/19 00:01	1
Trichloroethene	ND		0.20		ug/L			09/21/19 00:01	1
Trichlorofluoromethane	ND		0.50		ug/L			09/21/19 00:01	1
Vinyl chloride	ND		0.020		ug/L			09/21/19 00:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*113*		*80 - 120*		*09/21/19 00:01*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*09/21/19 00:01*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 120*		*09/21/19 00:01*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/21/19 00:01*	*1*
Trifluorotoluene (Surr)	*102*		*80 - 120*		*09/21/19 00:01*	*1*

Default Detection Limits

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
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: 6860 - Perchlorate by IC/MS or IC/MS/MS

Analyte	RL	MDL	Units
Perchlorate	0.050	0.0040	ug/L

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
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)
580-89178-1	03Q19L4MW09AW	110	97	105	96	109
580-89178-2	03Q19L4MW09BW	111	97	107	96	101
580-89178-3	03Q19L4MW10AW	112	97	109	95	101
580-89178-4	03Q19L4MW10BW	110	96	112	96	100
580-89178-5	091219TB	113	100	110	96	102
LCS 580-311759/4	Lab Control Sample	97	105	94	100	90
LCSD 580-311759/5	Lab Control Sample Dup	93	106	93	101	91
MB 580-311759/7	Method Blank	109	96	102	98	105

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)
580-89178-1	03Q19L4MW09AW	99
580-89178-1	03Q19L4MW09AW	97
580-89178-1 - RE	03Q19L4MW09AW	86
580-89178-1 - RE	03Q19L4MW09AW	90
580-89178-2	03Q19L4MW09BW	103
580-89178-2	03Q19L4MW09BW	99
580-89178-2 - DL	03Q19L4MW09BW	98
580-89178-2 - DL	03Q19L4MW09BW	109
580-89178-2 - RE	03Q19L4MW09BW	90
580-89178-2 - REDL	03Q19L4MW09BW	90
580-89178-2 - RE	03Q19L4MW09BW	95
580-89178-2 - REDL	03Q19L4MW09BW	93
580-89178-3	03Q19L4MW10AW	97
580-89178-3	03Q19L4MW10AW	95
580-89178-3 - RE	03Q19L4MW10AW	86
580-89178-3 - RE	03Q19L4MW10AW	90
580-89178-4	03Q19L4MW10BW	97
580-89178-4	03Q19L4MW10BW	92
580-89178-4 - DL	03Q19L4MW10BW	98
580-89178-4 - DL	03Q19L4MW10BW	103
580-89178-4 - RE	03Q19L4MW10BW	87
580-89178-4 - REDL	03Q19L4MW10BW	87
580-89178-4 - RE	03Q19L4MW10BW	90
580-89178-4 - REDL	03Q19L4MW10BW	88
LCS 320-324664/2-A	Lab Control Sample	95
LCS 320-328371/2-A	Lab Control Sample	88
LCSD 320-324664/3-A	Lab Control Sample Dup	97
MB 320-324664/1-A	Method Blank	95

Surrogate Summary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

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

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	DNT1 (79-111)								
MB 320-328371/1-A	Method Blank	87								

Surrogate Legend

DNT = 3,4-Dinitrotoluene

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
1,1,1-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2,2-Tetrachloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1,2-Trichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
1,1-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
1,2,3-Trichlorobenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,2,3-Trichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,2,4-Trichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2,4-Trimethylbenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			09/20/19 16:30	1
1,2-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,2-Dichloroethane	ND		0.20		ug/L			09/20/19 16:30	1
1,2-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
1,3-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
1,3-Dichloropropane	ND		0.20		ug/L			09/20/19 16:30	1
1,4-Dichlorobenzene	ND		0.30		ug/L			09/20/19 16:30	1
2,2-Dichloropropane	ND		0.50		ug/L			09/20/19 16:30	1
2-Chlorotoluene	ND		0.50		ug/L			09/20/19 16:30	1
4-Chlorotoluene	ND		0.30		ug/L			09/20/19 16:30	1
4-Isopropyltoluene	ND		0.30		ug/L			09/20/19 16:30	1
Benzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Bromoform	ND		0.50		ug/L			09/20/19 16:30	1
Bromomethane	ND		0.50		ug/L			09/20/19 16:30	1
Carbon tetrachloride	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobenzene	ND		0.20		ug/L			09/20/19 16:30	1
Chlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chlorodibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Chloroethane	ND		0.50		ug/L			09/20/19 16:30	1
Chloroform	ND		0.20		ug/L			09/20/19 16:30	1
Chloromethane	ND		0.50		ug/L			09/20/19 16:30	1
cis-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
cis-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Dibromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorobromomethane	ND		0.20		ug/L			09/20/19 16:30	1
Dichlorodifluoromethane	ND		0.40		ug/L			09/20/19 16:30	1
Ethylbenzene	ND		0.20		ug/L			09/20/19 16:30	1
Ethylene Dibromide	ND		0.10		ug/L			09/20/19 16:30	1
Hexachlorobutadiene	ND		0.50		ug/L			09/20/19 16:30	1
Isopropylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Methyl tert-butyl ether	ND		0.30		ug/L			09/20/19 16:30	1
Methylene Chloride	ND		5.0		ug/L			09/20/19 16:30	1
m-Xylene & p-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
Naphthalene	ND		1.0		ug/L			09/20/19 16:30	1
n-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1

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

Lab Sample ID: MB 580-311759/7
Matrix: Water
Analysis Batch: 311759

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			09/20/19 16:30	1
o-Xylene	ND		0.50		ug/L			09/20/19 16:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/20/19 16:30	1
Styrene	ND		0.50		ug/L			09/20/19 16:30	1
tert-Butylbenzene	ND		0.50		ug/L			09/20/19 16:30	1
Tetrachloroethene	ND		0.50		ug/L			09/20/19 16:30	1
Toluene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,2-Dichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
trans-1,3-Dichloropropene	ND		0.20		ug/L			09/20/19 16:30	1
Trichloroethene	ND		0.20		ug/L			09/20/19 16:30	1
Trichlorofluoromethane	ND		0.50		ug/L			09/20/19 16:30	1
Vinyl chloride	ND		0.020		ug/L			09/20/19 16:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*09/20/19 16:30*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/20/19 16:30*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*09/20/19 16:30*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/20/19 16:30*	*1*
Trifluorotoluene (Surr)	*105*		*80 - 120*		*09/20/19 16:30*	*1*

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.34		ug/L		107	79 - 127
1,1,1-Trichloroethane	5.00	5.12		ug/L		102	74 - 128
1,1,2,2-Tetrachloroethane	5.00	5.32		ug/L		106	69 - 139
1,1,2-Trichloroethane	5.00	5.77		ug/L		115	80 - 127
1,1-Dichloroethane	5.00	5.12		ug/L		102	74 - 135
1,1-Dichloroethene	5.00	5.45		ug/L		109	71 - 126
1,1-Dichloropropene	5.00	5.13		ug/L		103	72 - 132
1,2,3-Trichlorobenzene	5.00	5.65		ug/L		113	75 - 137
1,2,3-Trichloropropane	5.00	5.55		ug/L		111	80 - 127
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	79 - 130
1,2,4-Trimethylbenzene	5.00	5.54		ug/L		111	78 - 136
1,2-Dibromo-3-Chloropropane	5.00	5.02		ug/L		100	69 - 130
1,2-Dichlorobenzene	5.00	5.55		ug/L		111	80 - 129
1,2-Dichloroethane	5.00	5.46		ug/L		109	74 - 130
1,2-Dichloropropane	5.00	5.28		ug/L		106	80 - 130
1,3,5-Trimethylbenzene	5.00	5.15		ug/L		103	80 - 139
1,3-Dichlorobenzene	5.00	5.57		ug/L		111	80 - 130
1,3-Dichloropropane	5.00	5.52		ug/L		110	80 - 130
1,4-Dichlorobenzene	5.00	5.38		ug/L		108	80 - 129
2,2-Dichloropropane	5.00	5.23		ug/L		105	58 - 150
2-Chlorotoluene	5.00	5.00		ug/L		100	80 - 136
4-Chlorotoluene	5.00	5.23		ug/L		105	80 - 130
4-Isopropyltoluene	5.00	5.42		ug/L		108	78 - 132

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

Lab Sample ID: LCS 580-311759/4
Matrix: Water
Analysis Batch: 311759

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	5.43		ug/L		109	73 - 133
Bromobenzene	5.00	5.05		ug/L		101	80 - 130
Bromoform	5.00	5.31		ug/L		106	69 - 137
Bromomethane	5.00	5.83		ug/L		117	68 - 120
Carbon tetrachloride	5.00	5.00		ug/L		100	71 - 132
Chlorobenzene	5.00	5.41		ug/L		108	80 - 123
Chlorobromomethane	5.00	5.27		ug/L		105	79 - 131
Chlorodibromomethane	5.00	5.51		ug/L		110	76 - 131
Chloroethane	5.00	5.66		ug/L		113	49 - 135
Chloroform	5.00	5.14		ug/L		103	80 - 130
Chloromethane	5.00	5.79		ug/L		116	32 - 143
cis-1,2-Dichloroethene	5.00	5.39		ug/L		108	72 - 130
cis-1,3-Dichloropropene	5.00	4.98		ug/L		100	66 - 141
Dibromomethane	5.00	5.31		ug/L		106	65 - 141
Dichlorobromomethane	5.00	5.42		ug/L		108	74 - 131
Dichlorodifluoromethane	5.00	6.33		ug/L		127	20 - 137
Ethylbenzene	5.00	5.27		ug/L		105	80 - 130
Ethylene Dibromide	5.00	5.41		ug/L		108	80 - 126
Hexachlorobutadiene	5.00	5.51		ug/L		110	72 - 138
Isopropylbenzene	5.00	5.31		ug/L		106	75 - 137
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150
Methylene Chloride	5.00	8.49	*	ug/L		170	75 - 134
m-Xylene & p-Xylene	5.00	5.19		ug/L		104	78 - 130
Naphthalene	5.00	5.16		ug/L		103	64 - 132
n-Butylbenzene	5.00	5.16		ug/L		103	73 - 135
N-Propylbenzene	5.00	5.01		ug/L		100	77 - 142
o-Xylene	5.00	5.27		ug/L		105	80 - 139
sec-Butylbenzene	5.00	5.42		ug/L		108	78 - 140
Styrene	5.00	5.40		ug/L		108	74 - 136
tert-Butylbenzene	5.00	5.01		ug/L		100	77 - 140
Tetrachloroethene	5.00	5.13		ug/L		103	75 - 131
Toluene	5.00	5.56		ug/L		111	80 - 126
trans-1,2-Dichloroethene	5.00	5.18		ug/L		104	63 - 133
trans-1,3-Dichloropropene	5.00	5.02		ug/L		100	71 - 128
Trichloroethene	5.00	5.10		ug/L		102	72 - 136
Trichlorofluoromethane	5.00	5.80		ug/L		116	60 - 132
Vinyl chloride	5.00	5.47		ug/L		109	52 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
Trifluorotoluene (Surr)	*90*		*80 - 120*

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.24		ug/L		105	79 - 127	2	20
1,1,1-Trichloroethane	5.00	5.04		ug/L		101	74 - 128	2	14
1,1,2,2-Tetrachloroethane	5.00	5.06		ug/L		101	69 - 139	5	22
1,1,2-Trichloroethane	5.00	5.43		ug/L		109	80 - 127	6	19
1,1-Dichloroethane	5.00	5.05		ug/L		101	74 - 135	1	20
1,1-Dichloroethene	5.00	5.42		ug/L		108	71 - 126	1	17
1,1-Dichloropropene	5.00	5.03		ug/L		101	72 - 132	2	13
1,2,3-Trichlorobenzene	5.00	5.41		ug/L		108	75 - 137	4	20
1,2,3-Trichloropropane	5.00	5.44		ug/L		109	80 - 127	2	20
1,2,4-Trichlorobenzene	5.00	4.95		ug/L		99	79 - 130	1	20
1,2,4-Trimethylbenzene	5.00	5.49		ug/L		110	78 - 136	1	20
1,2-Dibromo-3-Chloropropane	5.00	5.00		ug/L		100	69 - 130	0	26
1,2-Dichlorobenzene	5.00	5.42		ug/L		108	80 - 129	2	14
1,2-Dichloroethane	5.00	5.20		ug/L		104	74 - 130	5	15
1,2-Dichloropropane	5.00	5.04		ug/L		101	80 - 130	5	14
1,3,5-Trimethylbenzene	5.00	5.13		ug/L		103	80 - 139	1	20
1,3-Dichlorobenzene	5.00	5.50		ug/L		110	80 - 130	1	12
1,3-Dichloropropane	5.00	5.22		ug/L		104	80 - 130	6	19
1,4-Dichlorobenzene	5.00	5.29		ug/L		106	80 - 129	2	11
2,2-Dichloropropane	5.00	5.27		ug/L		105	58 - 150	1	28
2-Chlorotoluene	5.00	5.07		ug/L		101	80 - 136	1	20
4-Chlorotoluene	5.00	5.22		ug/L		104	80 - 130	0	20
4-Isopropyltoluene	5.00	5.40		ug/L		108	78 - 132	0	14
Benzene	5.00	5.37		ug/L		107	73 - 133	1	20
Bromobenzene	5.00	5.03		ug/L		101	80 - 130	0	20
Bromoform	5.00	5.15		ug/L		103	69 - 137	3	20
Bromomethane	5.00	5.89		ug/L		118	68 - 120	1	18
Carbon tetrachloride	5.00	5.07		ug/L		101	71 - 132	1	15
Chlorobenzene	5.00	5.37		ug/L		107	80 - 123	1	12
Chlorobromomethane	5.00	5.11		ug/L		102	79 - 131	3	20
Chlorodibromomethane	5.00	5.20		ug/L		104	76 - 131	6	20
Chloroethane	5.00	5.69		ug/L		114	49 - 135	0	27
Chloroform	5.00	5.01		ug/L		100	80 - 130	3	20
Chloromethane	5.00	5.90		ug/L		118	32 - 143	2	23
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	72 - 130	3	20
cis-1,3-Dichloropropene	5.00	4.85		ug/L		97	66 - 141	3	22
Dibromomethane	5.00	4.99		ug/L		100	65 - 141	6	20
Dichlorobromomethane	5.00	5.10		ug/L		102	74 - 131	6	20
Dichlorodifluoromethane	5.00	5.80		ug/L		116	20 - 137	9	22
Ethylbenzene	5.00	5.24		ug/L		105	80 - 130	1	20
Ethylene Dibromide	5.00	5.26		ug/L		105	80 - 126	3	20
Hexachlorobutadiene	5.00	5.55		ug/L		111	72 - 138	1	20
Isopropylbenzene	5.00	5.39		ug/L		108	75 - 137	1	20
Methyl tert-butyl ether	5.00	4.94		ug/L		99	60 - 150	0	25
Methylene Chloride	5.00	8.65	*	ug/L		173	75 - 134	2	18
m-Xylene & p-Xylene	5.00	5.16		ug/L		103	78 - 130	1	20
Naphthalene	5.00	4.87		ug/L		97	64 - 132	6	20
n-Butylbenzene	5.00	5.12		ug/L		102	73 - 135	1	18

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

Lab Sample ID: LCSD 580-311759/5
Matrix: Water
Analysis Batch: 311759

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	5.04		ug/L		101	77 - 142	1	20
o-Xylene			5.00	5.25		ug/L		105	80 - 139	0	20
sec-Butylbenzene			5.00	5.46		ug/L		109	78 - 140	1	20
Styrene			5.00	5.33		ug/L		107	74 - 136	1	20
tert-Butylbenzene			5.00	4.98		ug/L		100	77 - 140	1	20
Tetrachloroethene			5.00	5.01		ug/L		100	75 - 131	2	20
Toluene			5.00	5.52		ug/L		110	80 - 126	1	20
trans-1,2-Dichloroethene			5.00	5.29		ug/L		106	63 - 133	2	17
trans-1,3-Dichloropropene			5.00	4.83		ug/L		97	71 - 128	4	21
Trichloroethene			5.00	4.99		ug/L		100	72 - 136	2	14
Trichlorofluoromethane			5.00	5.78		ug/L		116	60 - 132	0	20
Vinyl chloride			5.00	5.47		ug/L		109	52 - 128	0	21

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*80 - 120*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*
Trifluorotoluene (Surr)	*91*		*80 - 120*

Method: 8330B - Nitroaromatics and Nitramines (HPLC)

Lab Sample ID: MB 320-324664/1-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 324664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
1,3-Dinitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,4-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2,6-Dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		09/19/19 07:30	09/29/19 09:10	1
2-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
3-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Nitrotoluene	ND		0.50		ug/L		09/19/19 07:30	09/29/19 09:10	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
HMX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
RDX	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitrobenzene	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Tetryl	ND		0.10		ug/L		09/19/19 07:30	09/29/19 09:10	1
Nitroglycerin	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1
PETN	ND		0.65		ug/L		09/19/19 07:30	09/29/19 09:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*95*		*79 - 111*	*09/19/19 07:30*	*09/29/19 09:10*	*1*

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

Lab Sample ID: LCS 320-324664/2-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 324664

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,3,5-Trinitrobenzene			1.00	1.04		ug/L		104	74 - 120		
1,3-Dinitrobenzene			1.00	1.06		ug/L		106	72 - 123		
2,4,6-Trinitrotoluene			1.00	0.735		ug/L		73	69 - 111		
2,4-Dinitrotoluene			1.00	1.03		ug/L		103	70 - 119		
2,6-Dinitrotoluene			1.00	1.00		ug/L		100	71 - 119		
2-Amino-4,6-dinitrotoluene			1.00	1.07		ug/L		107	77 - 123		
2-Nitrotoluene			1.00	0.964		ug/L		96	64 - 120		
3-Nitrotoluene			1.00	1.08		ug/L		108	67 - 114		
4-Nitrotoluene			1.00	0.947		ug/L		95	67 - 115		
4-Amino-2,6-dinitrotoluene			1.00	1.10		ug/L		110	68 - 113		
HMX			1.00	1.08		ug/L		108	67 - 115		
RDX			1.00	1.11		ug/L		111	68 - 122		
Nitrobenzene			1.00	1.03		ug/L		103	69 - 119		
Tetryl			1.00	0.683		ug/L		68	66 - 105		
Nitroglycerin			5.00	5.00		ug/L		100	85 - 115		
PETN			5.00	4.85		ug/L		97	84 - 117		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
3,4-Dinitrotoluene	*95*		*79 - 111*

Lab Sample ID: LCSD 320-324664/3-A
Matrix: Water
Analysis Batch: 326750

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 324664

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3,5-Trinitrobenzene			1.00	0.988		ug/L		99	74 - 120	6	29
1,3-Dinitrobenzene			1.00	0.961		ug/L		96	72 - 123	10	29
2,4,6-Trinitrotoluene			1.00	0.674	*	ug/L		67	69 - 111	9	28
2,4-Dinitrotoluene			1.00	0.948		ug/L		95	70 - 119	9	30
2,6-Dinitrotoluene			1.00	0.916		ug/L		92	71 - 119	9	29
2-Amino-4,6-dinitrotoluene			1.00	0.993		ug/L		99	77 - 123	7	27
2-Nitrotoluene			1.00	0.892		ug/L		89	64 - 120	8	36
3-Nitrotoluene			1.00	0.982		ug/L		98	67 - 114	9	31
4-Nitrotoluene			1.00	0.856		ug/L		86	67 - 115	10	32
4-Amino-2,6-dinitrotoluene			1.00	1.01		ug/L		101	68 - 113	9	30
HMX			1.00	0.991		ug/L		99	67 - 115	9	32
RDX			1.00	1.00		ug/L		100	68 - 122	10	32
Nitrobenzene			1.00	0.937		ug/L		94	69 - 119	9	31
Tetryl			1.00	0.625	*	ug/L		62	66 - 105	9	26
Nitroglycerin			5.00	4.43		ug/L		89	85 - 115	12	15
PETN			5.00	4.43		ug/L		89	84 - 117	9	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
3,4-Dinitrotoluene	*97*		*79 - 111*

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

Lab Sample ID: MB 320-328371/1-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 328371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
1,3-Dinitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4,6-Trinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,4-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2,6-Dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Amino-4,6-dinitrotoluene	ND		0.20		ug/L		10/04/19 07:06	10/09/19 06:38	1
2-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
3-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Nitrotoluene	ND		0.50		ug/L		10/04/19 07:06	10/09/19 06:38	1
4-Amino-2,6-dinitrotoluene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
HMX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
RDX	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitrobenzene	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Tetryl	ND		0.10		ug/L		10/04/19 07:06	10/09/19 06:38	1
Nitroglycerin	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1
PETN	ND		0.65		ug/L		10/04/19 07:06	10/09/19 06:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
3,4-Dinitrotoluene	*87*		*79 - 111*	*10/04/19 07:06*	*10/09/19 06:38*	*1*

Lab Sample ID: LCS 320-328371/2-A
Matrix: Water
Analysis Batch: 329066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 328371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3,5-Trinitrobenzene	1.00	0.975		ug/L		98	74 - 120
1,3-Dinitrobenzene	1.00	0.991		ug/L		99	72 - 123
2,4,6-Trinitrotoluene	1.00	0.852		ug/L		85	69 - 111
2,4-Dinitrotoluene	1.00	0.966		ug/L		97	70 - 119
2,6-Dinitrotoluene	1.00	0.947		ug/L		95	71 - 119
2-Amino-4,6-dinitrotoluene	1.00	0.998		ug/L		100	77 - 123
2-Nitrotoluene	1.00	0.934		ug/L		93	64 - 120
3-Nitrotoluene	1.00	0.946		ug/L		95	67 - 114
4-Nitrotoluene	1.00	0.951		ug/L		95	67 - 115
4-Amino-2,6-dinitrotoluene	1.00	0.974		ug/L		97	68 - 113
HMX	1.00	1.03		ug/L		103	67 - 115
RDX	1.00	1.04		ug/L		104	68 - 122
Nitrobenzene	1.00	0.975		ug/L		98	69 - 119
Tetryl	1.00	0.816		ug/L		82	66 - 105
Nitroglycerin	5.00	4.70		ug/L		94	85 - 115
PETN	5.00	4.48		ug/L		90	84 - 117

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

Method: 6860 - Perchlorate by IC/MS or IC/MS/MS

Lab Sample ID: DLCK 280-471409/12
Matrix: Water
Analysis Batch: 471409

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

Analyte			Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		97	70 - 130		

Lab Sample ID: MB 280-471410/44
Matrix: Water
Analysis Batch: 471410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.050		ug/L			09/23/19 15:24	1

Lab Sample ID: LCS 280-471410/45
Matrix: Water
Analysis Batch: 471410

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	0.0534		ug/L		107	70 - 130		

Lab Sample ID: INF 280-471410/46
Matrix: Water
Analysis Batch: 471410

Client Sample ID: Lab Control Sample

Analyte			Spike Added	INF Result	INF Qualifier	Unit	D	%Rec	%Rec. Limits		
Perchlorate			0.0500	ND		ug/L		100	70 - 130		

GC/MS VOA

Analysis Batch: 311759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1	03Q19L4MW09AW	Total/NA	Water	8260C	
580-89178-2	03Q19L4MW09BW	Total/NA	Water	8260C	
580-89178-3	03Q19L4MW10AW	Total/NA	Water	8260C	
580-89178-4	03Q19L4MW10BW	Total/NA	Water	8260C	
580-89178-5	091219TB	Total/NA	Water	8260C	
MB 580-311759/7	Method Blank	Total/NA	Water	8260C	
LCS 580-311759/4	Lab Control Sample	Total/NA	Water	8260C	
LCSD 580-311759/5	Lab Control Sample Dup	Total/NA	Water	8260C	

HPLC/IC

Prep Batch: 324664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1	03Q19L4MW09AW	Total/NA	Water	8330-Prep	
580-89178-2 - DL	03Q19L4MW09BW	Total/NA	Water	8330-Prep	
580-89178-2	03Q19L4MW09BW	Total/NA	Water	8330-Prep	
580-89178-3	03Q19L4MW10AW	Total/NA	Water	8330-Prep	
580-89178-4 - DL	03Q19L4MW10BW	Total/NA	Water	8330-Prep	
580-89178-4	03Q19L4MW10BW	Total/NA	Water	8330-Prep	
MB 320-324664/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-324664/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	
LCSD 320-324664/3-A	Lab Control Sample Dup	Total/NA	Water	8330-Prep	

Analysis Batch: 326181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1	03Q19L4MW09AW	Total/NA	Water	8330B	324664
580-89178-2	03Q19L4MW09BW	Total/NA	Water	8330B	324664

Analysis Batch: 326750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1	03Q19L4MW09AW	Total/NA	Water	8330B	324664
580-89178-2	03Q19L4MW09BW	Total/NA	Water	8330B	324664
580-89178-3	03Q19L4MW10AW	Total/NA	Water	8330B	324664
580-89178-4	03Q19L4MW10BW	Total/NA	Water	8330B	324664
MB 320-324664/1-A	Method Blank	Total/NA	Water	8330B	324664
LCS 320-324664/2-A	Lab Control Sample	Total/NA	Water	8330B	324664
LCSD 320-324664/3-A	Lab Control Sample Dup	Total/NA	Water	8330B	324664

Analysis Batch: 326765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-3	03Q19L4MW10AW	Total/NA	Water	8330B	324664
580-89178-4	03Q19L4MW10BW	Total/NA	Water	8330B	324664

Analysis Batch: 327493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-2 - DL	03Q19L4MW09BW	Total/NA	Water	8330B	324664
580-89178-4 - DL	03Q19L4MW10BW	Total/NA	Water	8330B	324664

Analysis Batch: 327955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-2 - DL	03Q19L4MW09BW	Total/NA	Water	8330B	324664

HPLC/IC (Continued)

Analysis Batch: 327955 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-4 - DL	03Q19L4MW10BW	Total/NA	Water	8330B	324664

Prep Batch: 328371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1 - RE	03Q19L4MW09AW	Total/NA	Water	8330-Prep	
580-89178-2 - RE	03Q19L4MW09BW	Total/NA	Water	8330-Prep	
580-89178-2 - REDL	03Q19L4MW09BW	Total/NA	Water	8330-Prep	
580-89178-3 - RE	03Q19L4MW10AW	Total/NA	Water	8330-Prep	
580-89178-4 - RE	03Q19L4MW10BW	Total/NA	Water	8330-Prep	
580-89178-4 - REDL	03Q19L4MW10BW	Total/NA	Water	8330-Prep	
MB 320-328371/1-A	Method Blank	Total/NA	Water	8330-Prep	
LCS 320-328371/2-A	Lab Control Sample	Total/NA	Water	8330-Prep	

Analysis Batch: 329066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1 - RE	03Q19L4MW09AW	Total/NA	Water	8330B	328371
580-89178-2 - RE	03Q19L4MW09BW	Total/NA	Water	8330B	328371
580-89178-2 - REDL	03Q19L4MW09BW	Total/NA	Water	8330B	328371
580-89178-3 - RE	03Q19L4MW10AW	Total/NA	Water	8330B	328371
580-89178-4 - RE	03Q19L4MW10BW	Total/NA	Water	8330B	328371
580-89178-4 - REDL	03Q19L4MW10BW	Total/NA	Water	8330B	328371
MB 320-328371/1-A	Method Blank	Total/NA	Water	8330B	328371
LCS 320-328371/2-A	Lab Control Sample	Total/NA	Water	8330B	328371

Analysis Batch: 329486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1 - RE	03Q19L4MW09AW	Total/NA	Water	8330B	328371
580-89178-2 - RE	03Q19L4MW09BW	Total/NA	Water	8330B	328371
580-89178-2 - REDL	03Q19L4MW09BW	Total/NA	Water	8330B	328371
580-89178-3 - RE	03Q19L4MW10AW	Total/NA	Water	8330B	328371
580-89178-4 - RE	03Q19L4MW10BW	Total/NA	Water	8330B	328371
580-89178-4 - REDL	03Q19L4MW10BW	Total/NA	Water	8330B	328371

LCMS

Analysis Batch: 471409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
DLCK 280-471409/12	Lab Control Sample	Total/NA	Water	6860	

Analysis Batch: 471410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-89178-1	03Q19L4MW09AW	Total/NA	Water	6860	
580-89178-2	03Q19L4MW09BW	Total/NA	Water	6860	
580-89178-3	03Q19L4MW10AW	Total/NA	Water	6860	
580-89178-4	03Q19L4MW10BW	Total/NA	Water	6860	
MB 280-471410/44	Method Blank	Total/NA	Water	6860	
INF 280-471410/46	Lab Control Sample		Water	6860	
LCS 280-471410/45	Lab Control Sample	Total/NA	Water	6860	

Client Sample ID: 03Q19L4MW09AW
Lab Sample ID: 580-89178-1

Date Collected: 09/12/19 12:25
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 22:15	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 19:53	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 20:55	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326181	09/26/19 11:39	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 18:32	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 16:56	CBB	TAL DEN

Client Sample ID: 03Q19L4MW09BW
Lab Sample ID: 580-89178-2

Date Collected: 09/12/19 13:20
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 22:41	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 21:40	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	4	327493	10/02/19 13:05	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 19:08	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	4	329066	10/10/19 00:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326181	09/26/19 12:37	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	4	327955	10/02/19 23:14	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 19:30	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	4	329486	10/10/19 02:12	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 17:01	CBB	TAL DEN

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3

Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 23:08	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 22:34	AJC	TAL SAC

Client Sample ID: 03Q19L4MW10AW
Lab Sample ID: 580-89178-3

Date Collected: 09/12/19 14:10
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 20:02	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 00:09	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 20:27	AJC	TAL SAC
Total/NA	Analysis	6860		200	471410	09/23/19 17:06	CBB	TAL DEN

Client Sample ID: 03Q19L4MW10BW
Lab Sample ID: 580-89178-4

Date Collected: 09/12/19 15:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/20/19 23:34	JSM	TAL SEA
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326750	09/29/19 23:28	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	2	327493	10/02/19 16:40	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329066	10/09/19 21:49	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	2	329066	10/10/19 01:23	AJC	TAL SAC
Total/NA	Prep	8330-Prep			324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B		1	326765	09/28/19 01:06	AJC	TAL SAC
Total/NA	Prep	8330-Prep	DL		324664	09/19/19 07:30	NGK	TAL SAC
Total/NA	Analysis	8330B	DL	2	327955	10/03/19 00:12	AJC	TAL SAC
Total/NA	Prep	8330-Prep	RE		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	RE	1	329486	10/09/19 21:25	AJC	TAL SAC
Total/NA	Prep	8330-Prep	REDL		328371	10/04/19 07:06	JFA	TAL SAC
Total/NA	Analysis	8330B	REDL	2	329486	10/10/19 01:15	AJC	TAL SAC
Total/NA	Analysis	6860		1000	471410	09/23/19 17:11	CBB	TAL DEN

Client Sample ID: 091219TB
Lab Sample ID: 580-89178-5

Date Collected: 09/12/19 00:00
Matrix: Water
Date Received: 09/13/19 13:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	311759	09/21/19 00:01	JSM	TAL SEA

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89178-1
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	11-05-19
Montana (UST)	State	NA	04-13-21
Oregon	NELAP	WA100007	11-05-19
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, Denver

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-19
A2LA	ISO/IEC 17025	2907.01	10-31-19
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	01-08-20
Arizona	State	AZ0713	12-20-19
Arkansas DEQ	State	19-047-0	06-01-20
California	State	2513	01-08-20
Connecticut	State	PH-0686	09-30-20
Florida	NELAP	E87667-57	06-30-20
Georgia	State Program	N/A	01-08-20
Illinois	NELAP	2000172019-1	04-30-20
Iowa	State	IA#370	12-01-20
Kansas	NELAP	E-10166	04-30-20
Louisiana	NELAP	30785	06-30-20
Maine	State	2019011 (231)	03-03-21
Maine	State Program	CO0002	03-03-21
Minnesota	NELAP	1545373	12-31-19
Nevada	State	CO000262020-1	07-31-20
New Hampshire	NELAP	205310	04-28-20
New Hampshire	NELAP	205319	04-28-20
New Jersey	NELAP	190002	06-30-20
New York	NELAP	59923	04-01-20
North Carolina (WW/SW)	State	<cert No.>	12-31-19
North Carolina (WW/SW)	State Program	358	12-31-19
North Dakota	State	R-034	01-08-20
Oregon	NELAP	4025-011	01-08-20
Pennsylvania	NELAP	013	08-01-20
South Carolina	State Program	72002001	01-08-20
Texas	NELAP	T104704183-19-17	09-30-19
US Fish & Wildlife	Federal		07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal		03-26-21
USDA	US Federal Programs	P330-18-00099	03-26-21
Utah	NELAP	CO000262019-11	07-31-20
Virginia	NELAP	10490	06-14-20
Washington	State	C583-19	08-05-20

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

Accreditation/Certification Summary

Client: PBS Engineering and Environmental
Job ID: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Laboratory: Eurofins TestAmerica, Denver (Continued)

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

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	354	11-30-19
West Virginia DEP	State Program	354	11-30-19
Wisconsin	State	999615430	08-31-20
Wyoming (UST)	A2LA	2907.01	10-31-19
Wyoming (UST)	A2LA	2907.01	10-31-21

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 Program	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	08-09-21
Arizona	State	AZ0708	08-11-20
Arkansas DEQ	State	19-042-0	06-17-20
Arkansas DEQ	State Program	88-0691	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
Hawaii	State	<cert No.>	01-29-20
Illinois	NELAP	200060	03-17-20
Kansas	NELAP	E-10375	10-31-19
Louisiana	NELAP	01944	06-30-20
Maine	State	2018009	04-14-20
Maine	State Program	CA0004	04-14-20
Michigan	State	9947	01-29-20
Michigan	State Program	9947	01-31-20
Nevada	State Program	CA00044	07-31-20
New Hampshire	NELAP	2997	04-20-20
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
USEPA UCMR	Federal	CA00044	12-31-20
Utah	NELAP	CA00044	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: 580-89178-1
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
6860	Perchlorate by IC/MS or IC/MS/MS	EPA	TAL DEN
5030B	Purge and Trap	SW846	TAL SEA
8330-Prep	Solid-Phase Extraction (Explosives)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = Eurofins TestAmerica, Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

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: 580-89178-1
Project/Site: Camp Bonneville Groundwater 2019-2020

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-89178-1	03Q19L4MW09AW	Water	09/12/19 12:25	09/13/19 13:55	
580-89178-2	03Q19L4MW09BW	Water	09/12/19 13:20	09/13/19 13:55	
580-89178-3	03Q19L4MW10AW	Water	09/12/19 14:10	09/13/19 13:55	
580-89178-4	03Q19L4MW10BW	Water	09/12/19 15:00	09/13/19 13:55	
580-89178-5	091219TB	Water	09/12/19 00:00	09/13/19 13:55	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 15:04
Chloromethane	2.03	Incomplete Integration	thaneerat w	09/18/19 15:04
Vinyl chloride	2.18	Incomplete Integration	thaneerat w	09/18/19 15:04
Bromomethane	2.55	Incomplete Integration	thaneerat w	09/18/19 15:15
Chloroethane	2.68	Incomplete Integration	thaneerat w	09/18/19 15:15
Trichlorofluoromethane	3.04	Incomplete Integration	thaneerat w	09/18/19 15:16
1,1-Dichloroethene	3.76	Incomplete Integration	thaneerat w	09/18/19 15:16
1,1,2-Trichloro-1,2,2-trifluoroethane	3.85	Incomplete Integration	thaneerat w	09/18/19 15:18
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 15:18
Iodomethane	3.96	Incomplete Integration	thaneerat w	09/18/19 15:18
Carbon disulfide	4.08	Incomplete Integration	thaneerat w	09/18/19 15:19
TBA-d9 (IS)	4.86	Incomplete Integration	thaneerat w	09/18/19 15:03
Acrylonitrile	5.18	Incomplete Integration	thaneerat w	09/18/19 15:19
trans-1,2-Dichloroethene	5.18	Incomplete Integration	thaneerat w	09/18/19 15:19
Methyl tert-butyl ether	5.22	Incomplete Integration	thaneerat w	09/18/19 15:19
Hexane	5.77	Incomplete Integration	thaneerat w	09/18/19 15:19
1,1-Dichloroethane	6.04	Incomplete Integration	thaneerat w	09/18/19 15:19

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 15:19
cis-1,2-Dichloroethene	7.05	Incomplete Integration	thaneerat w	09/18/19 15:20
Chlorobromomethane	7.43	Incomplete Integration	thaneerat w	09/18/19 15:20
Chloroform	7.62	Incomplete Integration	thaneerat w	09/18/19 15:20
Carbon tetrachloride	8.01	Incomplete Integration	thaneerat w	09/18/19 15:20
1,1-Dichloropropene	8.05	Incomplete Integration	thaneerat w	09/18/19 15:21
1,2-Dichloroethane	8.38	Incomplete Integration	thaneerat w	09/18/19 15:21
Tert-amyl methyl ether	8.48	Incomplete Integration	thaneerat w	09/18/19 15:21
Trichloroethene	9.10	Incomplete Integration	thaneerat w	09/18/19 15:22
1,2-Dichloropropane	9.37	Incomplete Integration	thaneerat w	09/18/19 15:22
Dibromomethane	9.46	Incomplete Integration	thaneerat w	09/18/19 15:22
Dichlorobromomethane	9.66	Incomplete Integration	thaneerat w	09/18/19 15:22
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneerat w	09/18/19 15:22
Tetrachloroethene	10.86	Incomplete Integration	thaneerat w	09/18/19 15:22
1,3-Dichloropropane	10.93	Incomplete Integration	thaneerat w	09/18/19 15:22
Chlorobenzene	11.65	Incomplete Integration	thaneerat w	09/18/19 15:23
Styrene	12.18	Incomplete Integration	thaneerat w	09/18/19 15:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/3 IC Client Sample ID:

Date Analyzed: 09/17/19 20:42 Lab File ID: 091719B _002.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2,2-Tetrachloroethane	12.70	Incomplete Integration	thaneeratw	09/18/19 15:24
Bromobenzene	12.73	Incomplete Integration	thaneeratw	09/18/19 15:24
trans-1,4-Dichloro-2-butene	12.73	Incomplete Integration	thaneeratw	09/18/19 15:24
2-Chlorotoluene	12.86	Incomplete Integration	thaneeratw	09/18/19 15:24
4-Chlorotoluene	12.96	Incomplete Integration	thaneeratw	09/18/19 15:24
tert-Butylbenzene	13.18	Incomplete Integration	thaneeratw	09/18/19 15:24
1,4-Dichlorobenzene	13.54	Incomplete Integration	thaneeratw	09/18/19 15:25
1,2-Dichlorobenzene	13.83	Incomplete Integration	thaneeratw	09/18/19 15:25
Hexachlorobutadiene	15.17	Incomplete Integration	thaneeratw	09/18/19 15:25
Naphthalene	15.30	Incomplete Integration	thaneeratw	09/18/19 15:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.84	Incomplete Integration	thaneerat w	09/18/19 14:55
Chloromethane	2.04	Incomplete Integration	thaneerat w	09/18/19 14:55
Vinyl chloride	2.22	Incomplete Integration	thaneerat w	09/18/19 14:55
Bromomethane	2.56	Incomplete Integration	thaneerat w	09/18/19 14:55
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:55
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:56
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:56
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:56
1,1,2-Trichloro-1,2,2-trifluoroethane	3.85	Incomplete Integration	thaneerat w	09/18/19 14:56
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:56
Iodomethane	3.99	Incomplete Integration	thaneerat w	09/18/19 14:56
Carbon disulfide	4.07	Incomplete Integration	thaneerat w	09/18/19 14:57
TBA-d9 (IS)	4.87	Peak assignment corrected	thaneerat w	09/18/19 14:54
2-Methyl-2-propanol	5.03	Incomplete Integration	thaneerat w	09/18/19 14:57
trans-1,2-Dichloroethene	5.22	Incomplete Integration	thaneerat w	09/18/19 14:57
Methyl tert-butyl ether	5.24	Incomplete Integration	thaneerat w	09/18/19 14:57
Acrylonitrile	5.25	Incomplete Integration	thaneerat w	09/18/19 14:57

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Hexane	5.76	Incomplete Integration	thaneeratw	09/18/19 14:57
1,1-Dichloroethane	6.04	Incomplete Integration	thaneeratw	09/18/19 14:57
Tert-butyl ethyl ether	6.20	Incomplete Integration	thaneeratw	09/18/19 14:57
2,2-Dichloropropane	7.03	Incomplete Integration	thaneeratw	09/18/19 14:58
cis-1,2-Dichloroethene	7.05	Incomplete Integration	thaneeratw	09/18/19 14:58
Chlorobromomethane	7.41	Incomplete Integration	thaneeratw	09/18/19 14:58
Chloroform	7.62	Incomplete Integration	thaneeratw	09/18/19 14:58
1,1,1-Trichloroethane	7.81	Incomplete Integration	thaneeratw	09/18/19 14:58
Carbon tetrachloride	8.00	Incomplete Integration	thaneeratw	09/18/19 14:58
1,2-Dichloroethane	8.38	Incomplete Integration	thaneeratw	09/18/19 14:58
Tert-amyl methyl ether	8.50	Incomplete Integration	thaneeratw	09/18/19 14:58
Trichloroethene	9.09	Incomplete Integration	thaneeratw	09/18/19 14:59
1,2-Dichloropropane	9.36	Incomplete Integration	thaneeratw	09/18/19 14:59
Dibromomethane	9.45	Incomplete Integration	thaneeratw	09/18/19 14:59
2-Chloroethyl vinyl ether	9.95	Incomplete Integration	thaneeratw	09/18/19 14:59
cis-1,3-Dichloropropene	10.09	Incomplete Integration	thaneeratw	09/18/19 14:59
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneeratw	09/18/19 14:59

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/4 IC Client Sample ID:

Date Analyzed: 09/17/19 21:08 Lab File ID: 091719B _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
trans-1,3-Dichloropropene	10.63	Incomplete Integration	thaneerat w	09/18/19 15:00
1,1,2-Trichloroethane	10.79	Incomplete Integration	thaneerat w	09/18/19 15:00
2-Hexanone	10.99	Incomplete Integration	thaneerat w	09/18/19 15:01
Ethylene Dibromide	11.21	Incomplete Integration	thaneerat w	09/18/19 15:01
Chlorobenzene	11.65	Incomplete Integration	thaneerat w	09/18/19 15:01
1,2,3-Trichloropropane	12.75	Incomplete Integration	thaneerat w	09/18/19 15:01
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,4-Trimethylbenzene	13.56	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,4-Trichlorobenzene	15.08	Incomplete Integration	thaneerat w	09/18/19 15:02
1,2,3-Trichlorobenzene	15.47	Incomplete Integration	thaneerat w	09/18/19 15:02

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.80	Incomplete Integration	thaneerat w	09/18/19 14:46
Chloromethane	2.03	Incomplete Integration	thaneerat w	09/18/19 14:46
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:46
Bromomethane	2.54	Incomplete Integration	thaneerat w	09/18/19 14:47
Chloroethane	2.66	Incomplete Integration	thaneerat w	09/18/19 14:47
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:47
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:47
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:48
1,1,2-Trichloro-1,2,2-trifluoroethane	3.81	Incomplete Integration	thaneerat w	09/18/19 14:48
Acetone	3.88	Incomplete Integration	thaneerat w	09/18/19 14:48
Iodomethane	3.97	Incomplete Integration	thaneerat w	09/18/19 14:48
Carbon disulfide	4.06	Incomplete Integration	thaneerat w	09/18/19 14:48
Methylene Chloride	4.65	Incomplete Integration	thaneerat w	09/18/19 14:48
TBA-d9 (IS)	4.85	Peak assignment corrected	thaneerat w	09/18/19 14:46
2-Methyl-2-propanol	5.05	Incomplete Integration	thaneerat w	09/18/19 14:49
trans-1,2-Dichloroethene	5.20	Incomplete Integration	thaneerat w	09/18/19 14:49
Acrylonitrile	5.22	Incomplete Integration	thaneerat w	09/18/19 14:49

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl tert-butyl ether	5.23	Incomplete Integration	thaneerat w	09/18/19 14:49
Hexane	5.76	Incomplete Integration	thaneerat w	09/18/19 14:49
1,1-Dichloroethane	6.03	Incomplete Integration	thaneerat w	09/18/19 14:49
Vinyl acetate	6.14	Incomplete Integration	thaneerat w	09/18/19 14:49
Tert-butyl ethyl ether	6.19	Incomplete Integration	thaneerat w	09/18/19 14:49
2,2-Dichloropropane	7.01	Incomplete Integration	thaneerat w	09/18/19 14:50
cis-1,2-Dichloroethene	7.04	Incomplete Integration	thaneerat w	09/18/19 14:50
Chlorobromomethane	7.41	Incomplete Integration	thaneerat w	09/18/19 14:50
1,1,1-Trichloroethane	7.80	Incomplete Integration	thaneerat w	09/18/19 14:50
Carbon tetrachloride	7.99	Incomplete Integration	thaneerat w	09/18/19 14:51
Benzene	8.27	Incomplete Integration	thaneerat w	09/18/19 14:51
Tert-amyl methyl ether	8.49	Incomplete Integration	thaneerat w	09/18/19 14:51
Trichloroethene	9.08	Incomplete Integration	thaneerat w	09/18/19 14:51
Dibromomethane	9.45	Incomplete Integration	thaneerat w	09/18/19 14:51
2-Chloroethyl vinyl ether	9.94	Incomplete Integration	thaneerat w	09/18/19 14:51
4-Methyl-2-pentanone (MIBK)	10.23	Incomplete Integration	thaneerat w	09/18/19 14:52
trans-1,3-Dichloropropene	10.62	Incomplete Integration	thaneerat w	09/18/19 14:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/5 IC Client Sample ID:

Date Analyzed: 09/17/19 21:35 Lab File ID: 091719B _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Hexanone	11.00	Incomplete Integration	thaneerat w	09/18/19 14:52
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:52
Styrene	12.17	Incomplete Integration	thaneerat w	09/18/19 14:52
Bromoform	12.33	Incomplete Integration	thaneerat w	09/18/19 14:53
1,2,3-Trichloropropane	12.74	Incomplete Integration	thaneerat w	09/18/19 14:53
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:53
1,2-Dibromo-3-Chloropropane	14.43	Incomplete Integration	thaneerat w	09/18/19 14:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/6 IC Client Sample ID:

Date Analyzed: 09/17/19 22:01 Lab File ID: 091719B _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.80	Incomplete Integration	thaneerat w	09/18/19 14:26
Chloromethane	2.04	Incomplete Integration	thaneerat w	09/18/19 14:26
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:26
Bromomethane	2.54	Incomplete Integration	thaneerat w	09/18/19 14:26
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:27
Trichlorofluoromethane	3.00	Incomplete Integration	thaneerat w	09/18/19 14:27
Acrolein	3.62	Incomplete Integration	thaneerat w	09/18/19 14:27
1,1-Dichloroethene	3.75	Incomplete Integration	thaneerat w	09/18/19 14:27
1,1,2-Trichloro-1,2,2-trifluoroethane	3.82	Incomplete Integration	thaneerat w	09/18/19 14:27
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:27
Iodomethane	3.98	Incomplete Integration	thaneerat w	09/18/19 14:27
Carbon disulfide	4.07	Incomplete Integration	thaneerat w	09/18/19 14:27
2-Methyl-2-propanol	5.01	Incomplete Integration	thaneerat w	09/18/19 14:37
trans-1,2-Dichloroethene	5.19	Incomplete Integration	thaneerat w	09/18/19 14:38
Acrylonitrile	5.20	Incomplete Integration	thaneerat w	09/18/19 14:38
Methyl tert-butyl ether	5.24	Incomplete Integration	thaneerat w	09/18/19 14:38
Hexane	5.75	Incomplete Integration	thaneerat w	09/18/19 14:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/6 IC Client Sample ID:

Date Analyzed: 09/17/19 22:01 Lab File ID: 091719B _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethane	6.03	Incomplete Integration	thaneerat w	09/18/19 14:38
Vinyl acetate	6.12	Incomplete Integration	thaneerat w	09/18/19 14:38
Tert-butyl ethyl ether	6.19	Incomplete Integration	thaneerat w	09/18/19 14:38
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 14:38
2-Butanone (MEK)	7.11	Incomplete Integration	thaneerat w	09/18/19 14:38
Chlorobromomethane	7.42	Incomplete Integration	thaneerat w	09/18/19 14:39
Carbon tetrachloride	8.00	Incomplete Integration	thaneerat w	09/18/19 14:39
Dibromomethane	9.46	Incomplete Integration	thaneerat w	09/18/19 14:39
2-Chloroethyl vinyl ether	9.94	Incomplete Integration	thaneerat w	09/18/19 14:39
Ethylene Dibromide	11.23	Incomplete Integration	thaneerat w	09/18/19 14:39
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:39
trans-1,4-Dichloro-2-butene	12.74	Incomplete Integration	thaneerat w	09/18/19 14:39
1,4-Dichlorobenzene	13.54	Incomplete Integration	thaneerat w	09/18/19 14:40
1,2,4-Trimethylbenzene	13.56	Incomplete Integration	thaneerat w	09/18/19 14:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/7 IC Client Sample ID:

Date Analyzed: 09/17/19 22:28 Lab File ID: 091719B _006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 14:20
Vinyl chloride	2.18	Incomplete Integration	thaneerat w	09/18/19 14:20
Trichlorofluoromethane	2.97	Incomplete Integration	thaneerat w	09/18/19 14:20
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:20
1,1,2-Trichloro-1,2,2-trifluoroethane	3.83	Incomplete Integration	thaneerat w	09/18/19 14:20
Acetone	3.88	Incomplete Integration	thaneerat w	09/18/19 14:21
2-Methyl-2-propanol	5.01	Incomplete Integration	thaneerat w	09/18/19 14:21
Acrylonitrile	5.19	Incomplete Integration	thaneerat w	09/18/19 14:21
trans-1,2-Dichloroethene	5.19	Incomplete Integration	thaneerat w	09/18/19 14:21
Hexane	5.75	Incomplete Integration	thaneerat w	09/18/19 14:21
Vinyl acetate	6.14	Assign Peak	overmand	09/18/19 10:45
Tert-butyl ethyl ether	6.18	Incomplete Integration	thaneerat w	09/18/19 14:21
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 14:21
cis-1,2-Dichloroethene	7.03	Incomplete Integration	thaneerat w	09/18/19 14:21
2-Butanone (MEK)	7.11	Incomplete Integration	thaneerat w	09/18/19 14:22
2-Chloroethyl vinyl ether	9.96	Incomplete Integration	thaneerat w	09/18/19 14:23
4-Methyl-2-pentanone (MIBK)	10.24	Incomplete Integration	thaneerat w	09/18/19 14:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/7 IC Client Sample ID:

Date Analyzed: 09/17/19 22:28 Lab File ID: 091719B _006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:23
1,1,1,2-Tetrachloroethane	11.72	Incomplete Integration	thaneerat w	09/18/19 14:25
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/8 IC Client Sample ID:

Date Analyzed: 09/17/19 22:55 Lab File ID: 091719B _007.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.81	Incomplete Integration	thaneerat w	09/18/19 14:13
Vinyl chloride	2.19	Incomplete Integration	thaneerat w	09/18/19 14:14
Bromomethane	2.55	Incomplete Integration	thaneerat w	09/18/19 14:14
Chloroethane	2.67	Incomplete Integration	thaneerat w	09/18/19 14:14
Trichlorofluoromethane	3.02	Incomplete Integration	thaneerat w	09/18/19 14:14
Acrolein	3.64	Incomplete Integration	thaneerat w	09/18/19 14:14
1,1,2-Trichloro-1,2,2-trifluoroethane	3.83	Incomplete Integration	thaneerat w	09/18/19 14:15
Methylene Chloride	4.65	Incomplete Integration	thaneerat w	09/18/19 14:15
2-Methyl-2-propanol	5.03	Incomplete Integration	thaneerat w	09/18/19 14:15
Acrylonitrile	5.18	Incomplete Integration	thaneerat w	09/18/19 14:17
trans-1,2-Dichloroethene	5.20	Incomplete Integration	thaneerat w	09/18/19 14:17
Vinyl acetate	6.12	Assign Peak	overmand	09/18/19 10:46
2,2-Dichloropropane	7.02	Incomplete Integration	thaneerat w	09/18/19 14:18
2-Butanone (MEK)	7.09	Incomplete Integration	thaneerat w	09/18/19 14:19
Chlorobenzene	11.64	Incomplete Integration	thaneerat w	09/18/19 14:18
1,4-Dichlorobenzene	13.55	Incomplete Integration	thaneerat w	09/18/19 14:19

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/9 IC Client Sample ID:

Date Analyzed: 09/17/19 23:21 Lab File ID: 091719B _008.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	2.17	Incomplete Integration	thaneerat w	09/18/19 14:11
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 14:11
TBA-d9 (IS)	4.86	Peak assignment corrected	thaneerat w	09/18/19 14:11
Vinyl acetate	6.12	Assign Peak	overmand	09/18/19 10:46
2-Butanone (MEK)	7.09	Incomplete Integration	thaneerat w	09/18/19 14:12

Lab Sample ID: ICIS 580-311508/10 Client Sample ID:

Date Analyzed: 09/17/19 23:48 Lab File ID: 091719B _009.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.89	Incomplete Integration	thaneerat w	09/18/19 14:10
TBA-d9 (IS)	4.86	Incomplete Integration	thaneerat w	09/18/19 14:09
Vinyl acetate	6.13	Assign Peak	overmand	09/18/19 10:47
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 14:10
2-Butanone (MEK)	7.09	Peak assignment corrected	thaneerat w	09/18/19 14:12

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: STD 580-311508/11 IC Client Sample ID:

Date Analyzed: 09/18/19 00:14 Lab File ID: 091719B _010.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	thaneerat w	09/18/19 15:30
TBA-d9 (IS)	4.87	Incomplete Integration	thaneerat w	09/18/19 15:28

Lab Sample ID: STD 580-311508/12 IC Client Sample ID:

Date Analyzed: 09/18/19 00:41 Lab File ID: 091719B _011.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	thaneerat w	09/18/19 15:33

Lab Sample ID: STD 580-311508/13 IC Client Sample ID:

Date Analyzed: 09/18/19 01:07 Lab File ID: 091719B _012.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Incomplete Integration	thaneerat w	09/18/19 15:38
TBA-d9 (IS)	4.84	Incomplete Integration	thaneerat w	09/18/19 15:37
1,4-Dichlorobenzene-d4	13.53	Incomplete Integration	thaneerat w	09/18/19 15:37

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311508

Lab Sample ID: ICV 580-311508/15 Client Sample ID:

Date Analyzed: 09/18/19 02:00 Lab File ID: 091719B _014.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.00	Incomplete Integration	thaneerat w	09/18/19 17:31
2-Methyl-2-propanol	5.02	Incomplete Integration	thaneerat w	09/18/19 17:32
2,2-Dichloropropane	7.03	Incomplete Integration	thaneerat w	09/18/19 17:32

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311759

Lab Sample ID: CCVIS 580-311759/3 Client Sample ID:

Date Analyzed: 09/20/19 14:44 Lab File ID: 092019 _003.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.03	Incomplete Integration	mckelljs	09/23/19 13:08
1,1,1-Trichloroethane	7.80	Incomplete Integration	mckelljs	09/23/19 13:08

Lab Sample ID: LCS 580-311759/4 Client Sample ID:

Date Analyzed: 09/20/19 15:11 Lab File ID: 092019 _004.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.82	Incomplete Integration	mckelljs	09/23/19 13:09
Trichlorofluoromethane	2.99	Incomplete Integration	mckelljs	09/23/19 13:09

Lab Sample ID: LCSD 580-311759/5 Client Sample ID:

Date Analyzed: 09/20/19 15:37 Lab File ID: 092019 _005.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	2.99	Assign Peak	mckelljs	09/23/19 13:41
2,2-Dichloropropane	7.02	Peak assignment corrected	mckelljs	09/23/19 13:10

Lab Sample ID: CCVL 580-311759/6 Client Sample ID:

Date Analyzed: 09/20/19 16:04 Lab File ID: 092019 _006.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloroethene	3.75	Incomplete Integration	mckelljs	09/23/19 13:10
2,2-Dichloropropane	7.02	Incomplete Integration	mckelljs	09/23/19 13:10
1,1-Dichloropropene	8.03	Incomplete Integration	mckelljs	09/23/19 13:10
Chlorobenzene	11.64	Incomplete Integration	mckelljs	09/23/19 13:10
1,4-Dichlorobenzene	13.55	Incomplete Integration	mckelljs	09/23/19 13:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311759

Lab Sample ID: MB 580-311759/7 Client Sample ID:

Date Analyzed: 09/20/19 16:30 Lab File ID: 092019 _007.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:12
tert-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:11

Lab Sample ID: 580-89178-1 Client Sample ID: 03Q19L4MW09AW

Date Analyzed: 09/20/19 22:15 Lab File ID: 092019 _020.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:24
1,2,4-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:24
2-Chlorotoluene		Invalid Compound ID	mckelljs	09/23/19 13:24
cis-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:24
Methyl tert-butyl ether		Invalid Compound ID	mckelljs	09/23/19 13:24
tert-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:24
trans-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:24

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311759

Lab Sample ID: 580-89178-2 Client Sample ID: 03Q19L4MW09BW

Date Analyzed: 09/20/19 22:41 Lab File ID: 092019 _021.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.82	Peak assignment corrected	mckelljs	09/23/19 13:25
Methylene Chloride	4.67	Assign Peak	mckelljs	09/23/19 13:25
trans-1,2-Dichloroethene	5.20	Assign Peak	mckelljs	09/23/19 13:25
cis-1,2-Dichloroethene	7.05	Assign Peak	mckelljs	09/23/19 13:25
Chloroform	7.63	Assign Peak	mckelljs	09/23/19 13:25
4-Chlorotoluene		Invalid Compound ID	mckelljs	09/23/19 13:26
Benzene		Invalid Compound ID	mckelljs	09/23/19 13:25
cis-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:26
m-Xylene & p-Xylene		Invalid Compound ID	mckelljs	09/23/19 13:26
n-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:26
sec-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:26
tert-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:26

Lab Sample ID: 580-89178-3 Client Sample ID: 03Q19L4MW10AW

Date Analyzed: 09/20/19 23:08 Lab File ID: 092019 _022.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.05	Assign Peak	mckelljs	09/23/19 13:28
1,1-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:28
1,2,3-Trichlorobenzene		Invalid Compound ID	mckelljs	09/23/19 13:27
1,2,4-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:27
1,3,5-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:27
2-Chlorotoluene		Invalid Compound ID	mckelljs	09/23/19 13:27
cis-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:27
Methyl tert-butyl ether		Invalid Compound ID	mckelljs	09/23/19 13:28
tert-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Seattl Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Analysis Batch Number: 311759

Lab Sample ID: 580-89178-4 Client Sample ID: 03Q19L4MW10BW

Date Analyzed: 09/20/19 23:34 Lab File ID: 092019 _023.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.02	Assign Peak	mckelljs	09/23/19 13:28
Methylene Chloride	4.66	Assign Peak	mckelljs	09/23/19 13:28
trans-1,2-Dichloroethene	5.19	Assign Peak	mckelljs	09/23/19 13:29
cis-1,2-Dichloroethene	7.04	Assign Peak	mckelljs	09/23/19 13:29
1,2,3-Trichlorobenzene		Invalid Compound ID	mckelljs	09/23/19 13:30
1,2,4-Trichlorobenzene		Invalid Compound ID	mckelljs	09/23/19 13:30
1,2,4-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:29
4-Chlorotoluene		Invalid Compound ID	mckelljs	09/23/19 13:29
Benzene		Invalid Compound ID	mckelljs	09/23/19 13:29
Ethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:29
Isopropylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:29
Naphthalene		Invalid Compound ID	mckelljs	09/23/19 13:30
o-Xylene		Invalid Compound ID	mckelljs	09/23/19 13:29
Styrene		Invalid Compound ID	mckelljs	09/23/19 13:29

Lab Sample ID: 580-89178-5 Client Sample ID: 091219TB

Date Analyzed: 09/21/19 00:01 Lab File ID: 092019 _024.D GC Column: 624SIL-MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2,4-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:30
1,2-Dichloropropane		Invalid Compound ID	mckelljs	09/23/19 13:31
1,3,5-Trimethylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:30
2-Chlorotoluene		Invalid Compound ID	mckelljs	09/23/19 13:30
4-Isopropyltoluene		Invalid Compound ID	mckelljs	09/23/19 13:30
n-Butylbenzene		Invalid Compound ID	mckelljs	09/23/19 13:30
trans-1,3-Dichloropropene		Invalid Compound ID	mckelljs	09/23/19 13:31
m-Xylene & p-Xylene	11.84	Assign Peak	mckelljs	09/23/19 13:31

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: STD020 280-471409/4 IC Client Sample ID:

Date Analyzed: 09/23/19 11:34 Lab File ID: IC819I23002.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.64	Baseline	beckerc	09/23/19 17:20

Lab Sample ID: STD050 280-471409/5 IC Client Sample ID:

Date Analyzed: 09/23/19 11:39 Lab File ID: IC819I23003.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:21
Perchlorate	2.65	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: STD100 280-471409/6 IC Client Sample ID:

Date Analyzed: 09/23/19 11:44 Lab File ID: IC819I23004.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.62	Baseline	beckerc	09/23/19 17:21

Lab Sample ID: STD200 280-471409/7 ICI Client Sample ID:

Date Analyzed: 09/23/19 11:49 Lab File ID: IC819I23005.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:21

Lab Sample ID: STD1000 280-471409/9 IC Client Sample ID:

Date Analyzed: 09/23/19 11:59 Lab File ID: IC819I23007.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:21

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: ICB 280-471409/10 Client Sample ID:

Date Analyzed: 09/23/19 12:05 Lab File ID: IC819I23008.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	beckerc	09/23/19 17:22
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:22

Lab Sample ID: ICV 280-471409/11 Client Sample ID:

Date Analyzed: 09/23/19 12:10 Lab File ID: IC819I23009.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.61	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: DLCK 280-471409/12 Client Sample ID:

Date Analyzed: 09/23/19 12:15 Lab File ID: IC819I23010.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.63	Baseline	beckerc	09/23/19 17:25
Perchlorate-18O	2.63	Baseline	beckerc	09/23/19 17:24

Lab Sample ID: CCV 280-471409/23 Client Sample ID:

Date Analyzed: 09/23/19 13:12 Lab File ID: IC819I23021.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:30

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471409

Lab Sample ID: CCB 280-471409/25 Client Sample ID:

Date Analyzed: 09/23/19 13:47 Lab File ID: IC819I23026.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/23/19 17:31
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:31

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471410

Lab Sample ID: CCV 280-471410/41 Client Sample ID:

Date Analyzed: 09/23/19 15:09 Lab File ID: IC819I23042.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/23/19 17:36

Lab Sample ID: CCB 280-471410/43 Client Sample ID:

Date Analyzed: 09/23/19 15:19 Lab File ID: IC819I23044.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.57	Baseline	beckerc	09/23/19 17:36
Perchlorate		Invalid Compound ID	beckerc	09/23/19 17:36

Lab Sample ID: MB 280-471410/44 Client Sample ID:

Date Analyzed: 09/23/19 15:24 Lab File ID: IC819I23045.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/24/19 11:24

Lab Sample ID: INF 280-471410/46 Client Sample ID:

Date Analyzed: 09/23/19 15:34 Lab File ID: IC819I23047.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.58	Baseline	beckerc	09/24/19 11:24

Lab Sample ID: CCV 280-471410/54 Client Sample ID:

Date Analyzed: 09/23/19 16:15 Lab File ID: IC819I23055.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.56	Baseline	beckerc	09/24/19 11:26

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471410

Lab Sample ID: CCVL 280-471410/55 Client Sample ID:

Date Analyzed: 09/23/19 16:20 Lab File ID: IC819I23056.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.56	Baseline	beckerc	09/24/19 11:26

Lab Sample ID: CCB 280-471410/56 Client Sample ID:

Date Analyzed: 09/23/19 16:25 Lab File ID: IC819I23057.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate		Invalid Compound ID	beckerc	09/24/19 11:26

Lab Sample ID: 580-89178-1 Client Sample ID:

Date Analyzed: 09/23/19 16:56 Lab File ID: IC819I23063.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/24/19 11:27

Lab Sample ID: 580-89178-2 Client Sample ID:

Date Analyzed: 09/23/19 17:01 Lab File ID: IC819I23064.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.60	Baseline	beckerc	09/24/19 11:27

Lab Sample ID: 580-89178-3 Client Sample ID:

Date Analyzed: 09/23/19 17:06 Lab File ID: IC819I23065.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.56	Baseline	beckerc	09/24/19 11:28

6860

LCMS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Analysis Batch Number: 471410

Lab Sample ID: 580-89178-4 Client Sample ID:

Date Analyzed: 09/23/19 17:11 Lab File ID: IC819I23066.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.56	Baseline	beckerc	09/24/19 11:28

Lab Sample ID: CCV 280-471410/67 Client Sample ID:

Date Analyzed: 09/23/19 17:21 Lab File ID: IC819I23068.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.57	Baseline	beckerc	09/24/19 11:29

Lab Sample ID: CCVL 280-471410/68 Client Sample ID:

Date Analyzed: 09/23/19 17:27 Lab File ID: IC819I23069.d GC Column: ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate	2.59	Baseline	beckerc	09/24/19 11:29
Perchlorate-18O	2.59	Baseline	beckerc	09/24/19 11:29

Lab Sample ID: CCB 280-471410/69 Client Sample ID:

Date Analyzed: 09/23/19 17:32 Lab File ID: IC819I23070.d GC Column: ID: ()

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perchlorate-18O	2.59	Baseline	beckerc	09/24/19 11:29
Perchlorate		Invalid Compound ID	beckerc	09/24/19 11:29

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326139

Lab Sample ID: STD1 320-326139/4 IC Client Sample ID:

Date Analyzed: 09/25/19 22:31 Lab File ID: YA0000011.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	33.95	Incomplete Integration	cartiera	09/26/19 14:56
4-Nitrotoluene	35.45	Incomplete Integration	cartiera	09/26/19 14:57

Lab Sample ID: STD2 320-326139/5 IC Client Sample ID:

Date Analyzed: 09/25/19 23:24 Lab File ID: YA0000012.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
PETN	38.38	Incomplete Integration	cartiera	09/26/19 16:13

Lab Sample ID: STD3 320-326139/6 IC Client Sample ID:

Date Analyzed: 09/26/19 00:18 Lab File ID: YA0000013.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	33.98	Baseline Smoothing	cartiera	09/26/19 13:16

Lab Sample ID: STD6 320-326139/9 IC Client Sample ID:

Date Analyzed: 09/26/19 02:59 Lab File ID: YA0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.58	Peak assignment corrected	cartiera	09/26/19 13:19
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/26/19 13:19

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326139

Lab Sample ID: STD7 320-326139/10 IC Client Sample ID:

Date Analyzed: 09/26/19 03:52 Lab File ID: YA0000017.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.59	Peak assignment corrected	cartiera	09/26/19 13:20
3,4-Dinitrotoluene	28.94	Peak assignment corrected	cartiera	09/26/19 13:20

Lab Sample ID: ICV 320-326139/12 Client Sample ID:

Date Analyzed: 09/26/19 05:40 Lab File ID: YA0000019.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	19.72	Split Peak	cartiera	09/26/19 13:26

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326750

Lab Sample ID: MB 320-324664/1-A Client Sample ID:

Date Analyzed: 09/29/19 09:10 Lab File ID: Z0000073.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 14:33
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 14:33
HMX		Invalid Compound ID	cartiera	09/30/19 14:33
PETN	38.47	Incomplete Integration	cartiera	09/30/19 14:36

Lab Sample ID: 580-89178-1 Client Sample ID: 03Q19L4MW09AW

Date Analyzed: 09/29/19 19:53 Lab File ID: Z0000085.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	09/30/19 15:00
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:00
PETN	38.44	Peak not integrated	cartiera	09/30/19 15:00

Lab Sample ID: 580-89178-2 Client Sample ID: 03Q19L4MW09BW

Date Analyzed: 09/29/19 21:40 Lab File ID: Z0000087.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	09/30/19 15:05
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	09/30/19 15:05
2-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:05
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:06
Nitroglycerin		Invalid Compound ID	cartiera	09/30/19 15:05
PETN		Invalid Compound ID	cartiera	09/30/19 15:06
Tetryl		Invalid Compound ID	cartiera	09/30/19 15:05
2,6-Dinitrotoluene	30.55	Baseline Smoothing	cartiera	09/30/19 15:05
2,4-Dinitrotoluene	30.95	Baseline Smoothing	cartiera	09/30/19 15:05

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 326750

Lab Sample ID: 580-89178-3 Client Sample ID: 03Q19L4MW10AW

Date Analyzed: 09/29/19 22:34 Lab File ID: Z0000088.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	09/30/19 15:06
2,4,6-Trinitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:06
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:06
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:06
PETN	38.50	Incomplete Integration	cartiera	09/30/19 15:06

Lab Sample ID: 580-89178-4 Client Sample ID: 03Q19L4MW10BW

Date Analyzed: 09/29/19 23:28 Lab File ID: Z0000089.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	09/30/19 15:08
2-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:08
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 15:08
HMX		Invalid Compound ID	cartiera	09/30/19 15:08
PETN		Invalid Compound ID	cartiera	09/30/19 15:08

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 327493

Lab Sample ID: CCV 320-327493/55 Client Sample ID:

Date Analyzed: 10/02/19 02:22 Lab File ID: ZD0000016.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.52	Peak assignment corrected	cartiera	10/02/19 13:31
3,4-Dinitrotoluene	28.88	Peak assignment corrected	cartiera	10/02/19 13:31

Lab Sample ID: 580-89178-2 DL Client Sample ID: 03Q19L4MW09BW DL

Date Analyzed: 10/02/19 13:05 Lab File ID: ZD0000028.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	10/02/19 14:02
Nitrobenzene		Invalid Compound ID	cartiera	10/02/19 14:02

Lab Sample ID: 580-89178-4 DL Client Sample ID: 03Q19L4MW10BW DL

Date Analyzed: 10/02/19 16:40 Lab File ID: ZD0000032.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	10/03/19 13:57
HMX		Invalid Compound ID	cartiera	10/03/19 13:57
PETN		Invalid Compound ID	cartiera	10/09/19 15:08
2,6-Dinitrotoluene	30.41	Incomplete Integration	cartiera	10/09/19 14:59

Lab Sample ID: CCV 320-327493/28 Client Sample ID:

Date Analyzed: 10/03/19 02:29 Lab File ID: ZD0000043.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.46	Peak assignment corrected	cartiera	10/03/19 14:21
3,4-Dinitrotoluene	28.85	Peak assignment corrected	cartiera	10/03/19 14:21

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 329066

Lab Sample ID: MB 320-328371/1-A Client Sample ID:

Date Analyzed: 10/09/19 06:38 Lab File ID: G0000039.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
3-Nitrotoluene		Invalid Compound ID	cartiera	10/09/19 11:34
Nitroglycerin		Invalid Compound ID	cartiera	10/09/19 11:34
PETN		Invalid Compound ID	cartiera	10/09/19 11:34

Lab Sample ID: LCS 320-328371/2-A Client Sample ID:

Date Analyzed: 10/09/19 07:31 Lab File ID: G0000040.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.58	Peak assignment corrected	cartiera	10/09/19 11:34
3,4-Dinitrotoluene	28.93	Peak assignment corrected	cartiera	10/09/19 11:34

Lab Sample ID: 580-89178-2 RE Client Sample ID: 03Q19L4MW09BW RE

Date Analyzed: 10/09/19 19:08 Lab File ID: G0000053.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	ruangyotsakuld	10/10/19 13:47
3-Nitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:47
Nitroglycerin		Invalid Compound ID	ruangyotsakuld	10/10/19 13:47
PETN		Invalid Compound ID	ruangyotsakuld	10/10/19 13:47
Tetryl		Invalid Compound ID	ruangyotsakuld	10/10/19 13:47
2,4-Dinitrotoluene	30.95	Baseline Smoothing	ruangyotsakuld	10/10/19 13:47

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 329066

Lab Sample ID: 580-89178-3 RE Client Sample ID: 03Q19L4MW10AW RE

Date Analyzed: 10/09/19 20:02 Lab File ID: G0000054.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	ruangyotsakuld	10/10/19 13:48
2,4-Dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
3-Nitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
Nitroglycerin		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
PETN		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
Tetryl		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48

Lab Sample ID: 580-89178-1 RE Client Sample ID: 03Q19L4MW09AW RE

Date Analyzed: 10/09/19 20:55 Lab File ID: G0000055.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4-Dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48
PETN		Invalid Compound ID	ruangyotsakuld	10/10/19 13:48

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 329066

Lab Sample ID: 580-89178-4 RE Client Sample ID: 03Q19L4MW10BW RE

Date Analyzed: 10/09/19 21:49 Lab File ID: G0000056.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	ruangyotsakuld	10/10/19 13:49
2,4,6-Trinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:49
PETN		Invalid Compound ID	ruangyotsakuld	10/10/19 13:49
Tetryl		Invalid Compound ID	ruangyotsakuld	10/10/19 13:49

Lab Sample ID: 580-89178-2 REDL Client Sample ID: 03Q19L4MW09BW REDL

Date Analyzed: 10/10/19 00:30 Lab File ID: G0000059.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	10/10/19 12:22
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 12:23
PETN		Invalid Compound ID	cartiera	10/10/19 12:23

Lab Sample ID: 580-89178-4 REDL Client Sample ID: 03Q19L4MW10BW REDL

Date Analyzed: 10/10/19 01:23 Lab File ID: G0000060.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	10/10/19 12:26
HMX		Invalid Compound ID	cartiera	10/10/19 12:26
PETN		Invalid Compound ID	cartiera	10/10/19 12:26

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Analysis Batch Number: 329066

Lab Sample ID: CCV 320-329066/55 Client Sample ID:

Date Analyzed: 10/10/19 03:11 Lab File ID: G0000062.D GC Column: Synergi C18 ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Amino-2,6-dinitrotoluene	28.61	Peak assignment corrected	cartiera	10/10/19 12:28
3,4-Dinitrotoluene	28.95	Peak assignment corrected	cartiera	10/10/19 12:28

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 303740

Lab Sample ID: STD1 320-303740/4 IC Client Sample ID:

Date Analyzed: 06/25/19 20:10 Lab File ID: Y000005.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	24.07	Peak not integrated	cartiera	06/26/19 16:00
2-Amino-4,6-dinitrotoluene	33.73	Baseline Smoothing	cartiera	06/26/19 10:25
4-Amino-2,6-dinitrotoluene	33.99	Baseline Smoothing	cartiera	06/26/19 10:25
2,4,6-Trinitrotoluene	35.20	Split Peak	cartiera	06/26/19 10:25

Lab Sample ID: STD2 320-303740/5 IC Client Sample ID:

Date Analyzed: 06/25/19 21:08 Lab File ID: Y000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	24.17	Peak not integrated	cartiera	06/26/19 10:07
2-Nitrotoluene	28.90	Baseline Smoothing	cartiera	06/26/19 10:09
4-Nitrotoluene	28.90	Baseline Smoothing	cartiera	06/26/19 10:09
3-Nitrotoluene	29.47	Baseline Smoothing	cartiera	06/26/19 10:09
3,5-Dinitroaniline	30.13	Baseline Smoothing	cartiera	06/26/19 10:09
RDX	31.00	Baseline Smoothing	cartiera	06/26/19 10:09
2-Amino-4,6-dinitrotoluene	33.74	Baseline Smoothing	cartiera	06/26/19 10:09
4-Amino-2,6-dinitrotoluene	34.00	Baseline Smoothing	cartiera	06/26/19 10:09
2,4,6-Trinitrotoluene	35.21	Split Peak	cartiera	06/26/19 10:09
Tetryl	37.76	Baseline Smoothing	cartiera	06/26/19 10:08
PETN	41.05	Baseline Smoothing	cartiera	06/26/19 10:08

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 303740

Lab Sample ID: STD3 320-303740/6 IC Client Sample ID:

Date Analyzed: 06/25/19 22:05 Lab File ID: Y000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	24.17	Peak not integrated	cartiera	06/26/19 10:10
2-Amino-4,6-dinitrotoluene	33.74	Baseline Smoothing	cartiera	06/26/19 10:11
4-Amino-2,6-dinitrotoluene	34.00	Baseline Smoothing	cartiera	06/26/19 10:11
3,4-Dinitrotoluene	34.71	Baseline Smoothing	cartiera	06/26/19 10:11
2,4,6-Trinitrotoluene	35.21	Baseline Smoothing	cartiera	06/26/19 10:11
HMX	36.13	Split Peak	cartiera	06/26/19 10:12
Tetryl	37.76	Baseline Smoothing	cartiera	06/26/19 10:11

Lab Sample ID: STD4 320-303740/7 IC Client Sample ID:

Date Analyzed: 06/25/19 23:03 Lab File ID: Y000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	24.11	Incomplete Integration	cartiera	06/26/19 10:12
2,4,6-Trinitrotoluene	35.20	Split Peak	cartiera	06/26/19 10:12
HMX	36.12	Split Peak	cartiera	06/26/19 10:13
Tetryl	37.75	Split Peak	cartiera	06/26/19 10:13

Lab Sample ID: STD5 320-303740/8 IC Client Sample ID:

Date Analyzed: 06/26/19 00:00 Lab File ID: Y000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.86	Peak assignment corrected	cartiera	06/26/19 10:02
4-Nitrotoluene	28.86	Peak assignment corrected	cartiera	06/26/19 10:02
3-Nitrotoluene	29.43	Peak assignment corrected	cartiera	06/26/19 10:02
2,4-Dinitrotoluene	31.83	Peak assignment corrected	cartiera	06/26/19 10:02
2-Amino-4,6-dinitrotoluene	33.71	Peak assignment corrected	cartiera	06/26/19 10:02
4-Amino-2,6-dinitrotoluene	33.97	Peak assignment corrected	cartiera	06/26/19 10:03

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 303740

Lab Sample ID: STD6 320-303740/9 IC Client Sample ID:

Date Analyzed: 06/26/19 00:58 Lab File ID: Y000010.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.17	Split Peak	cartiera	06/26/19 10:14

Lab Sample ID: STD7 320-303740/10 IC Client Sample ID:

Date Analyzed: 06/26/19 01:55 Lab File ID: Y000011.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,4,6-Trinitrotoluene	35.16	Split Peak	cartiera	06/26/19 10:14

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 321126

Lab Sample ID: STD1 320-321126/4 IC Client Sample ID:

Date Analyzed: 09/05/19 21:07 Lab File ID: E000004.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.26	Baseline Smoothing	cartiera	09/09/19 16:59
4-Nitrotoluene	28.26	Baseline Smoothing	cartiera	09/09/19 16:59
3-Nitrotoluene	28.80	Baseline Smoothing	cartiera	09/09/19 16:59
3,5-Dinitroaniline	29.36	Baseline Smoothing	cartiera	09/09/19 16:59
RDX	30.29	Baseline Smoothing	cartiera	09/09/19 16:59
2,4-Dinitrotoluene	31.17	Baseline Smoothing	cartiera	09/09/19 16:59
2,6-Dinitrotoluene	31.94	Baseline Smoothing	cartiera	09/09/19 16:59
2-Amino-4,6-dinitrotoluene	33.33	Baseline Smoothing	cartiera	09/09/19 16:30
4-Amino-2,6-dinitrotoluene	33.63	Baseline Smoothing	cartiera	09/09/19 16:30
3,4-Dinitrotoluene	34.42	Baseline Smoothing	cartiera	09/09/19 16:31
2,4,6-Trinitrotoluene	34.83	Baseline Smoothing	cartiera	09/09/19 16:31
HMX	35.91	Baseline Smoothing	cartiera	09/09/19 16:31
Tetryl	37.53	Baseline Smoothing	cartiera	09/09/19 16:31
PETN	40.87	Incomplete Integration	cartiera	09/09/19 16:33

Lab Sample ID: STD2 320-321126/5 IC Client Sample ID:

Date Analyzed: 09/05/19 22:05 Lab File ID: E000005.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	33.32	Baseline Smoothing	cartiera	09/09/19 16:32
4-Amino-2,6-dinitrotoluene	33.62	Baseline Smoothing	cartiera	09/09/19 16:32
HMX	35.91	Baseline Smoothing	cartiera	09/09/19 16:32
PETN	40.87	Baseline Smoothing	cartiera	09/09/19 16:32

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 321126

Lab Sample ID: STD3 320-321126/6 IC Client Sample ID:

Date Analyzed: 09/05/19 23:02 Lab File ID: E000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.27	Baseline Smoothing	cartiera	09/09/19 16:42
4-Nitrotoluene	28.27	Baseline Smoothing	cartiera	09/09/19 16:42
3-Nitrotoluene	28.81	Baseline Smoothing	cartiera	09/09/19 16:42
3,5-Dinitroaniline	29.36	Baseline Smoothing	cartiera	09/09/19 16:42
RDX	30.28	Baseline Smoothing	cartiera	09/09/19 16:42
2,4-Dinitrotoluene	31.15	Baseline Smoothing	cartiera	09/09/19 16:42
2,6-Dinitrotoluene	31.98	Baseline Smoothing	cartiera	09/09/19 16:42
2-Amino-4,6-dinitrotoluene	33.33	Baseline Smoothing	cartiera	09/09/19 16:42
4-Amino-2,6-dinitrotoluene	33.61	Baseline Smoothing	cartiera	09/09/19 16:42

Lab Sample ID: STD4 320-321126/7 IC Client Sample ID:

Date Analyzed: 09/06/19 00:00 Lab File ID: E000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene	23.47	Incomplete Integration	cartiera	09/09/19 16:46
HMX	35.91	Baseline Smoothing	cartiera	09/09/19 16:47
Tetryl	37.53	Baseline Smoothing	cartiera	09/09/19 16:47
PETN	40.86	Split Peak	cartiera	09/09/19 16:47

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 321126

Lab Sample ID: STD5 320-321126/8 IC Client Sample ID:

Date Analyzed: 09/06/19 00:57 Lab File ID: E000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.25	Baseline Smoothing	cartiera	09/09/19 16:48
4-Nitrotoluene	28.25	Baseline Smoothing	cartiera	09/09/19 16:48
3-Nitrotoluene	28.82	Baseline Smoothing	cartiera	09/09/19 16:48
3,5-Dinitroaniline	29.34	Baseline Smoothing	cartiera	09/09/19 16:48
RDX	30.26	Baseline Smoothing	cartiera	09/09/19 16:48
2,4-Dinitrotoluene	31.14	Baseline Smoothing	cartiera	09/09/19 16:48
2,6-Dinitrotoluene	31.97	Baseline Smoothing	cartiera	09/09/19 16:48
2-Amino-4,6-dinitrotoluene	33.32	Baseline Smoothing	cartiera	09/09/19 16:48
4-Amino-2,6-dinitrotoluene	33.61	Baseline Smoothing	cartiera	09/09/19 16:48
Tetryl	37.53	Baseline Smoothing	cartiera	09/09/19 16:48

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 321126

Lab Sample ID: STD6 320-321126/9 IC Client Sample ID:

Date Analyzed: 09/06/19 01:55 Lab File ID: E000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitrobenzene	21.31	Peak assignment corrected	cartiera	09/09/19 15:56
1,3-Dinitrobenzene	23.46	Peak assignment corrected	cartiera	09/09/19 15:56
1,3,5-Trinitrobenzene	25.21	Peak assignment corrected	cartiera	09/09/19 15:56
2-Nitrotoluene	28.26	Baseline Smoothing	cartiera	09/09/19 16:10
4-Nitrotoluene	28.26	Baseline Smoothing	cartiera	09/09/19 16:10
3-Nitrotoluene	28.84	Baseline Smoothing	cartiera	09/09/19 16:10
3,5-Dinitroaniline	29.36	Baseline Smoothing	cartiera	09/09/19 16:10
RDX	30.27	Baseline Smoothing	cartiera	09/09/19 16:10
2,4-Dinitrotoluene	31.15	Baseline Smoothing	cartiera	09/09/19 16:10
2,6-Dinitrotoluene	31.99	Baseline Smoothing	cartiera	09/09/19 16:10
2-Amino-4,6-dinitrotoluene	33.33	Baseline Smoothing	cartiera	09/09/19 16:11
4-Amino-2,6-dinitrotoluene	33.62	Baseline Smoothing	cartiera	09/09/19 16:11
3,4-Dinitrotoluene	34.43	Baseline Smoothing	cartiera	09/09/19 16:11
2,4,6-Trinitrotoluene	34.84	Baseline Smoothing	cartiera	09/09/19 16:11
PETN	40.87	Baseline Smoothing	cartiera	09/09/19 16:05

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 326181

Lab Sample ID: CCVRT 320-326181/3 Client Sample ID:

Date Analyzed: 09/25/19 19:20 Lab File ID: Y000003.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	33.52	Baseline Smoothing	cartiera	09/25/19 21:06
4-Amino-2,6-dinitrotoluene	33.81	Baseline Smoothing	cartiera	09/25/19 21:06
3,4-Dinitrotoluene	34.57	Baseline Smoothing	cartiera	09/25/19 21:07
2,4,6-Trinitrotoluene	34.95	Baseline Smoothing	cartiera	09/25/19 21:07
HMX	36.02	Baseline Smoothing	cartiera	09/25/19 21:07

Lab Sample ID: 580-89178-1 Client Sample ID: 03Q19L4MW09AW

Date Analyzed: 09/26/19 11:39 Lab File ID: Y000020.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	09/26/19 14:19
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	09/26/19 14:19
Tetryl		Invalid Compound ID	cartiera	09/26/19 14:20
3,4-Dinitrotoluene	34.59	Baseline Smoothing	cartiera	09/26/19 14:20
HMX	36.04	Baseline Smoothing	cartiera	09/26/19 14:20

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 326181

Lab Sample ID: 580-89178-2 Client Sample ID: 03Q19L4MW09BW

Date Analyzed: 09/26/19 12:37 Lab File ID: Y000021.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	09/26/19 14:21
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	09/26/19 14:22
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	09/26/19 14:22
Nitrobenzene		Invalid Compound ID	cartiera	09/26/19 14:21
Tetryl		Invalid Compound ID	cartiera	09/26/19 14:23
RDX	30.59	Split Peak	cartiera	09/26/19 14:22
2,4-Dinitrotoluene	31.34	Split Peak	cartiera	09/26/19 14:22
3,4-Dinitrotoluene	34.59	Split Peak	cartiera	09/26/19 14:22
2,4,6-Trinitrotoluene	34.87	Split Peak	cartiera	09/26/19 14:22
HMX	36.05	Split Peak	cartiera	09/26/19 14:22

Lab Sample ID: CCV 320-326181/15 Client Sample ID:

Date Analyzed: 09/26/19 13:34 Lab File ID: Y000022.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.50	Baseline Smoothing	cartiera	09/26/19 15:11
4-Nitrotoluene	28.50	Baseline Smoothing	cartiera	09/26/19 15:11
3-Nitrotoluene	29.04	Baseline Smoothing	cartiera	09/26/19 15:11
3,5-Dinitroaniline	29.66	Baseline Smoothing	cartiera	09/26/19 15:11
RDX	30.57	Baseline Smoothing	cartiera	09/26/19 15:11
2,4-Dinitrotoluene	31.41	Baseline Smoothing	cartiera	09/26/19 15:11
2,6-Dinitrotoluene	32.26	Baseline Smoothing	cartiera	09/26/19 15:11
2-Amino-4,6-dinitrotoluene	33.54	Baseline Smoothing	cartiera	09/26/19 15:11
4-Amino-2,6-dinitrotoluene	33.83	Baseline Smoothing	cartiera	09/26/19 15:11
3,4-Dinitrotoluene	34.58	Baseline Smoothing	cartiera	09/26/19 15:11
2,4,6-Trinitrotoluene	34.98	Baseline Smoothing	cartiera	09/26/19 15:11

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 326765

Lab Sample ID: CCVRT 320-326765/3 Client Sample ID:

Date Analyzed: 09/27/19 18:24 Lab File ID: ZA000003.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene	23.65	Incomplete Integration	cartiera	09/27/19 20:52
PETN	40.95	Baseline Smoothing	cartiera	09/30/19 16:12

Lab Sample ID: 580-89178-3 Client Sample ID: 03Q19L4MW10AW

Date Analyzed: 09/28/19 00:09 Lab File ID: ZA000009.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	09/30/19 16:29
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	09/30/19 16:29
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	09/30/19 16:29
3-Nitrotoluene		Invalid Compound ID	cartiera	09/30/19 16:29
Nitrobenzene		Invalid Compound ID	cartiera	09/30/19 16:29
Tetryl		Invalid Compound ID	cartiera	09/30/19 16:30
RDX	30.61	Split Peak	cartiera	09/30/19 16:29

Lab Sample ID: 580-89178-4 Client Sample ID: 03Q19L4MW10BW

Date Analyzed: 09/28/19 01:06 Lab File ID: ZA000010.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	09/30/19 16:30
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	09/30/19 16:30
HMX		Invalid Compound ID	cartiera	09/30/19 16:31
Nitrobenzene	21.46	Baseline Smoothing	cartiera	09/30/19 16:30
3,4-Dinitrotoluene	34.59	Split Peak	cartiera	09/30/19 16:31
2,4,6-Trinitrotoluene	34.94	Split Peak	cartiera	09/30/19 16:31

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 326765

Lab Sample ID: CCV 320-326765/16 Client Sample ID:

Date Analyzed: 09/28/19 06:52 Lab File ID: ZA000016.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Amino-4,6-dinitrotoluene	33.55	Baseline Smoothing	cartiera	09/30/19 16:11
4-Amino-2,6-dinitrotoluene	33.83	Baseline Smoothing	cartiera	09/30/19 16:11
3,4-Dinitrotoluene	34.58	Baseline Smoothing	cartiera	09/30/19 16:11
2,4,6-Trinitrotoluene	34.98	Baseline Smoothing	cartiera	09/30/19 16:11
PETN	40.96	Baseline Smoothing	cartiera	09/30/19 16:11

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 327611

Lab Sample ID: STD1 320-327611/4 IC Client Sample ID:

Date Analyzed: 10/01/19 20:46 Lab File ID: A000006.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.32	Baseline Smoothing	cartiera	10/02/19 14:39
4-Nitrotoluene	28.32	Baseline Smoothing	cartiera	10/02/19 14:39
3-Nitrotoluene	28.81	Peak not integrated	cartiera	10/02/19 14:40
3,5-Dinitroaniline	29.48	Baseline Smoothing	cartiera	10/02/19 14:39
RDX	30.37	Baseline Smoothing	cartiera	10/02/19 14:39
2,4-Dinitrotoluene	31.20	Baseline Smoothing	cartiera	10/02/19 14:39
2,6-Dinitrotoluene	32.03	Baseline Smoothing	cartiera	10/02/19 14:39
2-Amino-4,6-dinitrotoluene	33.41	Baseline Smoothing	cartiera	10/02/19 14:39
4-Amino-2,6-dinitrotoluene	33.68	Baseline Smoothing	cartiera	10/02/19 14:39
3,4-Dinitrotoluene	34.49	Baseline Smoothing	cartiera	10/02/19 14:39
2,4,6-Trinitrotoluene	34.87	Baseline Smoothing	cartiera	10/02/19 14:39
HMX	35.95	Baseline Smoothing	cartiera	10/02/19 14:39
Tetryl	37.58	Baseline Smoothing	cartiera	10/02/19 14:52

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 327611

Lab Sample ID: STD2 320-327611/5 IC Client Sample ID:

Date Analyzed: 10/01/19 21:44 Lab File ID: A000007.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.28	Baseline Smoothing	cartiera	10/02/19 14:42
4-Nitrotoluene	28.28	Baseline Smoothing	cartiera	10/02/19 14:42
3-Nitrotoluene	28.81	Baseline Smoothing	cartiera	10/02/19 14:42
3,5-Dinitroaniline	29.44	Baseline Smoothing	cartiera	10/02/19 14:42
RDX	30.37	Baseline Smoothing	cartiera	10/02/19 14:42
2,4-Dinitrotoluene	31.19	Baseline Smoothing	cartiera	10/02/19 14:42
2,6-Dinitrotoluene	32.02	Baseline Smoothing	cartiera	10/02/19 14:42
2-Amino-4,6-dinitrotoluene	33.42	Baseline Smoothing	cartiera	10/02/19 14:42
4-Amino-2,6-dinitrotoluene	33.69	Baseline Smoothing	cartiera	10/02/19 14:42
3,4-Dinitrotoluene	34.48	Baseline Smoothing	cartiera	10/02/19 14:42
2,4,6-Trinitrotoluene	34.88	Baseline Smoothing	cartiera	10/02/19 14:42
Tetryl	37.57	Baseline Smoothing	cartiera	10/02/19 14:51

Lab Sample ID: STD3 320-327611/6 IC Client Sample ID:

Date Analyzed: 10/01/19 22:41 Lab File ID: A000008.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Nitrotoluene	28.33	Baseline Smoothing	cartiera	10/02/19 14:51
4-Nitrotoluene	28.33	Baseline Smoothing	cartiera	10/02/19 14:51
3-Nitrotoluene	28.85	Baseline Smoothing	cartiera	10/02/19 14:51
3,5-Dinitroaniline	29.44	Baseline Smoothing	cartiera	10/02/19 14:51
RDX	30.38	Baseline Smoothing	cartiera	10/02/19 14:51
2,4-Dinitrotoluene	31.21	Baseline Smoothing	cartiera	10/02/19 14:51
2,6-Dinitrotoluene	32.09	Baseline Smoothing	cartiera	10/02/19 14:51
2-Amino-4,6-dinitrotoluene	33.42	Baseline Smoothing	cartiera	10/02/19 14:51
4-Amino-2,6-dinitrotoluene	33.69	Baseline Smoothing	cartiera	10/02/19 14:51
3,4-Dinitrotoluene	34.48	Baseline Smoothing	cartiera	10/02/19 14:51
2,4,6-Trinitrotoluene	34.88	Baseline Smoothing	cartiera	10/02/19 14:51
Tetryl	37.58	Baseline Smoothing	cartiera	10/02/19 14:51

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 327611

Lab Sample ID: STD4 320-327611/7 IC Client Sample ID:

Date Analyzed: 10/01/19 23:39 Lab File ID: A000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetryl	37.57	Baseline Smoothing	cartiera	10/02/19 14:52

Lab Sample ID: STD5 320-327611/8 IC Client Sample ID:

Date Analyzed: 10/02/19 00:36 Lab File ID: A000010.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene	23.48	Incomplete Integration	cartiera	10/02/19 14:36
Nitroglycerin	36.62	Baseline Smoothing	cartiera	10/02/19 14:38

Lab Sample ID: STD6 320-327611/9 IC Client Sample ID:

Date Analyzed: 10/02/19 01:34 Lab File ID: A000011.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	36.61	Baseline Smoothing	cartiera	10/02/19 15:18

Lab Sample ID: ICV 320-327611/12 Client Sample ID:

Date Analyzed: 10/02/19 04:27 Lab File ID: A000014.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	36.60	Baseline Smoothing	cartiera	10/02/19 15:32

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 327955

Lab Sample ID: 580-89178-2 DL Client Sample ID: 03Q19L4MW09BW DL

Date Analyzed: 10/02/19 23:14 Lab File ID: B000008.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	10/06/19 11:21
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	10/06/19 11:21
2,4-Dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:22
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:23
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:23
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:23
Nitrobenzene		Invalid Compound ID	cartiera	10/06/19 11:21
Tetryl		Invalid Compound ID	cartiera	10/06/19 11:24
RDX	30.47	Split Peak	cartiera	10/06/19 11:22
3,4-Dinitrotoluene	34.52	Baseline Smoothing	cartiera	10/06/19 11:24
HMX	35.98	Split Peak	cartiera	10/06/19 11:24

Lab Sample ID: 580-89178-4 DL Client Sample ID: 03Q19L4MW10BW DL

Date Analyzed: 10/03/19 00:12 Lab File ID: B000009.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Dinitrobenzene		Invalid Compound ID	cartiera	10/06/19 11:25
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:25
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:25
3-Nitrotoluene		Invalid Compound ID	cartiera	10/06/19 11:25
HMX		Invalid Compound ID	cartiera	10/06/19 11:25
Tetryl		Invalid Compound ID	cartiera	10/06/19 11:25
3,4-Dinitrotoluene	34.51	Split Peak	cartiera	10/06/19 11:25

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 329486

Lab Sample ID: CCVRT 320-329486/3 Client Sample ID:

Date Analyzed: 10/08/19 21:26 Lab File ID: H000003.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	36.59	Baseline Smoothing	ruangyotsakuld	10/09/19 14:00

Lab Sample ID: CCV 320-329486/16 Client Sample ID:

Date Analyzed: 10/09/19 10:52 Lab File ID: H000017.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Nitroglycerin	36.53	Baseline Smoothing	cartiera	10/09/19 18:08

Lab Sample ID: 580-89178-1 RE Client Sample ID: 03Q19L4MW09AW RE

Date Analyzed: 10/09/19 18:32 Lab File ID: H000025.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	ruangyotsakuld	10/10/19 13:53
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:53
3-Nitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:53
Nitroglycerin		Invalid Compound ID	ruangyotsakuld	10/10/19 13:53
3,4-Dinitrotoluene	34.40	Baseline Smoothing	ruangyotsakuld	10/10/19 13:52
Tetryl	37.48	Unspecified		

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 329486

Lab Sample ID: 580-89178-2 RE Client Sample ID: 03Q19L4MW09BW RE

Date Analyzed: 10/09/19 19:30 Lab File ID: H000026.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	ruangyotsakuld	10/10/19 13:54
1,3-Dinitrobenzene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
Nitrobenzene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
Nitroglycerin		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54

Lab Sample ID: 580-89178-3 RE Client Sample ID: 03Q19L4MW10AW RE

Date Analyzed: 10/09/19 20:27 Lab File ID: H000027.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	ruangyotsakuld	10/10/19 13:54
1,3-Dinitrobenzene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:54

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 329486

Lab Sample ID: 580-89178-4 RE Client Sample ID: 03Q19L4MW10BW RE

Date Analyzed: 10/09/19 21:25 Lab File ID: H000028.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	ruangyotsakuld	10/10/19 13:55
1,3-Dinitrobenzene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55
HMX		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55
Nitrobenzene		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55
Nitroglycerin		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55
Tetryl		Invalid Compound ID	ruangyotsakuld	10/10/19 13:55

Lab Sample ID: CCV 320-329486/28 Client Sample ID:

Date Analyzed: 10/09/19 22:22 Lab File ID: H000029.D GC Column: Zorbax CN ID: 4.6(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Ethylene glycol dinitrate	23.35	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56
2-Amino-4,6-dinitrotoluene	33.30	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56
4-Amino-2,6-dinitrotoluene	33.57	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56
3,4-Dinitrotoluene	34.40	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56
2,4,6-Trinitrotoluene	34.76	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56
Nitroglycerin	36.54	Baseline Smoothing	ruangyotsakuld	10/10/19 13:56

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacram Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Analysis Batch Number: 329486

Lab Sample ID: 580-89178-4 REDL Client Sample ID: 03Q19L4MW10BW REDL

Date Analyzed: 10/10/19 01:15 Lab File ID: H000032.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	10/10/19 13:00
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:01
2-Amino-4,6-dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:01
3-Nitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:00
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:01
HMX		Invalid Compound ID	cartiera	10/10/19 13:01
Nitrobenzene		Invalid Compound ID	cartiera	10/10/19 13:00
3,4-Dinitrotoluene	34.41	Baseline Smoothing	cartiera	10/10/19 13:01

Lab Sample ID: 580-89178-2 REDL Client Sample ID: 03Q19L4MW09BW REDL

Date Analyzed: 10/10/19 02:12 Lab File ID: H000033.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	10/10/19 13:02
2,6-Dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:02
4-Amino-2,6-dinitrotoluene		Invalid Compound ID	cartiera	10/10/19 13:02
Nitrobenzene		Invalid Compound ID	cartiera	10/10/19 13:02
RDX	30.26	Split Peak	cartiera	10/10/19 13:02
2,4-Dinitrotoluene	31.03	Split Peak	cartiera	10/10/19 13:02
3,4-Dinitrotoluene	34.41	Baseline Smoothing	cartiera	10/10/19 13:03
HMX	35.90	Baseline Smoothing	cartiera	10/10/19 13:03

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

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_00010							Tentatively Identified Compound	
							Xylenes, Total	
					SURR/IS/TFT_00106	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_00106	03/12/20	03/19/19	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
5X SUR/IS/TFT_00012							1,1,1,2-Tetrachloroethane	
							1,1,1-Trichloroethane	
							1,1,2,2-Tetrachloroethane	
							1,1,2-Trichloro-1,2,2-trifluoroethane	
							1,1,2-Trichloroethane	
							1,1-Dichloroethane	
							1,1-Dichloroethene	
							1,1-Dichloropropene	
							1,2,3-Trichlorobenzene	
							1,2,3-Trichloropropane	
							1,2,4-Trichlorobenzene	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trimethylbenzene	
							1,2-Dibromo-3-Chloropropane	
							1,2-Dichlorobenzene	
							1,2-Dichloroethane	
							1,2-Dichloropropane	
							1,3,5-Trichlorobenzene	
							1,3,5-Trimethylbenzene	
							1,3-Dichlorobenzene	
							1,3-Dichloropropane	
							1,4-Dichlorobenzene	
							2,2-Dichloropropane	
							2-Butanone (MEK)	
							2-Chloroethyl vinyl ether	
							2-Chlorotoluene	
							2-Hexanone	
							2-Methyl-2-propanol	
							4-Chlorotoluene	
							4-Isopropyltoluene	
							4-Methyl-2-pentanone (MIBK)	
							Acetone	
							Acrolein	
							Acrylonitrile	
							Benzene	
							Bromobenzene	
							Bromoform	
							Bromomethane	
							Carbon disulfide	
							Carbon tetrachloride	
							Chlorobenzene	
							Chlorobromomethane	
							Chlorodibromomethane	
							Chloroethane	
							Chloroform	
							Chloromethane	
							cis-1,2-Dichloroethene	
							cis-1,3-Dichloropropene	
							Dibromomethane	
							Dichlorobromomethane	
							Dichlorodifluoromethane	
							Ethylbenzene	
							Ethylene Dibromide	
							Hexachlorobutadiene	
							Hexane	
							Iodomethane	
							Isopropylbenzene	
							m-Xylene & p-Xylene	
							Methyl tert-butyl ether	
							Methylene Chloride	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butylbenzene	
							N-Propylbenzene	
							Naphthalene	
							o-Xylene	
							sec-Butylbenzene	
							Styrene	
							Tentatively Identified Compound	
							Tert-amyl methyl ether	
							Tert-butyl ethyl ether	
							tert-Butylbenzene	
							Tetrachloroethene	
							Toluene	
							trans-1,2-Dichloroethene	
							trans-1,3-Dichloropropene	
							trans-1,4-Dichloro-2-butene	
							Trichloroethene	
							Trichlorofluoromethane	
							Vinyl acetate	
							Vinyl chloride	
							Xylenes, Total	
					SURR/IS/TFT_00106	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_00106	03/12/20	03/19/19	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00042	09/30/19	08/15/19	MeOH, Lot 198123	50 mL	VOAR2CEVE__00020	1000 uL	2-Chloroethyl vinyl ether	50 ug/mL
					VOARAcrolein_00055	750 uL	Acrolein	300 ug/mL
					VOARADDCOM__00024	1000 uL	1,3,5-Trichlorobenzene	50 ug/mL
					VOARGAS__00021	1 mL	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__00023	1 mL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOARMegMix__00031	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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__00016	1250 uL	Tert-amyl methyl ether	62.5 ug/mL
							Tert-butyl ethyl ether	62.5 ug/mL
					VOARVA__00044	1250 uL	Vinyl acetate	125 ug/mL
.VOAR2CEVE__00020	02/28/22		Restek, Lot A0146250		(Purchased Reagent)		2-Chloroethyl vinyl ether	2500 ug/mL
.VOARAcrolein_00055	10/31/19		Restek, Lot A0147676		(Purchased Reagent)		Acrolein	20000 ug/mL
.VOARADDCOM__00024	07/31/20		Restek, Lot A0145375		(Purchased Reagent)		1,3,5-Trichlorobenzene	2500 ug/mL
.VOARGAS__00021	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__00023	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	12500 ug/mL
.VOARMegMix__00031	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
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

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	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__00016	01/31/21		Restek, Lot A0144915		(Purchased Reagent)		Tert-amyl methyl ether	2500 ug/mL
							Tert-butyl ethyl ether	2500 ug/mL
.VOARVA__00044	09/30/19		Restek, Lot A0147136		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
VOAMasterSEC_00035	09/30/19	08/15/19	MeOH, Lot 198123	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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, Denver Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
6860-IS-Spike_00087	03/11/20	06/06/19	Di Water, Lot HPLC water 217510	100 mL	6860-ISStock2_00022	2 mL	Perchlorate-18O	0.0204 ug/mL
.6860-ISStock2_00022	03/11/20	03/11/19	H2O, Lot 209218	50 mL	6860-ISStock1_00015	0.5 mL	Perchlorate-18O	1.02 ug/mL
..6860-ISStock1_00015	03/11/20	Cambridge, Lot SDFF-012			(Purchased Reagent)		Perchlorate-18O	102 ug/mL
6860CalStockW_00110	10/04/19	05/29/19	H2O, Lot 217510	100 mL	6860CalStock3_00026	1 mL	Perchlorate	0.001 ug/mL
.6860CalStock3_00026	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860CalStock2_00021	0.1 mL	Perchlorate	0.1 ug/mL
..6860CalStock2_00021	10/04/19	10/08/18	H2O, Lot 193092	10 mL	6860StockClO4_00014	0.1 mL	Perchlorate	10 ug/mL
...6860StockClO4_00014	07/25/20	Accustandard, Lot 216095148			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860ICVStockW_00043	09/28/19	03/28/19	H2O, Lot 217519	50 mL	6860ICVStock3_00034	0.5 mL	Perchlorate	0.001 ug/mL
.6860ICVStock3_00034	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock2_00023	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00023	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock1_00010	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00010	06/19/21	Absolute Standards, Lot 061918			(Purchased Reagent)		Perchlorate	1000 ug/mL
6860LCS_00024	03/28/20	07/30/19	HPLC water, Lot 217519	50 mL	6860ICVStock3_00034	2.5 mL	Perchlorate	5 ug/L
.6860ICVStock3_00034	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock2_00023	0.1 mL	Perchlorate	0.1 ug/mL
..6860ICVStock2_00023	03/28/20	03/28/19	H2O, Lot 217519	10 mL	6860ICVStock1_00010	0.1 mL	Perchlorate	10 ug/mL
...6860ICVStock1_00010	06/19/21	Absolute Standards, Lot 061918			(Purchased Reagent)		Perchlorate	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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
HP34DNTSU_00123	03/16/20	09/16/19	Acetonitrile, Lot 0000231453	25 mL	HP8330SU_00084	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
.HP8330SU_00084	09/16/19		Restek, Lot A0131485		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
HP8330IC_00065	10/17/19	06/06/19	25% 0.1%HOAc in ACN, Lot 0.1% AC/ACN/H2O-037	25 mL	HP8330TA_00063	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_00063	12/06/19		AccuStandard, Lot 217101413		(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_00066	10/17/19	09/03/19	25% 0.1%HOAc in ACN, Lot 0.1% AC/ACN/H2O_039	25 mL	HP8330TA_00063	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

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00063	12/06/19	AccuStandard, Lot 217101413			(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
HP8330L0.5_00004	01/15/20	08/27/19	25:75 HOAc/ACN, Lot 0.1%HOAc/ACN/H2O_039	100 mL	HP8330L7_00039	500 uL	3,4-Dinitrotoluene	2.5 ng/mL
							3,5-Dinitroaniline	2.5 ng/mL
							1,3,5-Trinitrobenzene	2.5 ng/mL
							1,3-Dinitrobenzene	2.5 ng/mL
							2,4,6-Trinitrotoluene	2.5 ng/mL
							2,4-Dinitrotoluene	2.5 ng/mL
							2,6-Dinitrotoluene	2.5 ng/mL
							2-Amino-4,6-dinitrotoluene	2.5 ng/mL
							2-Nitrotoluene	2.5 ng/mL
							3-Nitrotoluene	2.5 ng/mL
							4-Amino-2,6-dinitrotoluene	2.5 ng/mL
							4-Nitrotoluene	2.5 ng/mL
							HMX	2.5 ng/mL
							Nitrobenzene	2.5 ng/mL
							RDX	2.5 ng/mL
							Tetryl	2.5 ng/mL
							Nitroglycerin	2.5 ng/mL
							PETN	2.5 ng/mL
.HP8330L7_00039	01/15/20	08/20/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0038	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00110	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.: 580-89178-1

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_00079	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_00110	01/15/20	07/15/19	Acetonitrile, Lot Acetonitrile_00145	25 mL	HP35DNATA_00067	1.25 mL	3,5-Dinitroaniline	50 ug/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
...HP35DNATA_00067	10/31/22		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 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.: 580-89178-1

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_00079	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
...HPNGTA_00066	06/30/24		Restek, Lot A0149738		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00064	04/30/24		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L1_00043	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	50 mL	HP8330L7_00037	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
							Ethylene glycol dinitrate	5 ng/mL
							Nitroglycerin	5 ng/mL
							PETN	5 ng/mL
.HP8330L7_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile_00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile 00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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_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
..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_00034	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	50 mL	HP8330L7_00037	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
							Ethylene glycol dinitrate	10 ng/mL
							Nitroglycerin	10 ng/mL
							PETN	10 ng/mL
.HP8330L7_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,6-Dinitrotoluene	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile_00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HPEGDNSP_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(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
							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_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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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
..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_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	50 mL	HP8330L7_00037	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile_00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...HP35DNATA_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..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_00063	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP8330L7_00037	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_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile 00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile 00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00066	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_7036	200 mL	HP8330L7_00038	20 mL	3,4-Dinitrotoluene	50 ng/mL
.HP8330L7_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	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
HP8330L4_00066	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_7036	200 mL	HP8330L7_00038	20 mL	1,3,5-Trinitrobenzene	50 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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 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_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	200 mL	HP8330SP_00110	2 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_00079	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dinitrobenzene	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_00079	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
...HPNGTA_00066	06/30/24		Restek, Lot A0149738		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00064	04/30/24		Restek, Lot A0147962		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L4_00068	01/15/20	09/04/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0039	100 mL	HP8330L7_00041	10 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_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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HP8330L5_00071	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	100 mL	HP8330L7_00037	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
							Ethylene glycol dinitrate	100 ng/mL
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile_00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	1.25 mL	1,3,5-Trinitrobenzene	50 ug/mL
							1,3-Dinitrobenzene	50 ug/mL
							2,4,6-Trinitrotoluene	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	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_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(Purchased Reagent)		PETN	1000 ug/mL
HP8330L5_00072	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	100 mL	HP8330L7_00038	20 mL	3,4-Dinitrotoluene	100 ng/mL
.HP8330L7_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	200 mL	HP34DNTSU_00121	2 mL	3,4-Dinitrotoluene	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
HP8330L5_00072	01/15/20	08/12/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	100 mL	HP8330L7_00038	20 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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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
							Nitroglycerin	100 ng/mL
							PETN	100 ng/mL
.HP8330L7_00038	01/15/20	08/08/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0037	200 mL	HP8330SP_00110	2 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_00079	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 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

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00079	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
...HPNGTA_00066	06/30/24		Restek, Lot A0149738		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00064	04/30/24		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
							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_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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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
HP8330L6_00052	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	25 mL	HP8330L7_00037	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2,4-Dinitrotoluene	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_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
..HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile 00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
...HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
..HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Nitrotoluene	50 ug/mL
							HMX	50 ug/mL
							Nitrobenzene	50 ug/mL
							RDX	50 ug/mL
							Tetryl	50 ug/mL
...HP35DNATA_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
...HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
...HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
..HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
...HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
...HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(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
							Nitroglycerin	200 ng/mL
							PETN	200 ng/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.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
							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.: 580-89178-1

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
HP8330L7_00037	08/08/19	05/30/19	25:75 HOAc/ACN, Lot 0.1% AC/ACN/H20_0036	200 mL	HP34DNTSU_00114	2 mL	3,4-Dinitrotoluene	500 ng/mL
					HP8330SP_00109	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_00045	2 mL	Ethylene glycol dinitrate	500 ng/mL
					HPNGPETNSP_00073	2 mL	Nitroglycerin	500 ng/mL
							PETN	500 ng/mL
.HP34DNTSU_00114	11/21/19	05/21/19	Acetonitrile, Lot Acetonitrile_00125	25 mL	HP8330SU_00080	1.25 mL	3,4-Dinitrotoluene	50 ug/mL
..HP8330SU_00080	05/21/20		Restek, Lot A0140727		(Purchased Reagent)		3,4-Dinitrotoluene	1000 ug/mL
.HP8330SP_00109	11/28/19	05/28/19	Acetonitrile, Lot Acetonitrile_00127	25 mL	HP35DNATA_00066	1.25 mL	3,5-Dinitroaniline	50 ug/mL
					HP8330TA_00064	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.: 580-89178-1

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_00066	05/28/20		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 ug/mL
..HP8330TA_00064	05/28/20		Restek, Lot A0120030		(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_00045	08/08/19	02/08/19	Acetonitrile, Lot Acetonitrile_00109	25 mL	HPEGDNTA_00033	1.25 mL	Ethylene glycol dinitrate	50 ug/mL
..HPEGDNTA_00033	05/31/22		Restek, Lot A0127817		(Purchased Reagent)		Ethylene glycol dinitrate	1000 ug/mL
.HPNGPETNSP_00073	09/04/19	03/04/19	Methanol, Lot Methanol_00343	25 mL	HPNGTA_00063	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00060	1.25 mL	PETN	50 ug/mL
..HPNGTA_00063	03/04/20		Restek, Lot A0140953		(Purchased Reagent)		Nitroglycerin	1000 ug/mL
..HPPETNTA_00060	03/04/20		Restek, Lot A0136539		(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
					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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					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
.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_00110	01/15/20	07/15/19	Acetonitrile, Lot Acetonitrile_00145	25 mL	HP35DNATA_00067	1.25 mL	3,5-Dinitroaniline	50 ug/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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

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_00067	10/31/22		Restek, Lot A0136481		(Purchased Reagent)		3,5-Dinitroaniline	1000 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
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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
HPNGPETNSP_00080	02/05/20	08/05/19	Methanol, Lot Methanol_00454	25 mL	HPNGTA_00066	1.25 mL	Nitroglycerin	50 ug/mL
					HPPETNTA_00064	1.25 mL	PETN	50 ug/mL
.HPNGTA_00066	06/30/24	Restek, Lot A0149738			(Purchased Reagent)		Nitroglycerin	1000 ug/mL
.HPPETNTA_00064	04/30/24	Restek, Lot A0147962			(Purchased Reagent)		PETN	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): 624SIL-MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TFT #	TOL #	BFB #
03Q19L4MW09AW	580-89178-1	105	110	109	96	97
03Q19L4MW09BW	580-89178-2	107	111	101	96	97
03Q19L4MW10AW	580-89178-3	109	112	101	95	97
03Q19L4MW10BW	580-89178-4	112	110	100	96	96
091219TB	580-89178-5	110	113	102	96	100
	MB 580-311759/7	102	109	105	98	96
	LCS 580-311759/4	94	97	90	100	105
	LCSD 580-311759/5	93	93	91	101	106

	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 092019 _004.D

Lab ID: LCS 580-311759/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.34	107	79-127	
1,1,1-Trichloroethane	5.00	5.12	102	74-128	
1,1,2,2-Tetrachloroethane	5.00	5.32	106	69-139	
1,1,2-Trichloroethane	5.00	5.77	115	80-127	
1,1-Dichloroethane	5.00	5.12	102	74-135	
1,1-Dichloroethene	5.00	5.45	109	71-126	
1,1-Dichloropropene	5.00	5.13	103	72-132	
1,2,3-Trichlorobenzene	5.00	5.65	113	75-137	
1,2,3-Trichloropropane	5.00	5.55	111	80-127	
1,2,4-Trichlorobenzene	5.00	5.01	100	79-130	
1,2,4-Trimethylbenzene	5.00	5.54	111	78-136	
1,2-Dibromo-3-Chloropropane	5.00	5.02	100	69-130	
1,2-Dichlorobenzene	5.00	5.55	111	80-129	
1,2-Dichloroethane	5.00	5.46	109	74-130	
1,2-Dichloropropane	5.00	5.28	106	80-130	
1,3,5-Trimethylbenzene	5.00	5.15	103	80-139	
1,3-Dichlorobenzene	5.00	5.57	111	80-130	
1,3-Dichloropropane	5.00	5.52	110	80-130	
1,4-Dichlorobenzene	5.00	5.38	108	80-129	
2,2-Dichloropropane	5.00	5.23	105	58-150	
2-Chlorotoluene	5.00	5.00	100	80-136	
4-Chlorotoluene	5.00	5.23	105	80-130	
4-Isopropyltoluene	5.00	5.42	108	78-132	
Benzene	5.00	5.43	109	73-133	
Bromobenzene	5.00	5.05	101	80-130	
Bromoform	5.00	5.31	106	69-137	
Bromomethane	5.00	5.83	117	68-120	
Carbon tetrachloride	5.00	5.00	100	71-132	
Chlorobenzene	5.00	5.41	108	80-123	
Chlorobromomethane	5.00	5.27	105	79-131	
Chlorodibromomethane	5.00	5.51	110	76-131	
Chloroethane	5.00	5.66	113	49-135	
Chloroform	5.00	5.14	103	80-130	
Chloromethane	5.00	5.79	116	32-143	
cis-1,2-Dichloroethene	5.00	5.39	108	72-130	
cis-1,3-Dichloropropene	5.00	4.98	100	66-141	
Dibromomethane	5.00	5.31	106	65-141	
Dichlorobromomethane	5.00	5.42	108	74-131	
Dichlorodifluoromethane	5.00	6.33	127	20-137	
Ethylbenzene	5.00	5.27	105	80-130	
Ethylene Dibromide	5.00	5.41	108	80-126	
Hexachlorobutadiene	5.00	5.51	110	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 092019 _004.D

Lab ID: LCS 580-311759/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Isopropylbenzene	5.00	5.31	106	75-137	
Methyl tert-butyl ether	5.00	4.94	99	60-150	
Methylene Chloride	5.00	8.49	170	75-134	*
m-Xylene & p-Xylene	5.00	5.19	104	78-130	
Naphthalene	5.00	5.16	103	64-132	
n-Butylbenzene	5.00	5.16	103	73-135	
N-Propylbenzene	5.00	5.01	100	77-142	
o-Xylene	5.00	5.27	105	80-139	
sec-Butylbenzene	5.00	5.42	108	78-140	
Styrene	5.00	5.40	108	74-136	
tert-Butylbenzene	5.00	5.01	100	77-140	
Tetrachloroethene	5.00	5.13	103	75-131	
Toluene	5.00	5.56	111	80-126	
trans-1,2-Dichloroethene	5.00	5.18	104	63-133	
trans-1,3-Dichloropropene	5.00	5.02	100	71-128	
Trichloroethene	5.00	5.10	102	72-136	
Trichlorofluoromethane	5.00	5.80	116	60-132	
Vinyl chloride	5.00	5.47	109	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 092019 _005.D

Lab ID: LCSD 580-311759/5 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	5.24	105	2	20	79-127	
1,1,1-Trichloroethane	5.00	5.04	101	2	14	74-128	
1,1,2,2-Tetrachloroethane	5.00	5.06	101	5	22	69-139	
1,1,2-Trichloroethane	5.00	5.43	109	6	19	80-127	
1,1-Dichloroethane	5.00	5.05	101	1	20	74-135	
1,1-Dichloroethene	5.00	5.42	108	1	17	71-126	
1,1-Dichloropropene	5.00	5.03	101	2	13	72-132	
1,2,3-Trichlorobenzene	5.00	5.41	108	4	20	75-137	
1,2,3-Trichloropropane	5.00	5.44	109	2	20	80-127	
1,2,4-Trichlorobenzene	5.00	4.95	99	1	20	79-130	
1,2,4-Trimethylbenzene	5.00	5.49	110	1	20	78-136	
1,2-Dibromo-3-Chloropropane	5.00	5.00	100	0	26	69-130	
1,2-Dichlorobenzene	5.00	5.42	108	2	14	80-129	
1,2-Dichloroethane	5.00	5.20	104	5	15	74-130	
1,2-Dichloropropane	5.00	5.04	101	5	14	80-130	
1,3,5-Trimethylbenzene	5.00	5.13	103	1	20	80-139	
1,3-Dichlorobenzene	5.00	5.50	110	1	12	80-130	
1,3-Dichloropropane	5.00	5.22	104	6	19	80-130	
1,4-Dichlorobenzene	5.00	5.29	106	2	11	80-129	
2,2-Dichloropropane	5.00	5.27	105	1	28	58-150	
2-Chlorotoluene	5.00	5.07	101	1	20	80-136	
4-Chlorotoluene	5.00	5.22	104	0	20	80-130	
4-Isopropyltoluene	5.00	5.40	108	0	14	78-132	
Benzene	5.00	5.37	107	1	20	73-133	
Bromobenzene	5.00	5.03	101	0	20	80-130	
Bromoform	5.00	5.15	103	3	20	69-137	
Bromomethane	5.00	5.89	118	1	18	68-120	
Carbon tetrachloride	5.00	5.07	101	1	15	71-132	
Chlorobenzene	5.00	5.37	107	1	12	80-123	
Chlorobromomethane	5.00	5.11	102	3	20	79-131	
Chlorodibromomethane	5.00	5.20	104	6	20	76-131	
Chloroethane	5.00	5.69	114	0	27	49-135	
Chloroform	5.00	5.01	100	3	20	80-130	
Chloromethane	5.00	5.90	118	2	23	32-143	
cis-1,2-Dichloroethene	5.00	5.25	105	3	20	72-130	
cis-1,3-Dichloropropene	5.00	4.85	97	3	22	66-141	
Dibromomethane	5.00	4.99	100	6	20	65-141	
Dichlorobromomethane	5.00	5.10	102	6	20	74-131	
Dichlorodifluoromethane	5.00	5.80	116	9	22	20-137	
Ethylbenzene	5.00	5.24	105	1	20	80-130	
Ethylene Dibromide	5.00	5.26	105	3	20	80-126	
Hexachlorobutadiene	5.00	5.55	111	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 092019 _005.D

Lab ID: LCSD 580-311759/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Isopropylbenzene	5.00	5.39	108	1	20	75-137	
Methyl tert-butyl ether	5.00	4.94	99	0	25	60-150	
Methylene Chloride	5.00	8.65	173	2	18	75-134	*
m-Xylene & p-Xylene	5.00	5.16	103	1	20	78-130	
Naphthalene	5.00	4.87	97	6	20	64-132	
n-Butylbenzene	5.00	5.12	102	1	18	73-135	
N-Propylbenzene	5.00	5.04	101	1	20	77-142	
o-Xylene	5.00	5.25	105	0	20	80-139	
sec-Butylbenzene	5.00	5.46	109	1	20	78-140	
Styrene	5.00	5.33	107	1	20	74-136	
tert-Butylbenzene	5.00	4.98	100	1	20	77-140	
Tetrachloroethene	5.00	5.01	100	2	20	75-131	
Toluene	5.00	5.52	110	1	20	80-126	
trans-1,2-Dichloroethene	5.00	5.29	106	2	17	63-133	
trans-1,3-Dichloropropene	5.00	4.83	97	4	21	71-128	
Trichloroethene	5.00	4.99	100	2	14	72-136	
Trichlorofluoromethane	5.00	5.78	116	0	20	60-132	
Vinyl chloride	5.00	5.47	109	0	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.: 580-89178-1

SDG No.:

Lab File ID: 092019 _007.D Lab Sample ID: MB 580-311759/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: TAC048 Date Analyzed: 09/20/2019 16:30

GC Column: 624SIL-MS ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 580-311759/4	092019 _004.D	09/20/2019 15:11
	LCSD 580-311759/5	092019 005.D	09/20/2019 15:37
03Q19L4MW09AW	580-89178-1	092019 020.D	09/20/2019 22:15
03Q19L4MW09BW	580-89178-2	092019 _021.D	09/20/2019 22:41
03Q19L4MW10AW	580-89178-3	092019 _022.D	09/20/2019 23:08
03Q19L4MW10BW	580-89178-4	092019 023.D	09/20/2019 23:34
091219TB	580-89178-5	092019 _024.D	09/21/2019 00:01

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab File ID: 091719B _001.D BFB Injection Date: 09/17/2019

Instrument ID: TAC048 BFB Injection Time: 20:15

Analysis Batch No.: 311508

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.6	
75	30.0 - 60.0 % of mass 95	46.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	1.3	(1.7) 1
174	50.0 - 120.00 % of mass 95	77.5	
175	5.0 - 9.0 % of mass 174	6.3	(8.1) 1
176	95.0 - 101.0 % of mass 174	74.1	(95.5) 1
177	5.0 - 9.0 % of mass 176	5.0	(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
	STD 580-311508/3	091719B _002.D	09/17/2019	20:42
	STD 580-311508/4	091719B _003.D	09/17/2019	21:08
	STD 580-311508/5	091719B _004.D	09/17/2019	21:35
	STD 580-311508/6	091719B _005.D	09/17/2019	22:01
	STD 580-311508/7	091719B _006.D	09/17/2019	22:28
	STD 580-311508/8	091719B _007.D	09/17/2019	22:55
	STD 580-311508/9	091719B _008.D	09/17/2019	23:21
	ICIS 580-311508/10	091719B _009.D	09/17/2019	23:48
	STD 580-311508/11	091719B _010.D	09/18/2019	00:14
	STD 580-311508/12	091719B _011.D	09/18/2019	00:41
	STD 580-311508/13	091719B _012.D	09/18/2019	01:07
	ICV 580-311508/15	091719B _014.D	09/18/2019	02:00

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab File ID: 092019 _003-BFB.d BFB Injection Date: 09/20/2019

Instrument ID: TAC048 BFB Injection Time: 14:44

Analysis Batch No.: 311759

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.8	
75	30.0 - 60.0 % of mass 95	46.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.7	(0.8) 1
174	50.0 - 120.00 % of mass 95	79.2	
175	5.0 - 9.0 % of mass 174	5.7	(7.2) 1
176	95.0 - 101.0 % of mass 174	75.8	(95.7) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.3) 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 580-311759/3	092019 _003.D	09/20/2019	14:44
	LCS 580-311759/4	092019 _004.D	09/20/2019	15:11
	LCSD 580-311759/5	092019 _005.D	09/20/2019	15:37
	CCVL 580-311759/6	092019 _006.D	09/20/2019	16:04
	MB 580-311759/7	092019 _007.D	09/20/2019	16:30
03Q19L4MW09AW	580-89178-1	092019 _020.D	09/20/2019	22:15
03Q19L4MW09BW	580-89178-2	092019 _021.D	09/20/2019	22:41
03Q19L4MW10AW	580-89178-3	092019 _022.D	09/20/2019	23:08
03Q19L4MW10BW	580-89178-4	092019 _023.D	09/20/2019	23:34
091219TB	580-89178-5	092019 _024.D	09/21/2019	00:01

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Sample No.: ICIS 580-311508/10 Date Analyzed: 09/17/2019 23:48

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 091719B _009.D Heated Purge: (Y/N) N

Calibration ID: 28235

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		86259	4.86	594659	8.67	386442	11.62
UPPER LIMIT			5.02		8.84		11.78
LOWER LIMIT			4.69		8.50		11.45
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-311508/15		98734	4.86	640043	8.67	408860	11.62

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.: 580-89178-1

SDG No.:

Sample No.: ICIS 580-311508/10 Date Analyzed: 09/17/2019 23:48

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 091719B _009.D Heated Purge: (Y/N) N

Calibration ID: 28235

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		208996	13.53				
UPPER LIMIT			13.69				
LOWER LIMIT			13.36				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 580-311508/15		204880	13.53				

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.: 580-89178-1

SDG No.:

Sample No.: CCVIS 580-311759/3 Date Analyzed: 09/20/2019 14:44

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm)

Lab File ID (Standard): 092019 _003.D Heated Purge: (Y/N) N

Calibration ID: 28235

		FB		CBNZd5		DCBd4	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		590407	8.67	402625	11.62	216036	13.53
UPPER LIMIT			8.84		11.78		13.69
LOWER LIMIT			8.50		11.45		13.36
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 580-311759/4		579301	8.67	382197	11.62	207233	13.53
LCSD 580-311759/5		572560	8.67	369669	11.62	202624	13.53
CCVL 580-311759/6		561060	8.67	376083	11.62	190986	13.53
MB 580-311759/7		507104	8.67	351502	11.62	172207	13.53
580-89178-1	03Q19L4MW09AW	478887	8.67	346425	11.62	160207	13.53
580-89178-2	03Q19L4MW09BW	481516	8.67	335222	11.62	167637	13.53
580-89178-3	03Q19L4MW10AW	467141	8.67	337950	11.62	168855	13.53
580-89178-4	03Q19L4MW10BW	462428	8.67	322887	11.62	165180	13.53
580-89178-5	091219TB	458365	8.67	329397	11.62	167879	13.53

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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Matrix: Water Lab File ID: 092019 _020.D

Analysis Method: 8260C Date Collected: 09/12/2019 12:25

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 22:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Matrix: Water Lab File ID: 092019 _020.D

Analysis Method: 8260C Date Collected: 09/12/2019 12:25

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 22:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120
98-08-8	Trifluorotoluene (Surr)	109		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Matrix: Water Lab File ID: 092019 _021.D

Analysis Method: 8260C Date Collected: 09/12/2019 13:20

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 22:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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	8.0		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	2.4		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	12		0.20	
75-35-4	1,1-Dichloroethene	8.1		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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Matrix: Water Lab File ID: 092019 _021.D

Analysis Method: 8260C Date Collected: 09/12/2019 13:20

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 22:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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	18		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	0.60		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)	111		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120
98-08-8	Trifluorotoluene (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Matrix: Water Lab File ID: 092019 _022.D

Analysis Method: 8260C Date Collected: 09/12/2019 14:10

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 23:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Matrix: Water Lab File ID: 092019 _022.D

Analysis Method: 8260C Date Collected: 09/12/2019 14:10

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 23:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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)	112		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	109		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120
98-08-8	Trifluorotoluene (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Matrix: Water Lab File ID: 092019 _023.D

Analysis Method: 8260C Date Collected: 09/12/2019 15:00

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 23:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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	9.3		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	0.86		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	11		0.20	
75-35-4	1,1-Dichloroethene	11		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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Matrix: Water Lab File ID: 092019 _023.D

Analysis Method: 8260C Date Collected: 09/12/2019 15:00

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 23:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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	26		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	0.26		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)	110		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	96		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.: 580-89178-1

SDG No.:

Client Sample ID: 091219TB Lab Sample ID: 580-89178-5

Matrix: Water Lab File ID: 092019 _024.D

Analysis Method: 8260C Date Collected: 09/12/2019 00:00

Sample wt/vol: 10(mL) Date Analyzed: 09/21/2019 00:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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.: 580-89178-1

SDG No.:

Client Sample ID: 091219TB Lab Sample ID: 580-89178-5

Matrix: Water Lab File ID: 092019 _024.D

Analysis Method: 8260C Date Collected: 09/12/2019 00:00

Sample wt/vol: 10(mL) Date Analyzed: 09/21/2019 00:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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)	113		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120
98-08-8	Trifluorotoluene (Surr)	102		80-120

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	+++++ 0.3206 0.2736	0.2657 0.2743	0.3066 0.3019	0.3248 0.2774	0.2536 0.2800	Lin1	0.0027	0.2774			0.1000	11.9			0.9990		0.9900
Chloromethane	+++++ 0.5190 0.4244	+++++ 0.4545	+++++ 0.4714	0.5152 0.4353	0.3852 0.4342	Lin1	0.0228	0.4310			0.1000	11.7			0.9990		0.9900
Vinyl chloride	0.5177 0.4534 0.4015	0.5367 0.4141	0.5286 0.4335	0.4495 0.4077	0.4157 0.4134	Qua1	0.0042	0.4215	-0.000198		0.1000	11.8			1.0000		0.9900
Bromomethane	+++++ 0.3011 0.2498	+++++ 0.2740	0.4150 0.2738	0.3427 0.2531	0.2946 0.2520	Lin1	0.0210	0.2522			0.1000	9.4			0.9990		0.9900
Chloroethane	+++++ 0.1051 0.0817	+++++ 0.0901	+++++ 0.0867	0.1209 0.0807	0.0936 0.0825	Lin1	0.0101	0.0821			0.0600	10.3			0.9990		0.9900
Trichlorofluoromethane	+++++ 0.4631 0.3949	+++++ 0.4369	+++++ 0.4290	0.5506 0.3977	0.4493 0.4031	Lin1	0.0394	0.3993			0.1000	7.3			0.9990		0.9900
Acrolein	+++++ 0.0279 0.0245	+++++ 0.0258	+++++ 0.0246	0.0317 0.0255	0.0267 0.0250	Lin1	0.0099	0.0247				4.3			1.0000		0.9900
1,1-Dichloroethene	+++++ 0.2950 0.2617	+++++ 0.2765	0.3483 0.2705	0.3548 0.2557	0.2759 0.2593	Lin2	0.0097	0.2687			0.1000	7.0			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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.2260 0.1896	+++++ 0.2035	0.2612 0.2004	0.2411 0.1877	0.2068 0.1912	Lin2	0.0069	0.1979			0.1000	5.5			0.9970		0.9900
Acetone	+++++ 0.0436 0.0309	+++++ 0.0327	+++++ 0.0340	+++++ 0.0321	0.0578 0.0321	Lin1	0.0663	0.0312			0.0200	3.2			1.0000		0.9900
Iodomethane	+++++ 0.5030 0.4457	+++++ 0.4790	0.6026 0.4687	0.5104 0.4451	0.4787 0.4487	Lin2	0.0137	0.4589				3.9			0.9980		0.9900
Carbon disulfide	+++++ 1.0870 1.0312	+++++ 1.0558	+++++ 1.0644	1.1729 1.0072	0.9733 1.0218	Lin2	0.0227	1.0279			0.1000	4.8			0.9980		0.9900
Methylene Chloride	+++++ 0.5262 0.3027	+++++ 0.3492	+++++ 0.3300	+++++ 0.3087	+++++ 0.3061	Lin1	0.2307	0.3007			0.1000	1.5			1.0000		0.9900
2-Methyl-2-propanol	+++++ 0.0098 0.0090	+++++ 0.0084	+++++ 0.0082	+++++ 0.0086	0.0080 0.0088	Lin2	-0.001	0.0087				7.7			0.9940		0.9900
Acrylonitrile	+++++ 0.0361 0.0466	+++++ 0.0401	+++++ 0.0439	+++++ 0.0477	0.0318 0.0489	Lin1	-0.107	0.0473				7.9			0.9990		0.9900
trans-1,2-Dichloroethene	+++++ 0.3114 0.3203	+++++ 0.3097	0.3343 0.3180	0.3153 0.3092	0.2753 0.3202	Lin2	0.0017	0.3092			0.1000	5.2			0.9970		0.9900
Methyl tert-butyl ether	+++++ 0.3204 0.4708	+++++ 0.4238	+++++ 0.4451	0.3756 0.4618	0.3219 0.4905	Qua1	-0.054	0.4682	0.0000755		0.1000	19.9			0.9990		0.9900
Hexane	+++++ 0.3174 0.4553	+++++ 0.3610	+++++ 0.3955	0.3399 0.4390	0.3150 0.4598	Qua1	-0.046	0.4260	0.0003410			18.2			0.9990		0.9900
1,1-Dichloroethane	+++++ 0.6033 0.5753	+++++ 0.5774	0.6172 0.5772	0.6327 0.5627	0.5801 0.5768	Ave		0.5892			0.2000	3.9		20.0			
Vinyl acetate	+++++ 0.0198 0.0325	+++++ 0.0233	+++++ 0.0261	+++++ 0.0310	0.0196 0.0322	Qua2	-0.010	0.0262	0.0000316			9.9			0.9920		0.9900
Tert-butyl ethyl ether	+++++ 0.1771 0.2511	+++++ 0.2343	+++++ 0.2447	0.1581 0.2482	0.1786 0.2534	Qua1	-0.038	0.2489	0.0000264			13.3			1.0000		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.3873 0.3679	+++++ 0.3847	0.4289 0.3749	0.4242 0.3599	0.3640 0.3653	Ave		0.3841				6.7		20.0			
cis-1,2-Dichloroethene	+++++ 0.2919 0.3332	+++++ 0.3106	0.2853 0.3242	0.2870 0.3241	0.2724 0.3337	Ave		0.3069			0.1000	7.5		20.0			
2-Butanone (MEK)	+++++ 0.0067 +++++	+++++ 0.0102	+++++ 0.0107	+++++ 0.0112	0.0071 0.0134	Qua1	-0.010	0.0101	0.0000135	*	0.0200	10.4			1.0000		0.9900
Chlorobromomethane	+++++ 0.1641 0.1493	+++++ 0.1576	+++++ 0.1578	0.1705 0.1554	0.1632 0.1550	Ave		0.1591				4.1		20.0			
Chloroform	+++++ 0.5236 0.4945	0.6129 0.5080	0.5477 0.5100	0.5984 0.4941	0.5279 0.5016	Ave		0.5319			0.2000	8.0		20.0			
1,1,1-Trichloroethane	+++++ 0.4218 0.4164	0.4229 0.4128	0.4863 0.4195	0.4344 0.4016	0.4174 0.4112	Ave		0.4244			0.1000	5.5		20.0			
Carbon tetrachloride	+++++ 0.3660 0.3502	0.3883 0.3548	0.3912 0.3562	0.4142 0.3421	0.3477 0.3508	Ave		0.3662			0.1000	6.5		20.0			
1,1-Dichloropropene	+++++ 0.3409 0.4395	+++++ 0.3812	+++++ 0.4035	0.3254 0.4207	0.3138 0.4379	Qua1	-0.037	0.4157	0.0002651			12.0			1.0000		0.9900
Benzene	+++++ 1.2052 1.2145	1.1881 1.1942	1.1991 1.2286	1.1658 1.2420	1.1941 1.2554	Ave		1.2087			0.5000	2.2		20.0			
1,2-Dichloroethane	+++++ 0.2641 0.2305	0.5014 0.2309	0.3805 0.2319	0.3091 0.2427	0.2885 0.2401	Lin1	0.0150	0.2342			0.1000	7.0			0.9990		0.9900
Tert-amyl methyl ether	+++++ 0.4580 0.5874	+++++ 0.5487	+++++ 0.5670	0.3678 0.5874	0.3888 0.6101	Qua1	-0.096	0.5955	-0.000027			13.5			0.9990		0.9900
Trichloroethene	0.4131 0.2689 0.2807	0.3164 0.2576	0.2871 0.2643	0.2788 0.2793	0.2833 0.2866	Lin1	0.0015	0.2805			0.2000	8.1			0.9990		0.9900
1,2-Dichloropropane	+++++ 0.2897 0.2940	0.2684 0.2763	0.3037 0.2818	0.3225 0.2964	0.2974 0.3023	Ave		0.2932			0.1000	5.2		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.1198 0.1043	+++++ 0.1076	0.1376 0.1064	0.1245 0.1118	0.1232 0.1110	Ave		0.1162				9.4		20.0			
Dichlorobromomethane	+++++ 0.3086 0.3040	0.3480 0.2895	0.3493 0.2915	0.3228 0.3062	0.3314 0.3131	Lin1	0.0028	0.3056			0.2000	4.3			1.0000		0.9900
2-Chloroethyl vinyl ether	+++++ 0.0159 0.0298	+++++ 0.0201	+++++ 0.0224	+++++ 0.0271	+++++ 0.0316	Qua1	-0.020	0.0284	0.0000223			20.0			0.9950		0.9900
cis-1,3-Dichloropropene	+++++ 0.4534 0.5814	+++++ 0.4537	+++++ 0.4907	0.4083 0.5545	0.4441 0.5768	Qua1	-0.046	0.5308	0.0005577		0.2000	11.9			0.9990		0.9900
4-Methyl-2-pentanone (MIBK)	+++++ 0.0446 0.0702	+++++ 0.0573	+++++ 0.0599	+++++ 0.0663	0.0382 0.0707	Qua1	-0.096	0.0661	0.0000098		0.0600	9.8			0.9990		0.9900
Toluene	+++++ 1.9091 1.7495	+++++ 1.8669	1.9892 1.8465	1.8859 1.8435	1.9896 1.8204	Lin1	0.0447	1.7865			0.4000	7.0			0.9990		0.9900
trans-1,3-Dichloropropene	+++++ 0.3622 0.4228	+++++ 0.3510	+++++ 0.3685	0.3293 0.4090	0.3262 0.4231	Lin1	-0.042	0.4177			0.1000	13.9			0.9990		0.9900
1,1,2-Trichloroethane	+++++ 0.2378 0.2175	+++++ 0.2200	0.3003 0.2138	0.2545 0.2203	0.2579 0.2200	Lin2	0.0080	0.2217			0.1000	4.3			0.9980		0.9900
Tetrachloroethene	+++++ 0.3596 0.3477	0.3154 0.3395	0.4189 0.3338	0.3974 0.3332	0.3761 0.3356	Lin2	0.0002	0.3550			0.2000	9.7			0.9900		0.9900
1,3-Dichloropropane	+++++ 0.4173 0.4125	+++++ 0.3908	0.4064 0.3936	0.3771 0.4149	0.4083 0.4177	Ave		0.4043				3.5		20.0			
2-Hexanone	+++++ 0.0353 0.0582	+++++ 0.0440	+++++ 0.0473	+++++ 0.0554	0.0322 0.0600	Qua2	-0.047	0.0486	0.0000258	*	0.0600	8.8			0.9930		0.9900
Chlorodibromomethane	+++++ 0.2539 0.2687	+++++ 0.2530	+++++ 0.2525	0.2682 0.2625	0.2584 0.2681	Ave		0.2607			0.1000	2.7		20.0			
Ethylene Dibromide	+++++ 0.1952 0.1994	+++++ 0.1893	0.2188 0.1865	0.1895 0.1971	0.1785 0.2008	Lin1	-0.002	0.1986			0.1000	8.4			1.0000		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 1.1748 1.0807	+++++ 1.1350	1.3300 1.1031	1.1718 1.1060	1.2004 1.1064	Ave		1.1565			0.5000	6.6		20.0			
1,1,1,2-Tetrachloroethane	+++++ 0.4145 0.3818	+++++ 0.3944	+++++ 0.3802	0.3781 0.3701	0.3801 0.3765	Ave		0.3845				3.6		20.0			
Ethylbenzene	+++++ 1.7124 1.8585	+++++ 1.9807	1.4998 1.9771	1.6167 2.0068	1.7168 2.0168	Qua1	-0.100	2.0647	-0.001938		0.1000	10.6			1.0000		0.9900
m-Xylene & p-Xylene	+++++ 1.1839 1.5879	+++++ 1.4663	+++++ 1.4878	1.1184 1.5341	1.2645 1.5822	Lin1	-0.165	1.5755			0.1000	11.5			1.0000		0.9900
o-Xylene	+++++ 1.1953 1.5631	+++++ 1.4931	+++++ 1.5754	1.0811 1.6010	1.1414 1.6162	Lin1	-0.167	1.5837			0.3000	10.9			1.0000		0.9900
Styrene	+++++ 0.8094 1.1243	+++++ 1.0552	+++++ 1.0795	0.6581 1.1128	0.7654 1.1330	Qua1	-0.142	1.1117	0.0001774		0.3000	12.5			1.0000		0.9900
Bromoform	+++++ 0.1397 0.1386	+++++ 0.1324	0.1557 0.1277	0.1317 0.1300	0.1160 0.1367	Lin1	-0.001	0.1364			0.1000	10.3			0.9990		0.9900
Isopropylbenzene	+++++ 1.4145 1.8582	+++++ 1.8543	1.0956 1.9992	1.2206 2.0163	1.2963 1.9941	Lin1	-0.138	1.9207			0.1000	15.2			0.9980		0.9900
1,1,2,2-Tetrachloroethane	+++++ 0.5606 0.4907	+++++ 0.5176	0.7239 0.4942	0.6300 0.4986	0.5633 0.5166	Qua1	0.0226	0.5130	-0.000199		0.3000	3.2			1.0000		0.9900
Bromobenzene	+++++ 0.7853 0.8023	0.9595 0.7415	0.8235 0.7274	0.8383 0.7626	0.8806 0.8137	Ave		0.8135				8.5		20.0			
trans-1,4-Dichloro-2-butene	+++++ 0.1016 0.1136	+++++ 0.1063	+++++ 0.0984	0.1028 0.1074	0.1054 0.1151	Lin1	-0.006	0.1125				9.4			0.9990		0.9900
1,2,3-Trichloropropane	+++++ 0.1401 0.1252	+++++ 0.1319	+++++ 0.1192	0.1430 0.1261	0.1388 0.1307	Lin2	0.0036	0.1281				4.6			0.9980		0.9900
N-Propylbenzene	+++++ 3.8270 4.0862	+++++ 4.4349	+++++ 4.6200	3.7812 4.6972	3.8807 4.7664	Qua1	-0.490	4.9683	-0.008282			13.7			0.9990		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.7675 0.9454	0.7085 0.8518	0.8807 0.8932	0.6964 0.8911	0.8248 0.9484	Lin1	-0.024	0.9348				14.8			0.9990		0.9900
1,3,5-Trimethylbenzene	+++++ 2.5617 3.2080	+++++ 3.1653	+++++ 3.3035	+++++ 3.3466	2.3910 3.4656	Qua1	-0.768	3.5049	-0.002660			7.4			0.9990		0.9900
4-Chlorotoluene	+++++ 0.7977 0.9437	+++++ 0.8673	0.6402 0.8814	0.6357 0.9016	0.8322 0.9427	Lin1	-0.053	0.9345				10.6			0.9990		0.9900
tert-Butylbenzene	+++++ 1.9100 2.8293	+++++ 2.4125	+++++ 2.6601	+++++ 2.8244	1.9934 2.9392	Lin1	-0.721	2.8579				11.1			0.9990		0.9900
sec-Butylbenzene	+++++ 3.2851 3.8782	+++++ 4.0099	+++++ 4.3158	2.6060 4.3612	3.0677 4.4010	Lin1	-0.348	4.1051				8.2			0.9960		0.9900
1,3-Dichlorobenzene	+++++ 1.7885 1.6801	+++++ 1.7270	1.6648 1.7129	1.6780 1.7013	1.6793 1.7266	Ave		1.7065			0.6000	2.2		20.0			
4-Isopropyltoluene	+++++ 2.6103 3.3682	+++++ 3.4886	2.0357 3.7183	2.0388 3.7128	2.3905 3.7555	Lin1	-0.255	3.5342				15.7			0.9970		0.9900
1,4-Dichlorobenzene	+++++ 1.8715 1.6572	1.8992 1.7328	2.0339 1.6997	1.9485 1.6825	1.9441 1.7048	Lin2	0.0123	1.7701			0.5000	6.6			0.9950		0.9900
1,2,4-Trimethylbenzene	+++++ 3.1474 3.1708	2.8505 3.3982	2.7583 3.4507	2.7482 3.3998	3.0398 3.4598	Lin1	-0.040	3.2946				6.8			0.9980		0.9900
n-Butylbenzene	+++++ 0.6725 0.9525	+++++ 0.8203	+++++ 0.8970	0.6224 0.9037	0.6284 0.9368	Qua1	-0.101	0.8955	0.0006112			13.8			1.0000		0.9900
1,2-Dichlorobenzene	+++++ 1.6359 1.5378	+++++ 1.6345	1.6630 1.5698	1.4740 1.5379	1.5606 1.5683	Ave		1.5758			0.4000	3.8		20.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.0820 0.0789	+++++ 0.0788	+++++ 0.0718	+++++ 0.0733	+++++ 0.0792	Lin2	0.0058	0.0760			0.0500	4.7			0.9980		0.9900
1,3,5-Trichlorobenzene	+++++ 1.2685 1.3531	1.3015 1.3237	1.4447 1.3576	1.2742 1.3454	1.2605 1.3536	Lin1	-0.006	1.3515				5.5			1.0000		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 0.7965 0.9989	+++++ 0.9100	+++++ 0.9810	0.7162 1.0249	0.7462 1.0267	Lin1	-0.103	1.0082			0.2000	10.9			0.9990		0.9900
Hexachlorobutadiene	+++++ 0.6450 0.5937	+++++ 0.6269	0.9213 0.6228	0.6863 0.6050	0.6216 0.5763	Lin1	0.0312	0.5918				5.6			1.0000		0.9900
Naphthalene	+++++ 0.9207 +++++	+++++ 1.1719	+++++ 1.3404	0.7932 1.4848	0.8230 1.5514	Qua1	-0.190	1.3225	0.0048559			19.3			0.9980		0.9900
1,2,3-Trichlorobenzene	+++++ 0.6953 0.7513	+++++ 0.7831	0.7971 0.8350	0.6401 0.8296	0.5984 0.7966	Lin1	-0.015	0.7770				12.5			0.9980		0.9900
Dibromofluoromethane (Surr)	0.2551 0.2340 0.2173	0.2570 0.2308	0.2574 0.2291	0.2447 0.2192	0.2285 0.2187	Ave		0.2356				6.6		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2146 0.1944 0.1782	0.2149 0.1885	0.2157 0.1851	0.2031 0.1876	0.1935 0.1841	Ave		0.1963				6.9		20.0			
Trifluorotoluene (Surr)	1.5679 1.3052 1.2896	1.4442 1.2614	1.4398 1.2285	1.3800 1.2256	1.4097 1.2702	Ave		1.3475				8.1		20.0			
Toluene-d8 (Surr)	1.4794 1.4668 1.4734	1.4562 1.5234	1.4723 1.4685	1.4475 1.4409	1.4818 1.4130	Ave		1.4657				1.9		20.0			
4-Bromofluorobenzene (Surr)	0.3119 0.3410 0.3604	0.3260 0.3560	0.3286 0.3492	0.3285 0.3435	0.3350 0.3451	Ave		0.3387				4.2		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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	Lin1	+++++ 17779 2049649	691 80957	1513 184140	3431 375675	7473 1004203	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloromethane	FB	Lin1	+++++ 28778 3178835	+++++ 134127	+++++ 287500	5443 589452	11353 1557264	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Vinyl chloride	FB	Qua1	510 25142 3007532	1396 122203	2609 264421	4749 551988	12252 1482701	0.0200 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromomethane	FB	Lin1	+++++ 16697 1870984	+++++ 80876	2048 167020	3620 342677	8681 903652	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Chloroethane	FB	Lin1	+++++ 5825 611835	+++++ 26577	+++++ 52872	1277 109288	2758 295995	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Trichlorofluoromethane	FB	Lin1	+++++ 25678 2958008	+++++ 128937	+++++ 261677	5817 538507	13240 1445829	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Acrolein	FB	Lin1	+++++ 9285 1099395	+++++ 45605	+++++ 89901	2012 207274	4720 538956	+++++ 6.00 600	+++++ 30.0	+++++ 60.0	1.20 120	3.00 300
1,1-Dichloroethene	FB	Lin2	+++++ 16356 1960007	+++++ 81617	1719 164994	3748 346252	8132 930015	+++++ 1.00 100	+++++ 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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin2	+++++ 12531 1420320	+++++ 60062	1289 122242	2547 254125	6094 685663	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Acetone	FB	Lin1	+++++ 12087 1156104	+++++ 48259	+++++ 103686	+++++ 217250	8522 576329	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Iodomethane	FB	Lin2	+++++ 27891 3338935	+++++ 141377	2974 285842	5392 602744	14107 1609093	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon disulfide	FB	Lin2	+++++ 60276 7724265	+++++ 311598	+++++ 649176	12391 1363789	28684 3664648	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Methylene Chloride	FB	Lin1	+++++ 29177 2267684	+++++ 103047	+++++ 201249	+++++ 417940	+++++ 1097650	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
2-Methyl-2-propanol	FB	Lin2	+++++ 5438 672309	+++++ 24830	+++++ 49719	+++++ 115785	2344 316907	+++++ 10.0 1000	+++++ 50.0	+++++ 100	+++++ 200	5.00 500
Acrylonitrile	FB	Lin1	+++++ 19996 3490855	+++++ 118430	+++++ 267789	+++++ 646504	9372 1754921	+++++ 10.0 1000	+++++ 50.0	+++++ 100	+++++ 200	5.00 500
trans-1,2-Dichloroethene	FB	Lin2	+++++ 17265 2399231	+++++ 91397	1650 193948	3331 418687	8112 1148212	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Methyl tert-butyl ether	FB	Qua1	+++++ 17764 3526787	+++++ 125078	+++++ 271444	3968 625300	9487 1759239	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Hexane	FB	Qua1	+++++ 17602 3410816	+++++ 106538	+++++ 241248	3591 594472	9284 1649147	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1-Dichloroethane	FB	Ave	+++++ 33454 4309510	+++++ 170401	3046 352026	6684 761932	17097 2068673	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Vinyl acetate	FB	Qua2	+++++ 2749 608401	+++++ 17183	+++++ 39780	+++++ 105015	1446 288531	+++++ 2.50 250	+++++ 12.5	+++++ 25.0	+++++ 50.0	1.25 125
Tert-butyl ethyl ether	FB	Qua1	+++++ 12276 2350817	+++++ 86434	+++++ 186570	2088 420174	6578 1136125	+++++ 1.25 125	+++++ 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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Ave	+++++ 21473 2756082	+++++ 113547	2117 228668	4481 487365	10727 1310252	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
cis-1,2-Dichloroethene	FB	Ave	+++++ 16187 2495763	+++++ 91655	1408 197707	3032 438896	8028 1196717	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Butanone (MEK)	FB	Qua1	+++++ 1847 +++++	+++++ 15002	+++++ 32781	+++++ 75920	1047 241055	+++++ 5.00 +++++	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Chlorobromomethane	FB	Ave	+++++ 9099 1118535	+++++ 46499	+++++ 96252	1801 210455	4810 555956	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Chloroform	FB	Ave	+++++ 29031 3704502	1594 149938	2703 311043	6322 669069	15557 1799136	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1-Trichloroethane	FB	Ave	+++++ 23390 3118888	1100 121841	2400 255837	4589 543761	12301 1474763	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Carbon tetrachloride	FB	Ave	+++++ 20293 2622930	1010 104711	1931 217230	4376 463228	10248 1258028	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1-Dichloropropene	FB	Qua1	+++++ 18905 3292505	+++++ 112510	+++++ 246108	3438 569625	9248 1570511	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Benzene	FB	Ave	+++++ 66830 9097161	3090 352452	5918 749316	12316 1681691	35190 4502532	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloroethane	FB	Lin1	+++++ 14645 1726594	1304 68141	1878 141424	3265 328594	8503 861143	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tert-amyl methyl ether	FB	Qua1	+++++ 31745 5499722	+++++ 202423	+++++ 432273	4857 994188	14324 2735320	+++++ 1.25 125	+++++ 6.25	+++++ 12.5	0.250 25.0	0.625 62.5
Trichloroethene	FB	Lin1	407 14911 2102788	823 76025	1417 161195	2945 378128	8350 1027888	0.0200 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dichloropropane	FB	Ave	+++++ 16066 2202546	698 81531	1499 171842	3407 401317	8764 1084298	+++++ 1.00 100	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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 6641 781111	+++++ 31751	679 64886	1315 151334	3631 398076	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dichlorobromomethane	FB	Lin1	+++++ 17113 2277370	905 85454	1724 177795	3410 414660	9767 1122991	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Chloroethyl vinyl ether	CBNZ d5	Qua1	+++++ 551 141857	+++++ 3691	+++++ 8874	+++++ 24679	+++++ 76908	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
cis-1,3-Dichloropropene	CBNZ d5	Qua1	+++++ 15748 2763037	+++++ 83383	+++++ 194474	2880 504471	8603 1404374	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Qua1	+++++ 7748 1669020	+++++ 52644	+++++ 118755	+++++ 301630	3699 860282	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Toluene	CBNZ d5	Lin1	+++++ 66308 8314343	+++++ 343132	6373 731868	13303 1677070	38546 4432402	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
trans-1,3-Dichloropropene	CBNZ d5	Lin1	+++++ 12581 2009549	+++++ 64515	+++++ 146053	2323 372055	6319 1030158	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,1,2-Trichloroethane	CBNZ d5	Lin2	+++++ 8261 1033774	+++++ 40434	962 84725	1795 200429	4996 535544	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Tetrachloroethene	CBNZ d5	Lin2	+++++ 12491 1652508	540 62404	1342 132284	2803 303095	7287 817210	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3-Dichloropropane	CBNZ d5	Ave	+++++ 14495 1960239	+++++ 71825	1302 156018	2660 377477	7911 1017075	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
2-Hexanone	CBNZ d5	Qua2	+++++ 6138 1383225	+++++ 40426	+++++ 93704	+++++ 251918	3122 730589	+++++ 5.00 500	+++++ 25.0	+++++ 50.0	+++++ 100	2.50 250
Chlorodibromomethane	CBNZ d5	Ave	+++++ 8817 1276935	+++++ 46505	+++++ 100068	1892 238845	5006 652860	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Ethylene Dibromide	CBNZ d5	Lin1	+++++ 6779 947850	+++++ 34788	701 73906	1337 179274	3458 488897	+++++ 1.00 100	+++++ 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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++ 40803 5135963	+++++ 208601	4261 437200	8266 1006177	23257 2693919	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	+++++ 14395 1814552	+++++ 72488	+++++ 150694	2667 336707	7364 916828	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Ethylbenzene	CBNZ d5	Qua1	+++++ 59475 8832369	+++++ 364044	4805 783638	11404 1825674	33261 4910573	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
m-Xylene & p-Xylene	CBNZ d5	Lin1	+++++ 41118 7546510	+++++ 269503	+++++ 589684	7889 1395598	24499 3852445	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
o-Xylene	CBNZ d5	Lin1	+++++ 41515 7428634	+++++ 274426	+++++ 624427	7626 1456487	22113 3935138	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Styrene	CBNZ d5	Qua1	+++++ 28112 5343476	+++++ 193943	+++++ 427846	4642 1012375	14829 2758686	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Bromoform	CBNZ d5	Lin1	+++++ 4853 658815	+++++ 24327	499 50598	929 118271	2248 332768	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Isopropylbenzene	CBNZ d5	Lin1	+++++ 49130 8831413	+++++ 340804	3510 792399	8610 1834284	25115 4855271	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,1,2,2-Tetrachloroethane	DCBd 4	Qua1	+++++ 10550 1197132	+++++ 52821	1177 105930	2317 236963	5440 624843	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Bromobenzene	DCBd 4	Ave	+++++ 14779 1957257	822 75675	1339 155928	3083 362485	8504 984319	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
trans-1,4-Dichloro-2-butene	DCBd 4	Lin1	+++++ 1912 277111	+++++ 10844	+++++ 21087	378 51042	1018 139189	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichloropropane	DCBd 4	Lin2	+++++ 2636 305497	+++++ 13466	+++++ 25543	526 59955	1340 158039	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
N-Propylbenzene	DCBd 4	Qua1	+++++ 72020 9968069	+++++ 452612	+++++ 990315	13906 2232603	37478 5765620	+++++ 1.00 100	+++++ 5.00	+++++ 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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin1	+++++ 14444 2306145	607 86929	1432 191469	2561 423555	7966 1147269	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,3,5-Trimethylbenzene	DCBd 4	Qua1	+++++ 48209 7825750	+++++ 323041	+++++ 708114	+++++ 1590653	23091 4192155	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
4-Chlorotoluene	DCBd 4	Lin1	+++++ 15012 2302054	+++++ 88510	1041 188938	2338 428552	8037 1140313	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
tert-Butylbenzene	DCBd 4	Lin1	+++++ 35945 6901949	+++++ 246206	+++++ 570202	+++++ 1342428	19251 3555311	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	0.500 50.0
sec-Butylbenzene	DCBd 4	Lin1	+++++ 61823 9460620	+++++ 409237	+++++ 925120	9584 2072883	29626 5323617	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,3-Dichlorobenzene	DCBd 4	Ave	+++++ 33657 4098558	+++++ 176247	2707 367169	6171 808639	16218 2088605	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
4-Isopropyltoluene	DCBd 4	Lin1	+++++ 49123 8216624	+++++ 356028	3310 797032	7498 1764686	23086 4542823	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,4-Dichlorobenzene	DCBd 4	Lin2	+++++ 35220 4042552	1627 176838	3307 364341	7166 799714	18775 2062242	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2,4-Trimethylbenzene	DCBd 4	Lin1	+++++ 59231 7735118	2442 346806	4485 739684	10107 1615946	29357 4185043	+++++ 1.00 100	0.0500 5.00	0.100 10.0	0.200 20.0	0.500 50.0
n-Butylbenzene	DCBd 4	Qua1	+++++ 12656 2323560	+++++ 83714	+++++ 192287	2289 429535	6069 1133155	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2-Dichlorobenzene	DCBd 4	Ave	+++++ 30786 3751510	+++++ 166809	2704 336486	5421 730988	15072 1897104	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
1,2-Dibromo-3-Chloropropane	DCBd 4	Lin2	+++++ 1543 192489	+++++ 8042	+++++ 15401	+++++ 34820	+++++ 95813	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	+++++ 20.0	+++++ 50.0
1,3,5-Trichlorobenzene	DCBd 4	Lin1	+++++ 23871 3300859	1115 135088	2349 291012	4686 639481	12173 1637423	+++++ 1.00 100	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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	Lin1	+++++ 14989 2436868	+++++ 92875	+++++ 210276	2634 487143	7206 1241932	+++++ 1.00 100	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
Hexachlorobutadiene	DCBd 4	Lin1	+++++ 12138 1448280	+++++ 63978	1498 133506	2524 287561	6003 697063	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Naphthalene	DCBd 4	Qua1	+++++ 17327 +++++	+++++ 119596	+++++ 287318	2917 705709	7948 1876646	+++++ 1.00 +++++	+++++ 5.00	+++++ 10.0	0.200 20.0	0.500 50.0
1,2,3-Trichlorobenzene	DCBd 4	Lin1	+++++ 13085 1832718	+++++ 79925	1296 178994	2354 394326	5779 963653	+++++ 1.00 100	+++++ 5.00	0.100 10.0	0.200 20.0	0.500 50.0
Dibromofluoromethane (Surr)	FB	Ave	122525 126486 158713	130341 132844	123864 136266	126025 144696	131289 152923	9.75 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	103078 105087 130175	108974 108473	103784 110054	104600 123856	111218 128773	9.75 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	239573 245536 314477	247344 257363	234009 263229	253655 291159	272183 307173	10.00 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	465212 496722 682729	486202 545979	459925 567484	497766 639021	559797 670884	9.75 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	98067 115493 166998	108844 127573	102661 134942	112955 152346	126562 163859	9.75 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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD 580-311508/3	091719B_002.D
Level 2	STD 580-311508/4	091719B_003.D
Level 3	STD 580-311508/5	091719B_004.D
Level 4	STD 580-311508/6	091719B_005.D
Level 5	STD 580-311508/7	091719B_006.D
Level 6	STD 580-311508/8	091719B_007.D
Level 7	STD 580-311508/9	091719B_008.D
Level 8	ICIS 580-311508/10	091719B_009.D
Level 9	STD 580-311508/11	091719B_010.D
Level 10	STD 580-311508/12	091719B_011.D
Level 11	STD 580-311508/13	091719B_012.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	+++++	-23.9						30				
Chloromethane	+++++	+++++	+++++	-6.9						30		
Vinyl chloride	-27.2						30					
Bromomethane	+++++	+++++	-18.7						30			
Chloroethane	+++++	+++++	+++++	-14.3						30		
Trichlorofluoromethane	+++++	+++++	+++++	-11.4						30		
Acrolein	+++++	+++++	+++++	-5.0						30		
1,1-Dichloroethene	+++++	+++++	-6.7						30			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++	+++++	-2.8						30			
Acetone	+++++	+++++	+++++	+++++	0.3						30	
Iodomethane	+++++	+++++	1.5						30			
Carbon disulfide	+++++	+++++	+++++	3.0						30		
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.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	+++++	+++++	-6.2						30	
Acrylonitrile	+++++	+++++	+++++	+++++	12.4						30	
trans-1,2-Dichloroethene	+++++	+++++	2.7						30			
Methyl tert-butyl ether	+++++	+++++	+++++	37.5 *						30		
Hexane	+++++	+++++	+++++	34.2 *						30		
1,1-Dichloroethane	+++++	+++++	4.7						50			
Vinyl acetate	+++++	+++++	+++++	+++++	5.3						30	
Tert-butyl ethyl ether	+++++	+++++	+++++	23.9						30		
2,2-Dichloropropane	+++++	+++++	11.7						50			
cis-1,2-Dichloroethene	+++++	+++++	-7.1						50			
2-Butanone (MEK)	+++++	+++++	+++++	+++++	11.4 +++++						30	
Chlorobromomethane	+++++	+++++	+++++	7.1						50		
Chloroform	+++++	15.2						50				
1,1,1-Trichloroethane	+++++	-0.4						50				
Carbon tetrachloride	+++++	6.1						50				
1,1-Dichloropropene	+++++	+++++	+++++	23.1						30		
Benzene	+++++	-1.7						50				
1,2-Dichloroethane	+++++	-14.4						30				
Tert-amyl methyl ether	+++++	+++++	+++++	26.1						30		
Trichloroethene	21.0						30					
1,2-Dichloropropane	+++++	-8.5						50				

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	18.4						50			
Dichlorobromomethane	+++++	-4.6						30				
2-Chloroethyl vinyl ether	+++++	+++++	+++++	+++++	+++++	25.9						30
cis-1,3-Dichloropropene	+++++	+++++	+++++	20.5						30		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	+++++	15.6						30	
Toluene	+++++	+++++	-13.7						30			
trans-1,3-Dichloropropene	+++++	+++++	+++++	28.8						30		
1,1,2-Trichloroethane	+++++	+++++	-0.5						30			
Tetrachloroethene	+++++	-12.2						30				
1,3-Dichloropropane	+++++	+++++	0.5						50			
2-Hexanone	+++++	+++++	+++++	+++++	4.7						30	
Chlorodibromomethane	+++++	+++++	+++++	2.9						50		
Ethylene Dibromide	+++++	+++++	19.0						30			
Chlorobenzene	+++++	+++++	15.0						50			
1,1,1,2-Tetrachloroethane	+++++	+++++	+++++	-1.7						50		
Ethylbenzene	+++++	+++++	21.0						30			
m-Xylene & p-Xylene	+++++	+++++	+++++	23.2						30		
o-Xylene	+++++	+++++	+++++	21.1						30		
Styrene	+++++	+++++	+++++	23.0						30		
Bromoform	+++++	+++++	21.9						30			
Isopropylbenzene	+++++	+++++	28.9						30			

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	-3.0						30			
Bromobenzene	+++++	18.0						50				
trans-1,4-Dichloro-2-butene	+++++	+++++	+++++	17.5						30		
1,2,3-Trichloropropane	+++++	+++++	+++++	-2.3						30		
N-Propylbenzene	+++++	+++++	+++++	25.5						30		
2-Chlorotoluene	+++++	28.2						30				
1,3,5-Trimethylbenzene	+++++	+++++	+++++	+++++	12.1						30	
4-Chlorotoluene	+++++	+++++	24.9						30			
tert-Butylbenzene	+++++	+++++	+++++	+++++	20.2						30	
sec-Butylbenzene	+++++	+++++	+++++	5.9						30		
1,3-Dichlorobenzene	+++++	+++++	-2.4						50			
4-Isopropyltoluene	+++++	+++++	29.8						30			
1,4-Dichlorobenzene	+++++	-6.6						30				
1,2,4-Trimethylbenzene	+++++	10.6						30				
n-Butylbenzene	+++++	+++++	+++++	25.7						30		
1,2-Dichlorobenzene	+++++	+++++	5.5						50			
1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	0.3						30
1,3,5-Trichlorobenzene	+++++	5.2						30				
1,2,4-Trichlorobenzene	+++++	+++++	+++++	22.2						30		
Hexachlorobutadiene	+++++	+++++	3.0						30			
Naphthalene	+++++	+++++	+++++	31.8 *	+++++					30		

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1 Analy Batch No.: 311508

SDG No.:

Instrument ID: TAC048 GC Column: 624SIL-MS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/17/2019 20:42 Calibration End Date: 09/18/2019 01:07 Calibration ID: 28235

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	+++++	+++++	21.3						30			
Dibromofluoromethane (Surr)	8.3						50					
1,2-Dichloroethane-d4 (Surr)	9.3						50					
Trifluorotoluene (Surr)	16.4						50					
Toluene-d8 (Surr)	0.9						50					
4-Bromofluorobenzene (Surr)	-7.9						50					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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	Lin1		0.2564	0.1000	9.23	10.0	-7.7	30.0
Chloromethane	Lin1		0.4833	0.1000	11.2	10.0	11.6	30.0
Vinyl chloride	Qua1		0.4434	0.1000	10.6	10.0	5.6	30.0
Bromomethane	Lin1		0.2762	0.1000	10.9	10.0	8.7	30.0
Chloroethane	Lin1		0.0923	0.0600	11.1	10.0	11.3	30.0
Trichlorofluoromethane	Lin1		0.4259	0.1000	10.6	10.0	5.7	30.0
Acrolein	Lin1		0.0278		66.9	60.0	11.5	30.0
1,1-Dichloroethene	Lin2		0.2866	0.1000	10.6	10.0	6.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.1965	0.1000	9.90	10.0	-1.0	30.0
Acetone	Lin1		0.0328	0.0200	50.4	50.0	0.8	30.0
Iodomethane	Lin2		0.4986		10.8	10.0	8.4	30.0
Carbon disulfide	Lin2		1.105	0.1000	10.7	10.0	7.2	30.0
Methylene Chloride	Lin1		0.3343	0.1000	10.3	10.0	3.5	30.0
2-Methyl-2-propanol	Lin2		0.0093		106	100	6.3	30.0
Acrylonitrile	Lin1		0.0452		97.6	100	-2.4	30.0
trans-1,2-Dichloroethene	Lin2		0.3373	0.1000	10.9	10.0	9.0	30.0
Methyl tert-butyl ether	Qua1		0.4616	0.1000	9.96	10.0	-0.4	30.0
Hexane	Qua1		0.4305		10.1	10.0	1.3	30.0
1,1-Dichloroethane	Ave	0.5892	0.6051	0.2000	10.3	10.0	2.7	30.0
Vinyl acetate	Qua2		0.0282		26.5	25.0	6.0	30.0
Tert-butyl ethyl ether	Qua1		0.2498		12.7	12.5	1.4	30.0
2,2-Dichloropropane	Ave	0.3841	0.3830		9.97	10.0	-0.3	30.0
cis-1,2-Dichloroethene	Ave	0.3069	0.3445	0.1000	11.2	10.0	12.2	30.0
2-Butanone (MEK)	Qua1		0.0105*	0.0200	49.9	50.0	-0.2	30.0
Chlorobromomethane	Ave	0.1591	0.1556		9.78	10.0	-2.2	30.0
Chloroform	Ave	0.5319	0.5119	0.2000	9.62	10.0	-3.8	30.0
1,1,1-Trichloroethane	Ave	0.4244	0.4283	0.1000	10.1	10.0	0.9	30.0
Carbon tetrachloride	Ave	0.3662	0.3522	0.1000	9.62	10.0	-3.8	30.0
1,1-Dichloropropene	Qua1		0.4081		9.84	10.0	-1.6	30.0
Benzene	Ave	1.209	1.273	0.5000	10.5	10.0	5.3	30.0
1,2-Dichloroethane	Lin1		0.2346	0.1000	9.95	10.0	-0.5	30.0
Tert-amyl methyl ether	Qua1		0.5896		12.5	12.5	0.4	30.0
Trichloroethene	Lin1		0.2749	0.2000	9.80	10.0	-2.0	30.0
1,2-Dichloropropane	Ave	0.2932	0.2871	0.1000	9.79	10.0	-2.1	30.0
Dibromomethane	Ave	0.1162	0.1080		9.29	10.0	-7.1	30.0
Dichlorobromomethane	Lin1		0.3078	0.2000	10.1	10.0	0.6	30.0
2-Chloroethyl vinyl ether	Qua1		0.0262		9.88	10.0	-1.2	30.0
cis-1,3-Dichloropropene	Qua1		0.5514	0.2000	10.4	10.0	3.6	30.0
4-Methyl-2-pentanone (MIBK)	Qua1		0.0644	0.0600	49.8	50.0	-0.4	30.0
Toluene	Lin1		1.935	0.4000	10.8	10.0	8.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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		0.3796	0.1000	9.19	10.0	-8.1	30.0
1,1,2-Trichloroethane	Lin2		0.2251	0.1000	10.1	10.0	1.1	30.0
Tetrachloroethene	Lin2		0.3487	0.2000	9.82	10.0	-1.8	30.0
1,3-Dichloropropane	Ave	0.4043	0.4113		10.2	10.0	1.7	30.0
2-Hexanone	Qua2		0.0519*	0.0600	52.9	50.0	5.8	30.0
Chlorodibromomethane	Ave	0.2607	0.2638	0.1000	10.1	10.0	1.2	30.0
Ethylene Dibromide	Lin1		0.1992	0.1000	10.0	10.0	0.4	30.0
Chlorobenzene	Ave	1.156	1.150	0.5000	9.95	10.0	-0.5	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.3857		10.0	10.0	0.3	30.0
Ethylbenzene	Qua1		2.092	0.1000	10.3	10.0	2.8	30.0
m-Xylene & p-Xylene	Lin1		1.597	0.1000	10.2	10.0	2.4	30.0
o-Xylene	Lin1		1.681	0.3000	10.7	10.0	7.2	30.0
Styrene	Qua1		1.161	0.3000	10.6	10.0	5.5	30.0
Bromoform	Lin1		0.1327	0.1000	9.73	10.0	-2.7	30.0
Isopropylbenzene	Lin1		2.120	0.1000	11.1	10.0	11.1	30.0
1,1,2,2-Tetrachloroethane	Qua1		0.5243	0.3000	10.2	10.0	2.2	30.0
Bromobenzene	Ave	0.8135	0.8131		10.0	10.0	-0.0	30.0
trans-1,4-Dichloro-2-butene	Lin1		0.1158		10.3	10.0	3.5	30.0
1,2,3-Trichloropropane	Lin2		0.1353		10.5	10.0	5.4	30.0
N-Propylbenzene	Qua1		5.100		10.5	10.0	5.5	30.0
2-Chlorotoluene	Lin1		0.9856		10.6	10.0	5.7	30.0
1,3,5-Trimethylbenzene	Qua1		3.670		10.8	10.0	7.8	30.0
4-Chlorotoluene	Lin1		0.9777		10.5	10.0	5.2	30.0
tert-Butylbenzene	Lin1		3.007		10.8	10.0	7.7	30.0
sec-Butylbenzene	Lin1		4.746		11.6	10.0	16.5	30.0
1,3-Dichlorobenzene	Ave	1.707	1.857	0.6000	10.9	10.0	8.8	30.0
4-Isopropyltoluene	Lin1		4.059		11.6	10.0	15.6	30.0
1,4-Dichlorobenzene	Lin2		1.859	0.5000	10.5	10.0	5.0	30.0
1,2,4-Trimethylbenzene	Lin1		3.757		11.4	10.0	14.2	30.0
n-Butylbenzene	Qua1		0.9644		10.8	10.0	8.0	30.0
1,2-Dichlorobenzene	Ave	1.576	1.655	0.4000	10.5	10.0	5.1	30.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0836	0.0500	10.9	10.0	9.3	30.0
1,3,5-Trichlorobenzene	Lin1		1.498		11.1	10.0	10.9	30.0
1,2,4-Trichlorobenzene	Lin1		1.113	0.2000	11.1	10.0	11.4	30.0
Hexachlorobutadiene	Lin1		0.6908		11.6	10.0	16.2	30.0
Naphthalene	Qua1		1.499		11.0	10.0	10.3	30.0
1,2,3-Trichlorobenzene	Lin1		0.8968		11.6	10.0	15.6	30.0
Dibromofluoromethane (Surr)	Ave	0.2356	0.2208		9.14	9.75	-6.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1807		8.97	9.75	-8.0	30.0
Trifluorotoluene (Surr)	Ave	1.347	1.322		9.81	10.0	-1.9	30.0
Toluene-d8 (Surr)	Ave	1.466	1.462		9.73	9.75	-0.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 580-311508/15 Calibration Date: 09/18/2019 02:00

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 091719B _014.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	0.3387	0.3461		9.97	9.75	2.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVIS 580-311759/3 Calibration Date: 09/20/2019 14:44

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _003.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	Lin1		0.3096	0.1000	11.2	10.0	11.5	20.0
Chloromethane	Lin1		0.4572	0.1000	10.6	10.0	5.6	20.0
Vinyl chloride	Qua1		0.4468	0.1000	10.6	10.0	6.4	20.0
Bromomethane	Lin1		0.2783	0.1000	11.0	10.0	9.5	20.0
Chloroethane	Lin1		0.0886	0.0600	10.7	10.0	6.8	20.0
Trichlorofluoromethane	Lin1		0.4506	0.1000	11.2	10.0	11.8	20.0
Acrolein	Lin1		0.0261		62.8	60.0	4.7	20.0
1,1-Dichloroethene	Lin2		0.2780	0.1000	10.3	10.0	3.1	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.2120	0.1000	10.7	10.0	6.8	20.0
Acetone	Lin1		0.0402	0.0200	62.3	50.0	24.6*	20.0
Iodomethane	Lin2		0.4681		10.2	10.0	1.7	20.0
Carbon disulfide	Lin2		1.079	0.1000	10.5	10.0	4.8	20.0
Methylene Chloride	Lin1		0.3543	0.1000	11.0	10.0	10.1	20.0
2-Methyl-2-propanol	Lin2		0.0082		93.6	100	-6.4	20.0
Acrylonitrile	Lin1		0.0437		94.6	100	-5.4	20.0
trans-1,2-Dichloroethene	Lin2		0.3224	0.1000	10.4	10.0	4.2	20.0
Methyl tert-butyl ether	Qua1		0.4407	0.1000	9.51	10.0	-4.9	20.0
Hexane	Qua1		0.4589		10.8	10.0	7.9	20.0
1,1-Dichloroethane	Ave	0.5892	0.5852	0.2000	9.93	10.0	-0.7	20.0
Vinyl acetate	Qua2		0.0289		27.1	25.0	8.3	20.0
Tert-butyl ethyl ether	Qua1		0.2487		12.6	12.5	1.0	20.0
2,2-Dichloropropane	Ave	0.3841	0.3917		10.2	10.0	2.0	20.0
cis-1,2-Dichloroethene	Ave	0.3069	0.3292	0.1000	10.7	10.0	7.3	20.0
2-Butanone (MEK)	Qua1		0.0118*	0.0200	55.4	50.0	10.8	20.0
Chlorobromomethane	Ave	0.1591	0.1627		10.2	10.0	2.2	20.0
Chloroform	Ave	0.5319	0.5241	0.2000	9.85	10.0	-1.5	20.0
1,1,1-Trichloroethane	Ave	0.4244	0.4235	0.1000	9.98	10.0	-0.2	20.0
Carbon tetrachloride	Ave	0.3662	0.3669	0.1000	10.0	10.0	0.2	20.0
1,1-Dichloropropene	Qua1		0.4302		10.4	10.0	3.7	20.0
Benzene	Ave	1.209	1.316	0.5000	10.9	10.0	8.9	20.0
1,2-Dichloroethane	Lin1		0.2525	0.1000	10.7	10.0	7.1	20.0
Tert-amyl methyl ether	Qua1		0.5869		12.5	12.5	-0.1	20.0
Trichloroethene	Lin1		0.2915	0.2000	10.4	10.0	3.9	20.0
1,2-Dichloropropane	Ave	0.2932	0.3057	0.1000	10.4	10.0	4.2	20.0
Dibromomethane	Ave	0.1162	0.1172		10.1	10.0	0.9	20.0
Dichlorobromomethane	Lin1		0.3228	0.2000	10.6	10.0	5.5	20.0
2-Chloroethyl vinyl ether	Qua1		0.0251		9.47	10.0	-5.3	20.0
cis-1,3-Dichloropropene	Qua1		0.5270	0.2000	9.91	10.0	-0.9	20.0
4-Methyl-2-pentanone (MIBK)	Qua1		0.0649	0.0600	50.2	50.0	0.3	20.0
Toluene	Lin1		1.938	0.4000	10.8	10.0	8.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVIS 580-311759/3 Calibration Date: 09/20/2019 14:44

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _003.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		0.4021	0.1000	9.73	10.0	-2.7	20.0
1,1,2-Trichloroethane	Lin2		0.2333	0.1000	10.5	10.0	4.8	20.0
Tetrachloroethene	Lin2		0.3533	0.2000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.4043	0.4274		10.6	10.0	5.7	20.0
2-Hexanone	Qua2		0.0606	0.0600	61.4	50.0	22.7*	20.0
Chlorodibromomethane	Ave	0.2607	0.2670	0.1000	10.2	10.0	2.4	20.0
Ethylene Dibromide	Lin1		0.2034	0.1000	10.3	10.0	2.5	20.0
Chlorobenzene	Ave	1.156	1.190	0.5000	10.3	10.0	2.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3845	0.3827		9.96	10.0	-0.4	20.0
Ethylbenzene	Qua1		2.084	0.1000	10.2	10.0	2.4	20.0
m-Xylene & p-Xylene	Lin1		1.578	0.1000	10.1	10.0	1.2	20.0
o-Xylene	Lin1		1.605	0.3000	10.2	10.0	2.4	20.0
Styrene	Qua1		1.177	0.3000	10.7	10.0	7.0	20.0
Bromoform	Lin1		0.1383	0.1000	10.1	10.0	1.4	20.0
Isopropylbenzene	Lin1		2.008	0.1000	10.5	10.0	5.3	20.0
1,1,2,2-Tetrachloroethane	Qua1		0.5072	0.3000	9.88	10.0	-1.2	20.0
Bromobenzene	Ave	0.8135	0.7872		9.68	10.0	-3.2	20.0
trans-1,4-Dichloro-2-butene	Lin1		0.1105		9.88	10.0	-1.2	20.0
1,2,3-Trichloropropane	Lin2		0.1286		10.0	10.0	0.1	20.0
N-Propylbenzene	Qua1		4.812		9.95	10.0	-0.5	20.0
2-Chlorotoluene	Lin1		0.9160		9.83	10.0	-1.7	20.0
1,3,5-Trimethylbenzene	Qua1		3.422		10.1	10.0	0.6	20.0
4-Chlorotoluene	Lin1		0.9385		10.1	10.0	1.0	20.0
tert-Butylbenzene	Lin1		2.769		9.94	10.0	-0.6	20.0
sec-Butylbenzene	Lin1		4.429		10.9	10.0	8.7	20.0
1,3-Dichlorobenzene	Ave	1.707	1.803	0.6000	10.6	10.0	5.7	20.0
4-Isopropyltoluene	Lin1		3.778		10.8	10.0	7.6	20.0
1,4-Dichlorobenzene	Lin2		1.803	0.5000	10.2	10.0	1.8	20.0
1,2,4-Trimethylbenzene	Lin1		3.515		10.7	10.0	6.8	20.0
n-Butylbenzene	Qua1		0.9286		10.4	10.0	4.1	20.0
1,2-Dichlorobenzene	Ave	1.576	1.644	0.4000	10.4	10.0	4.3	20.0
1,2-Dibromo-3-Chloropropane	Lin2		0.0708	0.0500	9.24	10.0	-7.6	20.0
1,3,5-Trichlorobenzene	Lin1		1.368		10.1	10.0	1.3	20.0
1,2,4-Trichlorobenzene	Lin1		0.9663	0.2000	9.69	10.0	-3.1	20.0
Hexachlorobutadiene	Lin1		0.6373		10.7	10.0	7.2	20.0
Naphthalene	Qua1		1.343		9.94	10.0	-0.6	20.0
1,2,3-Trichlorobenzene	Lin1		0.8391		10.8	10.0	8.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2356	0.2270		9.39	9.75	-3.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1893		9.40	9.75	-3.6	20.0
Trifluorotoluene (Surr)	Ave	1.347	1.195		8.86	10.0	-11.3	20.0
Toluene-d8 (Surr)	Ave	1.466	1.439		9.57	9.75	-1.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVIS 580-311759/3 Calibration Date: 09/20/2019 14:44

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _003.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	0.3387	0.3551		10.2	9.75	4.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 580-311759/6 Calibration Date: 09/20/2019 16:04

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _006.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	Lin1		0.1709	0.1000		0.200	-43.3	
Chloromethane	Lin1		0.6043	0.1000	0.228	0.200	13.8	
Vinyl chloride	Qua1		0.2016	0.1000	0.0857	0.200	-57.2	
Bromomethane	Lin1		0.3013	0.1000		0.200	-22.2	
Chloroethane	Lin1		0.0426*	0.0600		0.200	-109.7	
Trichlorofluoromethane	Lin1		0.0884*	0.1000		0.200	-127.2	
Acrolein	Lin1		0.0573		2.38	1.20	98.3	
1,1-Dichloroethene	Lin2		0.3276	0.1000	0.208	0.200	3.8	
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.0847*	0.1000		0.200	-74.6	
Acetone	Lin1		0.0688	0.0200		1.00	-92.0	
Iodomethane	Lin2		0.4504		0.166	0.200	-16.8	
Carbon disulfide	Lin2		1.237	0.1000	0.219	0.200	9.3	
Methylene Chloride	Lin1		2.260	0.1000		0.200	268.1	
2-Methyl-2-propanol	Lin2		0.0147		3.50	2.00	75.0	
trans-1,2-Dichloroethene	Lin2		0.1634	0.1000	0.100	0.200	-49.9	
Acrylonitrile	Lin1		0.0107		2.71	2.00	35.6	
Methyl tert-butyl ether	Qua1		0.1721	0.1000	0.188	0.200	-5.9	
Hexane	Qua1		0.4052		0.299	0.200	49.5	
1,1-Dichloroethane	Ave	0.5892	0.4093	0.2000	0.139	0.200	-30.5	
Vinyl acetate	Qua2		0.0085		0.544	0.500	8.7	
Tert-butyl ethyl ether	Qua1		0.1142		0.266	0.250	6.3	
2,2-Dichloropropane	Ave	0.3841	0.3872		0.202	0.200	0.8	
cis-1,2-Dichloroethene	Ave	0.3069	0.3187	0.1000	0.208	0.200	3.8	
2-Butanone (MEK)	Qua1		0.0128*	0.0200		1.00	129.8	
Chlorobromomethane	Ave	0.1591	0.1838		0.231	0.200	15.5	
Chloroform	Ave	0.5319	0.6407	0.2000	0.241	0.200	20.5	
1,1,1-Trichloroethane	Ave	0.4244	0.2803	0.1000	0.132	0.200	-34.0	
Carbon tetrachloride	Ave	0.3662	0.4022	0.1000	0.220	0.200	9.8	
1,1-Dichloropropene	Qua1		0.3397		0.253	0.200	26.5	
Benzene	Ave	1.209	1.356	0.5000	0.224	0.200	12.2	
1,2-Dichloroethane	Lin1		0.3737	0.1000	0.255	0.200	27.4	
Tert-amyl methyl ether	Qua1		0.7220		0.464	0.250	85.6	
Trichloroethene	Lin1		0.3712	0.2000	0.259	0.200	29.7	
1,2-Dichloropropane	Ave	0.2932	0.4336	0.1000	0.296	0.200	47.9	
Dibromomethane	Ave	0.1162	0.2059		0.354	0.200	77.2	
Dichlorobromomethane	Lin1		0.6875	0.2000	0.441	0.200	120.3	
2-Chloroethyl vinyl ether	Qua1		0.0058		0.742	0.200	270.8	
cis-1,3-Dichloropropene	Qua1		0.8966	0.2000	0.425	0.200	112.4	
4-Methyl-2-pentanone (MIBK)	Qua1		0.1919	0.0600	4.35	1.00	334.7	
Toluene	Lin1		2.721	0.4000	0.280	0.200	39.8	

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 580-311759/6 Calibration Date: 09/20/2019 16:04

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _006.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		0.9438	0.1000	0.552	0.200	175.9	
1,1,2-Trichloroethane	Lin2		0.7950	0.1000	0.681	0.200	240.6	
Tetrachloroethene	Lin2		0.4602	0.2000	0.259	0.200	29.4	
1,3-Dichloropropane	Ave	0.4043	1.066		0.527	0.200	163.7	
2-Hexanone	Qua2		0.1754	0.0600	4.56	1.00	356.1	
Chlorodibromomethane	Ave	0.2607	0.9038	0.1000	0.693	0.200	246.7	
Ethylene Dibromide	Lin1		0.5389	0.1000	0.552	0.200	175.8	
Chlorobenzene	Ave	1.156	3.060	0.5000	0.529	0.200	164.6	
1,1,1,2-Tetrachloroethane	Ave	0.3845	1.320		0.686	0.200	243.2	
Ethylbenzene	Qua1		3.453	0.1000	0.383	0.200	91.5	
m-Xylene & p-Xylene	Lin1		2.468	0.1000	0.418	0.200	108.9	
o-Xylene	Lin1		2.905	0.3000	0.473	0.200	136.3	
Styrene	Qua1		2.419	0.3000	0.563	0.200	181.4	
Bromoform	Lin1		0.6003	0.1000	0.888	0.200	343.9	
Isopropylbenzene	Lin1		3.174	0.1000	0.402	0.200	101.2	
1,1,2,2-Tetrachloroethane	Qua1		2.833	0.3000	1.06	0.200	430.5	
Bromobenzene	Ave	0.8135	2.798		0.688	0.200	243.9	
trans-1,4-Dichloro-2-butene	Lin1		0.4949		0.932	0.200	366.2	
1,2,3-Trichloropropane	Lin2		0.7017		1.07	0.200	433.7	
N-Propylbenzene	Qua1		10.01		0.502	0.200	151.0	
2-Chlorotoluene	Lin1		2.466		0.554	0.200	176.9	
1,3,5-Trimethylbenzene	Qua1		6.822		0.609	0.200	204.4	
4-Chlorotoluene	Lin1		2.825		0.661	0.200	230.5	
tert-Butylbenzene	Lin1		5.374		0.628	0.200	214.1	
sec-Butylbenzene	Lin1		8.041		0.477	0.200	138.3	
1,3-Dichlorobenzene	Ave	1.707	6.630	0.6000	0.777	0.200	288.5	
4-Isopropyltoluene	Lin1		6.873		0.461	0.200	130.6	
1,4-Dichlorobenzene	Lin2		7.448	0.5000	0.835	0.200	317.3	
1,2,4-Trimethylbenzene	Lin1		10.56		0.653	0.200	226.6	
n-Butylbenzene	Qua1		1.865		0.529	0.200	164.5	
1,2-Dichlorobenzene	Ave	1.576	6.679	0.4000	0.848	0.200	323.9	
1,2-Dibromo-3-Chloropropane	Lin2		0.3995	0.0500	0.975	0.200	387.6	
1,3,5-Trichlorobenzene	Lin1		4.504		0.671	0.200	235.5	
1,2,4-Trichlorobenzene	Lin1		3.389	0.2000	0.775	0.200	287.3	
Hexachlorobutadiene	Lin1		1.855		0.574	0.200	187.2	
Naphthalene	Qua1		4.447		0.814	0.200	307.0	
1,2,3-Trichlorobenzene	Lin1		3.090		0.814	0.200	306.9	
Dibromofluoromethane (Surr)	Ave	0.2356	0.2263		9.36	9.75	-4.0	
1,2-Dichloroethane-d4 (Surr)	Ave	0.1963	0.1938		9.62	9.75	-1.3	
Trifluorotoluene (Surr)	Ave	1.347	1.336		9.91	10.0	-0.8	
Toluene-d8 (Surr)	Ave	1.466	1.462		9.72	9.75	-0.3	

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 580-311759/6 Calibration Date: 09/20/2019 16:04

Instrument ID: TAC048 Calib Start Date: 09/17/2019 20:42

GC Column: 624SIL-MS ID: 0.25(mm) Calib End Date: 09/18/2019 01:07

Lab File ID: 092019 _006.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	0.3387	0.3439		9.90	9.75	1.6	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311759/7

Matrix: Water Lab File ID: 092019 _007.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 16:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 580-311759/7

Matrix: Water Lab File ID: 092019 _007.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 16:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 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)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
98-08-8	Trifluorotoluene (Surr)	105		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311759/4

Matrix: Water Lab File ID: 092019 _004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 15:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.34		0.30	
71-55-6	1,1,1-Trichloroethane	5.12		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	5.32		0.20	
79-00-5	1,1,2-Trichloroethane	5.77		0.20	
75-34-3	1,1-Dichloroethane	5.12		0.20	
75-35-4	1,1-Dichloroethene	5.45		0.20	
563-58-6	1,1-Dichloropropene	5.13		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.65		0.50	
96-18-4	1,2,3-Trichloropropane	5.55		0.20	
120-82-1	1,2,4-Trichlorobenzene	5.01		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.54		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	5.02		2.0	
95-50-1	1,2-Dichlorobenzene	5.55		0.30	
107-06-2	1,2-Dichloroethane	5.46		0.20	
78-87-5	1,2-Dichloropropane	5.28		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.15		0.50	
541-73-1	1,3-Dichlorobenzene	5.57		0.30	
142-28-9	1,3-Dichloropropane	5.52		0.20	
106-46-7	1,4-Dichlorobenzene	5.38		0.30	
594-20-7	2,2-Dichloropropane	5.23		0.50	
95-49-8	2-Chlorotoluene	5.00		0.50	
106-43-4	4-Chlorotoluene	5.23		0.30	
99-87-6	4-Isopropyltoluene	5.42		0.30	
71-43-2	Benzene	5.43		0.20	
108-86-1	Bromobenzene	5.05		0.20	
75-25-2	Bromoform	5.31		0.50	
74-83-9	Bromomethane	5.83		0.50	
56-23-5	Carbon tetrachloride	5.00		0.20	
108-90-7	Chlorobenzene	5.41		0.20	
74-97-5	Chlorobromomethane	5.27		0.20	
124-48-1	Chlorodibromomethane	5.51		0.20	
75-00-3	Chloroethane	5.66		0.50	
67-66-3	Chloroform	5.14		0.20	
74-87-3	Chloromethane	5.79		0.50	
156-59-2	cis-1,2-Dichloroethene	5.39		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.98		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 580-311759/4

Matrix: Water Lab File ID: 092019 _004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 15:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	5.31		0.20	
75-27-4	Dichlorobromomethane	5.42		0.20	
75-71-8	Dichlorodifluoromethane	6.33		0.40	
100-41-4	Ethylbenzene	5.27		0.20	
106-93-4	Ethylene Dibromide	5.41		0.10	
87-68-3	Hexachlorobutadiene	5.51		0.50	
98-82-8	Isopropylbenzene	5.31		1.0	
1634-04-4	Methyl tert-butyl ether	4.94		0.30	
75-09-2	Methylene Chloride	8.49		5.0	
179601-23-1	m-Xylene & p-Xylene	5.19		0.50	
91-20-3	Naphthalene	5.16		1.0	
104-51-8	n-Butylbenzene	5.16		0.50	
103-65-1	N-Propylbenzene	5.01		0.30	
95-47-6	o-Xylene	5.27		0.50	
135-98-8	sec-Butylbenzene	5.42		1.0	
100-42-5	Styrene	5.40		0.50	
98-06-6	tert-Butylbenzene	5.01		0.50	
127-18-4	Tetrachloroethene	5.13		0.50	
108-88-3	Toluene	5.56		0.20	
156-60-5	trans-1,2-Dichloroethene	5.18		0.20	
10061-02-6	trans-1,3-Dichloropropene	5.02		0.20	
79-01-6	Trichloroethene	5.10		0.20	
75-69-4	Trichlorofluoromethane	5.80		0.50	
75-01-4	Vinyl chloride	5.47		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	94		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
98-08-8	Trifluorotoluene (Surr)	90		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311759/5

Matrix: Water Lab File ID: 092019 _005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 15:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
630-20-6	1,1,1,2-Tetrachloroethane	5.24		0.30	
71-55-6	1,1,1-Trichloroethane	5.04		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	5.06		0.20	
79-00-5	1,1,2-Trichloroethane	5.43		0.20	
75-34-3	1,1-Dichloroethane	5.05		0.20	
75-35-4	1,1-Dichloroethene	5.42		0.20	
563-58-6	1,1-Dichloropropene	5.03		0.20	
87-61-6	1,2,3-Trichlorobenzene	5.41		0.50	
96-18-4	1,2,3-Trichloropropane	5.44		0.20	
120-82-1	1,2,4-Trichlorobenzene	4.95		0.30	
95-63-6	1,2,4-Trimethylbenzene	5.49		0.30	
96-12-8	1,2-Dibromo-3-Chloropropane	5.00		2.0	
95-50-1	1,2-Dichlorobenzene	5.42		0.30	
107-06-2	1,2-Dichloroethane	5.20		0.20	
78-87-5	1,2-Dichloropropane	5.04		0.20	
108-67-8	1,3,5-Trimethylbenzene	5.13		0.50	
541-73-1	1,3-Dichlorobenzene	5.50		0.30	
142-28-9	1,3-Dichloropropane	5.22		0.20	
106-46-7	1,4-Dichlorobenzene	5.29		0.30	
594-20-7	2,2-Dichloropropane	5.27		0.50	
95-49-8	2-Chlorotoluene	5.07		0.50	
106-43-4	4-Chlorotoluene	5.22		0.30	
99-87-6	4-Isopropyltoluene	5.40		0.30	
71-43-2	Benzene	5.37		0.20	
108-86-1	Bromobenzene	5.03		0.20	
75-25-2	Bromoform	5.15		0.50	
74-83-9	Bromomethane	5.89		0.50	
56-23-5	Carbon tetrachloride	5.07		0.20	
108-90-7	Chlorobenzene	5.37		0.20	
74-97-5	Chlorobromomethane	5.11		0.20	
124-48-1	Chlorodibromomethane	5.20		0.20	
75-00-3	Chloroethane	5.69		0.50	
67-66-3	Chloroform	5.01		0.20	
74-87-3	Chloromethane	5.90		0.50	
156-59-2	cis-1,2-Dichloroethene	5.25		0.20	
10061-01-5	cis-1,3-Dichloropropene	4.85		0.20	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 580-311759/5

Matrix: Water Lab File ID: 092019 _005.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 10(mL) Date Analyzed: 09/20/2019 15:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: 624SIL-MS ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 311759 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
74-95-3	Dibromomethane	4.99		0.20	
75-27-4	Dichlorobromomethane	5.10		0.20	
75-71-8	Dichlorodifluoromethane	5.80		0.40	
100-41-4	Ethylbenzene	5.24		0.20	
106-93-4	Ethylene Dibromide	5.26		0.10	
87-68-3	Hexachlorobutadiene	5.55		0.50	
98-82-8	Isopropylbenzene	5.39		1.0	
1634-04-4	Methyl tert-butyl ether	4.94		0.30	
75-09-2	Methylene Chloride	8.65		5.0	
179601-23-1	m-Xylene & p-Xylene	5.16		0.50	
91-20-3	Naphthalene	4.87		1.0	
104-51-8	n-Butylbenzene	5.12		0.50	
103-65-1	N-Propylbenzene	5.04		0.30	
95-47-6	o-Xylene	5.25		0.50	
135-98-8	sec-Butylbenzene	5.46		1.0	
100-42-5	Styrene	5.33		0.50	
98-06-6	tert-Butylbenzene	4.98		0.50	
127-18-4	Tetrachloroethene	5.01		0.50	
108-88-3	Toluene	5.52		0.20	
156-60-5	trans-1,2-Dichloroethene	5.29		0.20	
10061-02-6	trans-1,3-Dichloropropene	4.83		0.20	
79-01-6	Trichloroethene	4.99		0.20	
75-69-4	Trichlorofluoromethane	5.78		0.50	
75-01-4	Vinyl chloride	5.47		0.020	

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		80-120
460-00-4	4-Bromofluorobenzene (Surr)	106		80-120
1868-53-7	Dibromofluoromethane (Surr)	93		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.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Start Date: 09/17/2019 20:15

Analysis Batch Number: 311508 End Date: 09/18/2019 02:00

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 580-311508/2		09/17/2019 20:15	1	091719B _001.D	624SIL-MS 0.25(mm)
STD 580-311508/3 IC		09/17/2019 20:42	1	091719B _002.D	624SIL-MS 0.25(mm)
STD 580-311508/4 IC		09/17/2019 21:08	1	091719B _003.D	624SIL-MS 0.25(mm)
STD 580-311508/5 IC		09/17/2019 21:35	1	091719B _004.D	624SIL-MS 0.25(mm)
STD 580-311508/6 IC		09/17/2019 22:01	1	091719B _005.D	624SIL-MS 0.25(mm)
STD 580-311508/7 IC		09/17/2019 22:28	1	091719B _006.D	624SIL-MS 0.25(mm)
STD 580-311508/8 IC		09/17/2019 22:55	1	091719B _007.D	624SIL-MS 0.25(mm)
STD 580-311508/9 IC		09/17/2019 23:21	1	091719B _008.D	624SIL-MS 0.25(mm)
ICIS 580-311508/10		09/17/2019 23:48	1	091719B _009.D	624SIL-MS 0.25(mm)
STD 580-311508/11 IC		09/18/2019 00:14	1	091719B _010.D	624SIL-MS 0.25(mm)
STD 580-311508/12 IC		09/18/2019 00:41	1	091719B _011.D	624SIL-MS 0.25(mm)
STD 580-311508/13 IC		09/18/2019 01:07	1	091719B _012.D	624SIL-MS 0.25(mm)
ICV 580-311508/15		09/18/2019 02:00	1	091719B _014.D	624SIL-MS 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Instrument ID: TAC048 Start Date: 09/20/2019 14:44

Analysis Batch Number: 311759 End Date: 09/21/2019 01:20

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 580-311759/3		09/20/2019 14:44	1	092019 _003.D	624SIL-MS 0.25(mm)
BFB 580-311759/1003		09/20/2019 14:44	1	092019 003-BFB.d	624SIL-MS 0.25(mm)
LCS 580-311759/4		09/20/2019 15:11	1	092019 _004.D	624SIL-MS 0.25(mm)
LCSD 580-311759/5		09/20/2019 15:37	1	092019 _005.D	624SIL-MS 0.25(mm)
CCVL 580-311759/6		09/20/2019 16:04	1	092019 _006.D	624SIL-MS 0.25(mm)
MB 580-311759/7		09/20/2019 16:30	1	092019 _007.D	624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 16:57	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 17:23	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 17:50	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 18:16	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 18:43	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 19:09	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 19:36	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 20:02	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 20:29	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 20:55	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 21:22	1		624SIL-MS 0.25(mm)
ZZZZZ		09/20/2019 21:49	1		624SIL-MS 0.25(mm)
580-89178-1		09/20/2019 22:15	1	092019 _020.D	624SIL-MS 0.25(mm)
580-89178-2		09/20/2019 22:41	1	092019 _021.D	624SIL-MS 0.25(mm)
580-89178-3		09/20/2019 23:08	1	092019 _022.D	624SIL-MS 0.25(mm)
580-89178-4		09/20/2019 23:34	1	092019 _023.D	624SIL-MS 0.25(mm)
580-89178-5		09/21/2019 00:01	1	092019 _024.D	624SIL-MS 0.25(mm)
ZZZZZ		09/21/2019 00:27	1		624SIL-MS 0.25(mm)
ZZZZZ		09/21/2019 00:54	1		624SIL-MS 0.25(mm)
ZZZZZ		09/21/2019 01:20	1		624SIL-MS 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Seattle Job No.: 580-89178-1

SDG No.:

Batch Number: 311508 Batch Start Date: 09/17/19 20:15 Batch Analyst: Jantanu, Charinporn

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	5X SUR/IS/TFT 00010	VOAMasterMix 00042	VOAMasterSEC 00035	
BFB 580-311508/2		8260C		10 mL	10 mL	2 uL			
STD 580-311508/3 IC		8260C		10 mL	10 mL	2 uL	0.02 uL		
STD 580-311508/4 IC		8260C		10 mL	10 mL	2 uL	0.05 uL		
STD 580-311508/5 IC		8260C		10 mL	10 mL	2 uL	0.1 uL		
STD 580-311508/6 IC		8260C		10 mL	10 mL	2 uL	0.2 uL		
STD 580-311508/7 IC		8260C		10 mL	10 mL	2 uL	0.5 uL		
STD 580-311508/8 IC		8260C		10 mL	10 mL	2 uL	1 uL		
STD 580-311508/9 IC		8260C		10 mL	10 mL	2 uL	5 uL		
ICIS 580-311508/10		8260C		10 mL	10 mL	2 uL	10 uL		
STD 580-311508/11 IC		8260C		10 mL	10 mL	2 uL	20 uL		
STD 580-311508/12 IC		8260C		10 mL	10 mL	2 uL	50 uL		
STD 580-311508/13 IC		8260C		10 mL	10 mL	2 uL	100 uL		
ICV 580-311508/15		8260C		10 mL	10 mL	2 uL		10 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.: 580-89178-1

SDG No.:

Batch Number: 311759 Batch Start Date: 09/20/19 14:44 Batch Analyst: McKell, Justin S

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	5X SUR/IS/TFT 00012	VOAMasterMix 00042	
CCVIS 580-311759/3		8260C		10 mL	10 mL		2 uL	10 uL	
LCS 580-311759/4		8260C		10 mL	10 mL		2 uL	5 uL	
LCSD 580-311759/5		8260C		10 mL	10 mL		2 uL	5 uL	
CCVL 580-311759/6		8260C		10 mL	10 mL		2 uL	0.2 uL	
MB 580-311759/7		8260C		10 mL	10 mL		2 uL		
580-89178-F-1	03Q19L4MW09AW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89178-F-2	03Q19L4MW09BW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89178-F-3	03Q19L4MW10AW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89178-F-4	03Q19L4MW10BW	8260C	T	10 mL	10 mL	<2 SU	2 uL		
580-89178-C-5	091219TB	8260C	T	10 mL	10 mL	<2 SU	2 uL		
BFB 580-311759/1003		8260C		10 mL	10 mL	<2 SU	2 uL	10 uL	

Batch Notes	
Vial Lot Number	0103701E

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.: 580-89178-1

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 #
03Q19L4MW09AW	580-89178-1	97	
03Q19L4MW09AW	580-89178-1		99
03Q19L4MW09AW RE	580-89178-1 RE	86	
03Q19L4MW09AW RE	580-89178-1 RE		90
03Q19L4MW09BW	580-89178-2	99	
03Q19L4MW09BW	580-89178-2		103
03Q19L4MW09BW DL	580-89178-2 DL	98	
03Q19L4MW09BW DL	580-89178-2 DL		109
03Q19L4MW09BW RE	580-89178-2 RE	90	
03Q19L4MW09BW RE	580-89178-2 RE		95
03Q19L4MW09BW REDL	580-89178-2 REDL	90	
03Q19L4MW09BW REDL	580-89178-2 REDL		93
03Q19L4MW10AW	580-89178-3	97	
03Q19L4MW10AW	580-89178-3		95
03Q19L4MW10AW RE	580-89178-3 RE	86	
03Q19L4MW10AW RE	580-89178-3 RE		90
03Q19L4MW10BW	580-89178-4	97	
03Q19L4MW10BW	580-89178-4		92
03Q19L4MW10BW DL	580-89178-4 DL	98	
03Q19L4MW10BW DL	580-89178-4 DL		103
03Q19L4MW10BW RE	580-89178-4 RE	87	
03Q19L4MW10BW RE	580-89178-4 RE		90
03Q19L4MW10BW REDL	580-89178-4 REDL	87	
03Q19L4MW10BW REDL	580-89178-4 REDL		88
	MB 320-324664/1-A	95	
	MB 320-328371/1-A	87	
	LCS 320-324664/2-A	95	
	LCS 320-328371/2-A	88	
	LCSD 320-324664/3-A	97	

	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0000074.D

Lab ID: LCS 320-324664/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	1.04	104	74-120	
1,3-Dinitrobenzene	1.00	1.06	106	72-123	
2,4,6-Trinitrotoluene	1.00	0.735	73	69-111	
2,4-Dinitrotoluene	1.00	1.03	103	70-119	
2,6-Dinitrotoluene	1.00	1.00	100	71-119	
2-Amino-4,6-dinitrotoluene	1.00	1.07	107	77-123	
2-Nitrotoluene	1.00	0.964	96	64-120	
3-Nitrotoluene	1.00	1.08	108	67-114	
4-Nitrotoluene	1.00	0.947	95	67-115	
4-Amino-2,6-dinitrotoluene	1.00	1.10	110	68-113	
HMX	1.00	1.08	108	67-115	
RDX	1.00	1.11	111	68-122	
Nitrobenzene	1.00	1.03	103	69-119	
Tetryl	1.00	0.683	68	66-105	
Nitroglycerin	5.00	5.00	100	85-115	
PETN	5.00	4.85	97	84-117	

Column to be used to flag recovery and RPD values

FORM III 8330B

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: G0000040.D

Lab ID: LCS 320-328371/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,3,5-Trinitrobenzene	1.00	0.975	98	74-120	
1,3-Dinitrobenzene	1.00	0.991	99	72-123	
2,4,6-Trinitrotoluene	1.00	0.852	85	69-111	
2,4-Dinitrotoluene	1.00	0.966	97	70-119	
2,6-Dinitrotoluene	1.00	0.947	95	71-119	
2-Amino-4,6-dinitrotoluene	1.00	0.998	100	77-123	
2-Nitrotoluene	1.00	0.934	93	64-120	
3-Nitrotoluene	1.00	0.946	95	67-114	
4-Nitrotoluene	1.00	0.951	95	67-115	
4-Amino-2,6-dinitrotoluene	1.00	0.974	97	68-113	
HMX	1.00	1.03	103	67-115	
RDX	1.00	1.04	104	68-122	
Nitrobenzene	1.00	0.975	98	69-119	
Tetryl	1.00	0.816	82	66-105	
Nitroglycerin	5.00	4.70	94	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.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z0000075.D

Lab ID: LCSD 320-324664/3-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	0.988	99	6	29	74-120	
1,3-Dinitrobenzene	1.00	0.961	96	10	29	72-123	
2,4,6-Trinitrotoluene	1.00	0.674	67	9	28	69-111	*
2,4-Dinitrotoluene	1.00	0.948	95	9	30	70-119	
2,6-Dinitrotoluene	1.00	0.916	92	9	29	71-119	
2-Amino-4,6-dinitrotoluene	1.00	0.993	99	7	27	77-123	
2-Nitrotoluene	1.00	0.892	89	8	36	64-120	
3-Nitrotoluene	1.00	0.982	98	9	31	67-114	
4-Nitrotoluene	1.00	0.856	86	10	32	67-115	
4-Amino-2,6-dinitrotoluene	1.00	1.01	101	9	30	68-113	
HMX	1.00	0.991	99	9	32	67-115	
RDX	1.00	1.00	100	10	32	68-122	
Nitrobenzene	1.00	0.937	94	9	31	69-119	
Tetryl	1.00	0.625	62	9	26	66-105	*
Nitroglycerin	5.00	4.43	89	12	15	85-115	
PETN	5.00	4.43	89	9	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.: 580-89178-1

SDG No.:

Lab Sample ID: MB 320-324664/1-A

Matrix: Water Date Extracted: 09/19/2019 07:30

Lab File ID:(1) Z0000073.D Lab File ID:(2)

Date Analyzed:(1) 09/29/2019 09:10 Date Analyzed:(2)

Instrument ID:(1) LC11 Instrument ID:(2) LC12

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 320-324664/2-A	09/29/2019 10:03	
	LCSD 320-324664/3-A	09/29/2019 10:57	
03Q19L4MW09AW	580-89178-1	09/29/2019 19:53	09/26/2019 11:39
03Q19L4MW09BW	580-89178-2	09/29/2019 21:40	09/26/2019 12:37
03Q19L4MW10AW	580-89178-3	09/29/2019 22:34	09/28/2019 00:09
03Q19L4MW10BW	580-89178-4	09/29/2019 23:28	09/28/2019 01:06
03Q19L4MW09BW DL	580-89178-2 DL	10/02/2019 13:05	10/02/2019 23:14
03Q19L4MW10BW DL	580-89178-4 DL	10/02/2019 16:40	10/03/2019 00:12

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: MB 320-328371/1-A

Matrix: Water Date Extracted: 10/04/2019 07:06

Lab File ID:(1) G0000039.D Lab File ID:(2)

Date Analyzed:(1) 10/09/2019 06:38 Date Analyzed:(2)

Instrument ID:(1) LC11 Instrument ID:(2) LC12

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 320-328371/2-A	10/09/2019 07:31	
03Q19L4MW09BW RE	580-89178-2 RE	10/09/2019 19:08	10/09/2019 19:30
03Q19L4MW10AW RE	580-89178-3 RE	10/09/2019 20:02	10/09/2019 20:27
03Q19L4MW09AW RE	580-89178-1 RE	10/09/2019 20:55	10/09/2019 18:32
03Q19L4MW10BW RE	580-89178-4 RE	10/09/2019 21:49	10/09/2019 21:25
03Q19L4MW09BW REDL	580-89178-2 REDL	10/10/2019 00:30	10/10/2019 02:12
03Q19L4MW10BW REDL	580-89178-4 REDL	10/10/2019 01:23	10/10/2019 01:15

FORM VIII
HPLC/IC ANALYTICAL SEQUENCE

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-326750/1 Date Analyzed: 09/28/2019 15:17

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): Z0000053.D Heated Purge: (Y/N) N

Calibration ID: 47644

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				28.91		
UPPER LIMIT				29.16		
LOWER LIMIT				28.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-326750/1		09/28/2019 15:17	Z0000053.D	28.91		
CCV 320-326750/14		09/29/2019 02:54	Z0000066.D	28.92		
MB 320-324664/1-A		09/29/2019 09:10	Z0000073.D	28.92		
LCS 320-324664/2-A		09/29/2019 10:03	Z0000074.D	28.91		
LCSD 320-324664/3-A		09/29/2019 10:57	Z0000075.D	28.92		
CCV 320-326750/26		09/29/2019 13:38	Z0000078.D	28.90		
580-89178-1	03Q19L4MW09AW	09/29/2019 19:53	Z0000085.D	28.90		
580-89178-2	03Q19L4MW09BW	09/29/2019 21:40	Z0000087.D	28.94		
580-89178-3	03Q19L4MW10AW	09/29/2019 22:34	Z0000088.D	28.95		
580-89178-4	03Q19L4MW10BW	09/29/2019 23:28	Z0000089.D	28.95		
CCV 320-326750/38		09/30/2019 00:21	Z0000090.D	28.94		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-327493/3 Date Analyzed: 10/01/2019 14:45

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): ZD0000003.D Heated Purge: (Y/N) N

Calibration ID: 47644

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT		
				RT #		
CONTINUING CALIBRATION SURROGATE				28.93		
UPPER LIMIT				29.18		
LOWER LIMIT				28.68		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-327493/3		10/01/2019 14:45	ZD0000003.D	28.93		
CCV 320-327493/55		10/02/2019 02:22	ZD0000016.D	28.88		
580-89178-2 DL	03Q19L4MW09BW DL	10/02/2019 13:05	ZD0000028.D	28.91		
CCV 320-327493/16		10/02/2019 13:59	ZD0000029.D	28.88		
580-89178-4 DL	03Q19L4MW10BW DL	10/02/2019 16:40	ZD0000032.D	28.88		
CCV 320-327493/28		10/03/2019 02:29	ZD0000043.D	28.85		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-329066/3 Date Analyzed: 10/07/2019 22:28

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm)

Lab File ID (Standard): G0000003.D Heated Purge: (Y/N) N

Calibration ID: 47644

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				28.98		
UPPER LIMIT				29.23		
LOWER LIMIT				28.73		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-329066/3		10/07/2019 22:28	G0000003.D	28.98		
CCV 320-329066/28		10/08/2019 20:48	G0000028.D	28.96		
MB 320-328371/1-A		10/09/2019 06:38	G0000039.D	28.98		
LCS 320-328371/2-A		10/09/2019 07:31	G0000040.D	28.93		
CCV 320-329066/40		10/09/2019 08:25	G0000041.D	28.96		
CCV 320-329066/59		10/09/2019 18:14	G0000052.D	28.98		
580-89178-2 RE	03Q19L4MW09BW RE	10/09/2019 19:08	G0000053.D	28.97		
580-89178-3 RE	03Q19L4MW10AW RE	10/09/2019 20:02	G0000054.D	28.96		
580-89178-1 RE	03Q19L4MW09AW RE	10/09/2019 20:55	G0000055.D	28.96		
580-89178-4 RE	03Q19L4MW10BW RE	10/09/2019 21:49	G0000056.D	28.98		
580-89178-2 REDL	03Q19L4MW09BW REDL	10/10/2019 00:30	G0000059.D	28.98		
580-89178-4 REDL	03Q19L4MW10BW REDL	10/10/2019 01:23	G0000060.D	28.99		
CCV 320-329066/55		10/10/2019 03:11	G0000062.D	28.95		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-326181/3 Date Analyzed: 09/25/2019 19:20

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): Y000003.D Heated Purge: (Y/N) N

Calibration ID: 47277

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				34.57		
UPPER LIMIT				34.82		
LOWER LIMIT				34.32		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-326181/3		09/25/2019 19:20	Y000003.D	34.57		
580-89178-1	03Q19L4MW09AW	09/26/2019 11:39	Y000020.D	34.59		
580-89178-2	03Q19L4MW09BW	09/26/2019 12:37	Y000021.D	34.59		
CCV 320-326181/15		09/26/2019 13:34	Y000022.D	34.58		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-326765/3 Date Analyzed: 09/27/2019 18:24

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): ZA000003.D Heated Purge: (Y/N) N

Calibration ID: 47277

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				34.58		
UPPER LIMIT				34.83		
LOWER LIMIT				34.33		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-326765/3		09/27/2019 18:24	ZA000003.D	34.58		
580-89178-3	03Q19L4MW10AW	09/28/2019 00:09	ZA000009.D	34.59		
580-89178-4	03Q19L4MW10BW	09/28/2019 01:06	ZA000010.D	34.59		
CCV 320-326765/16		09/28/2019 06:52	ZA000016.D	34.58		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-327955/3 Date Analyzed: 10/02/2019 18:27

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): B000003.D Heated Purge: (Y/N) N

Calibration ID: 47725

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				34.48		
UPPER LIMIT				34.73		
LOWER LIMIT				34.23		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-327955/3		10/02/2019 18:27	B000003.D	34.48		
580-89178-2 DL	03Q19L4MW09BW DL	10/02/2019 23:14	B000008.D	34.52		
580-89178-4 DL	03Q19L4MW10BW DL	10/03/2019 00:12	B000009.D	34.51		
CCV 320-327955/16		10/03/2019 07:52	B000017.D	34.48		

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.: 580-89178-1

SDG No.:

Sample No.: CCVRT 320-329486/3 Date Analyzed: 10/08/2019 21:26

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm)

Lab File ID (Standard): H000003.D Heated Purge: (Y/N) N

Calibration ID: 47725

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				DNT RT #		
CONTINUING CALIBRATION SURROGATE				34.46		
UPPER LIMIT				34.71		
LOWER LIMIT				34.21		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 320-329486/3		10/08/2019 21:26	H000003.D	34.46		
CCV 320-329486/16		10/09/2019 10:52	H000017.D	34.38		
580-89178-1 RE	03Q19L4MW09AW RE	10/09/2019 18:32	H000025.D	34.40		
580-89178-2 RE	03Q19L4MW09BW RE	10/09/2019 19:30	H000026.D	34.39		
580-89178-3 RE	03Q19L4MW10AW RE	10/09/2019 20:27	H000027.D	34.40		
580-89178-4 RE	03Q19L4MW10BW RE	10/09/2019 21:25	H000028.D	34.39		
CCV 320-329486/28		10/09/2019 22:22	H000029.D	34.40		
580-89178-4 REDL	03Q19L4MW10BW REDL	10/10/2019 01:15	H000032.D	34.41		
580-89178-2 REDL	03Q19L4MW09BW REDL	10/10/2019 02:12	H000033.D	34.41		
CCV 320-329486/38		10/10/2019 08:55	H000040.D	34.40		

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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 09/29/2019 19:53 Date Analyzed (2): 09/26/2019 11:39

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		17.80	17.58	18.08	1.7		13.9
	2		36.04	35.77	36.27	1.5		
RDX	1		20.37	20.13	20.63	6.7		7.9
	2		30.58	30.27	30.77	6.2		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW RE Lab Sample ID: 580-89178-1 RE

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/09/2019 20:55 Date Analyzed (2): 10/09/2019 18:32

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		17.81	17.53	18.03	1.7		12.0
	2		35.89	35.63	36.13	1.5		
RDX	1		20.39	20.15	20.65	6.1		3.0
	2		30.22	29.88	30.38	5.9		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 09/29/2019 21:40 Date Analyzed (2): 09/26/2019 12:37

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		17.84	17.58	18.08	1.7		11.9
	2		36.05	35.77	36.27	1.5		
RDX	1		20.40	20.13	20.63	21		6.9
	2		30.59	30.27	30.77	19		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW DL Lab Sample ID: 580-89178-2 DL

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/02/2019 13:05 Date Analyzed (2): 10/02/2019 23:14

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		17.80	17.51	18.01	1.9		15.0
	2		35.98	35.71	36.21	1.6		
RDX	1		20.39	20.10	20.60	24		10.8
	2		30.47	30.10	30.60	21		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW RE Lab Sample ID: 580-89178-2 RE

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/09/2019 19:08 Date Analyzed (2): 10/09/2019 19:30

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		17.77	17.53	18.03	1.5		11.8
	2		35.89	35.63	36.13	1.3		
RDX	1		20.39	20.15	20.65	19		1.3
	2		30.19	29.88	30.38	19		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW REDL Lab Sample ID: 580-89178-2 REDL

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/10/2019 00:30 Date Analyzed (2): 10/10/2019 02:12

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		17.83	17.53	18.03	1.7		25.3
	2		35.90	35.64	36.14	1.3		
RDX	1		20.43	20.15	20.65	22		13.5
	2		30.26	29.95	30.45	19		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 09/29/2019 22:34 Date Analyzed (2): 09/28/2019 00:09

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		17.83	17.58	18.08	0.42		19.5
	2		36.04	35.78	36.28	0.34		
RDX	1		20.39	20.13	20.63	2.2		9.0
	2		30.61	30.34	30.84	2.0		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW RE Lab Sample ID: 580-89178-3 RE

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/09/2019 20:02 Date Analyzed (2): 10/09/2019 20:27

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		17.78	17.53	18.03	0.46		11.7
	2		35.89	35.63	36.13	0.41		
RDX	1		20.39	20.15	20.65	2.4		6.0
	2		30.21	29.88	30.38	2.3		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 09/29/2019 23:28 Date Analyzed (2): 09/28/2019 01:06

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	
RDX	1		20.40	20.14	20.64	11		11.7
	2		30.63	30.34	30.84	9.8		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW DL Lab Sample ID: 580-89178-4 DL

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/02/2019 16:40 Date Analyzed (2): 10/03/2019 00:12

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	
RDX	1		20.39	20.10	20.60	12		9.0
	2		30.44	30.10	30.60	11		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW RE Lab Sample ID: 580-89178-4 RE

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/09/2019 21:49 Date Analyzed (2): 10/09/2019 21:25

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	
RDX	1		20.40	20.15	20.65	11		2.8
	2		30.19	29.88	30.38	11		

FORM X
IDENTIFICATION SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW REDL Lab Sample ID: 580-89178-4 REDL

Instrument ID (1): LC11 Instrument ID (2): LC12

Date Analyzed (1): 10/10/2019 01:23 Date Analyzed (2): 10/10/2019 01:15

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	
RDX	1		20.42	20.15	20.65	13		11.6
	2		30.26	29.95	30.45	11		

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Matrix: Water Lab File ID: Y000020.D

Analysis Method: 8330B Date Collected: 09/12/2019 12:25

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 992.5(mL) Date Analyzed: 09/26/2019 11:39

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.: 326181 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	99		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Matrix: Water Lab File ID: Z0000085.D

Analysis Method: 8330B Date Collected: 09/12/2019 12:25

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 992.5(mL) Date Analyzed: 09/29/2019 19:53

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.: 326750 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	1.7		0.10	
121-82-4	RDX	6.7		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	97		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW RE Lab Sample ID: 580-89178-1 RE

Matrix: Water Lab File ID: H000025.D

Analysis Method: 8330B Date Collected: 09/12/2019 12:25

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 988.3(mL) Date Analyzed: 10/09/2019 18:32

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.: 329486 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW RE Lab Sample ID: 580-89178-1 RE

Matrix: Water Lab File ID: G0000055.D

Analysis Method: 8330B Date Collected: 09/12/2019 12:25

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 988.3(mL) Date Analyzed: 10/09/2019 20:55

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.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.51*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.51*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.51*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*1.7*	*H*	*0.10*	
121-82-4	*RDX*	*6.1*	*H*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.66*	
78-11-5	*PETN*	*ND*	*H*	*0.66*	

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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Matrix: Water Lab File ID: Y000021.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 994.3(mL) Date Analyzed: 09/26/2019 12:37

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.: 326181 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	103		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Matrix: Water Lab File ID: Z0000087.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 994.3(mL) Date Analyzed: 09/29/2019 21:40

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.: 326750 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	1.7		0.10	
121-82-4	*RDX*	*21*	*E*	*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	99		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW RE Lab Sample ID: 580-89178-2 RE

Matrix: Water Lab File ID: G0000053.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 997.6(mL) Date Analyzed: 10/09/2019 19:08

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.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.50*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.50*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*1.5*	*H*	*0.10*	
121-82-4	*RDX*	*19*	*H E*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.65*	
78-11-5	*PETN*	*ND*	*H*	*0.65*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW RE Lab Sample ID: 580-89178-2 RE

Matrix: Water Lab File ID: H000026.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 997.6(mL) Date Analyzed: 10/09/2019 19:30

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.: 329486 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	95		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW DL Lab Sample ID: 580-89178-2 DL

Matrix: Water Lab File ID: ZD0000028.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 994.3(mL) Date Analyzed: 10/02/2019 13:05

Con. Extract Vol.: 20(mL) Dilution Factor: 4

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	RDX	24		0.40	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	98		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW DL Lab Sample ID: 580-89178-2 DL

Matrix: Water Lab File ID: B000008.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 994.3(mL) Date Analyzed: 10/02/2019 23:14

Con. Extract Vol.: 20(mL) Dilution Factor: 4

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 327955 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	109		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW REDL Lab Sample ID: 580-89178-2 REDL

Matrix: Water Lab File ID: G0000059.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 997.6(mL) Date Analyzed: 10/10/2019 00:30

Con. Extract Vol.: 20(mL) Dilution Factor: 4

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	*RDX*	*22*	*H*	*0.40*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW REDL Lab Sample ID: 580-89178-2 REDL

Matrix: Water Lab File ID: H000033.D

Analysis Method: 8330B Date Collected: 09/12/2019 13:20

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 997.6(mL) Date Analyzed: 10/10/2019 02:12

Con. Extract Vol.: 20(mL) Dilution Factor: 4

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 329486 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	93		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Matrix: Water Lab File ID: ZA000009.D

Analysis Method: 8330B Date Collected: 09/12/2019 14:10

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 992.1(mL) Date Analyzed: 09/28/2019 00:09

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.: 326765 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	95		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Matrix: Water Lab File ID: Z0000088.D

Analysis Method: 8330B Date Collected: 09/12/2019 14:10

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 992.1(mL) Date Analyzed: 09/29/2019 22:34

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.: 326750 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	0.42		0.10	
121-82-4	RDX	2.2		0.10	
98-95-3	Nitrobenzene	ND		0.10	
479-45-8	Tetryl	ND	*	0.10	
55-63-0	Nitroglycerin	ND		0.66	
78-11-5	PETN	ND		0.66	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW RE Lab Sample ID: 580-89178-3 RE

Matrix: Water Lab File ID: G0000054.D

Analysis Method: 8330B Date Collected: 09/12/2019 14:10

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 998.4(mL) Date Analyzed: 10/09/2019 20:02

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.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.50*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.50*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*0.46*	*H*	*0.10*	
121-82-4	*RDX*	*2.4*	*H*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.65*	
78-11-5	*PETN*	*ND*	*H*	*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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW RE Lab Sample ID: 580-89178-3 RE

Matrix: Water Lab File ID: H000027.D

Analysis Method: 8330B Date Collected: 09/12/2019 14:10

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 998.4(mL) Date Analyzed: 10/09/2019 20:27

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.: 329486 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Matrix: Water Lab File ID: ZA000010.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 990.2(mL) Date Analyzed: 09/28/2019 01:06

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.: 326765 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	92		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Matrix: Water Lab File ID: Z0000089.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 990.2(mL) Date Analyzed: 09/29/2019 23:28

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.: 326750 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*	*11*	*E*	*0.10*	
98-95-3	Nitrobenzene	ND		0.10	
479-45-8	Tetryl	ND	*	0.10	
55-63-0	Nitroglycerin	ND		0.66	
78-11-5	PETN	ND		0.66	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW RE Lab Sample ID: 580-89178-4 RE

Matrix: Water Lab File ID: H000028.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 994.7(mL) Date Analyzed: 10/09/2019 21:25

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.: 329486 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	90		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW RE Lab Sample ID: 580-89178-4 RE

Matrix: Water Lab File ID: G0000056.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 994.7(mL) Date Analyzed: 10/09/2019 21:49

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.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	*1,3,5-Trinitrobenzene*	*ND*	*H*	*0.10*	
99-65-0	*1,3-Dinitrobenzene*	*ND*	*H*	*0.10*	
118-96-7	*2,4,6-Trinitrotoluene*	*ND*	*H*	*0.10*	
121-14-2	*2,4-Dinitrotoluene*	*ND*	*H*	*0.10*	
606-20-2	*2,6-Dinitrotoluene*	*ND*	*H*	*0.10*	
35572-78-2	*2-Amino-4,6-dinitrotoluene*	*ND*	*H*	*0.20*	
88-72-2	*2-Nitrotoluene*	*ND*	*H*	*0.50*	
99-08-1	*3-Nitrotoluene*	*ND*	*H*	*0.50*	
99-99-0	*4-Nitrotoluene*	*ND*	*H*	*0.50*	
19406-51-0	*4-Amino-2,6-dinitrotoluene*	*ND*	*H*	*0.10*	
2691-41-0	*HMX*	*ND*	*H*	*0.10*	
121-82-4	*RDX*	*11*	*H E*	*0.10*	
98-95-3	*Nitrobenzene*	*ND*	*H*	*0.10*	
479-45-8	*Tetryl*	*ND*	*H*	*0.10*	
55-63-0	*Nitroglycerin*	*ND*	*H*	*0.65*	
78-11-5	*PETN*	*ND*	*H*	*0.65*	

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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW DL Lab Sample ID: 580-89178-4 DL

Matrix: Water Lab File ID: ZD0000032.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 990.2(mL) Date Analyzed: 10/02/2019 16:40

Con. Extract Vol.: 20(mL) Dilution Factor: 2

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 327493 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	RDX	12		0.20	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	98		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW DL Lab Sample ID: 580-89178-4 DL

Matrix: Water Lab File ID: B000009.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 990.2(mL) Date Analyzed: 10/03/2019 00:12

Con. Extract Vol.: 20(mL) Dilution Factor: 2

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 327955 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	103		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW REDL Lab Sample ID: 580-89178-4 REDL

Matrix: Water Lab File ID: H000032.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 994.7(mL) Date Analyzed: 10/10/2019 01:15

Con. Extract Vol.: 20(mL) Dilution Factor: 2

Injection Volume: 500(uL) GC Column: Zorbax CN ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 329486 Units: ug/L

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.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW REDL Lab Sample ID: 580-89178-4 REDL

Matrix: Water Lab File ID: G0000060.D

Analysis Method: 8330B Date Collected: 09/12/2019 15:00

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 994.7(mL) Date Analyzed: 10/10/2019 01:23

Con. Extract Vol.: 20(mL) Dilution Factor: 2

Injection Volume: 500(uL) GC Column: Synergi C18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
121-82-4	*RDX*	*13*	*H*	*0.20*	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	87		79-111

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
HMX	17.803	17.818	17.805	17.801	17.801	17.822	17.770				17.551 - 18.051	17.803
RDX	20.386	20.388	20.391	20.391	20.391	20.388	20.374				20.141 - 20.641	20.387
1,3,5-Trinitrobenzene	22.140	22.131	22.138	22.135	22.135	22.128	22.124				21.885 - 22.385	22.133
1,3-Dinitrobenzene	24.320	24.325	24.328	24.325	24.325	24.312	24.314				24.075 - 24.575	24.321
3,5-Dinitroaniline	25.330	25.315	25.325	25.321	25.328	25.308	25.314				25.078 - 25.578	25.320
Nitrobenzene	25.840	25.835	25.835	25.835	25.838	25.818	25.830				25.588 - 26.088	25.833
Tetryl	26.443	26.438	26.448	26.441	26.445	26.432	26.430				26.195 - 26.695	26.440
Nitroglycerin		27.115	27.131	27.111	27.121	27.108	27.104				26.871 - 27.371	27.115
2,4,6-Trinitrotoluene	27.766	27.728	27.751	27.741	27.748	27.732	27.734				27.498 - 27.998	27.743
4-Amino-2,6-dinitrotoluene	28.570	28.591	28.598	28.598	28.605	28.582	28.587				28.265 - 28.945	28.590
2-Amino-4,6-dinitrotoluene	29.266	29.248	29.265	29.261	29.268	29.238	29.250				28.888 - 29.648	29.257
2,6-Dinitrotoluene	30.533	30.528	30.545	30.541	30.541	30.522	30.530				30.241 - 30.841	30.534
2,4-Dinitrotoluene	30.980	30.961	30.985	30.978	30.981	30.958	30.970				30.671 - 31.291	30.973
2-Nitrotoluene	33.950	33.948	33.978	33.951	33.961	33.932	33.957				33.631 - 34.291	33.954
4-Nitrotoluene	35.453	35.441	35.425	35.438	35.441	35.408	35.437				35.081 - 35.801	35.435
3-Nitrotoluene	36.966	36.988	37.001	36.981	36.988	36.952	36.980				36.588 - 37.388	36.979
PETN		38.378	38.434	38.418	38.425	38.402	38.400				38.015 - 38.835	38.410
3,4-Dinitrotoluene	28.946	28.955	28.948	28.955	28.958	28.935	28.944				28.708 - 29.208	28.949

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.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	76.600 70.280	72.600 68.605	70.500 61.926	70.320	Ave		70.1187143				6.3		20.0			
RDX	91.200 87.610	88.900 85.715	89.100 77.632	88.100	Ave		86.8938571				5.1		20.0			
1,3,5-Trinitrobenzene	223.20 219.20	222.80 216.75	217.30 204.84	219.96	Ave		217.721429				2.8		20.0			
1,3-Dinitrobenzene	207.00 204.30	203.70 202.60	203.40 190.48	204.04	Ave		202.217143				2.6		20.0			
3,5-Dinitroaniline	154.40 149.85	153.80 147.29	149.50 139.66	149.92	Ave		149.203143				3.3		20.0			
Nitrobenzene	119.60 115.13	118.10 114.17	115.00 107.45	114.70	Ave		114.877857				3.3		20.0			
Tetryl	115.20 113.80	116.10 113.62	113.95 110.05	113.46	Ave		113.739857				1.7		20.0			
Nitroglycerin	 93.220	99.900 96.660	92.750 91.932	92.880	Ave		94.5570000				3.3		20.0			
2,4,6-Trinitrotoluene	126.80 123.32	122.10 122.99	122.90 118.69	122.66	Ave		122.779714				1.9		20.0			
4-Amino-2,6-dinitrotoluene	86.400 81.690	84.600 80.250	81.350 77.622	81.600	Ave		81.9302857				3.5		20.0			
2-Amino-4,6-dinitrotoluene	115.60 111.17	108.90 110.15	109.90 105.60	110.22	Ave		110.218714				2.7		20.0			
2,6-Dinitrotoluene	73.200 71.190	73.300 71.100	71.300 68.332	70.860	Ave		71.3260000				2.3		20.0			
2,4-Dinitrotoluene	128.20 129.37	129.10 129.42	129.35 124.08	128.70	Ave		128.317143				1.5		20.0			
2-Nitrotoluene	1250.4 1138.2	1156.2 1132.8	1191.7 1101.0	1127.6	Lin2	612.834127	1122.95774							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.: 580-89178-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

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	1746.0 1507.6	1525.0 1516.7	1536.4 1470.7	1513.4	Lin2	1151.77687	1481.41748							0.9990		0.9900
3-Nitrotoluene	75.600 64.620	67.900 64.665	65.650 62.418	64.680	Lin2	58.2654696	63.2834662							1.0000		0.9900
PETN	 52.790	57.000 54.305	53.500 51.860	51.640	Ave		53.5158333				3.7		20.0			
3,4-Dinitrotoluene	79.200 72.960	72.200 72.870	71.800 70.336	72.280	Ave		73.0922857				3.9		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.: 580-89178-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-326139/4	YA0000011.D
Level 2	STD2 320-326139/5	YA0000012.D
Level 3	STD3 320-326139/6	YA0000013.D
Level 4	STD4 320-326139/7	YA0000014.D
Level 5	STD5 320-326139/8	YA0000015.D
Level 6	STD6 320-326139/9	YA0000016.D
Level 7	STD7 320-326139/10	YA0000017.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	383 13721	726 30963	1410	3516	7028	5.00 200	10.0 500	20.0	50.0	100
RDX	Ave	456 17143	889 38816	1782	4405	8761	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	1116 43350	2228 102420	4346	10998	21920	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	1035 40520	2037 95240	4068	10202	20430	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	772 29458	1538 69831	2990	7496	14985	5.00 200	10.0 500	20.0	50.0	100
Nitrobenzene	Ave	598 22833	1181 53725	2300	5735	11513	5.00 200	10.0 500	20.0	50.0	100
Tetryl	Ave	576 22723	1161 55027	2279	5673	11380	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Ave	 19332	999 45966	1855	4644	9322	 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	634 24598	1221 59344	2458	6133	12332	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	432 16050	846 38811	1627	4080	8169	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	578 22029	1089 52798	2198	5511	11117	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	366 14220	733 34166	1426	3543	7119	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	641 25884	1291 62040	2587	6435	12937	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Lin2	6252 226563	11562 550513	23833	56381	113816	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Lin2	8730 303332	15250 735335	30727	75671	150756	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.: 580-89178-1 Analy Batch No.: 326139

SDG No.:

Instrument ID: LC11 GC Column: Synergi C18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/25/2019 22:31 Calibration End Date: 09/26/2019 03:52 Calibration ID: 47644

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	378 12933	679 31209	1313	3234	6462	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	 10861	570 25930	1070	2582	5279	 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	396 14574	722 35168	1436	3614	7296	5.00 200	10.0 500	20.0	50.0	100

Curve Type Legend:

Ave = Average by Height
Lin2 = Linear 1/conc^2

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 303740

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2019 20:10 Calibration End Date: 06/26/2019 01:55 Calibration ID: 46001

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-303740/4	Y000005.D
Level 2	STD2 320-303740/5	Y000006.D
Level 3	STD3 320-303740/6	Y000007.D
Level 4	STD4 320-303740/7	Y000008.D
Level 5	STD5 320-303740/8	Y000009.D
Level 6	STD6 320-303740/9	Y000010.D
Level 7	STD7 320-303740/10	Y000011.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Nitrobenzene	21.867	21.838	21.869	21.858	21.830	21.803	21.770				21.580 - 22.080	21.834
Ethylene glycol dinitrate	24.073	24.168	24.169	24.105	24.103	24.066	24.027				23.853 - 24.353	24.102
1,3-Dinitrobenzene	24.127	24.154	24.129	24.128	24.103	24.066	24.027				23.853 - 24.353	24.105
1,3,5-Trinitrobenzene	26.097	26.091	26.106	26.088	26.050	26.006	25.970				25.710 - 26.390	26.058
2-Nitrotoluene	28.887	28.901	28.899	28.901	28.860	28.830	28.794				28.610 - 29.110	28.867
4-Nitrotoluene	28.887	28.901	28.899	28.901	28.860	28.830	28.794				28.610 - 29.110	28.867
3-Nitrotoluene	29.423	29.468	29.456	29.471	29.427	29.396	29.354				29.177 - 29.677	29.428
3,5-Dinitroaniline	30.070	30.134	30.119	30.105	30.070	30.036	30.010				29.810 - 30.330	30.078
RDX	30.957	31.001	30.979	30.998	30.943	30.916	30.887				30.693 - 31.193	30.954
2,4-Dinitrotoluene	31.847	31.888	31.863	31.871	31.830	31.800	31.770				31.580 - 32.080	31.838
2,6-Dinitrotoluene	32.627	32.648	32.629	32.621	32.583	32.560	32.540				32.333 - 32.833	32.601
2-Amino-4,6-dinitrotoluene	33.730	33.744	33.739	33.735	33.707	33.696	33.680				33.457 - 33.957	33.719
4-Amino-2,6-dinitrotoluene	33.987	34.004	33.999	33.995	33.967	33.956	33.944				33.717 - 34.217	33.979
2,4,6-Trinitrotoluene	35.200	35.211	35.209	35.201	35.180	35.170	35.157				34.930 - 35.430	35.190
HMX	36.123	36.131	36.129	36.121	36.107	36.100	36.094				35.857 - 36.357	36.115
Nitroglycerin	36.837	36.841	36.842	36.838	36.817	36.813	36.804				36.567 - 37.067	36.827
Tetryl	37.750	37.761	37.759	37.751	37.737	37.733	37.724				37.487 - 37.987	37.745
PETN	41.040	41.054	41.056	41.041	41.033	41.030	41.024				40.783 - 41.283	41.040
3,4-Dinitrotoluene	34.703	34.718	34.713	34.708	34.687	34.680	34.667				34.437 - 34.937	34.697

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 303740

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2019 20:10 Calibration End Date: 06/26/2019 01:55 Calibration ID: 46001

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-303740/4	Y000005.D
Level 2	STD2 320-303740/5	Y000006.D
Level 3	STD3 320-303740/6	Y000007.D
Level 4	STD4 320-303740/7	Y000008.D
Level 5	STD5 320-303740/8	Y000009.D
Level 6	STD6 320-303740/9	Y000010.D
Level 7	STD7 320-303740/10	Y000011.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	58.600 52.960	59.200 51.610	55.400 47.822	52.980	Ave		54.0817143				7.4		20.0			
Ethylene glycol dinitrate	63.600 50.760	55.300 50.315	55.600 48.470	53.360	Ave		53.9150000				9.3		20.0			
1,3-Dinitrobenzene	114.40 110.16	112.10 107.34	113.15 101.34	110.10	Ave		109.797286				4.0		20.0			
1,3,5-Trinitrobenzene	91.800 86.010	83.700 83.920	87.100 80.676	85.200	Ave		85.4865714				4.0		20.0			
2-Nitrotoluene	64.600 66.730	67.100 64.915	68.950 61.462	66.420	Ave		65.7395714				3.6		20.0			
4-Nitrotoluene	64.600 66.730	67.100 64.915	68.950 61.462	66.420	Ave		65.7395714				3.6		20.0			
3-Nitrotoluene	911.00 1007.5	1027.0 998.68	1105.4 984.66	1041.3	Ave		1010.79143				5.8		20.0			
3,5-Dinitroaniline	87.800 92.030	92.400 89.255	96.750 84.942	92.580	Ave		90.8224286				4.2		20.0			
RDX	1140.2 1193.8	1303.8 1204.4	1375.1 1193.3	1270.9	Ave		1240.21114				6.5		20.0			
2,4-Dinitrotoluene	111.40 112.04	107.60 109.80	117.15 105.08	113.52	Ave		110.940857				3.6		20.0			
2,6-Dinitrotoluene	80.200 83.610	78.700 81.935	85.300 78.424	84.380	Ave		81.7927143				3.4		20.0			
2-Amino-4,6-dinitrotoluene	173.60 177.97	176.70 172.69	183.95 165.94	179.34	Ave		175.741000				3.3		20.0			
4-Amino-2,6-dinitrotoluene	156.60 166.31	166.80 161.19	172.60 156.32	168.64	Ave		164.065286				3.8		20.0			
2,4,6-Trinitrotoluene	186.40 186.81	182.30 183.43	192.70 177.84	187.02	Ave		185.213857				2.5		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.: 580-89178-1 Analy Batch No.: 303740

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2019 20:10 Calibration End Date: 06/26/2019 01:55 Calibration ID: 46001

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	150.20 149.22	146.30 146.11	153.45 141.21	148.02	Ave		147.786714				2.6		20.0			
Nitroglycerin	167.60 187.30	178.50 183.52	186.25 179.15	184.70	Ave		181.003143				3.8		20.0			
Tetryl	223.40 220.01	213.10 217.12	222.80 211.42	217.58	Ave		217.917857				2.1		20.0			
PETN	206.40 209.88	201.30 206.37	212.70 201.90	208.24	Ave		206.684000				2.0		20.0			
3,4-Dinitrotoluene	127.00 128.86	123.30 126.60	134.40 121.62	129.20	Ave		127.281571				3.3		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.: 580-89178-1 Analy Batch No.: 303740

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2019 20:10 Calibration End Date: 06/26/2019 01:55 Calibration ID: 46001

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-303740/4	Y000005.D
Level 2	STD2 320-303740/5	Y000006.D
Level 3	STD3 320-303740/6	Y000007.D
Level 4	STD4 320-303740/7	Y000008.D
Level 5	STD5 320-303740/8	Y000009.D
Level 6	STD6 320-303740/9	Y000010.D
Level 7	STD7 320-303740/10	Y000011.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	293 10322	592 23911	1108	2649	5296	5.00 200	10.0 500	20.0	50.0	100
Ethylene glycol dinitrate	Ave	318 10063	553 24235	1112	2668	5076	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	572 21467	1121 50668	2263	5505	11016	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	459 16784	837 40338	1742	4260	8601	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Ave	323 12983	671 30731	1379	3321	6673	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Ave	323 12983	671 30731	1379	3321	6673	5.00 200	10.0 500	20.0	50.0	100
3-Nitrotoluene	Ave	4555 199736	10270 492330	22108	52064	100752	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Ave	439 17851	924 42471	1935	4629	9203	5.00 200	10.0 500	20.0	50.0	100
RDX	Ave	5701 240884	13038 596659	27501	63545	119379	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Ave	557 21960	1076 52538	2343	5676	11204	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Ave	401 16387	787 39212	1706	4219	8361	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	868 34537	1767 82971	3679	8967	17797	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	783 32237	1668 78161	3452	8432	16631	5.00 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	932 36685	1823 88921	3854	9351	18681	5.00 200	10.0 500	20.0	50.0	100
HMX	Ave	751 29221	1463 70606	3069	7401	14922	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.: 580-89178-1 Analy Batch No.: 303740

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/25/2019 20:10 Calibration End Date: 06/26/2019 01:55 Calibration ID: 46001

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
Nitroglycerin	Ave	838 36704	1785 89576	3725	9235	18730	5.00 200	10.0 500	20.0	50.0	100
Tetryl	Ave	1117 43423	2131 105710	4456	10879	22001	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	1032 41274	2013 100949	4254	10412	20988	5.00 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	635 25319	1233 60808	2688	6460	12886	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.: 580-89178-1 Analy Batch No.: 321126

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/05/2019 21:07 Calibration End Date: 09/06/2019 03:50 Calibration ID: 47277

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-321126/4	E000004.D
Level 2	STD2 320-321126/5	E000005.D
Level 3	STD3 320-321126/6	E000006.D
Level 4	STD4 320-321126/7	E000007.D
Level 5	STD5 320-321126/8	E000008.D
Level 6	STD6 320-321126/9	E000009.D
Level 7	STD7 320-321126/10	E000010.D
Level 8	STD8 320-321126/11	E000011.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	LVL 8			RT WINDOW	AVG RT
Nitrobenzene	21.273	21.316	21.339	21.343	21.310	21.308	21.315	21.285			21.058 - 21.558	21.311
1,3-Dinitrobenzene	23.433	23.466	23.459	23.467	23.454	23.455	23.458	23.418			23.205 - 23.705	23.451
1,3,5-Trinitrobenzene	25.209	25.236	25.199	25.240	25.207	25.205	25.205	25.172			24.865 - 25.545	25.209
2-Nitrotoluene	28.256	28.286	28.269	28.297	28.247	28.258	28.261	28.225			28.008 - 28.508	28.262
4-Nitrotoluene	28.256	28.286	28.269	28.297	28.247	28.258	28.261	28.225			28.008 - 28.508	28.262
3-Nitrotoluene	28.803	28.793	28.813	28.843	28.817	28.835	28.828	28.782			28.585 - 29.085	28.814
3,5-Dinitroaniline	29.363	29.356	29.359	29.373	29.340	29.355	29.365	29.332			29.095 - 29.615	29.355
RDX	30.286	30.276	30.279	30.313	30.257	30.265	30.278	30.242			30.015 - 30.515	30.275
2,4-Dinitrotoluene	31.166	31.176	31.149	31.153	31.137	31.145	31.141	31.112			30.895 - 31.395	31.147
2,6-Dinitrotoluene	31.939	31.956	31.976	31.993	31.970	31.988	31.988	31.962			31.738 - 32.238	31.972
2-Amino-4,6-dinitrotoluene	33.326	33.323	33.326	33.340	33.320	33.331	33.331	33.315			33.081 - 33.581	33.327
4-Amino-2,6-dinitrotoluene	33.633	33.623	33.609	33.633	33.610	33.621	33.621	33.608			33.371 - 33.871	33.620
2,4,6-Trinitrotoluene	34.829	34.843	34.833	34.840	34.830	34.835	34.835	34.825			34.585 - 35.085	34.834
HMX	35.906	35.906	35.902	35.910	35.904	35.905	35.905	35.898			35.655 - 36.155	35.905
Nitroglycerin	36.592	36.582	36.586	36.583	36.580	36.581	36.581	36.575			36.331 - 36.831	36.583
Tetryl	37.526	37.529	37.526	37.530	37.527	37.528	37.531	37.525			37.278 - 37.778	37.528
PETN	40.869	40.869	40.869	40.863	40.870	40.868	40.871	40.868			40.618 - 41.118	40.868
3,4-Dinitrotoluene	34.419	34.436	34.423	34.433	34.417	34.425	34.425	34.415			34.175 - 34.675	34.424

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 321126

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/05/2019 21:07 Calibration End Date: 09/06/2019 03:50 Calibration ID: 47277

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-321126/4	E000004.D
Level 2	STD2 320-321126/5	E000005.D
Level 3	STD3 320-321126/6	E000006.D
Level 4	STD4 320-321126/7	E000007.D
Level 5	STD5 320-321126/8	E000008.D
Level 6	STD6 320-321126/9	E000009.D
Level 7	STD7 320-321126/10	E000010.D
Level 8	STD8 320-321126/11	E000011.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 LVL 8		B	M1	M2								
Nitrobenzene	58.000 53.100	58.400 52.800	56.000 52.025	54.400 48.058	Ave		54.0978750				6.3		20.0			
1,3-Dinitrobenzene	117.60 107.96	114.40 108.56	110.00 106.40	107.65 99.968	Ave		109.066625				4.8		20.0			
1,3,5-Trinitrobenzene	92.400 86.200	90.600 86.410	86.900 85.395	86.650 82.120	Ave		87.0843750				3.6		20.0			
2-Nitrotoluene	74.400 66.260	72.400 65.250	71.200 63.995	67.650 61.158	Lin2	28.1137775	65.0234321							0.9980		0.9900
4-Nitrotoluene	74.400 66.260	72.400 65.250	71.200 63.995	67.650 61.158	Lin2	28.1137775	65.0234321							0.9980		0.9900
3-Nitrotoluene	1145.6 923.46	1126.4 895.95	1067.8 859.19	964.80 859.60	Ave		980.349625				12.0		20.0			
3,5-Dinitroaniline	113.60 89.920	101.80 89.350	98.100 86.625	91.500 82.826	Lin2	68.7893209	87.4479756							0.9990		0.9900
RDX	78.800 52.380	67.600 51.690	62.200 49.095	55.200 47.196	Lin2	75.6779695	50.5753048							0.9970		0.9900
2,4-Dinitrotoluene	134.40 104.24	120.80 103.40	114.00 100.72	107.90 97.284	Lin2	86.2193807	101.861168							0.9990		0.9900
2,6-Dinitrotoluene	76.800 70.560	76.000 70.760	73.600 68.920	71.600 66.374	Lin2	21.5953222	69.7023102							0.9990		0.9900
2-Amino-4,6-dinitrotoluene	165.60 158.20	159.60 157.56	161.80 155.50	160.15 148.41	Ave		158.352250				3.2		20.0			
4-Amino-2,6-dinitrotoluene	144.40 143.80	146.60 144.14	144.10 141.98	146.50 136.14	Ave		143.457125				2.3		20.0			
2,4,6-Trinitrotoluene	154.00 182.02	196.60 185.32	181.70 184.54	191.20 179.09	Ave		181.807625				6.9		20.0			
HMX	173.60 142.52	155.60 143.31	150.00 142.72	142.05 137.81	Lin2	81.8843863	140.395748							1.0000		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.: 580-89178-1 Analy Batch No.: 321126

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/05/2019 21:07 Calibration End Date: 09/06/2019 03:50 Calibration ID: 47277

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 LVL 8		B	M1	M2								
Nitroglycerin	857.20 1391.8	1241.8 1394.1	1386.4 1418.2	1372.7 1373.3	Lin2	-1301.2595	1432.44628							0.9980		0.9900
Tetryl	1706.0 1818.7	1827.8 1851.2	1978.0 1848.6	1802.4 1797.7	Lin2	-262.97291	1854.66796							0.9980		0.9900
PETN	186.80 199.82	182.40 200.84	234.60 206.73	201.15 196.62	Ave		201.120000				7.8		20.0			
3,4-Dinitrotoluene	114.00 116.88	123.20 118.94	116.70 117.99	121.85 113.45	Ave		117.875375				2.9		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.: 580-89178-1 Analy Batch No.: 321126

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/05/2019 21:07 Calibration End Date: 09/06/2019 03:50 Calibration ID: 47277

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-321126/4	E000004.D
Level 2	STD2 320-321126/5	E000005.D
Level 3	STD3 320-321126/6	E000006.D
Level 4	STD4 320-321126/7	E000007.D
Level 5	STD5 320-321126/8	E000008.D
Level 6	STD6 320-321126/9	E000009.D
Level 7	STD7 320-321126/10	E000010.D
Level 8	STD8 320-321126/11	E000011.D

ANALYTE	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
Nitrobenzene	Ave	145 5280	292 10405	560 24029	1088	2655	2.50 100	5.00 200	10.0 500	20.0	50.0
1,3-Dinitrobenzene	Ave	294 10856	572 21279	1100 49984	2153	5398	2.50 100	5.00 200	10.0 500	20.0	50.0
1,3,5-Trinitrobenzene	Ave	231 8641	453 17079	869 41060	1733	4310	2.50 100	5.00 200	10.0 500	20.0	50.0
2-Nitrotoluene	Lin2	186 6525	362 12799	712 30579	1353	3313	2.50 100	5.00 200	10.0 500	20.0	50.0
4-Nitrotoluene	Lin2	186 6525	362 12799	712 30579	1353	3313	2.50 100	5.00 200	10.0 500	20.0	50.0
3-Nitrotoluene	Ave	2864 89595	5632 171837	10678 429801	19296	46173	2.50 100	5.00 200	10.0 500	20.0	50.0
3,5-Dinitroaniline	Lin2	284 8935	509 17325	981 41413	1830	4496	2.50 100	5.00 200	10.0 500	20.0	50.0
RDX	Lin2	197 5169	338 9819	622 23598	1104	2619	2.50 100	5.00 200	10.0 500	20.0	50.0
2,4-Dinitrotoluene	Lin2	336 10340	604 20144	1140 48642	2158	5212	2.50 100	5.00 200	10.0 500	20.0	50.0
2,6-Dinitrotoluene	Lin2	192 7076	380 13784	736 33187	1432	3528	2.50 100	5.00 200	10.0 500	20.0	50.0
2-Amino-4,6-dinitrotoluene	Ave	414 15756	798 31100	1618 74204	3203	7910	2.50 100	5.00 200	10.0 500	20.0	50.0
4-Amino-2,6-dinitrotoluene	Ave	361 14414	733 28395	1441 68071	2930	7190	2.50 100	5.00 200	10.0 500	20.0	50.0
2,4,6-Trinitrotoluene	Ave	385 18532	983 36907	1817 89543	3824	9101	2.50 100	5.00 200	10.0 500	20.0	50.0
HMX	Lin2	434 14331	778 28543	1500 68907	2841	7126	2.50 100	5.00 200	10.0 500	20.0	50.0
Nitroglycerin	Lin2	2143 139410	6209 283641	13864 686647	27454	69589	2.50 100	5.00 200	10.0 500	20.0	50.0

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 321126

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/05/2019 21:07 Calibration End Date: 09/06/2019 03:50 Calibration ID: 47277

ANALYTE	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
Tetryl	Lin2	4265 185121	9139 369724	19780 898832	36047	90937	2.50 100	5.00 200	10.0 500	20.0	50.0
PETN	Ave	467 20084	912 41346	2346 98310	4023	9991	2.50 100	5.00 200	10.0 500	20.0	50.0
3,4-Dinitrotoluene	Ave	285 11894	616 23597	1167 56724	2437	5844	2.50 100	5.00 200	10.0 500	20.0	50.0

Curve Type Legend:

Ave = Average
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.: 580-89178-1 Analy Batch No.: 327611

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/01/2019 20:46 Calibration End Date: 10/02/2019 02:31 Calibration ID: 47725

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-327611/4	A000006.D
Level 2	STD2 320-327611/5	A000007.D
Level 3	STD3 320-327611/6	A000008.D
Level 4	STD4 320-327611/7	A000009.D
Level 5	STD5 320-327611/8	A000010.D
Level 6	STD6 320-327611/9	A000011.D
Level 7	STD7 320-327611/10	A000012.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7				RT WINDOW	AVG RT
Nitrobenzene	21.344	21.304	21.349	21.346	21.339	21.331	21.294				21.089 - 21.589	21.330
1,3-Dinitrobenzene	23.490	23.457	23.486	23.480	23.479	23.455	23.424				23.229 - 23.729	23.467
1,3,5-Trinitrobenzene	25.150	25.174	25.176	25.153	25.156	25.148	25.114				24.816 - 25.496	25.153
2-Nitrotoluene	28.317	28.277	28.332	28.320	28.326	28.301	28.264				28.076 - 28.576	28.305
4-Nitrotoluene	28.317	28.277	28.332	28.320	28.326	28.301	28.264				28.076 - 28.576	28.305
3-Nitrotoluene	28.807	28.814	28.852	28.853	28.859	28.808	28.774				28.609 - 29.109	28.824
3,5-Dinitroaniline	29.477	29.440	29.442	29.440	29.456	29.431	29.414				29.196 - 29.716	29.443
RDX	30.374	30.374	30.382	30.350	30.366	30.335	30.310				30.116 - 30.616	30.356
2,4-Dinitrotoluene	31.204	31.190	31.212	31.213	31.216	31.198	31.167				30.966 - 31.466	31.200
2,6-Dinitrotoluene	32.034	32.024	32.086	32.076	32.073	32.055	32.027				31.823 - 32.323	32.054
2-Amino-4,6-dinitrotoluene	33.407	33.424	33.416	33.410	33.416	33.398	33.384				33.166 - 33.666	33.408
4-Amino-2,6-dinitrotoluene	33.684	33.694	33.689	33.683	33.686	33.671	33.654				33.436 - 33.936	33.680
2,4,6-Trinitrotoluene	34.870	34.884	34.876	34.870	34.869	34.861	34.854				34.619 - 35.119	34.869
HMX	35.947	35.970	35.962	35.960	35.959	35.951	35.944				35.709 - 36.209	35.956
Nitroglycerin		36.624	36.619	36.620	36.619	36.611	36.600				36.369 - 36.869	36.616
Tetryl	37.580	37.570	37.579	37.573	37.576	37.568	37.560				37.326 - 37.826	37.572
PETN		40.910	40.932	40.906	40.929	40.915	40.890				40.679 - 41.179	40.914
3,4-Dinitrotoluene	34.487	34.480	34.479	34.483	34.479	34.471	34.460				34.229 - 34.729	34.477

FORM VI
HPLC/IC BY EXTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1 Analy Batch No.: 327611

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/01/2019 20:46 Calibration End Date: 10/02/2019 02:31 Calibration ID: 47725

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-327611/4	A000006.D
Level 2	STD2 320-327611/5	A000007.D
Level 3	STD3 320-327611/6	A000008.D
Level 4	STD4 320-327611/7	A000009.D
Level 5	STD5 320-327611/8	A000010.D
Level 6	STD6 320-327611/9	A000011.D
Level 7	STD7 320-327611/10	A000012.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	54.000 47.050	50.500 46.305	47.750 43.338	47.160	Ave		48.0147143				7.0		20.0			
1,3-Dinitrobenzene	96.000 93.310	95.400 92.515	93.400 87.808	93.260	Ave		93.0990000				2.8		20.0			
1,3,5-Trinitrobenzene	75.200 73.450	75.200 72.600	72.550 70.182	72.760	Ave		73.1345714				2.4		20.0			
2-Nitrotoluene	62.200 56.550	59.900 55.220	57.250 53.012	55.860	Lin2	39.3090673	54.9684844							0.9990		0.9900
4-Nitrotoluene	62.200 56.550	59.900 55.220	57.250 53.012	55.860	Lin2	39.3090673	54.9684844							0.9990		0.9900
3-Nitrotoluene	45.400 35.810	42.000 34.780	37.050 34.450	35.080	Lin2	57.1565794	34.6357720							0.9990		0.9900
3,5-Dinitroaniline	84.400 73.350	81.700 71.185	74.950 69.406	72.200	Lin2	73.4541308	71.2520359							0.9990		0.9900
RDX	63.800 42.160	51.800 41.205	46.400 39.972	40.780	Lin2	118.657948	40.0280535							0.9990		0.9900
2,4-Dinitrotoluene	105.60 83.570	95.000 83.015	86.850 80.686	81.740	Lin2	124.171184	81.2009645							1.0000		0.9900
2,6-Dinitrotoluene	65.600 56.730	61.100 56.480	56.900 54.916	54.980	Lin2	52.1315697	55.2187261							1.0000		0.9900
2-Amino-4,6-dinitrotoluene	123.20 122.30	124.50 120.24	123.00 117.37	119.22	Ave		121.404000				2.1		20.0			
4-Amino-2,6-dinitrotoluene	114.80 115.13	114.60 112.72	115.25 111.01	111.56	Ave		113.581286				1.6		20.0			
2,4,6-Trinitrotoluene	132.60 137.90	136.30 137.17	137.10 134.12	136.26	Ave		135.921429				1.4		20.0			
HMX	100.00 101.09	101.60 99.805	101.15 97.100	100.10	Ave		100.120714				1.5		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.: 580-89178-1 Analy Batch No.: 327611

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/01/2019 20:46 Calibration End Date: 10/02/2019 02:31 Calibration ID: 47725

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	124.03	126.30 124.50	116.65 120.25	123.00	Ave		122.453833				2.8		20.0			
Tetryl	169.60 167.02	166.00 165.01	163.15 161.73	164.48	Ave		165.284143				1.6		20.0			
PETN	143.66	152.00 143.43	137.00 139.50	142.32	Ave		142.985000				3.6		20.0			
3,4-Dinitrotoluene	85.800 87.390	86.700 86.580	86.800 84.204	85.720	Ave		86.1705714				1.2		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.: 580-89178-1 Analy Batch No.: 327611

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/01/2019 20:46 Calibration End Date: 10/02/2019 02:31 Calibration ID: 47725

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 320-327611/4	A000006.D
Level 2	STD2 320-327611/5	A000007.D
Level 3	STD3 320-327611/6	A000008.D
Level 4	STD4 320-327611/7	A000009.D
Level 5	STD5 320-327611/8	A000010.D
Level 6	STD6 320-327611/9	A000011.D
Level 7	STD7 320-327611/10	A000012.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	270 9261	505 21669	955	2358	4705	5.00 200	10.0 500	20.0	50.0	100
1,3-Dinitrobenzene	Ave	480 18503	954 43904	1868	4663	9331	5.00 200	10.0 500	20.0	50.0	100
1,3,5-Trinitrobenzene	Ave	376 14520	752 35091	1451	3638	7345	5.00 200	10.0 500	20.0	50.0	100
2-Nitrotoluene	Lin2	311 11044	599 26506	1145	2793	5655	5.00 200	10.0 500	20.0	50.0	100
4-Nitrotoluene	Lin2	311 11044	599 26506	1145	2793	5655	5.00 200	10.0 500	20.0	50.0	100
3-Nitrotoluene	Lin2	227 6956	420 17225	741	1754	3581	5.00 200	10.0 500	20.0	50.0	100
3,5-Dinitroaniline	Lin2	422 14237	817 34703	1499	3610	7335	5.00 200	10.0 500	20.0	50.0	100
RDX	Lin2	319 8241	518 19986	928	2039	4216	5.00 200	10.0 500	20.0	50.0	100
2,4-Dinitrotoluene	Lin2	528 16603	950 40343	1737	4087	8357	5.00 200	10.0 500	20.0	50.0	100
2,6-Dinitrotoluene	Lin2	328 11296	611 27458	1138	2749	5673	5.00 200	10.0 500	20.0	50.0	100
2-Amino-4,6-dinitrotoluene	Ave	616 24048	1245 58684	2460	5961	12230	5.00 200	10.0 500	20.0	50.0	100
4-Amino-2,6-dinitrotoluene	Ave	574 22543	1146 55507	2305	5578	11513	5.00 200	10.0 500	20.0	50.0	100
2,4,6-Trinitrotoluene	Ave	663 27434	1363 67060	2742	6813	13790	5.00 200	10.0 500	20.0	50.0	100
HMX	Ave	500 19961	1016 48550	2023	5005	10109	5.00 200	10.0 500	20.0	50.0	100
Nitroglycerin	Ave	 24899	1263 60124	2333	6150	12403	 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.: 580-89178-1 Analy Batch No.: 327611

SDG No.:

Instrument ID: LC12 GC Column: Zorbax CN ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/01/2019 20:46 Calibration End Date: 10/02/2019 02:31 Calibration ID: 47725

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	Ave	848 33001	1660 80867	3263	8224	16702	5.00 200	10.0 500	20.0	50.0	100
PETN	Ave	 28686	1520 69750	2740	7116	14366	 200	10.0 500	20.0	50.0	100
3,4-Dinitrotoluene	Ave	429 17316	867 42102	1736	4286	8739	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.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: YA0000019.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		109.8		198	200	-0.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: YA0000019.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.72	19.49	19.99

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: YA0000019.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.41		198	200	-1.0	20.0
RDX	Ave	86.89	87.64		202	200	0.9	20.0
1,3,5-Trinitrobenzene	Ave	217.7	220.2		202	200	1.1	20.0
1,3-Dinitrobenzene	Ave	202.2	208.6		206	200	3.2	20.0
3,5-Dinitroaniline	Ave	149.2	147.0		197	200	-1.4	20.0
Nitrobenzene	Ave	114.9	114.8		200	200	-0.0	20.0
Tetryl	Ave	113.7	111.0		195	200	-2.4	20.0
Nitroglycerin	Ave	94.56	96.99		205	200	2.6	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.4		198	200	-1.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	77.88		190	200	-4.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	108.9		198	200	-1.2	20.0
2,6-Dinitrotoluene	Ave	71.33	71.78		201	200	0.6	20.0
2,4-Dinitrotoluene	Ave	128.3	130.9		204	200	2.0	20.0
2-Nitrotoluene	Lin2		1116		198	200	-0.9	20.0
4-Nitrotoluene	Lin2		1471		198	200	-1.1	20.0
3-Nitrotoluene	Lin2		66.26		208	200	4.2	20.0
PETN	Ave	53.52	50.06		187	200	-6.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-326139/12 Calibration Date: 09/26/2019 05:40

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: YA0000019.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.79	17.55	18.05
RDX	20.38	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.89	22.39
1,3-Dinitrobenzene	24.32	24.08	24.58
3,5-Dinitroaniline	25.32	25.08	25.58
Nitrobenzene	25.84	25.59	26.09
Tetryl	26.44	26.20	26.70
Nitroglycerin	27.11	26.87	27.37
2,4,6-Trinitrotoluene	27.74	27.50	28.00
4-Amino-2,6-dinitrotoluene	28.60	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.26	28.89	29.65
2,6-Dinitrotoluene	30.53	30.24	30.84
2,4-Dinitrotoluene	30.98	30.67	31.29
2-Nitrotoluene	33.96	33.63	34.29
4-Nitrotoluene	35.44	35.08	35.80
3-Nitrotoluene	36.98	36.59	37.39
PETN	38.42	38.02	38.84

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326750/1 Calibration Date: 09/28/2019 15:17

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000053.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.61		101	100	0.7	20.0
RDX	Ave	86.89	87.57		101	100	0.8	20.0
1,3,5-Trinitrobenzene	Ave	217.7	220.3		101	100	1.2	20.0
1,3-Dinitrobenzene	Ave	202.2	205.4		102	100	1.6	20.0
3,5-Dinitroaniline	Ave	149.2	150.7		101	100	1.0	20.0
Nitrobenzene	Ave	114.9	115.0		100	100	0.0	20.0
Tetryl	Ave	113.7	114.7		101	100	0.8	20.0
Nitroglycerin	Ave	94.56	95.73		101	100	1.2	20.0
2,4,6-Trinitrotoluene	Ave	122.8	124.6		101	100	1.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	82.02		100	100	0.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.3		102	100	1.9	20.0
2,6-Dinitrotoluene	Ave	71.33	71.72		101	100	0.6	20.0
2,4-Dinitrotoluene	Ave	128.3	130.4		102	100	1.6	20.0
2-Nitrotoluene	Lin2		1122		99.3	100	-0.7	20.0
4-Nitrotoluene	Lin2		1516		102	100	1.6	20.0
3-Nitrotoluene	Lin2		65.00		102	100	1.8	20.0
PETN	Ave	53.52	53.62		100	100	0.2	20.0
3,4-Dinitrotoluene	Ave	73.09	73.25		100	100	0.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326750/1 Calibration Date: 09/28/2019 15:17

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000053.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.78	17.53	18.03
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.11	21.86	22.36
1,3-Dinitrobenzene	24.30	24.05	24.55
3,5-Dinitroaniline	25.29	25.04	25.54
Nitrobenzene	25.81	25.56	26.06
Tetryl	26.41	26.16	26.66
Nitroglycerin	27.08	26.83	27.33
2,4,6-Trinitrotoluene	27.71	27.46	27.96
4-Amino-2,6-dinitrotoluene	28.56	28.22	28.90
2-Amino-4,6-dinitrotoluene	29.22	28.84	29.60
2,6-Dinitrotoluene	30.49	30.19	30.79
2,4-Dinitrotoluene	30.93	30.62	31.24
2-Nitrotoluene	33.89	33.56	34.22
4-Nitrotoluene	35.36	35.00	35.72
3-Nitrotoluene	36.89	36.49	37.29
PETN	38.32	37.91	38.73
3,4-Dinitrotoluene	28.91	28.66	29.16

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/14 Calibration Date: 09/29/2019 02:54

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000066.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.18		50.0	50.0	0.0	20.0
RDX	Ave	86.89	88.08		50.7	50.0	1.4	20.0
1,3,5-Trinitrobenzene	Ave	217.7	220.4		50.6	50.0	1.2	20.0
1,3-Dinitrobenzene	Ave	202.2	205.3		50.8	50.0	1.5	20.0
3,5-Dinitroaniline	Ave	149.2	150.3		50.4	50.0	0.7	20.0
Nitrobenzene	Ave	114.9	114.5		49.8	50.0	-0.4	20.0
Tetryl	Ave	113.7	113.5		49.9	50.0	-0.2	20.0
Nitroglycerin	Ave	94.56	93.10		49.2	50.0	-1.5	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.8		50.4	50.0	0.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	82.20		50.2	50.0	0.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.6		50.6	50.0	1.3	20.0
2,6-Dinitrotoluene	Ave	71.33	71.10		49.8	50.0	-0.3	20.0
2,4-Dinitrotoluene	Ave	128.3	129.1		50.3	50.0	0.6	20.0
2-Nitrotoluene	Lin2		1117		49.2	50.0	-1.6	20.0
4-Nitrotoluene	Lin2		1490		49.5	50.0	-1.0	20.0
3-Nitrotoluene	Lin2		65.30		50.7	50.0	1.3	20.0
PETN	Ave	53.52	53.54		50.0	50.0	0.0	20.0
3,4-Dinitrotoluene	Ave	73.09	72.88		49.9	50.0	-0.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/14 Calibration Date: 09/29/2019 02:54

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000066.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.80	17.55	18.05
RDX	20.38	20.13	20.63
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.30	24.05	24.55
3,5-Dinitroaniline	25.29	25.04	25.54
Nitrobenzene	25.80	25.55	26.05
Tetryl	26.42	26.17	26.67
Nitroglycerin	27.09	26.84	27.34
2,4,6-Trinitrotoluene	27.71	27.46	27.96
4-Amino-2,6-dinitrotoluene	28.56	28.22	28.90
2-Amino-4,6-dinitrotoluene	29.21	28.83	29.59
2,6-Dinitrotoluene	30.48	30.18	30.78
2,4-Dinitrotoluene	30.92	30.61	31.23
2-Nitrotoluene	33.88	33.55	34.21
4-Nitrotoluene	35.36	35.00	35.72
3-Nitrotoluene	36.89	36.49	37.29
PETN	38.34	37.93	38.75
3,4-Dinitrotoluene	28.92	28.67	29.17

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/26 Calibration Date: 09/29/2019 13:38

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000078.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.30		50.1	50.0	0.3	20.0
RDX	Ave	86.89	88.22		50.8	50.0	1.5	20.0
1,3,5-Trinitrobenzene	Ave	217.7	219.7		50.5	50.0	0.9	20.0
1,3-Dinitrobenzene	Ave	202.2	205.8		50.9	50.0	1.8	20.0
3,5-Dinitroaniline	Ave	149.2	151.1		50.6	50.0	1.3	20.0
Nitrobenzene	Ave	114.9	111.4		48.5	50.0	-3.0	20.0
Tetryl	Ave	113.7	114.2		50.2	50.0	0.4	20.0
Nitroglycerin	Ave	94.56	100.4		53.1	50.0	6.2	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.4		50.3	50.0	0.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.74		49.9	50.0	-0.2	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.4		51.0	50.0	2.0	20.0
2,6-Dinitrotoluene	Ave	71.33	71.44		50.1	50.0	0.2	20.0
2,4-Dinitrotoluene	Ave	128.3	130.0		50.7	50.0	1.3	20.0
2-Nitrotoluene	Lin2		1064		46.8	50.0	-6.4	20.0
4-Nitrotoluene	Lin2		1448		48.1	50.0	-3.8	20.0
3-Nitrotoluene	Lin2		62.96		48.8	50.0	-2.4	20.0
PETN	Ave	53.52	51.86		48.5	50.0	-3.1	20.0
3,4-Dinitrotoluene	Ave	73.09	72.96		49.9	50.0	-0.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/26 Calibration Date: 09/29/2019 13:38

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000078.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.83	17.58	18.08
RDX	20.38	20.13	20.63
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.29	24.04	24.54
3,5-Dinitroaniline	25.28	25.03	25.53
Nitrobenzene	25.78	25.53	26.03
Tetryl	26.41	26.16	26.66
Nitroglycerin	27.08	26.83	27.33
2,4,6-Trinitrotoluene	27.70	27.45	27.95
4-Amino-2,6-dinitrotoluene	28.54	28.20	28.88
2-Amino-4,6-dinitrotoluene	29.19	28.81	29.57
2,6-Dinitrotoluene	30.46	30.16	30.76
2,4-Dinitrotoluene	30.90	30.59	31.21
2-Nitrotoluene	33.86	33.53	34.19
4-Nitrotoluene	35.33	34.97	35.69
3-Nitrotoluene	36.86	36.46	37.26
PETN	38.32	37.91	38.73
3,4-Dinitrotoluene	28.90	28.65	29.15

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/38 Calibration Date: 09/30/2019 00:21

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000090.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.34		50.2	50.0	0.3	20.0
RDX	Ave	86.89	88.08		50.7	50.0	1.4	20.0
1,3,5-Trinitrobenzene	Ave	217.7	218.9		50.3	50.0	0.6	20.0
1,3-Dinitrobenzene	Ave	202.2	204.6		50.6	50.0	1.2	20.0
3,5-Dinitroaniline	Ave	149.2	150.0		50.3	50.0	0.5	20.0
Nitrobenzene	Ave	114.9	115.1		50.1	50.0	0.2	20.0
Tetryl	Ave	113.7	113.5		49.9	50.0	-0.2	20.0
Nitroglycerin	Ave	94.56	100.3		53.0	50.0	6.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	123.2		50.2	50.0	0.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.90		50.0	50.0	-0.0	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.1		50.8	50.0	1.7	20.0
2,6-Dinitrotoluene	Ave	71.33	71.96		50.4	50.0	0.9	20.0
2,4-Dinitrotoluene	Ave	128.3	129.9		50.6	50.0	1.2	20.0
2-Nitrotoluene	Lin2		1115		49.1	50.0	-1.8	20.0
4-Nitrotoluene	Lin2		1515		50.3	50.0	0.7	20.0
3-Nitrotoluene	Lin2		64.72		50.2	50.0	0.4	20.0
PETN	Ave	53.52	53.78		50.2	50.0	0.5	20.0
3,4-Dinitrotoluene	Ave	73.09	73.00		49.9	50.0	-0.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326750/38 Calibration Date: 09/30/2019 00:21

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: Z0000090.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.84	17.59	18.09
RDX	20.39	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.31	25.06	25.56
Nitrobenzene	25.82	25.57	26.07
Tetryl	26.44	26.19	26.69
Nitroglycerin	27.11	26.86	27.36
2,4,6-Trinitrotoluene	27.73	27.48	27.98
4-Amino-2,6-dinitrotoluene	28.58	28.24	28.92
2-Amino-4,6-dinitrotoluene	29.24	28.86	29.62
2,6-Dinitrotoluene	30.51	30.21	30.81
2,4-Dinitrotoluene	30.95	30.64	31.26
2-Nitrotoluene	33.92	33.59	34.25
4-Nitrotoluene	35.39	35.03	35.75
3-Nitrotoluene	36.92	36.52	37.32
PETN	38.41	38.00	38.82
3,4-Dinitrotoluene	28.94	28.69	29.19

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-327493/3 Calibration Date: 10/01/2019 14:45

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.63		97.9	100	-2.1	20.0
RDX	Ave	86.89	85.60		98.5	100	-1.5	20.0
1,3,5-Trinitrobenzene	Ave	217.7	214.5		98.5	100	-1.5	20.0
1,3-Dinitrobenzene	Ave	202.2	201.0		99.4	100	-0.6	20.0
3,5-Dinitroaniline	Ave	149.2	147.0		98.5	100	-1.5	20.0
Nitrobenzene	Ave	114.9	112.8		98.1	100	-1.9	20.0
Tetryl	Ave	113.7	112.3		98.7	100	-1.3	20.0
Nitroglycerin	Ave	94.56	94.66		100	100	0.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	122.0		99.4	100	-0.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.32		99.3	100	-0.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.8		101	100	1.4	20.0
2,6-Dinitrotoluene	Ave	71.33	70.75		99.2	100	-0.8	20.0
2,4-Dinitrotoluene	Ave	128.3	128.5		100	100	0.1	20.0
2-Nitrotoluene	Lin2		1136		101	100	0.6	20.0
4-Nitrotoluene	Lin2		1513		101	100	1.4	20.0
3-Nitrotoluene	Lin2		64.64		101	100	1.2	20.0
PETN	Ave	53.52	52.79		98.6	100	-1.4	20.0
3,4-Dinitrotoluene	Ave	73.09	73.01		99.9	100	-0.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-327493/3 Calibration Date: 10/01/2019 14:45

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.78	17.53	18.03
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.31	25.06	25.56
Nitrobenzene	25.82	25.57	26.07
Tetryl	26.42	26.17	26.67
Nitroglycerin	27.10	26.85	27.35
2,4,6-Trinitrotoluene	27.72	27.47	27.97
4-Amino-2,6-dinitrotoluene	28.57	28.23	28.91
2-Amino-4,6-dinitrotoluene	29.22	28.84	29.60
2,6-Dinitrotoluene	30.49	30.19	30.79
2,4-Dinitrotoluene	30.93	30.62	31.24
2-Nitrotoluene	33.88	33.55	34.21
4-Nitrotoluene	35.35	34.99	35.71
3-Nitrotoluene	36.88	36.48	37.28
PETN	38.30	37.89	38.71
3,4-Dinitrotoluene	28.93	28.68	29.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/55 Calibration Date: 10/02/2019 02:22

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.98		49.2	50.0	-1.6	20.0
RDX	Ave	86.89	86.46		49.8	50.0	-0.5	20.0
1,3,5-Trinitrobenzene	Ave	217.7	215.8		49.6	50.0	-0.9	20.0
1,3-Dinitrobenzene	Ave	202.2	202.2		50.0	50.0	-0.0	20.0
3,5-Dinitroaniline	Ave	149.2	147.8		49.5	50.0	-0.9	20.0
Nitrobenzene	Ave	114.9	113.1		49.2	50.0	-1.5	20.0
Tetryl	Ave	113.7	111.9		49.2	50.0	-1.6	20.0
Nitroglycerin	Ave	94.56	99.22		52.5	50.0	4.9	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.7		49.5	50.0	-0.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	80.78		49.3	50.0	-1.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	111.4		50.5	50.0	1.1	20.0
2,6-Dinitrotoluene	Ave	71.33	70.86		49.7	50.0	-0.7	20.0
2,4-Dinitrotoluene	Ave	128.3	127.7		49.8	50.0	-0.5	20.0
2-Nitrotoluene	Lin2		1110		48.9	50.0	-2.3	20.0
4-Nitrotoluene	Lin2		1487		49.4	50.0	-1.2	20.0
3-Nitrotoluene	Lin2		63.84		49.5	50.0	-1.0	20.0
PETN	Ave	53.52	49.70		46.4	50.0	-7.1	20.0
3,4-Dinitrotoluene	Ave	73.09	72.34		49.5	50.0	-1.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/55 Calibration Date: 10/02/2019 02:22

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.76	17.51	18.01
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.10	21.85	22.35
1,3-Dinitrobenzene	24.27	24.02	24.52
3,5-Dinitroaniline	25.26	25.01	25.51
Nitrobenzene	25.78	25.53	26.03
Tetryl	26.39	26.14	26.64
Nitroglycerin	27.06	26.81	27.31
2,4,6-Trinitrotoluene	27.68	27.43	27.93
4-Amino-2,6-dinitrotoluene	28.52	28.18	28.86
2-Amino-4,6-dinitrotoluene	29.17	28.79	29.55
2,6-Dinitrotoluene	30.46	30.16	30.76
2,4-Dinitrotoluene	30.89	30.58	31.20
2-Nitrotoluene	33.86	33.53	34.19
4-Nitrotoluene	35.33	34.97	35.69
3-Nitrotoluene	36.86	36.46	37.26
PETN	38.32	37.91	38.73
3,4-Dinitrotoluene	28.88	28.63	29.13

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/16 Calibration Date: 10/02/2019 13:59

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000029.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.18		49.3	50.0	-1.3	20.0
RDX	Ave	86.89	86.86		50.0	50.0	-0.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	215.8		49.5	50.0	-0.9	20.0
1,3-Dinitrobenzene	Ave	202.2	202.6		50.1	50.0	0.2	20.0
3,5-Dinitroaniline	Ave	149.2	148.5		49.8	50.0	-0.4	20.0
Nitrobenzene	Ave	114.9	108.3		47.1	50.0	-5.7	20.0
Tetryl	Ave	113.7	112.3		49.4	50.0	-1.2	20.0
Nitroglycerin	Ave	94.56	94.46		49.9	50.0	-0.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	122.6		49.9	50.0	-0.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	81.24		49.6	50.0	-0.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.4		51.0	50.0	2.0	20.0
2,6-Dinitrotoluene	Ave	71.33	70.52		49.4	50.0	-1.1	20.0
2,4-Dinitrotoluene	Ave	128.3	128.8		50.2	50.0	0.4	20.0
2-Nitrotoluene	Lin2		1077		47.4	50.0	-5.2	20.0
4-Nitrotoluene	Lin2		1482		49.3	50.0	-1.5	20.0
3-Nitrotoluene	Lin2		61.20		47.4	50.0	-5.1	20.0
PETN	Ave	53.52	51.00		47.6	50.0	-4.7	20.0
3,4-Dinitrotoluene	Ave	73.09	72.62		49.7	50.0	-0.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/16 Calibration Date: 10/02/2019 13:59

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000029.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.77	17.52	18.02
RDX	20.35	20.10	20.60
1,3,5-Trinitrobenzene	22.09	21.84	22.34
1,3-Dinitrobenzene	24.26	24.01	24.51
3,5-Dinitroaniline	25.25	25.00	25.50
Nitrobenzene	25.76	25.51	26.01
Tetryl	26.38	26.13	26.63
Nitroglycerin	27.06	26.81	27.31
2,4,6-Trinitrotoluene	27.67	27.42	27.92
4-Amino-2,6-dinitrotoluene	28.51	28.17	28.85
2-Amino-4,6-dinitrotoluene	29.16	28.78	29.54
2,6-Dinitrotoluene	30.44	30.14	30.74
2,4-Dinitrotoluene	30.88	30.57	31.19
2-Nitrotoluene	33.84	33.51	34.17
4-Nitrotoluene	35.31	34.95	35.67
3-Nitrotoluene	36.84	36.44	37.24
PETN	38.30	37.89	38.71
3,4-Dinitrotoluene	28.88	28.63	29.13

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/28 Calibration Date: 10/03/2019 02:29

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000043.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	68.66		49.0	50.0	-2.1	20.0
RDX	Ave	86.89	86.02		49.5	50.0	-1.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	214.7		49.3	50.0	-1.4	20.0
1,3-Dinitrobenzene	Ave	202.2	203.0		50.2	50.0	0.4	20.0
3,5-Dinitroaniline	Ave	149.2	147.4		49.4	50.0	-1.2	20.0
Nitrobenzene	Ave	114.9	112.9		49.2	50.0	-1.7	20.0
Tetryl	Ave	113.7	112.1		49.3	50.0	-1.5	20.0
Nitroglycerin	Ave	94.56	92.52		48.9	50.0	-2.2	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.0		49.3	50.0	-1.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	80.44		49.1	50.0	-1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	112.5		51.0	50.0	2.1	20.0
2,6-Dinitrotoluene	Ave	71.33	70.84		49.7	50.0	-0.7	20.0
2,4-Dinitrotoluene	Ave	128.3	128.6		50.1	50.0	0.2	20.0
2-Nitrotoluene	Lin2		1101		48.5	50.0	-3.1	20.0
4-Nitrotoluene	Lin2		1523		50.6	50.0	1.2	20.0
3-Nitrotoluene	Lin2		63.90		49.6	50.0	-0.9	20.0
PETN	Ave	53.52	51.88		48.5	50.0	-3.1	20.0
3,4-Dinitrotoluene	Ave	73.09	72.34		49.5	50.0	-1.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327493/28 Calibration Date: 10/03/2019 02:29

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: ZD0000043.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.82	17.57	18.07
RDX	20.36	20.11	20.61
1,3,5-Trinitrobenzene	22.09	21.84	22.34
1,3-Dinitrobenzene	24.24	23.99	24.49
3,5-Dinitroaniline	25.22	24.97	25.47
Nitrobenzene	25.72	25.47	25.97
Tetryl	26.37	26.12	26.62
Nitroglycerin	27.04	26.79	27.29
2,4,6-Trinitrotoluene	27.65	27.40	27.90
4-Amino-2,6-dinitrotoluene	28.46	28.12	28.80
2-Amino-4,6-dinitrotoluene	29.10	28.72	29.48
2,6-Dinitrotoluene	30.38	30.08	30.68
2,4-Dinitrotoluene	30.81	30.50	31.12
2-Nitrotoluene	33.75	33.42	34.08
4-Nitrotoluene	35.21	34.85	35.57
3-Nitrotoluene	36.75	36.35	37.15
PETN	38.27	37.86	38.68
3,4-Dinitrotoluene	28.85	28.60	29.10

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-329066/3 Calibration Date: 10/07/2019 22:28

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.09		98.5	100	-1.5	20.0
RDX	Ave	86.89	85.90		98.9	100	-1.1	20.0
1,3,5-Trinitrobenzene	Ave	217.7	213.2		97.9	100	-2.1	20.0
1,3-Dinitrobenzene	Ave	202.2	198.9		98.4	100	-1.6	20.0
3,5-Dinitroaniline	Ave	149.2	146.4		98.1	100	-1.9	20.0
Nitrobenzene	Ave	114.9	112.0		97.5	100	-2.5	20.0
Tetryl	Ave	113.7	111.2		97.8	100	-2.2	20.0
Nitroglycerin	Ave	94.56	94.27		99.7	100	-0.3	20.0
2,4,6-Trinitrotoluene	Ave	122.8	120.6		98.2	100	-1.8	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	79.80		97.4	100	-2.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	109.3		99.2	100	-0.8	20.0
2,6-Dinitrotoluene	Ave	71.33	69.47		97.4	100	-2.6	20.0
2,4-Dinitrotoluene	Ave	128.3	126.0		98.2	100	-1.8	20.0
2-Nitrotoluene	Lin2		1109		98.2	100	-1.8	20.0
4-Nitrotoluene	Lin2		1518		102	100	1.7	20.0
3-Nitrotoluene	Lin2		62.96		98.6	100	-1.4	20.0
PETN	Ave	53.52	50.69		94.7	100	-5.3	20.0
3,4-Dinitrotoluene	Ave	73.09	71.66		98.0	100	-2.0	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-329066/3 Calibration Date: 10/07/2019 22:28

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.84	17.59	18.09
RDX	20.41	20.16	20.66
1,3,5-Trinitrobenzene	22.15	21.90	22.40
1,3-Dinitrobenzene	24.34	24.09	24.59
3,5-Dinitroaniline	25.35	25.10	25.60
Nitrobenzene	25.84	25.59	26.09
Tetryl	26.47	26.22	26.72
Nitroglycerin	27.14	26.89	27.39
2,4,6-Trinitrotoluene	27.76	27.51	28.01
4-Amino-2,6-dinitrotoluene	28.63	28.29	28.97
2-Amino-4,6-dinitrotoluene	29.29	28.91	29.67
2,6-Dinitrotoluene	30.56	30.26	30.86
2,4-Dinitrotoluene	31.00	30.69	31.31
2-Nitrotoluene	33.98	33.65	34.31
4-Nitrotoluene	35.47	35.11	35.83
3-Nitrotoluene	37.02	36.62	37.42
PETN	38.47	38.06	38.88
3,4-Dinitrotoluene	28.98	28.73	29.23

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/28 Calibration Date: 10/08/2019 20:48

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000028.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.00		49.9	50.0	-0.2	20.0
RDX	Ave	86.89	87.62		50.4	50.0	0.8	20.0
1,3,5-Trinitrobenzene	Ave	217.7	218.3		50.1	50.0	0.2	20.0
1,3-Dinitrobenzene	Ave	202.2	201.9		49.9	50.0	-0.2	20.0
3,5-Dinitroaniline	Ave	149.2	148.9		49.9	50.0	-0.2	20.0
Nitrobenzene	Ave	114.9	109.4		47.6	50.0	-4.7	20.0
Tetryl	Ave	113.7	112.2		49.3	50.0	-1.4	20.0
Nitroglycerin	Ave	94.56	91.94		48.6	50.0	-2.8	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.8		49.6	50.0	-0.8	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	79.74		48.7	50.0	-2.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	109.0		49.4	50.0	-1.1	20.0
2,6-Dinitrotoluene	Ave	71.33	69.90		49.0	50.0	-2.0	20.0
2,4-Dinitrotoluene	Ave	128.3	127.8		49.8	50.0	-0.4	20.0
2-Nitrotoluene	Lin2		1079		47.5	50.0	-5.0	20.0
4-Nitrotoluene	Lin2		1489		49.5	50.0	-1.1	20.0
3-Nitrotoluene	Lin2		61.50		47.7	50.0	-4.7	20.0
PETN	Ave	53.52	51.82		48.4	50.0	-3.2	20.0
3,4-Dinitrotoluene	Ave	73.09	71.04		48.6	50.0	-2.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/28 Calibration Date: 10/08/2019 20:48

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000028.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.83	17.58	18.08
RDX	20.39	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.33	25.08	25.58
Nitrobenzene	25.82	25.57	26.07
Tetryl	26.44	26.19	26.69
Nitroglycerin	27.11	26.86	27.36
2,4,6-Trinitrotoluene	27.74	27.49	27.99
4-Amino-2,6-dinitrotoluene	28.61	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.26	28.88	29.64
2,6-Dinitrotoluene	30.53	30.23	30.83
2,4-Dinitrotoluene	30.97	30.66	31.28
2-Nitrotoluene	33.94	33.61	34.27
4-Nitrotoluene	35.42	35.06	35.78
3-Nitrotoluene	36.97	36.57	37.37
PETN	38.40	37.99	38.81
3,4-Dinitrotoluene	28.96	28.71	29.21

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/40 Calibration Date: 10/09/2019 08:25

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000041.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.08		50.0	50.0	-0.0	20.0
RDX	Ave	86.89	86.88		50.0	50.0	-0.0	20.0
1,3,5-Trinitrobenzene	Ave	217.7	216.9		49.8	50.0	-0.4	20.0
1,3-Dinitrobenzene	Ave	202.2	201.9		49.9	50.0	-0.2	20.0
3,5-Dinitroaniline	Ave	149.2	147.9		49.6	50.0	-0.9	20.0
Nitrobenzene	Ave	114.9	113.0		49.2	50.0	-1.6	20.0
Tetryl	Ave	113.7	112.0		49.2	50.0	-1.5	20.0
Nitroglycerin	Ave	94.56	91.64		48.5	50.0	-3.1	20.0
2,4,6-Trinitrotoluene	Ave	122.8	122.0		49.7	50.0	-0.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	80.54		49.2	50.0	-1.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	110.2		50.0	50.0	-0.0	20.0
2,6-Dinitrotoluene	Ave	71.33	70.24		49.2	50.0	-1.5	20.0
2,4-Dinitrotoluene	Ave	128.3	128.2		50.0	50.0	-0.0	20.0
2-Nitrotoluene	Lin2		1136		50.0	50.0	0.0	20.0
4-Nitrotoluene	Lin2		1485		49.3	50.0	-1.3	20.0
3-Nitrotoluene	Lin2		63.40		49.2	50.0	-1.7	20.0
PETN	Ave	53.52	51.24		47.9	50.0	-4.3	20.0
3,4-Dinitrotoluene	Ave	73.09	72.16		49.4	50.0	-1.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/40 Calibration Date: 10/09/2019 08:25

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000041.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.81	17.56	18.06
RDX	20.39	20.14	20.64
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.32	24.07	24.57
3,5-Dinitroaniline	25.33	25.08	25.58
Nitrobenzene	25.83	25.58	26.08
Tetryl	26.45	26.20	26.70
Nitroglycerin	27.12	26.87	27.37
2,4,6-Trinitrotoluene	27.74	27.49	27.99
4-Amino-2,6-dinitrotoluene	28.61	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.27	28.89	29.65
2,6-Dinitrotoluene	30.53	30.23	30.83
2,4-Dinitrotoluene	30.98	30.67	31.29
2-Nitrotoluene	33.95	33.62	34.28
4-Nitrotoluene	35.43	35.07	35.79
3-Nitrotoluene	36.96	36.56	37.36
PETN	38.42	38.01	38.83
3,4-Dinitrotoluene	28.96	28.71	29.21

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/59 Calibration Date: 10/09/2019 18:14

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: G0000052.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Lin2		110.6		49.9	50.0	-0.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/59 Calibration Date: 10/09/2019 18:14

Instrument ID: LC11 Calib Start Date: 09/04/2019 23:18

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/05/2019 05:34

Lab File ID: G0000052.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	19.73	19.48	19.98

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/59 Calibration Date: 10/09/2019 18:14

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000052.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	69.60		49.6	50.0	-0.7	20.0
RDX	Ave	86.89	87.08		50.1	50.0	0.2	20.0
1,3,5-Trinitrobenzene	Ave	217.7	216.0		49.6	50.0	-0.8	20.0
1,3-Dinitrobenzene	Ave	202.2	200.8		49.7	50.0	-0.7	20.0
3,5-Dinitroaniline	Ave	149.2	148.4		49.7	50.0	-0.6	20.0
Nitrobenzene	Ave	114.9	112.6		49.0	50.0	-2.0	20.0
Tetryl	Ave	113.7	111.6		49.1	50.0	-1.9	20.0
Nitroglycerin	Ave	94.56	90.98		48.1	50.0	-3.8	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.1		49.3	50.0	-1.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	79.70		48.6	50.0	-2.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	108.8		49.3	50.0	-1.3	20.0
2,6-Dinitrotoluene	Ave	71.33	69.72		48.9	50.0	-2.3	20.0
2,4-Dinitrotoluene	Ave	128.3	126.8		49.4	50.0	-1.2	20.0
2-Nitrotoluene	Lin2		1112		49.0	50.0	-2.0	20.0
4-Nitrotoluene	Lin2		1514		50.3	50.0	0.6	20.0
3-Nitrotoluene	Lin2		62.54		48.5	50.0	-3.0	20.0
PETN	Ave	53.52	52.44		49.0	50.0	-2.0	20.0
3,4-Dinitrotoluene	Ave	73.09	71.82		49.1	50.0	-1.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/59 Calibration Date: 10/09/2019 18:14

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000052.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.78	17.53	18.03
RDX	20.40	20.15	20.65
1,3,5-Trinitrobenzene	22.13	21.88	22.38
1,3-Dinitrobenzene	24.34	24.09	24.59
3,5-Dinitroaniline	25.34	25.09	25.59
Nitrobenzene	25.86	25.61	26.11
Tetryl	26.44	26.19	26.69
Nitroglycerin	27.11	26.86	27.36
2,4,6-Trinitrotoluene	27.74	27.49	27.99
4-Amino-2,6-dinitrotoluene	28.64	28.30	28.98
2-Amino-4,6-dinitrotoluene	29.30	28.92	29.68
2,6-Dinitrotoluene	30.57	30.27	30.87
2,4-Dinitrotoluene	31.02	30.71	31.33
2-Nitrotoluene	34.02	33.69	34.35
4-Nitrotoluene	35.49	35.13	35.85
3-Nitrotoluene	37.04	36.64	37.44
PETN	38.43	38.02	38.84
3,4-Dinitrotoluene	28.98	28.73	29.23

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/55 Calibration Date: 10/10/2019 03:11

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000062.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
HMX	Ave	70.12	70.18		50.0	50.0	0.0	20.0
RDX	Ave	86.89	87.60		50.4	50.0	0.8	20.0
1,3,5-Trinitrobenzene	Ave	217.7	217.7		50.0	50.0	-0.0	20.0
1,3-Dinitrobenzene	Ave	202.2	202.4		50.1	50.0	0.1	20.0
3,5-Dinitroaniline	Ave	149.2	148.7		49.8	50.0	-0.3	20.0
Nitrobenzene	Ave	114.9	106.9		46.5	50.0	-7.0	20.0
Tetryl	Ave	113.7	112.4		49.4	50.0	-1.1	20.0
Nitroglycerin	Ave	94.56	91.20		48.2	50.0	-3.6	20.0
2,4,6-Trinitrotoluene	Ave	122.8	121.9		49.6	50.0	-0.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	81.93	80.46		49.1	50.0	-1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	110.2	109.1		49.5	50.0	-1.0	20.0
2,6-Dinitrotoluene	Ave	71.33	69.52		48.7	50.0	-2.5	20.0
2,4-Dinitrotoluene	Ave	128.3	127.0		49.5	50.0	-1.0	20.0
2-Nitrotoluene	Lin2		1073		47.2	50.0	-5.6	20.0
4-Nitrotoluene	Lin2		1432		47.5	50.0	-4.9	20.0
3-Nitrotoluene	Lin2		59.08		45.8	50.0	-8.5	20.0
PETN	Ave	53.52	51.32		47.9	50.0	-4.1	20.0
3,4-Dinitrotoluene	Ave	73.09	71.90		49.2	50.0	-1.6	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329066/55 Calibration Date: 10/10/2019 03:11

Instrument ID: LC11 Calib Start Date: 09/25/2019 22:31

GC Column: Synergi C18 ID: 4.60(mm) Calib End Date: 09/26/2019 03:52

Lab File ID: G0000062.D

Analyte	RT	RT WINDOW	
		FROM	TO
HMX	17.78	17.53	18.03
RDX	20.37	20.12	20.62
1,3,5-Trinitrobenzene	22.12	21.87	22.37
1,3-Dinitrobenzene	24.31	24.06	24.56
3,5-Dinitroaniline	25.32	25.07	25.57
Nitrobenzene	25.83	25.58	26.08
Tetryl	26.43	26.18	26.68
Nitroglycerin	27.10	26.85	27.35
2,4,6-Trinitrotoluene	27.73	27.48	27.98
4-Amino-2,6-dinitrotoluene	28.61	28.27	28.95
2-Amino-4,6-dinitrotoluene	29.28	28.90	29.66
2,6-Dinitrotoluene	30.55	30.25	30.85
2,4-Dinitrotoluene	30.99	30.68	31.30
2-Nitrotoluene	34.00	33.67	34.33
4-Nitrotoluene	35.48	35.12	35.84
3-Nitrotoluene	37.04	36.64	37.44
PETN	38.43	38.02	38.84
3,4-Dinitrotoluene	28.95	28.70	29.20

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-303740/12 Calibration Date: 06/26/2019 03:51

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.08	53.36		197	200	-1.3	20.0
1,3-Dinitrobenzene	Ave	109.8	111.5		203	200	1.6	20.0
Ethylene glycol dinitrate	Ave	53.92	52.42		194	200	-2.8	20.0
1,3,5-Trinitrobenzene	Ave	85.49	87.05		204	200	1.8	20.0
2-Nitrotoluene	Ave	65.74	65.29		199	200	-0.7	20.0
4-Nitrotoluene	Ave	65.74	65.29		199	200	-0.7	20.0
3-Nitrotoluene	Ave	1011	983.7		195	200	-2.7	20.0
3,5-Dinitroaniline	Ave	90.82	91.10		201	200	0.3	20.0
RDX	Ave	1240	1194		192	200	-3.8	20.0
2,4-Dinitrotoluene	Ave	110.9	110.0		198	200	-0.9	20.0
2,6-Dinitrotoluene	Ave	81.79	82.41		202	200	0.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	175.7	178.2		203	200	1.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	164.1	155.3		189	200	-5.4	20.0
2,4,6-Trinitrotoluene	Ave	185.2	200.1		216	200	8.1	20.0
HMX	Ave	147.8	146.6		198	200	-0.8	20.0
Nitroglycerin	Ave	181.0	183.9		203	200	1.6	20.0
Tetryl	Ave	217.9	235.8		216	200	8.2	20.0
PETN	Ave	206.7	188.3		182	200	-8.9	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-303740/12 Calibration Date: 06/26/2019 03:51

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.81	21.58	22.08
1,3-Dinitrobenzene	24.06	23.85	24.35
Ethylene glycol dinitrate	24.07	23.85	24.35
1,3,5-Trinitrobenzene	26.00	25.71	26.39
2-Nitrotoluene	28.83	28.61	29.11
4-Nitrotoluene	28.83	28.61	29.11
3-Nitrotoluene	29.40	29.18	29.68
3,5-Dinitroaniline	30.03	29.81	30.33
RDX	30.91	30.69	31.19
2,4-Dinitrotoluene	31.79	31.58	32.08
2,6-Dinitrotoluene	32.55	32.33	32.83
2-Amino-4,6-dinitrotoluene	33.69	33.46	33.96
4-Amino-2,6-dinitrotoluene	33.95	33.72	34.22
2,4,6-Trinitrotoluene	35.16	34.93	35.43
HMX	36.09	35.86	36.36
Nitroglycerin	36.81	36.57	37.07
Tetryl	37.73	37.49	37.99
PETN	41.03	40.78	41.28

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-321126/13 Calibration Date: 09/06/2019 05:45

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: E000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92				200		

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-321126/13 Calibration Date: 09/06/2019 05:45

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: E000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate			

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-321126/13 Calibration Date: 09/06/2019 05:45

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: E000013.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.10	52.86		195	200	-2.3	20.0
1,3-Dinitrobenzene	Ave	109.1	110.3		202	200	1.1	20.0
1,3,5-Trinitrobenzene	Ave	87.08	86.11		198	200	-1.1	20.0
2-Nitrotoluene	Lin2		64.32		197	200	-1.3	20.0
4-Nitrotoluene	Lin2		64.32		197	200	-1.3	20.0
3-Nitrotoluene	Ave	980.3	942.7		192	200	-3.8	20.0
3,5-Dinitroaniline	Lin2		87.77		200	200	-0.0	20.0
RDX	Lin2		51.73		203	200	1.5	20.0
2,4-Dinitrotoluene	Lin2		104.1		204	200	1.8	20.0
2,6-Dinitrotoluene	Lin2		71.85		206	200	2.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	158.4	161.4		204	200	2.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	143.5	141.4		197	200	-1.5	20.0
2,4,6-Trinitrotoluene	Ave	181.8	184.8		203	200	1.6	20.0
HMX	Lin2		144.0		205	200	2.3	20.0
Nitroglycerin	Lin2		1434		201	200	0.5	20.0
Tetryl	Lin2		1831		198	200	-1.2	20.0
PETN	Ave	201.1	192.4		191	200	-4.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-321126/13 Calibration Date: 09/06/2019 05:45

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: E000013.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.38	21.06	21.56
1,3-Dinitrobenzene	23.53	23.21	23.71
1,3,5-Trinitrobenzene	25.28	24.87	25.55
2-Nitrotoluene	28.34	28.01	28.51
4-Nitrotoluene	28.34	28.01	28.51
3-Nitrotoluene	28.90	28.59	29.09
3,5-Dinitroaniline	29.46	29.10	29.62
RDX	30.36	30.02	30.52
2,4-Dinitrotoluene	31.23	30.90	31.40
2,6-Dinitrotoluene	32.07	31.74	32.24
2-Amino-4,6-dinitrotoluene	33.39	33.08	33.58
4-Amino-2,6-dinitrotoluene	33.67	33.37	33.87
2,4,6-Trinitrotoluene	34.87	34.59	35.09
HMX	35.93	35.66	36.16
Nitroglycerin	36.61	36.33	36.83
Tetryl	37.56	37.28	37.78
PETN	40.90	40.62	41.12

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326181/3 Calibration Date: 09/25/2019 19:20

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	1.770		24.8	100	-96.7*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326181/3 Calibration Date: 09/25/2019 19:20

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.56	23.31	23.81

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326181/3 Calibration Date: 09/25/2019 19:20

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: Y000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.10	51.81		95.8	100	-4.2	20.0
1,3-Dinitrobenzene	Ave	109.1	105.3		96.5	100	-3.5	20.0
1,3,5-Trinitrobenzene	Ave	87.08	84.13		96.6	100	-3.4	20.0
2-Nitrotoluene	Lin2		63.61		97.4	100	-2.6	20.0
4-Nitrotoluene	Lin2		63.61		97.4	100	-2.6	20.0
3-Nitrotoluene	Ave	980.3	948.6		96.8	100	-3.2	20.0
3,5-Dinitroaniline	Lin2		86.03		97.6	100	-2.4	20.0
RDX	Lin2		49.57		96.5	100	-3.5	20.0
2,4-Dinitrotoluene	Lin2		101.0		98.3	100	-1.7	20.0
2,6-Dinitrotoluene	Lin2		71.14		102	100	1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	158.4	160.1		101	100	1.1	20.0
4-Amino-2,6-dinitrotoluene	Ave	143.5	147.0		102	100	2.5	20.0
2,4,6-Trinitrotoluene	Ave	181.8	182.2		100	100	0.2	20.0
HMX	Lin2		137.3		97.2	100	-2.8	20.0
Nitroglycerin	Lin2		1400		98.6	100	-1.4	20.0
Tetryl	Lin2		1856		100	100	0.2	20.0
PETN	Ave	201.1	190.8		94.9	100	-5.1	20.0
3,4-Dinitrotoluene	Ave	117.9	117.3		99.5	100	-0.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326181/3 Calibration Date: 09/25/2019 19:20

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: Y000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.43	21.18	21.68
1,3-Dinitrobenzene	23.57	23.32	23.82
1,3,5-Trinitrobenzene	25.25	24.91	25.59
2-Nitrotoluene	28.47	28.22	28.72
4-Nitrotoluene	28.47	28.22	28.72
3-Nitrotoluene	29.02	28.77	29.27
3,5-Dinitroaniline	29.62	29.36	29.88
RDX	30.52	30.27	30.77
2,4-Dinitrotoluene	31.38	31.13	31.63
2,6-Dinitrotoluene	32.23	31.98	32.48
2-Amino-4,6-dinitrotoluene	33.52	33.27	33.77
4-Amino-2,6-dinitrotoluene	33.81	33.56	34.06
2,4,6-Trinitrotoluene	34.95	34.70	35.20
HMX	36.02	35.77	36.27
Nitroglycerin	36.68	36.43	36.93
Tetryl	37.63	37.38	37.88
PETN	40.97	40.72	41.22
3,4-Dinitrotoluene	34.57	34.32	34.82

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326181/15 Calibration Date: 09/26/2019 13:34

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000022.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	1.460		10.2	50.0	-97.3*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326181/15 Calibration Date: 09/26/2019 13:34

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: Y000022.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.60	23.35	23.85

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326181/15 Calibration Date: 09/26/2019 13:34

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: Y000022.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.10	51.40		47.5	50.0	-5.0	20.0
1,3-Dinitrobenzene	Ave	109.1	103.7		47.5	50.0	-5.0	20.0
1,3,5-Trinitrobenzene	Ave	87.08	82.82		47.6	50.0	-4.9	20.0
2-Nitrotoluene	Lin2		62.68		47.8	50.0	-4.5	20.0
4-Nitrotoluene	Lin2		62.68		47.8	50.0	-4.5	20.0
3-Nitrotoluene	Ave	980.3	955.2		48.7	50.0	-2.6	20.0
3,5-Dinitroaniline	Lin2		85.50		48.1	50.0	-3.8	20.0
RDX	Lin2		50.30		48.2	50.0	-3.5	20.0
2,4-Dinitrotoluene	Lin2		100.9		48.7	50.0	-2.7	20.0
2,6-Dinitrotoluene	Lin2		70.74		50.4	50.0	0.9	20.0
2-Amino-4,6-dinitrotoluene	Ave	158.4	155.2		49.0	50.0	-2.0	20.0
4-Amino-2,6-dinitrotoluene	Ave	143.5	142.8		49.8	50.0	-0.5	20.0
2,4,6-Trinitrotoluene	Ave	181.8	175.2		48.2	50.0	-3.6	20.0
HMX	Lin2		131.1		46.1	50.0	-7.8	20.0
Nitroglycerin	Lin2		1366		48.6	50.0	-2.8	20.0
Tetryl	Lin2		1823		49.3	50.0	-1.4	20.0
PETN	Ave	201.1	181.4		45.1	50.0	-9.8	20.0
3,4-Dinitrotoluene	Ave	117.9	112.9		47.9	50.0	-4.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326181/15 Calibration Date: 09/26/2019 13:34

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: Y000022.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.46	21.21	21.71
1,3-Dinitrobenzene	23.60	23.35	23.85
1,3,5-Trinitrobenzene	25.30	24.96	25.64
2-Nitrotoluene	28.50	28.25	28.75
4-Nitrotoluene	28.50	28.25	28.75
3-Nitrotoluene	29.04	28.79	29.29
3,5-Dinitroaniline	29.66	29.40	29.92
RDX	30.57	30.32	30.82
2,4-Dinitrotoluene	31.41	31.16	31.66
2,6-Dinitrotoluene	32.26	32.01	32.51
2-Amino-4,6-dinitrotoluene	33.54	33.29	33.79
4-Amino-2,6-dinitrotoluene	33.83	33.58	34.08
2,4,6-Trinitrotoluene	34.98	34.73	35.23
HMX	36.04	35.79	36.29
Nitroglycerin	36.70	36.45	36.95
Tetryl	37.65	37.40	37.90
PETN	40.97	40.72	41.22
3,4-Dinitrotoluene	34.58	34.33	34.83

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326765/3 Calibration Date: 09/27/2019 18:24

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: ZA000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.10	50.44		93.2	100	-6.8	20.0
1,3-Dinitrobenzene	Ave	109.1	101.4		93.0	100	-7.0	20.0
1,3,5-Trinitrobenzene	Ave	87.08	80.08		92.0	100	-8.0	20.0
2-Nitrotoluene	Lin2		61.26		93.8	100	-6.2	20.0
4-Nitrotoluene	Lin2		61.26		93.8	100	-6.2	20.0
3-Nitrotoluene	Ave	980.3	917.3		93.6	100	-6.4	20.0
3,5-Dinitroaniline	Lin2		80.71		91.5	100	-8.5	20.0
RDX	Lin2		46.70		90.8	100	-9.2	20.0
2,4-Dinitrotoluene	Lin2		94.51		91.9	100	-8.1	20.0
2,6-Dinitrotoluene	Lin2		66.84		95.6	100	-4.4	20.0
2-Amino-4,6-dinitrotoluene	Ave	158.4	146.2		92.3	100	-7.7	20.0
4-Amino-2,6-dinitrotoluene	Ave	143.5	132.7		92.5	100	-7.5	20.0
2,4,6-Trinitrotoluene	Ave	181.8	165.7		91.1	100	-8.9	20.0
HMX	Lin2		123.0		87.0	100	-13.0	20.0
Nitroglycerin	Lin2		1394		98.2	100	-1.8	20.0
Tetryl	Lin2		1849		99.8	100	-0.2	20.0
PETN	Ave	201.1	177.8		88.4	100	-11.6	20.0
3,4-Dinitrotoluene	Ave	117.9	105.5		89.5	100	-10.5	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-326765/3 Calibration Date: 09/27/2019 18:24

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: ZA000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.50	21.25	21.75
1,3-Dinitrobenzene	23.65	23.40	23.90
1,3,5-Trinitrobenzene	25.35	25.01	25.69
2-Nitrotoluene	28.52	28.27	28.77
4-Nitrotoluene	28.52	28.27	28.77
3-Nitrotoluene	29.06	28.81	29.31
3,5-Dinitroaniline	29.70	29.44	29.96
RDX	30.59	30.34	30.84
2,4-Dinitrotoluene	31.44	31.19	31.69
2,6-Dinitrotoluene	32.28	32.03	32.53
2-Amino-4,6-dinitrotoluene	33.55	33.30	33.80
4-Amino-2,6-dinitrotoluene	33.83	33.58	34.08
2,4,6-Trinitrotoluene	34.98	34.73	35.23
HMX	36.03	35.78	36.28
Nitroglycerin	36.68	36.43	36.93
Tetryl	37.64	37.39	37.89
PETN	40.95	40.70	41.20
3,4-Dinitrotoluene	34.58	34.33	34.83

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326765/16 Calibration Date: 09/28/2019 06:52

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: ZA000016.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	54.10	50.24		46.4	50.0	-7.1	20.0
1,3-Dinitrobenzene	Ave	109.1	101.2		46.4	50.0	-7.2	20.0
1,3,5-Trinitrobenzene	Ave	87.08	80.04		46.0	50.0	-8.1	20.0
2-Nitrotoluene	Lin2		60.82		46.3	50.0	-7.3	20.0
4-Nitrotoluene	Lin2		60.82		46.3	50.0	-7.3	20.0
3-Nitrotoluene	Ave	980.3	862.1		44.0	50.0	-12.1	20.0
3,5-Dinitroaniline	Lin2		79.78		44.8	50.0	-10.3	20.0
RDX	Lin2		46.02		44.0	50.0	-12.0	20.0
2,4-Dinitrotoluene	Lin2		92.58		44.6	50.0	-10.8	20.0
2,6-Dinitrotoluene	Lin2		64.86		46.2	50.0	-7.6	20.0
2-Amino-4,6-dinitrotoluene	Ave	158.4	146.3		46.2	50.0	-7.6	20.0
4-Amino-2,6-dinitrotoluene	Ave	143.5	133.9		46.7	50.0	-6.7	20.0
2,4,6-Trinitrotoluene	Ave	181.8	163.6		45.0	50.0	-10.0	20.0
HMX	Lin2		121.6		42.7	50.0	-14.6	20.0
Nitroglycerin	Lin2		1383		49.2	50.0	-1.6	20.0
Tetryl	Lin2		1828		49.4	50.0	-1.1	20.0
PETN	Ave	201.1	179.8		44.7	50.0	-10.6	20.0
3,4-Dinitrotoluene	Ave	117.9	104.6		44.4	50.0	-11.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-326765/16 Calibration Date: 09/28/2019 06:52

Instrument ID: LC12 Calib Start Date: 09/05/2019 21:07

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 09/06/2019 03:50

Lab File ID: ZA000016.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.48	21.23	21.73
1,3-Dinitrobenzene	23.64	23.39	23.89
1,3,5-Trinitrobenzene	25.36	25.02	25.70
2-Nitrotoluene	28.52	28.27	28.77
4-Nitrotoluene	28.52	28.27	28.77
3-Nitrotoluene	29.05	28.80	29.30
3,5-Dinitroaniline	29.70	29.44	29.96
RDX	30.59	30.34	30.84
2,4-Dinitrotoluene	31.43	31.18	31.68
2,6-Dinitrotoluene	32.28	32.03	32.53
2-Amino-4,6-dinitrotoluene	33.55	33.30	33.80
4-Amino-2,6-dinitrotoluene	33.83	33.58	34.08
2,4,6-Trinitrotoluene	34.98	34.73	35.23
HMX	36.04	35.79	36.29
Nitroglycerin	36.69	36.44	36.94
Tetryl	37.64	37.39	37.89
PETN	40.96	40.71	41.21
3,4-Dinitrotoluene	34.58	34.33	34.83

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-327611/12 Calibration Date: 10/02/2019 04:27

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: A000014.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	45.08		198	200	-16.4	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-327611/12 Calibration Date: 10/02/2019 04:27

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: A000014.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.45	23.21	23.71

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-327611/12 Calibration Date: 10/02/2019 04:27

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: A000014.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	46.88		195	200	-2.4	20.0
1,3-Dinitrobenzene	Ave	93.10	95.32		205	200	2.4	20.0
1,3,5-Trinitrobenzene	Ave	73.13	72.91		199	200	-0.3	20.0
2-Nitrotoluene	Lin2		54.97		199	200	-0.4	20.0
4-Nitrotoluene	Lin2		54.97		199	200	-0.4	20.0
3-Nitrotoluene	Lin2		36.22		207	200	3.7	20.0
3,5-Dinitroaniline	Lin2		71.14		199	200	-0.7	20.0
RDX	Lin2		42.43		209	200	4.5	20.0
2,4-Dinitrotoluene	Lin2		84.23		206	200	3.0	20.0
2,6-Dinitrotoluene	Lin2		56.78		205	200	2.3	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	120.9		199	200	-0.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	109.7		193	200	-3.4	20.0
2,4,6-Trinitrotoluene	Ave	135.9	133.5		196	200	-1.8	20.0
HMX	Ave	100.1	98.83		197	200	-1.3	20.0
Nitroglycerin	Ave	122.5	123.9		202	200	1.2	20.0
Tetryl	Ave	165.3	161.0		195	200	-2.6	20.0
PETN	Ave	143.0	132.8		186	200	-7.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 320-327611/12 Calibration Date: 10/02/2019 04:27

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: A000014.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.33	21.09	21.59
1,3-Dinitrobenzene	23.45	23.23	23.73
1,3,5-Trinitrobenzene	25.13	24.82	25.50
2-Nitrotoluene	28.28	28.08	28.58
4-Nitrotoluene	28.28	28.08	28.58
3-Nitrotoluene	28.81	28.61	29.11
3,5-Dinitroaniline	29.42	29.20	29.72
RDX	30.32	30.12	30.62
2,4-Dinitrotoluene	31.18	30.97	31.47
2,6-Dinitrotoluene	32.04	31.82	32.32
2-Amino-4,6-dinitrotoluene	33.39	33.17	33.67
4-Amino-2,6-dinitrotoluene	33.66	33.44	33.94
2,4,6-Trinitrotoluene	34.86	34.62	35.12
HMX	35.95	35.71	36.21
Nitroglycerin	36.60	36.37	36.87
Tetryl	37.56	37.33	37.83
PETN	40.90	40.68	41.18

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-327955/3 Calibration Date: 10/02/2019 18:27

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: B000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	47.41		98.7	100	-1.3	20.0
1,3-Dinitrobenzene	Ave	93.10	93.96		101	100	0.9	20.0
1,3,5-Trinitrobenzene	Ave	73.13	73.73		101	100	0.8	20.0
2-Nitrotoluene	Lin2		56.62		102	100	2.3	20.0
4-Nitrotoluene	Lin2		56.62		102	100	2.3	20.0
3-Nitrotoluene	Lin2		35.73		102	100	1.5	20.0
3,5-Dinitroaniline	Lin2		73.55		102	100	2.2	20.0
RDX	Lin2		42.39		103	100	2.9	20.0
2,4-Dinitrotoluene	Lin2		83.95		102	100	1.9	20.0
2,6-Dinitrotoluene	Lin2		56.71		102	100	1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	123.2		101	100	1.5	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	114.0		100	100	0.3	20.0
2,4,6-Trinitrotoluene	Ave	135.9	138.6		102	100	2.0	20.0
HMX	Ave	100.1	101.3		101	100	1.2	20.0
Nitroglycerin	Ave	122.5	124.5		102	100	1.7	20.0
Tetryl	Ave	165.3	167.0		101	100	1.0	20.0
PETN	Ave	143.0	144.1		101	100	0.7	20.0
3,4-Dinitrotoluene	Ave	86.17	87.76		102	100	1.8	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-327955/3 Calibration Date: 10/02/2019 18:27

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: B000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.35	21.10	21.60
1,3-Dinitrobenzene	23.48	23.23	23.73
1,3,5-Trinitrobenzene	25.15	24.81	25.49
2-Nitrotoluene	28.32	28.07	28.57
4-Nitrotoluene	28.32	28.07	28.57
3-Nitrotoluene	28.87	28.62	29.12
3,5-Dinitroaniline	29.45	29.19	29.71
RDX	30.35	30.10	30.60
2,4-Dinitrotoluene	31.21	30.96	31.46
2,6-Dinitrotoluene	32.06	31.81	32.31
2-Amino-4,6-dinitrotoluene	33.41	33.16	33.66
4-Amino-2,6-dinitrotoluene	33.68	33.43	33.93
2,4,6-Trinitrotoluene	34.86	34.61	35.11
HMX	35.96	35.71	36.21
Nitroglycerin	36.61	36.36	36.86
Tetryl	37.57	37.32	37.82
PETN	40.90	40.65	41.15
3,4-Dinitrotoluene	34.48	34.23	34.73

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327955/16 Calibration Date: 10/03/2019 07:52

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: B000017.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	47.28		49.2	50.0	-1.5	20.0
1,3-Dinitrobenzene	Ave	93.10	93.50		50.2	50.0	0.4	20.0
1,3,5-Trinitrobenzene	Ave	73.13	73.62		50.3	50.0	0.7	20.0
2-Nitrotoluene	Lin2		56.20		50.4	50.0	0.8	20.0
4-Nitrotoluene	Lin2		56.20		50.4	50.0	0.8	20.0
3-Nitrotoluene	Lin2		35.44		49.5	50.0	-1.0	20.0
3,5-Dinitroaniline	Lin2		72.74		50.0	50.0	0.0	20.0
RDX	Lin2		41.30		48.6	50.0	-2.8	20.0
2,4-Dinitrotoluene	Lin2		82.44		49.2	50.0	-1.5	20.0
2,6-Dinitrotoluene	Lin2		55.28		49.1	50.0	-1.8	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	121.7		50.1	50.0	0.2	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	113.0		49.8	50.0	-0.5	20.0
2,4,6-Trinitrotoluene	Ave	135.9	137.9		50.7	50.0	1.4	20.0
HMX	Ave	100.1	103.4		51.6	50.0	3.2	20.0
Nitroglycerin	Ave	122.5	125.0		51.0	50.0	2.1	20.0
Tetryl	Ave	165.3	167.8		50.7	50.0	1.5	20.0
PETN	Ave	143.0	142.2		49.7	50.0	-0.5	20.0
3,4-Dinitrotoluene	Ave	86.17	87.30		50.7	50.0	1.3	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-327955/16 Calibration Date: 10/03/2019 07:52

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: B000017.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.36	21.11	21.61
1,3-Dinitrobenzene	23.47	23.22	23.72
1,3,5-Trinitrobenzene	25.17	24.83	25.51
2-Nitrotoluene	28.34	28.09	28.59
4-Nitrotoluene	28.34	28.09	28.59
3-Nitrotoluene	28.84	28.59	29.09
3,5-Dinitroaniline	29.47	29.21	29.73
RDX	30.37	30.12	30.62
2,4-Dinitrotoluene	31.25	31.00	31.50
2,6-Dinitrotoluene	32.09	31.84	32.34
2-Amino-4,6-dinitrotoluene	33.43	33.18	33.68
4-Amino-2,6-dinitrotoluene	33.69	33.44	33.94
2,4,6-Trinitrotoluene	34.87	34.62	35.12
HMX	35.96	35.71	36.21
Nitroglycerin	36.61	36.36	36.86
Tetryl	37.56	37.31	37.81
PETN	40.89	40.64	41.14
3,4-Dinitrotoluene	34.48	34.23	34.73

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-329486/3 Calibration Date: 10/08/2019 21:26

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000003.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	46.23		96.3	100	-3.7	20.0
1,3-Dinitrobenzene	Ave	93.10	91.50		98.3	100	-1.7	20.0
1,3,5-Trinitrobenzene	Ave	73.13	71.72		98.1	100	-1.9	20.0
2-Nitrotoluene	Lin2		55.11		99.5	100	-0.5	20.0
4-Nitrotoluene	Lin2		55.11		99.5	100	-0.5	20.0
3-Nitrotoluene	Lin2		36.48		104	100	3.7	20.0
3,5-Dinitroaniline	Lin2		73.27		102	100	1.8	20.0
RDX	Lin2		41.01		99.5	100	-0.5	20.0
2,4-Dinitrotoluene	Lin2		81.61		99.0	100	-1.0	20.0
2,6-Dinitrotoluene	Lin2		54.82		98.3	100	-1.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	116.7		96.1	100	-3.9	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	116.1		102	100	2.2	20.0
2,4,6-Trinitrotoluene	Ave	135.9	132.8		97.7	100	-2.3	20.0
HMX	Ave	100.1	94.50		94.4	100	-5.6	20.0
Nitroglycerin	Ave	122.5	117.7		96.1	100	-3.9	20.0
Tetryl	Ave	165.3	158.7		96.0	100	-4.0	20.0
PETN	Ave	143.0	135.8		94.9	100	-5.1	20.0
3,4-Dinitrotoluene	Ave	86.17	83.53		96.9	100	-3.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVRT 320-329486/3 Calibration Date: 10/08/2019 21:26

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000003.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.31	21.06	21.56
1,3-Dinitrobenzene	23.40	23.15	23.65
1,3,5-Trinitrobenzene	25.07	24.73	25.41
2-Nitrotoluene	28.26	28.01	28.51
4-Nitrotoluene	28.26	28.01	28.51
3-Nitrotoluene	28.78	28.53	29.03
3,5-Dinitroaniline	29.35	29.09	29.61
RDX	30.28	30.03	30.53
2,4-Dinitrotoluene	31.15	30.90	31.40
2,6-Dinitrotoluene	32.01	31.76	32.26
2-Amino-4,6-dinitrotoluene	33.36	33.11	33.61
4-Amino-2,6-dinitrotoluene	33.63	33.38	33.88
2,4,6-Trinitrotoluene	34.83	34.58	35.08
HMX	35.93	35.68	36.18
Nitroglycerin	36.59	36.34	36.84
Tetryl	37.55	37.30	37.80
PETN	40.88	40.63	41.13
3,4-Dinitrotoluene	34.46	34.21	34.71

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/16 Calibration Date: 10/09/2019 10:52

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000017.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	4.480		4.93	50.0	-91.7*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/16 Calibration Date: 10/09/2019 10:52

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000017.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.30	23.05	23.55

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/16 Calibration Date: 10/09/2019 10:52

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000017.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	46.68		48.6	50.0	-2.8	20.0
1,3-Dinitrobenzene	Ave	93.10	93.04		50.0	50.0	-0.0	20.0
1,3,5-Trinitrobenzene	Ave	73.13	72.74		49.7	50.0	-0.5	20.0
2-Nitrotoluene	Lin2		55.54		49.8	50.0	-0.4	20.0
4-Nitrotoluene	Lin2		55.54		49.8	50.0	-0.4	20.0
3-Nitrotoluene	Lin2		35.94		50.2	50.0	0.5	20.0
3,5-Dinitroaniline	Lin2		73.24		50.4	50.0	0.7	20.0
RDX	Lin2		40.52		47.7	50.0	-4.7	20.0
2,4-Dinitrotoluene	Lin2		81.22		48.5	50.0	-3.0	20.0
2,6-Dinitrotoluene	Lin2		53.42		47.4	50.0	-5.1	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	113.7		46.8	50.0	-6.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	112.9		49.7	50.0	-0.6	20.0
2,4,6-Trinitrotoluene	Ave	135.9	131.5		48.4	50.0	-3.3	20.0
HMX	Ave	100.1	95.92		47.9	50.0	-4.2	20.0
Nitroglycerin	Ave	122.5	120.5		49.2	50.0	-1.6	20.0
Tetryl	Ave	165.3	161.1		48.7	50.0	-2.5	20.0
PETN	Ave	143.0	138.2		48.3	50.0	-3.4	20.0
3,4-Dinitrotoluene	Ave	86.17	82.62		47.9	50.0	-4.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/16 Calibration Date: 10/09/2019 10:52

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000017.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.22	20.97	21.47
1,3-Dinitrobenzene	23.31	23.06	23.56
1,3,5-Trinitrobenzene	24.97	24.63	25.31
2-Nitrotoluene	28.14	27.89	28.39
4-Nitrotoluene	28.14	27.89	28.39
3-Nitrotoluene	28.67	28.42	28.92
3,5-Dinitroaniline	29.22	28.96	29.48
RDX	30.13	29.88	30.38
2,4-Dinitrotoluene	31.00	30.75	31.25
2,6-Dinitrotoluene	31.87	31.62	32.12
2-Amino-4,6-dinitrotoluene	33.27	33.02	33.52
4-Amino-2,6-dinitrotoluene	33.55	33.30	33.80
2,4,6-Trinitrotoluene	34.75	34.50	35.00
HMX	35.88	35.63	36.13
Nitroglycerin	36.53	36.28	36.78
Tetryl	37.49	37.24	37.74
PETN	40.83	40.58	41.08
3,4-Dinitrotoluene	34.38	34.13	34.63

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/28 Calibration Date: 10/09/2019 22:22

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000029.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	43.30		47.6	50.0	-19.7	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/28 Calibration Date: 10/09/2019 22:22

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000029.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.35	23.10	23.60

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/28 Calibration Date: 10/09/2019 22:22

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000029.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	44.94		46.8	50.0	-6.4	20.0
1,3-Dinitrobenzene	Ave	93.10	92.04		49.4	50.0	-1.1	20.0
1,3,5-Trinitrobenzene	Ave	73.13	72.26		49.4	50.0	-1.2	20.0
2-Nitrotoluene	Lin2		53.04		47.5	50.0	-4.9	20.0
4-Nitrotoluene	Lin2		53.04		47.5	50.0	-4.9	20.0
3-Nitrotoluene	Lin2		34.46		48.1	50.0	-3.8	20.0
3,5-Dinitroaniline	Lin2		72.48		49.8	50.0	-0.3	20.0
RDX	Lin2		40.02		47.0	50.0	-5.9	20.0
2,4-Dinitrotoluene	Lin2		80.30		47.9	50.0	-4.2	20.0
2,6-Dinitrotoluene	Lin2		53.14		47.2	50.0	-5.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	117.3		48.3	50.0	-3.4	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	117.5		51.7	50.0	3.4	20.0
2,4,6-Trinitrotoluene	Ave	135.9	132.1		48.6	50.0	-2.8	20.0
HMX	Ave	100.1	94.00		46.9	50.0	-6.1	20.0
Nitroglycerin	Ave	122.5	118.1		48.2	50.0	-3.6	20.0
Tetryl	Ave	165.3	157.6		47.7	50.0	-4.6	20.0
PETN	Ave	143.0	134.9		47.2	50.0	-5.7	20.0
3,4-Dinitrotoluene	Ave	86.17	83.40		48.4	50.0	-3.2	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/28 Calibration Date: 10/09/2019 22:22

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000029.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.26	21.01	21.51
1,3-Dinitrobenzene	23.35	23.10	23.60
1,3,5-Trinitrobenzene	24.98	24.64	25.32
2-Nitrotoluene	28.20	27.95	28.45
4-Nitrotoluene	28.20	27.95	28.45
3-Nitrotoluene	28.70	28.45	28.95
3,5-Dinitroaniline	29.28	29.02	29.54
RDX	30.20	29.95	30.45
2,4-Dinitrotoluene	31.05	30.80	31.30
2,6-Dinitrotoluene	31.91	31.66	32.16
2-Amino-4,6-dinitrotoluene	33.30	33.05	33.55
4-Amino-2,6-dinitrotoluene	33.57	33.32	33.82
2,4,6-Trinitrotoluene	34.76	34.51	35.01
HMX	35.89	35.64	36.14
Nitroglycerin	36.54	36.29	36.79
Tetryl	37.49	37.24	37.74
PETN	40.84	40.59	41.09
3,4-Dinitrotoluene	34.40	34.15	34.65

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/38 Calibration Date: 10/10/2019 08:55

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000040.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethylene glycol dinitrate	Ave	53.92	1.160		1.28	50.0	-97.8*	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/38 Calibration Date: 10/10/2019 08:55

Instrument ID: LC12 Calib Start Date: 06/25/2019 20:10

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 06/26/2019 01:55

Lab File ID: H000040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Ethylene glycol dinitrate	23.31	23.06	23.56

FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/38 Calibration Date: 10/10/2019 08:55

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000040.D Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Nitrobenzene	Ave	48.01	46.34		48.3	50.0	-3.5	20.0
1,3-Dinitrobenzene	Ave	93.10	91.38		49.1	50.0	-1.8	20.0
1,3,5-Trinitrobenzene	Ave	73.13	71.74		49.0	50.0	-1.9	20.0
2-Nitrotoluene	Lin2		54.78		49.1	50.0	-1.8	20.0
4-Nitrotoluene	Lin2		54.78		49.1	50.0	-1.8	20.0
3-Nitrotoluene	Lin2		36.18		50.6	50.0	1.2	20.0
3,5-Dinitroaniline	Lin2		72.74		50.0	50.0	0.0	20.0
RDX	Lin2		40.32		47.4	50.0	-5.2	20.0
2,4-Dinitrotoluene	Lin2		79.98		47.7	50.0	-4.6	20.0
2,6-Dinitrotoluene	Lin2		52.54		46.6	50.0	-6.7	20.0
2-Amino-4,6-dinitrotoluene	Ave	121.4	112.5		46.3	50.0	-7.3	20.0
4-Amino-2,6-dinitrotoluene	Ave	113.6	114.5		50.4	50.0	0.8	20.0
2,4,6-Trinitrotoluene	Ave	135.9	128.7		47.3	50.0	-5.3	20.0
HMX	Ave	100.1	93.10		46.5	50.0	-7.0	20.0
Nitroglycerin	Ave	122.5	115.9		47.3	50.0	-5.4	20.0
Tetryl	Ave	165.3	156.8		47.4	50.0	-5.1	20.0
PETN	Ave	143.0	133.8		46.8	50.0	-6.4	20.0
3,4-Dinitrotoluene	Ave	86.17	80.90		46.9	50.0	-6.1	20.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 320-329486/38 Calibration Date: 10/10/2019 08:55

Instrument ID: LC12 Calib Start Date: 10/01/2019 20:46

GC Column: Zorbax CN ID: 4.60(mm) Calib End Date: 10/02/2019 02:31

Lab File ID: H000040.D

Analyte	RT	RT WINDOW	
		FROM	TO
Nitrobenzene	21.25	21.00	21.50
1,3-Dinitrobenzene	23.35	23.10	23.60
1,3,5-Trinitrobenzene	24.97	24.63	25.31
2-Nitrotoluene	28.19	27.94	28.44
4-Nitrotoluene	28.19	27.94	28.44
3-Nitrotoluene	28.68	28.43	28.93
3,5-Dinitroaniline	29.26	29.00	29.52
RDX	30.19	29.94	30.44
2,4-Dinitrotoluene	31.04	30.79	31.29
2,6-Dinitrotoluene	31.89	31.64	32.14
2-Amino-4,6-dinitrotoluene	33.30	33.05	33.55
4-Amino-2,6-dinitrotoluene	33.57	33.32	33.82
2,4,6-Trinitrotoluene	34.77	34.52	35.02
HMX	35.89	35.64	36.14
Nitroglycerin	36.54	36.29	36.79
Tetryl	37.49	37.24	37.74
PETN	40.83	40.58	41.08
3,4-Dinitrotoluene	34.40	34.15	34.65

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-324664/1-A

Matrix: Water Lab File ID: Z0000073.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 1000(mL) Date Analyzed: 09/29/2019 09:10

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.: 326750 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	95		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 320-328371/1-A

Matrix: Water Lab File ID: G0000039.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 1000(mL) Date Analyzed: 10/09/2019 06:38

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.: 329066 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	87		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-324664/2-A

Matrix: Water Lab File ID: Z0000074.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 1000(mL) Date Analyzed: 09/29/2019 10:03

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.: 326750 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	1.04		0.10	
99-65-0	1,3-Dinitrobenzene	1.06		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.735		0.10	
121-14-2	2,4-Dinitrotoluene	1.03		0.10	
606-20-2	2,6-Dinitrotoluene	1.00		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	1.07		0.20	
88-72-2	2-Nitrotoluene	0.964		0.50	
99-08-1	3-Nitrotoluene	1.08		0.50	
99-99-0	4-Nitrotoluene	0.947		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	1.10		0.10	
2691-41-0	HMX	1.08		0.10	
121-82-4	RDX	1.11		0.10	
98-95-3	Nitrobenzene	1.03		0.10	
479-45-8	Tetryl	0.683		0.10	
55-63-0	Nitroglycerin	5.00		0.65	
78-11-5	PETN	4.85		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	95		79-111

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 320-328371/2-A

Matrix: Water Lab File ID: G0000040.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 10/04/2019 07:06

Sample wt/vol: 1000(mL) Date Analyzed: 10/09/2019 07:31

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.: 329066 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.975		0.10	
99-65-0	1,3-Dinitrobenzene	0.991		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.852		0.10	
121-14-2	2,4-Dinitrotoluene	0.966		0.10	
606-20-2	2,6-Dinitrotoluene	0.947		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	0.998		0.20	
88-72-2	2-Nitrotoluene	0.934		0.50	
99-08-1	3-Nitrotoluene	0.946		0.50	
99-99-0	4-Nitrotoluene	0.951		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	0.974		0.10	
2691-41-0	HMX	1.03		0.10	
121-82-4	RDX	1.04		0.10	
98-95-3	Nitrobenzene	0.975		0.10	
479-45-8	Tetryl	0.816		0.10	
55-63-0	Nitroglycerin	4.70		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.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 320-324664/3-A

Matrix: Water Lab File ID: Z0000075.D

Analysis Method: 8330B Date Collected:

Extraction Method: 8330-Prep Date Extracted: 09/19/2019 07:30

Sample wt/vol: 1000(mL) Date Analyzed: 09/29/2019 10:57

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.: 326750 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
99-35-4	1,3,5-Trinitrobenzene	0.988		0.10	
99-65-0	1,3-Dinitrobenzene	0.961		0.10	
118-96-7	2,4,6-Trinitrotoluene	0.674		0.10	
121-14-2	2,4-Dinitrotoluene	0.948		0.10	
606-20-2	2,6-Dinitrotoluene	0.916		0.10	
35572-78-2	2-Amino-4,6-dinitrotoluene	0.993		0.20	
88-72-2	2-Nitrotoluene	0.892		0.50	
99-08-1	3-Nitrotoluene	0.982		0.50	
99-99-0	4-Nitrotoluene	0.856		0.50	
19406-51-0	4-Amino-2,6-dinitrotoluene	1.01		0.10	
2691-41-0	HMX	0.991		0.10	
121-82-4	RDX	1.00		0.10	
98-95-3	Nitrobenzene	0.937		0.10	
479-45-8	Tetryl	0.625		0.10	
55-63-0	Nitroglycerin	4.43		0.65	
78-11-5	PETN	4.43		0.65	

CAS NO.	SURROGATE	%REC	Q	LIMITS
610-39-9	3,4-Dinitrotoluene	97		79-111

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Start Date: 09/25/2019 22:31

Analysis Batch Number: 326139 End Date: 09/26/2019 12:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-326139/4 IC		09/25/2019 22:31	1	YA0000011.D	Synergi C18 4.6(mm)
STD2 320-326139/5 IC		09/25/2019 23:24	1	YA0000012.D	Synergi C18 4.6(mm)
STD3 320-326139/6 IC		09/26/2019 00:18	1	YA0000013.D	Synergi C18 4.6(mm)
STD4 320-326139/7 IC		09/26/2019 01:11	1	YA0000014.D	Synergi C18 4.6(mm)
STD5 320-326139/8 IC		09/26/2019 02:05	1	YA0000015.D	Synergi C18 4.6(mm)
STD6 320-326139/9 IC		09/26/2019 02:59	1	YA0000016.D	Synergi C18 4.6(mm)
STD7 320-326139/10 IC		09/26/2019 03:52	1	YA0000017.D	Synergi C18 4.6(mm)
ICV 320-326139/12		09/26/2019 05:40	1	YA0000019.D	Synergi C18 4.6(mm)
STD 320-326139/13 IC		09/26/2019 06:33	1		Synergi C18 4.6(mm)
STD 320-326139/14 IC		09/26/2019 07:27	1		Synergi C18 4.6(mm)
STD 320-326139/15 IC		09/26/2019 08:20	1		Synergi C18 4.6(mm)
STD 320-326139/16 IC		09/26/2019 09:14	1		Synergi C18 4.6(mm)
STD 320-326139/17 IC		09/26/2019 10:08	1		Synergi C18 4.6(mm)
STD 320-326139/18 IC		09/26/2019 11:01	1		Synergi C18 4.6(mm)
ICV 320-326139/20		09/26/2019 12:49	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Start Date: 09/28/2019 15:17

Analysis Batch Number: 326750 End Date: 09/30/2019 10:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-326750/1		09/28/2019 15:17	1	Z0000053.D	Synergi C18 4.6(mm)
CCVRT 320-326750/2		09/28/2019 16:11	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 17:58	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 18:51	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 19:45	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 20:39	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 21:32	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 22:26	1		Synergi C18 4.6(mm)
ZZZZZ		09/28/2019 23:20	1		Synergi C18 4.6(mm)
ZZZZZ		09/29/2019 00:13	1		Synergi C18 4.6(mm)
ZZZZZ		09/29/2019 01:07	1		Synergi C18 4.6(mm)
ZZZZZ		09/29/2019 02:01	1		Synergi C18 4.6(mm)
CCV 320-326750/14		09/29/2019 02:54	1	Z0000066.D	Synergi C18 4.6(mm)
CCV 320-326750/15		09/29/2019 03:48	1		Synergi C18 4.6(mm)
MB 320-324664/1-A		09/29/2019 09:10	1	Z0000073.D	Synergi C18 4.6(mm)
LCS 320-324664/2-A		09/29/2019 10:03	1	Z0000074.D	Synergi C18 4.6(mm)
LCSD 320-324664/3-A		09/29/2019 10:57	1	Z0000075.D	Synergi C18 4.6(mm)
ZZZZZ		09/29/2019 11:51	1		Synergi C18 4.6(mm)
CCV 320-326750/26		09/29/2019 13:38	1	Z0000078.D	Synergi C18 4.6(mm)
CCV 320-326750/27		09/29/2019 14:32	1		Synergi C18 4.6(mm)
580-89178-1		09/29/2019 19:53	1	Z0000085.D	Synergi C18 4.6(mm)
580-89178-2		09/29/2019 21:40	1	Z0000087.D	Synergi C18 4.6(mm)
580-89178-3		09/29/2019 22:34	1	Z0000088.D	Synergi C18 4.6(mm)
580-89178-4		09/29/2019 23:28	1	Z0000089.D	Synergi C18 4.6(mm)
CCV 320-326750/38		09/30/2019 00:21	1	Z0000090.D	Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 01:15	5		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 02:08	1		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 03:02	1		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 03:55	5		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 04:49	1		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 05:42	1		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 07:30	1		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 08:23	5		Synergi C18 4.6(mm)
ZZZZZ		09/30/2019 09:17	1		Synergi C18 4.6(mm)
CCV 320-326750/49		09/30/2019 10:11	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Start Date: 10/01/2019 14:45

Analysis Batch Number: 327493 End Date: 10/04/2019 09:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-327493/3		10/01/2019 14:45	1	ZD0000003.D	Synergi C18 4.6(mm)
CCVRT 320-327493/4		10/01/2019 15:39	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 19:13	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 20:07	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 21:00	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 21:54	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 22:48	1		Synergi C18 4.6(mm)
ZZZZZ		10/01/2019 23:41	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 00:35	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 01:28	1		Synergi C18 4.6(mm)
CCV 320-327493/55		10/02/2019 02:22	1	ZD0000016.D	Synergi C18 4.6(mm)
CCV 320-327493/56		10/02/2019 03:16	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 04:09	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 05:03	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 05:57	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 06:50	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 08:38	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 09:31	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 10:24	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 11:18	1		Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 12:12	1		Synergi C18 4.6(mm)
580-89178-2 DL		10/02/2019 13:05	4	ZD0000028.D	Synergi C18 4.6(mm)
CCV 320-327493/16		10/02/2019 13:59	1	ZD0000029.D	Synergi C18 4.6(mm)
CCV 320-327493/17		10/02/2019 14:53	1		Synergi C18 4.6(mm)
580-89178-4 DL		10/02/2019 16:40	2	ZD0000032.D	Synergi C18 4.6(mm)
ZZZZZ		10/02/2019 17:33	10		Synergi C18 4.6(mm)
ZZZZZ		10/03/2019 01:36	1		Synergi C18 4.6(mm)
CCV 320-327493/28		10/03/2019 02:29	1	ZD0000043.D	Synergi C18 4.6(mm)
CCV 320-327493/29		10/03/2019 03:23	1		Synergi C18 4.6(mm)
CCV 320-327493/38		10/03/2019 13:12	1		Synergi C18 4.6(mm)
CCV 320-327493/39		10/03/2019 14:06	1		Synergi C18 4.6(mm)
ZZZZZ		10/03/2019 20:21	1		Synergi C18 4.6(mm)
ZZZZZ		10/03/2019 21:15	1		Synergi C18 4.6(mm)
ZZZZZ		10/03/2019 22:08	1		Synergi C18 4.6(mm)
ZZZZZ		10/03/2019 23:02	1		Synergi C18 4.6(mm)
CCV 320-327493/70		10/04/2019 02:36	1		Synergi C18 4.6(mm)
CCV 320-327493/71		10/04/2019 03:30	1		Synergi C18 4.6(mm)
CCV 320-327493/57		10/04/2019 08:52	1		Synergi C18 4.6(mm)
CCV 320-327493/58		10/04/2019 09:45	1		Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC11 Start Date: 10/07/2019 22:28

Analysis Batch Number: 329066 End Date: 10/10/2019 03:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-329066/3		10/07/2019 22:28	1	G0000003.D	Synergi C18 4.6(mm)
CCVRT 320-329066/4		10/07/2019 23:22	1		Synergi C18 4.6(mm)
CCV 320-329066/16		10/08/2019 10:05	1		Synergi C18 4.6(mm)
CCV 320-329066/17		10/08/2019 10:59	1		Synergi C18 4.6(mm)
ZZZZZ		10/08/2019 18:08	1		Synergi C18 4.6(mm)
ZZZZZ		10/08/2019 19:01	1		Synergi C18 4.6(mm)
CCV 320-329066/28		10/08/2019 20:48	1	G0000028.D	Synergi C18 4.6(mm)
CCV 320-329066/29		10/08/2019 21:42	1		Synergi C18 4.6(mm)
ZZZZZ		10/08/2019 23:29	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 00:23	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 01:16	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 02:10	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 03:03	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 03:57	1		Synergi C18 4.6(mm)
MB 320-328371/1-A		10/09/2019 06:38	1	G0000039.D	Synergi C18 4.6(mm)
LCS 320-328371/2-A		10/09/2019 07:31	1	G0000040.D	Synergi C18 4.6(mm)
CCV 320-329066/40		10/09/2019 08:25	1	G0000041.D	Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 09:18	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 10:12	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 11:06	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 11:59	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 12:53	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 13:47	1		Synergi C18 4.6(mm)
CCV 320-329066/56		10/09/2019 14:40	1		Synergi C18 4.6(mm)
CCV 320-329066/58		10/09/2019 17:21	1		Synergi C18 4.6(mm)
CCV 320-329066/59		10/09/2019 18:14	1	G0000052.D	Synergi C18 4.6(mm)
580-89178-2 RE		10/09/2019 19:08	1	G0000053.D	Synergi C18 4.6(mm)
580-89178-3 RE		10/09/2019 20:02	1	G0000054.D	Synergi C18 4.6(mm)
580-89178-1 RE		10/09/2019 20:55	1	G0000055.D	Synergi C18 4.6(mm)
580-89178-4 RE		10/09/2019 21:49	1	G0000056.D	Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 22:42	1		Synergi C18 4.6(mm)
ZZZZZ		10/09/2019 23:36	1		Synergi C18 4.6(mm)
580-89178-2 REDL		10/10/2019 00:30	4	G0000059.D	Synergi C18 4.6(mm)
580-89178-4 REDL		10/10/2019 01:23	2	G0000060.D	Synergi C18 4.6(mm)
ZZZZZ		10/10/2019 02:17	5		Synergi C18 4.6(mm)
CCV 320-329066/55		10/10/2019 03:11	1	G0000062.D	Synergi C18 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 06/25/2019 20:10

Analysis Batch Number: 303740 End Date: 06/26/2019 15:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-303740/4 IC		06/25/2019 20:10	1	Y000005.D	Zorbax CN 4.6(mm)
STD2 320-303740/5 IC		06/25/2019 21:08	1	Y000006.D	Zorbax CN 4.6(mm)
STD3 320-303740/6 IC		06/25/2019 22:05	1	Y000007.D	Zorbax CN 4.6(mm)
STD4 320-303740/7 IC		06/25/2019 23:03	1	Y000008.D	Zorbax CN 4.6(mm)
STD5 320-303740/8 IC		06/26/2019 00:00	1	Y000009.D	Zorbax CN 4.6(mm)
STD6 320-303740/9 IC		06/26/2019 00:58	1	Y000010.D	Zorbax CN 4.6(mm)
STD7 320-303740/10 IC		06/26/2019 01:55	1	Y000011.D	Zorbax CN 4.6(mm)
ICV 320-303740/12		06/26/2019 03:51	1	Y000013.D	Zorbax CN 4.6(mm)
STD2 320-303740/14 IC		06/26/2019 05:46	1		Zorbax CN 4.6(mm)
STD3 320-303740/15 IC		06/26/2019 06:43	1		Zorbax CN 4.6(mm)
STD4 320-303740/16 IC		06/26/2019 07:41	1		Zorbax CN 4.6(mm)
STD5 320-303740/17 IC		06/26/2019 08:38	1		Zorbax CN 4.6(mm)
STD6 320-303740/18 IC		06/26/2019 09:36	1		Zorbax CN 4.6(mm)
STD7 320-303740/19 IC		06/26/2019 10:33	1		Zorbax CN 4.6(mm)
ICV 320-303740/22		06/26/2019 15:22	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 09/05/2019 21:07

Analysis Batch Number: 321126 End Date: 09/06/2019 05:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-321126/4 IC		09/05/2019 21:07	1	E000004.D	Zorbax CN 4.6(mm)
STD2 320-321126/5 IC		09/05/2019 22:05	1	E000005.D	Zorbax CN 4.6(mm)
STD3 320-321126/6 IC		09/05/2019 23:02	1	E000006.D	Zorbax CN 4.6(mm)
STD4 320-321126/7 IC		09/06/2019 00:00	1	E000007.D	Zorbax CN 4.6(mm)
STD5 320-321126/8 IC		09/06/2019 00:57	1	E000008.D	Zorbax CN 4.6(mm)
STD6 320-321126/9 IC		09/06/2019 01:55	1	E000009.D	Zorbax CN 4.6(mm)
STD7 320-321126/10 IC		09/06/2019 02:53	1	E000010.D	Zorbax CN 4.6(mm)
STD8 320-321126/11 IC		09/06/2019 03:50	1	E000011.D	Zorbax CN 4.6(mm)
ICV 320-321126/13		09/06/2019 05:45	1	E000013.D	Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 09/25/2019 19:20

Analysis Batch Number: 326181 End Date: 09/27/2019 07:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-326181/3		09/25/2019 19:20	1	Y000003.D	Zorbax CN 4.6(mm)
ZZZZZ		09/25/2019 21:15	1		Zorbax CN 4.6(mm)
ZZZZZ		09/25/2019 22:13	1		Zorbax CN 4.6(mm)
ZZZZZ		09/25/2019 23:10	1		Zorbax CN 4.6(mm)
ZZZZZ		09/26/2019 00:08	1		Zorbax CN 4.6(mm)
580-89178-1		09/26/2019 11:39	1	Y000020.D	Zorbax CN 4.6(mm)
580-89178-2		09/26/2019 12:37	1	Y000021.D	Zorbax CN 4.6(mm)
CCV 320-326181/15		09/26/2019 13:34	1	Y000022.D	Zorbax CN 4.6(mm)
CCV 320-326181/26		09/27/2019 00:07	1		Zorbax CN 4.6(mm)
CCV 320-326181/33		09/27/2019 07:47	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 09/27/2019 18:24

Analysis Batch Number: 326765 End Date: 09/30/2019 13:32

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-326765/3		09/27/2019 18:24	1	ZA000003.D	Zorbax CN 4.6(mm)
CCVRT 320-326765/4		09/27/2019 19:21	1		Zorbax CN 4.6(mm)
580-89178-3		09/28/2019 00:09	1	ZA000009.D	Zorbax CN 4.6(mm)
580-89178-4		09/28/2019 01:06	1	ZA000010.D	Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 02:04	5		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 03:01	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 03:59	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 04:57	5		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 05:54	1		Zorbax CN 4.6(mm)
CCV 320-326765/16		09/28/2019 06:52	1	ZA000016.D	Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 12:36	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 13:34	5		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 14:32	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 15:29	5		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 16:27	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 20:17	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 21:14	1		Zorbax CN 4.6(mm)
CCV 320-326765/27		09/28/2019 22:12	1		Zorbax CN 4.6(mm)
ZZZZZ		09/28/2019 23:09	1		Zorbax CN 4.6(mm)
ZZZZZ		09/29/2019 00:07	1		Zorbax CN 4.6(mm)
CCV 320-326765/38		09/29/2019 08:45	1		Zorbax CN 4.6(mm)
CCV 320-326765/39		09/29/2019 09:43	1		Zorbax CN 4.6(mm)
CCV 320-326765/50		09/29/2019 20:16	1		Zorbax CN 4.6(mm)
CCV 320-326765/51		09/29/2019 21:14	1		Zorbax CN 4.6(mm)
CCV 320-326765/63		09/30/2019 08:45	1		Zorbax CN 4.6(mm)
CCV 320-326765/68		09/30/2019 13:32	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 10/01/2019 20:46

Analysis Batch Number: 327611 End Date: 10/02/2019 13:04

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 320-327611/4 IC		10/01/2019 20:46	1	A000006.D	Zorbax CN 4.6(mm)
STD2 320-327611/5 IC		10/01/2019 21:44	1	A000007.D	Zorbax CN 4.6(mm)
STD3 320-327611/6 IC		10/01/2019 22:41	1	A000008.D	Zorbax CN 4.6(mm)
STD4 320-327611/7 IC		10/01/2019 23:39	1	A000009.D	Zorbax CN 4.6(mm)
STD5 320-327611/8 IC		10/02/2019 00:36	1	A000010.D	Zorbax CN 4.6(mm)
STD6 320-327611/9 IC		10/02/2019 01:34	1	A000011.D	Zorbax CN 4.6(mm)
STD7 320-327611/10 IC		10/02/2019 02:31	1	A000012.D	Zorbax CN 4.6(mm)
ICV 320-327611/12		10/02/2019 04:27	1	A000014.D	Zorbax CN 4.6(mm)
STD2 320-327611/14 IC		10/02/2019 06:22	1		Zorbax CN 4.6(mm)
STD3 320-327611/15 IC		10/02/2019 07:19	1		Zorbax CN 4.6(mm)
STD4 320-327611/16 IC		10/02/2019 08:17	1		Zorbax CN 4.6(mm)
STD5 320-327611/17 IC		10/02/2019 09:14	1		Zorbax CN 4.6(mm)
STD6 320-327611/18 IC		10/02/2019 10:12	1		Zorbax CN 4.6(mm)
STD7 320-327611/19 IC		10/02/2019 11:09	1		Zorbax CN 4.6(mm)
ICV 320-327611/21		10/02/2019 13:04	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 10/02/2019 18:27

Analysis Batch Number: 327955 End Date: 10/04/2019 22:14

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-327955/3		10/02/2019 18:27	1	B000003.D	Zorbax CN 4.6(mm)
CCVRT 320-327955/4		10/02/2019 19:24	1		Zorbax CN 4.6(mm)
580-89178-2 DL		10/02/2019 23:14	4	B000008.D	Zorbax CN 4.6(mm)
580-89178-4 DL		10/03/2019 00:12	2	B000009.D	Zorbax CN 4.6(mm)
ZZZZZ		10/03/2019 01:09	10		Zorbax CN 4.6(mm)
CCV 320-327955/16		10/03/2019 07:52	1	B000017.D	Zorbax CN 4.6(mm)
CCV 320-327955/17		10/03/2019 08:49	1		Zorbax CN 4.6(mm)
CCV 320-327955/28		10/03/2019 22:15	1		Zorbax CN 4.6(mm)
CCV 320-327955/29		10/03/2019 23:12	1		Zorbax CN 4.6(mm)
CCV 320-327955/40		10/04/2019 09:46	1		Zorbax CN 4.6(mm)
CCV 320-327955/41		10/04/2019 10:43	1		Zorbax CN 4.6(mm)
CCV 320-327955/54		10/04/2019 21:17	1		Zorbax CN 4.6(mm)
CCV 320-327955/55		10/04/2019 22:14	1		Zorbax CN 4.6(mm)

HPLC/IC ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 580-89178-1

SDG No.:

Instrument ID: LC12 Start Date: 10/08/2019 21:26

Analysis Batch Number: 329486 End Date: 10/10/2019 19:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 320-329486/3		10/08/2019 21:26	1	H000003.D	Zorbax CN 4.6(mm)
CCVRT 320-329486/4		10/08/2019 22:24	1		Zorbax CN 4.6(mm)
ZZZZZ		10/09/2019 05:06	1		Zorbax CN 4.6(mm)
ZZZZZ		10/09/2019 06:04	1		Zorbax CN 4.6(mm)
ZZZZZ		10/09/2019 07:01	1		Zorbax CN 4.6(mm)
ZZZZZ		10/09/2019 07:59	1		Zorbax CN 4.6(mm)
CCV 320-329486/16		10/09/2019 10:52	1	H000017.D	Zorbax CN 4.6(mm)
CCV 320-329486/17		10/09/2019 11:49	1		Zorbax CN 4.6(mm)
580-89178-1 RE		10/09/2019 18:32	1	H000025.D	Zorbax CN 4.6(mm)
580-89178-2 RE		10/09/2019 19:30	1	H000026.D	Zorbax CN 4.6(mm)
580-89178-3 RE		10/09/2019 20:27	1	H000027.D	Zorbax CN 4.6(mm)
580-89178-4 RE		10/09/2019 21:25	1	H000028.D	Zorbax CN 4.6(mm)
CCV 320-329486/28		10/09/2019 22:22	1	H000029.D	Zorbax CN 4.6(mm)
ZZZZZ		10/09/2019 23:20	1		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 00:17	5		Zorbax CN 4.6(mm)
580-89178-4 REDL		10/10/2019 01:15	2	H000032.D	Zorbax CN 4.6(mm)
580-89178-2 REDL		10/10/2019 02:12	4	H000033.D	Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 03:10	10		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 04:07	5		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 05:05	5		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 06:03	1		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 07:00	1		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 07:58	1		Zorbax CN 4.6(mm)
CCV 320-329486/38		10/10/2019 08:55	1	H000040.D	Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 09:53	1		Zorbax CN 4.6(mm)
ZZZZZ		10/10/2019 10:50	1		Zorbax CN 4.6(mm)
CCV 320-329486/51		10/10/2019 19:28	1		Zorbax CN 4.6(mm)

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-89178-1

SDG No.:

Batch Number: 324664 Batch Start Date: 09/19/19 07:07 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 09/24/19 11:51

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00121	HP8330SP 00110
MB 320-324664/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-324664/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
LCSD 320-324664/3		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
580-89178-B-1	03Q19L4MW09AW	8330-Prep, 8330B	T	1497.4 g	504.86 g	992.5 mL	20 mL	50 uL	
580-89178-B-2	03Q19L4MW09BW	8330-Prep, 8330B	T	1498.4 g	504.11 g	994.3 mL	20 mL	50 uL	
580-89178-A-3	03Q19L4MW10AW	8330-Prep, 8330B	T	1496.0 g	503.87 g	992.1 mL	20 mL	50 uL	
580-89178-A-4	03Q19L4MW10BW	8330-Prep, 8330B	T	1494.4 g	504.21 g	990.2 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPNGPETNSP 00080	AnalysisComment				
MB 320-324664/1		8330-Prep, 8330B			SPE 4 Port 3				
LCS 320-324664/2		8330-Prep, 8330B		100 uL	SPE 4 Port 4				
LCSD 320-324664/3		8330-Prep, 8330B		100 uL	SPE 4 Port 5				
580-89178-B-1	03Q19L4MW09AW	8330-Prep, 8330B	T		SPE 3 Port 5				
580-89178-B-2	03Q19L4MW09BW	8330-Prep, 8330B	T		SPE 3 Port 6				
580-89178-A-3	03Q19L4MW10AW	8330-Prep, 8330B	T		SPE 4 Port 1				
580-89178-A-4	03Q19L4MW10BW	8330-Prep, 8330B	T		SPE 4 Port 2				

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.: 580-89178-1

SDG No.:

Batch Number: 324664 Batch Start Date: 09/19/19 07:07 Batch Analyst: Kuzmenko, Natalia

Batch Method: 8330-Prep Batch End Date: 09/24/19 11:51

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00112 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Client IDs match the labels; Pipette ID: 48487M; 2 mL pipette lot #11162018
Analyst ID - Concentration	JFA 9/19/19
Date of Clean up	9/24/19
Date Dilution Performed	9/24/19
Analyst ID - Dilution	NGK
Filter ID	R8PA33636
Date of Final Volume	9/24/19
Vendor lot number	0.1% HOAc/ACN_00112
Millipore Water Dispense Date	9/13/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	SC 9/19/19
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.

HPLC/IC BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Sacramen Job No.: 580-89178-1

SDG No.:

Batch Number: 328371 Batch Start Date: 10/04/19 07:05 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	HP34DNTSU 00123	HP8330SP 00113
MB 320-328371/1		8330-Prep, 8330B				1000 mL	20 mL	50 uL	
LCS 320-328371/2		8330-Prep, 8330B				1000 mL	20 mL	50 uL	20 uL
580-89178-A-1	03Q19L4MW09AW	8330-Prep, 8330B	T	1493.8 g	505.47 g	988.3 mL	20 mL	50 uL	
580-89178-A-2	03Q19L4MW09BW	8330-Prep, 8330B	T	1501.3 g	503.74 g	997.6 mL	20 mL	50 uL	
580-89178-B-3	03Q19L4MW10AW	8330-Prep, 8330B	T	1502.9 g	504.52 g	998.4 mL	20 mL	50 uL	
580-89178-B-4	03Q19L4MW10BW	8330-Prep, 8330B	T	1499.4 g	504.73 g	994.7 mL	20 mL	50 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	HPNGPETNSP 00080	AnalysisComment				
MB 320-328371/1		8330-Prep, 8330B			SPE 4 Port 4				
LCS 320-328371/2		8330-Prep, 8330B		100 uL	SPE 4 Port 5				
580-89178-A-1	03Q19L4MW09AW	8330-Prep, 8330B	T		SPE 3 Port 3				
580-89178-A-2	03Q19L4MW09BW	8330-Prep, 8330B	T		SPE 3 Port 4				
580-89178-B-3	03Q19L4MW10AW	8330-Prep, 8330B	T		SPE 3 Port 5				
580-89178-B-4	03Q19L4MW10BW	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.: 580-89178-1

SDG No.:

Batch Number: 328371 Batch Start Date: 10/04/19 07:05 Batch Analyst: Aguilar, Jose F

Batch Method: 8330-Prep Batch End Date:

Batch Notes	
0.1% HOAc/CAN ID	0.1% HOAc/ACN_00112 Dispenser lot 01-A-5335
Balance ID	QA-036
Batch Comment	Client IDs match the labels; Pipette ID: 48487M ; 2 mL pipette lot #11162018
Analyst ID - Concentration	JFA 10/4/19
Date of Clean up	10/7/19
Date Dilution Performed	10/7/19
Analyst ID - Dilution	JFA
Filter ID	R8PA33636
Date of Final Volume	10/03/19
Vendor lot number	0.1% HOAc/ACN_00112
Millipore Water Dispense Date	9/27/19
Prep Solvent Volume Used	5 mL
Analyst ID - Reagent Drop Witness	SC 10/4/19
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
54281-3	5X	AJC	27 Sept. 2019
54284-2	5X		
580-89178-2	2X		
580-89180-1	5X		
580-89180-3	5X		
580-89180-5	5X		
580-89180-6	5X		
580-89178-2	4X		30 Sept. 2019
580-89178-4	2X		
580-89180-5	10X		
160-35694-2/MS/MSD	10x / 50x		2 Oct. 2019
160-35694-3	50x / 10x		
160-35694-4	10X		
680-173994-5/DUP	20X		7 Oct. 2019
680-174316-1/MS/MSD	5X		
580-89178-2	4X		
580-89178-4	2X		
580-89180-1	5X		
320-54609-3	5X	AJC	7 Oct. 2019

SR 328371

Method 6860

Perchlorate (IC/MS) by Method 6860

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23046.d

Lab ID: LCS 280-471410/45 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Perchlorate	0.0500	0.0534	107	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS DETECTION LIMIT CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23010.d

Lab ID: DLCK 280-471409/12 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	DLCK CONCENTRATION (ug/L)	DLCK % REC	QC LIMITS REC	#
Perchlorate	0.0500	ND	97	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM III
LCMS LC INTERFERENCE CHECK STANDARD RECOVERY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IC819I23047.d

Lab ID: INF 280-471410/46 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	INF CONCENTRATION (ug/L)	INF % REC	QC LIMITS REC	#
Perchlorate	0.0500	ND	100	70-130	

Column to be used to flag recovery and RPD values

FORM III 6860

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab File ID: IC819I23045.d Lab Sample ID: MB 280-471410/44

Matrix: Water Date Extracted:

Instrument ID: LC_LCMS8 Date Analyzed: 09/23/2019 15:24

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 280-471410/43	IC819I23044.d	09/23/2019 15:19
	LCS 280-471410/45	IC819I23046.d	09/23/2019 15:29
	CCB 280-471410/56	IC819I23057.d	09/23/2019 16:25
03Q19L4MW09AW	580-89178-1	IC819I23063.d	09/23/2019 16:56
03Q19L4MW09BW	580-89178-2	IC819I23064.d	09/23/2019 17:01
03Q19L4MW10AW	580-89178-3	IC819I23065.d	09/23/2019 17:06
03Q19L4MW10BW	580-89178-4	IC819I23066.d	09/23/2019 17:11
	CCB 280-471410/69	IC819I23070.d	09/23/2019 17:32

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Calibration Start Date: 09/23/2019 11:34

GC Column: ID: () Calibration End Date: 09/23/2019 11:59

Calibration ID: 38414

		ClO418					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MEAN AREA AND MEAN RT		936976	2.62				
UPPER LIMIT		1405464	7.62				
LOWER LIMIT		468488	-2.38				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICB 280-471409/10		977999	2.61				
ICV 280-471409/11		1049880	2.61				
DLCK 280-471409/12		1021951	2.63				
CCV 280-471409/23		997859	2.60				
CCB 280-471409/25		978255	2.60				
CCV 280-471410/41		1078049	2.59				
CCVL 280-471410/42		1019461	2.57				
CCB 280-471410/43		1016080	2.57				
MB 280-471410/44		1150090	2.59				
LCS 280-471410/45		1093635	2.59				
INF 280-471410/46		953901	2.58				
CCV 280-471410/54		1057800	2.56				
CCVL 280-471410/55		1070168	2.56				
CCB 280-471410/56		1028967	2.58				
580-89178-1	03Q19L4MW09AW	1086132	2.60				
580-89178-2	03Q19L4MW09BW	1108949	2.60				
580-89178-3	03Q19L4MW10AW	1126603	2.56				
580-89178-4	03Q19L4MW10BW	1105001	2.56				
CCV 280-471410/67		1094489	2.57				
CCVL 280-471410/68		1061985	2.59				
CCB 280-471410/69		1043717	2.59				

ClO418 = Perchlorate-18O

Area Limit = 50%-150% of internal standard area
RT Limit = ± 5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 6860

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09AW Lab Sample ID: 580-89178-1

Matrix: Water Lab File ID: IC819I23063.d

Analysis Method: 6860 Date Collected: 09/12/2019 12:25

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 16:56

Con. Extract Vol.: Dilution Factor: 1000

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	360		50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW09BW Lab Sample ID: 580-89178-2

Matrix: Water Lab File ID: IC819I23064.d

Analysis Method: 6860 Date Collected: 09/12/2019 13:20

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 17:01

Con. Extract Vol.: Dilution Factor: 1000

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	200		50	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10AW Lab Sample ID: 580-89178-3

Matrix: Water Lab File ID: IC819I23065.d

Analysis Method: 6860 Date Collected: 09/12/2019 14:10

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 17:06

Con. Extract Vol.: Dilution Factor: 200

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	54		10	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: 03Q19L4MW10BW Lab Sample ID: 580-89178-4

Matrix: Water Lab File ID: IC819I23066.d

Analysis Method: 6860 Date Collected: 09/12/2019 15:00

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 17:11

Con. Extract Vol.: Dilution Factor: 1000

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	190		50	

FORM VI
LCMS BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1 Analy Batch No.: 471409

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/23/2019 11:34 Calibration End Date: 09/23/2019 11:59 Calibration ID: 38414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-471409/4	IC819I23002.d
Level 2	STD050 280-471409/5	IC819I23003.d
Level 3	STD100 280-471409/6	IC819I23004.d
Level 4	STD200 280-471409/7	IC819I23005.d
Level 5	STD500 280-471409/8	IC819I23006.d
Level 6	STD1000 280-471409/9	IC819I23007.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 3	LVL 4	LVL 5		B	M1	M2								
Perchlorate	1.4742 1.2457	1.4658	1.3673	1.2688	1.2402	Lin1	7.1682	1.2385							1.0000		0.9900

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, Denver Job No.: 580-89178-1 Analy Batch No.: 471409

SDG No.:

Instrument ID: LC_LCMS8 GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 09/23/2019 11:34 Calibration End Date: 09/23/2019 11:59 Calibration ID: 38414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD020 280-471409/4	IC819I23002.d
Level 2	STD050 280-471409/5	IC819I23003.d
Level 3	STD100 280-471409/6	IC819I23004.d
Level 4	STD200 280-471409/7	IC819I23005.d
Level 5	STD500 280-471409/8	IC819I23006.d
Level 6	STD1000 280-471409/9	IC819I23007.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perchlorate	ClO4 18	Lin1	128859 5955955	345211	611865	1147610	2913868	20.0 1000	50.0	100	200	500

Curve Type Legend:
Lin1 = Linear 1/conc ISTD

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: ICV 280-471409/11 Calibration Date: 09/23/2019 12:10

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23009.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.253		0.197	0.200	-1.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 280-471409/23 Calibration Date: 09/23/2019 13:12

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23021.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.228		0.193	0.200	-3.7	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 280-471410/41 Calibration Date: 09/23/2019 15:09

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23042.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.184		0.185	0.200	-7.3	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 280-471410/42 Calibration Date: 09/23/2019 15:14

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23043.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.790		0.0231	0.0200	15.6	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 280-471410/54 Calibration Date: 09/23/2019 16:15

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23055.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.188		0.186	0.200	-7.0	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 280-471410/55 Calibration Date: 09/23/2019 16:20

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23056.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.527		0.0189	0.0200	-5.6	30.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCV 280-471410/67 Calibration Date: 09/23/2019 17:21

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23068.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.107		0.173	0.200	-13.5	15.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Lab Sample ID: CCVL 280-471410/68 Calibration Date: 09/23/2019 17:27

Instrument ID: LC_LCMS8 Calib Start Date: 09/23/2019 11:34

GC Column: ID: Calib End Date: 09/23/2019 11:59

Lab File ID: IC819I23069.d Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perchlorate	Lin1		1.394		0.0167	0.0200	-16.4	30.0

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 280-471410/44

Matrix: Water Lab File ID: IC819I23045.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:24

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471409/25

Matrix: Water Lab File ID: IC819I23026.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 13:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471410/43

Matrix: Water Lab File ID: IC819I23044.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:19

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471410/56

Matrix: Water Lab File ID: IC819I23057.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 16:25

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 280-471410/69

Matrix: Water Lab File ID: IC819I23070.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 17:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: ICB 280-471409/10

Matrix: Water Lab File ID: IC819I23008.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:05

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 280-471410/45

Matrix: Water Lab File ID: IC819I23046.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:29

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	0.0534		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: DLCK 280-471409/12

Matrix: Water Lab File ID: IC819I23010.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 12:15

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471409 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Client Sample ID: Lab Sample ID: INF 280-471410/46

Matrix: Water Lab File ID: IC819I23047.d

Analysis Method: 6860 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 5(mL) Date Analyzed: 09/23/2019 15:34

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 250(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 471410 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
14797-73-0	Perchlorate	ND		0.050	

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Start Date: 09/23/2019 11:34

Analysis Batch Number: 471409 End Date: 09/23/2019 15:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD020 280-471409/4 IC		09/23/2019 11:34	1	IC819I23002.d	
STD050 280-471409/5 IC		09/23/2019 11:39	1	IC819I23003.d	
STD100 280-471409/6 IC		09/23/2019 11:44	1	IC819I23004.d	
STD200 280-471409/7 ICISAV		09/23/2019 11:49	1	IC819I23005.d	
STD500 280-471409/8 IC		09/23/2019 11:54	1	IC819I23006.d	
STD1000 280-471409/9 IC		09/23/2019 11:59	1	IC819I23007.d	
ICB 280-471409/10		09/23/2019 12:05	1	IC819I23008.d	
ICV 280-471409/11		09/23/2019 12:10	1	IC819I23009.d	
DLCK 280-471409/12		09/23/2019 12:15	1	IC819I23010.d	
ZZZZZ		09/23/2019 12:20	1		
ZZZZZ		09/23/2019 12:25	1		
INF 280-471409/15		09/23/2019 12:30	1		
ZZZZZ		09/23/2019 12:35	20		
ZZZZZ		09/23/2019 12:41	20		
ZZZZZ		09/23/2019 12:46	20		
ZZZZZ		09/23/2019 12:51	20		
ZZZZZ		09/23/2019 12:56	20		
ZZZZZ		09/23/2019 13:01	1		
ZZZZZ		09/23/2019 13:07	1		
CCV 280-471409/23		09/23/2019 13:12	1	IC819I23021.d	
CCVL 280-471409/24		09/23/2019 13:39	1		
CCB 280-471409/25		09/23/2019 13:47	1	IC819I23026.d	
ZZZZZ		09/23/2019 13:53	10		
ZZZZZ		09/23/2019 13:58	1		
ZZZZZ		09/23/2019 14:03	1		
ZZZZZ		09/23/2019 14:08	1		
ZZZZZ		09/23/2019 14:13	1		
ZZZZZ		09/23/2019 14:18	1		
ZZZZZ		09/23/2019 14:23	1		
ZZZZZ		09/23/2019 14:28	1		
ZZZZZ		09/23/2019 14:33	1		
ZZZZZ		09/23/2019 14:39	1		
CCV 280-471409/36		09/23/2019 14:44	1		
CCVL 280-471409/37		09/23/2019 14:49	1		
CCB 280-471409/38		09/23/2019 14:54	1		
ZZZZZ		09/23/2019 14:59	1		
ZZZZZ		09/23/2019 15:04	1		
CCV 280-471409/41		09/23/2019 15:09	1		
CCVL 280-471409/42		09/23/2019 15:14	1		
CCB 280-471409/43		09/23/2019 15:19	1		

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Instrument ID: LC_LCMS8 Start Date: 09/23/2019 15:09

Analysis Batch Number: 471410 End Date: 09/23/2019 18:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 280-471410/41		09/23/2019 15:09	1	IC819I23042.d	
CCVL 280-471410/42		09/23/2019 15:14	1	IC819I23043.d	
CCB 280-471410/43		09/23/2019 15:19	1	IC819I23044.d	
MB 280-471410/44		09/23/2019 15:24	1	IC819I23045.d	
LCS 280-471410/45		09/23/2019 15:29	1	IC819I23046.d	
INF 280-471410/46		09/23/2019 15:34	1	IC819I23047.d	
ZZZZZ		09/23/2019 15:39	1		
ZZZZZ		09/23/2019 15:44	1		
ZZZZZ		09/23/2019 15:49	1		
ZZZZZ		09/23/2019 15:54	1		
ZZZZZ		09/23/2019 16:00	1		
ZZZZZ		09/23/2019 16:05	1		
ZZZZZ		09/23/2019 16:10	1		
CCV 280-471410/54		09/23/2019 16:15	1	IC819I23055.d	
CCVL 280-471410/55		09/23/2019 16:20	1	IC819I23056.d	
CCB 280-471410/56		09/23/2019 16:25	1	IC819I23057.d	
ZZZZZ		09/23/2019 16:30	1		
ZZZZZ		09/23/2019 16:35	10		
ZZZZZ		09/23/2019 16:40	1		
ZZZZZ		09/23/2019 16:45	10		
ZZZZZ		09/23/2019 16:50	1		
580-89178-1		09/23/2019 16:56	1000	IC819I23063.d	
580-89178-2		09/23/2019 17:01	1000	IC819I23064.d	
580-89178-3		09/23/2019 17:06	200	IC819I23065.d	
580-89178-4		09/23/2019 17:11	1000	IC819I23066.d	
ZZZZZ		09/23/2019 17:16	1000		
CCV 280-471410/67		09/23/2019 17:21	1	IC819I23068.d	
CCVL 280-471410/68		09/23/2019 17:27	1	IC819I23069.d	
CCB 280-471410/69		09/23/2019 17:32	1	IC819I23070.d	
ZZZZZ		09/23/2019 17:37	100		
ZZZZZ		09/23/2019 17:42	100		
ZZZZZ		09/23/2019 17:47	100		
CCV 280-471410/73		09/23/2019 17:52	1		
CCVL 280-471410/74		09/23/2019 17:58	1		
CCB 280-471410/75		09/23/2019 18:03	1		

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Batch Number: 471409 Batch Start Date: 09/23/19 11:34 Batch Analyst: Becker, Chad B

Batch Method: 6860 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	6860-IS-Spike 00087	6860CalStockW 00110	6860ICVStockW 00043			
STD020 280-471409/4 IC		6860		50 uL	100 uL				
STD050 280-471409/5 IC		6860		50 uL	250 uL				
STD100 280-471409/6 IC		6860		50 uL	500 uL				
STD200 280-471409/7 ICISAV		6860		50 uL	1000 uL				
STD500 280-471409/8 IC		6860		50 uL	2500 uL				
STD1000 280-471409/9 IC		6860		50 uL	5000 uL				
ICB 280-471409/10		6860		50 uL					
ICV 280-471409/11		6860		50 uL		1000 uL			
DLCK 280-471409/12		6860		50 uL	250 uL				
CCV 280-471409/23		6860		50 uL	1000 uL				
CCB 280-471409/25		6860		50 uL					

Batch Notes	
Batch Comment	CB

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.

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Denver Job No.: 580-89178-1

SDG No.:

Batch Number: 471410 Batch Start Date: 09/23/19 15:09 Batch Analyst: Becker, Chad B

Batch Method: 6860 Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	6860-IS-Spike 00087	6860_INF_Soln 00017	6860CalStockW 00110	6860LCS 00024		
CCV 280-471410/41		6860		50 uL		1000 uL			
CCVL 280-471410/42		6860		50 uL		100 uL			
CCB 280-471410/43		6860		50 uL					
MB 280-471410/44		6860		50 uL					
LCS 280-471410/45		6860		50 uL			50 uL		
INF 280-471410/46		6860		50 uL	4950 uL		50 uL		
CCV 280-471410/54		6860		50 uL		1000 uL			
CCVL 280-471410/55		6860		50 uL		100 uL			
CCB 280-471410/56		6860		50 uL					
580-89178-C-1	03Q19L4MW09AW	6860	T	50 uL					
580-89178-C-2	03Q19L4MW09BW	6860	T	50 uL					
580-89178-C-3	03Q19L4MW10AW	6860	T	50 uL					
580-89178-C-4	03Q19L4MW10BW	6860	T	50 uL					
CCV 280-471410/67		6860		50 uL		1000 uL			
CCVL 280-471410/68		6860		50 uL		100 uL			
CCB 280-471410/69		6860		50 uL					

Batch Notes	
Batch Comment	CB

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

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 & Tommy Laird
Phone:
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	8260C_LL	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
Preservation Code:											
03Q19L4MW09AW	9/12/19	1225	G	W			X	X	X	6	
03Q19L4MW09BW	↓	1320	↓	↓			↓	↓	↓	↓	
03Q19L4MW10AW		1410									
03Q19L4MW10BW	↓	1500	↓	↓			↓	↓	↓	↓	
091219TB	↓	—	↓	↓				↓		3	

580-89178 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: Data Package III 3.9°

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/12/19 1730	PBS	Jessica Myn	9/13/19 1200	M.E.
2	Jessica Myn	9/13/19 1355	M.E.		9/13/19 1355	FAPOR
3						

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 Randall & Tommy Laird	Lab PM: Cruz, Sheri L	Carrier Tracking No(s):	COC No: 580-31510-10297.1
Client Contact: Matt Randall and Scott Brausten	Phone:	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		
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	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	8330A Nitroaromatics and Niramines	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
03Q19L4MW09AW	9/12/19	1225	G	W			X	X	X	6	
03Q19L4MW09BW		1320									
03Q19L4MW10AW		1410									
03Q19L4MW10BW		1500									
091219TB		—								3	

580-89178 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: Data Package III 3.9°

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Tommy Laird	9/12/19 1730	PBS	Jessica Mae	9/13/19 1200	M.E.
2		9/13/19 1355	M.E.		9/13/19 1355	TAKOR
3		9/16/19 1700	TAKOR		9/17/19 0910	TASER

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

Cooler Temperature(s) °C and Other Remarks:

IRM = 0.0/0.3

Ver: 08/04/2016

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Phone: 916-373-5600 Fax: 916-372-1059

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: 320-159454.1
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 #: 580-89178-1
Address: 4955 Yarrow Street, ,	Due Date Requested: 10/1/2019			
City: Arvada	TAT Requested (days):			
State, Zip: CO, 80002				
Phone: 303-736-0100(Tel) 303-431-7171(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)	6860/ Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
03Q19L4MW09AW (580-89178-1)	9/12/19	12:25 Pacific		Water			X	1	
03Q19L4MW09BW (580-89178-2)	9/12/19	13:20 Pacific		Water			X	1	
03Q19L4MW10AW (580-89178-3)	9/12/19	14:10 Pacific		Water			X	1	
03Q19L4MW10BW (580-89178-4)	9/12/19	15:00 Pacific		Water			X	1	

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
	9/17/19 1830			9/18/19 0913	TAEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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:
		1.9, +0.1 RS, ~~3.5~~, 9/18/19

Ver: 01-16-2019

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: 580-70060.1
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 #: 580-89178-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 10/1/2019			
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_IWWT (MOD) Explosives, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
03Q19L4MW09AW (580-89178-1)	9/12/19	12:25 Pacific		Water			X	X	3	
03Q19L4MW09BW (580-89178-2)	9/12/19	13:20 Pacific		Water			X	X	3	
03Q19L4MW10AW (580-89178-3)	9/12/19	14:10 Pacific		Water			X	X	3	
03Q19L4MW10BW (580-89178-4)	9/12/19	15:00 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:	Company	Received by:	Date/Time:	Company
	9/16/19 1720	TAPOL		9/17/19 900	ETA PGL
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.: 481127, 481125, 481126	Cooler Temperature(s) °C and Other Remarks: 2.3, 1.7, 1.7

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: PBS Engineering and Environmental

Job Number: 580-89178-1

Login Number: 89178
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: 580-89178-1

Login Number: 89178
List Number: 3
Creator: Zimmerman, Steven M

List Source: Eurofins TestAmerica, Denver
List Creation: 09/18/19 08:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	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: 580-89178-1

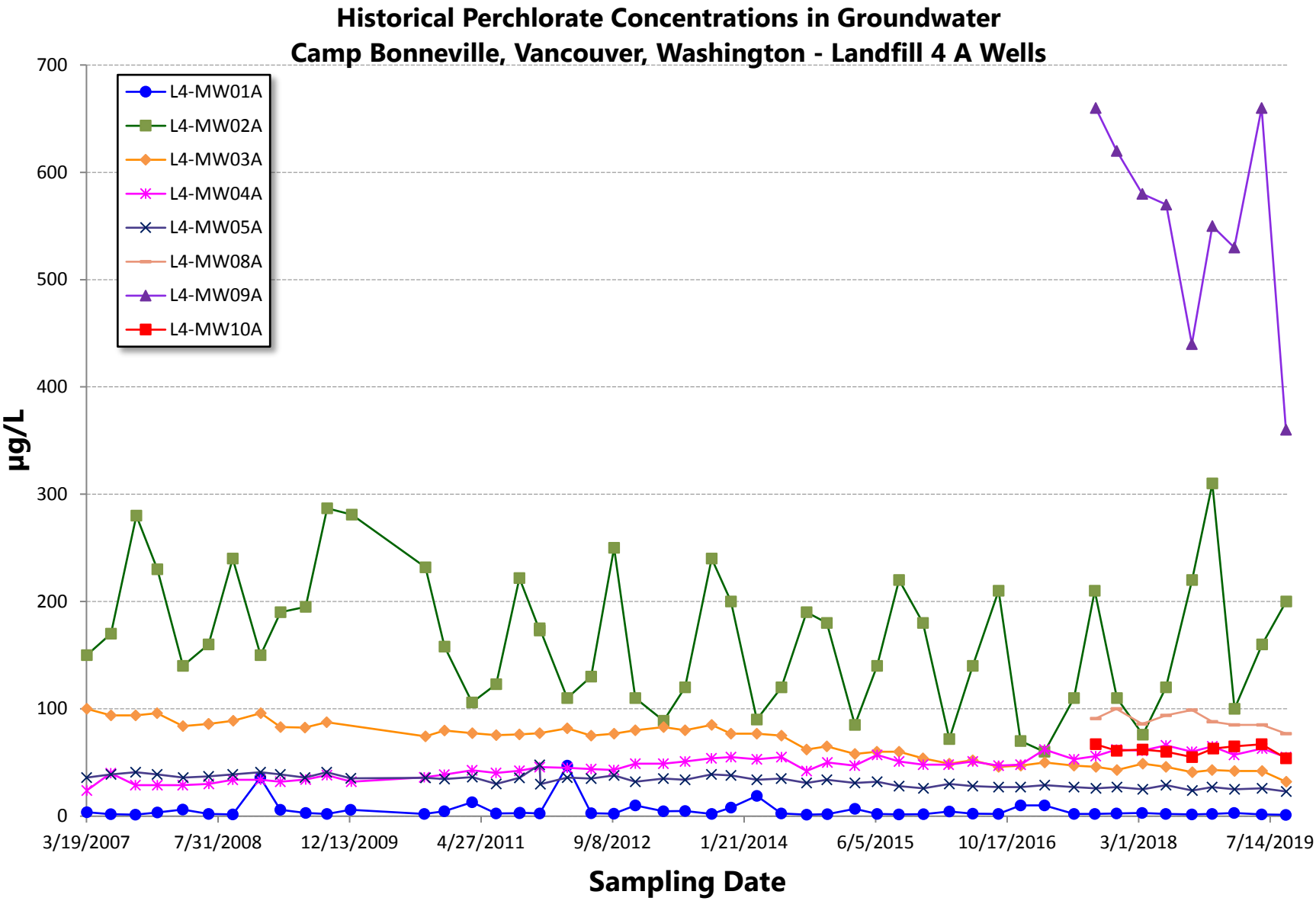
Login Number: 89178
List Number: 2
Creator: Thompson, Sarah W

List Source: Eurofins TestAmerica, Sacramento
List Creation: 09/17/19 12:50 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	481125
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	1.7c
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?	N/A	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 E

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
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9/8/2012
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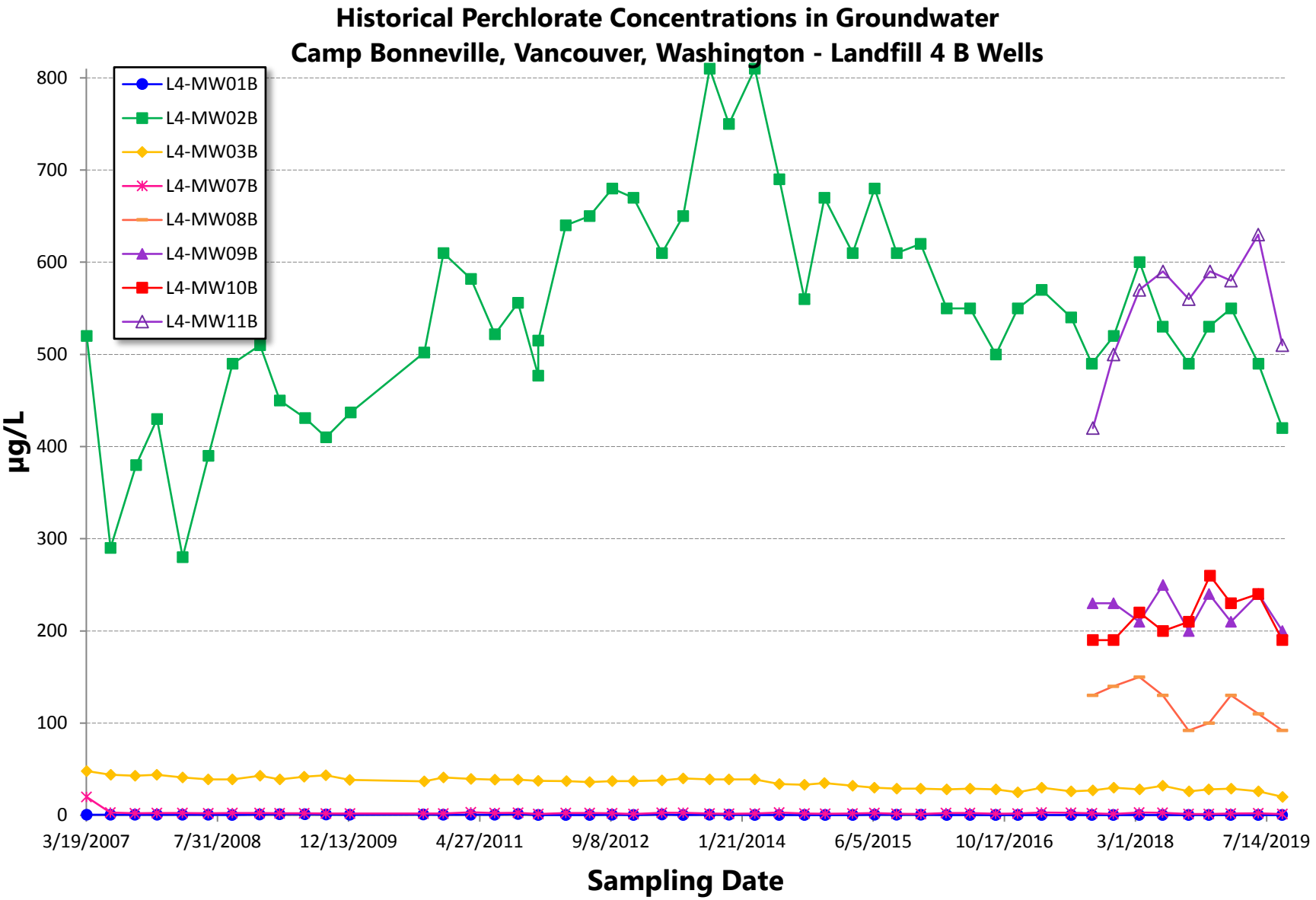
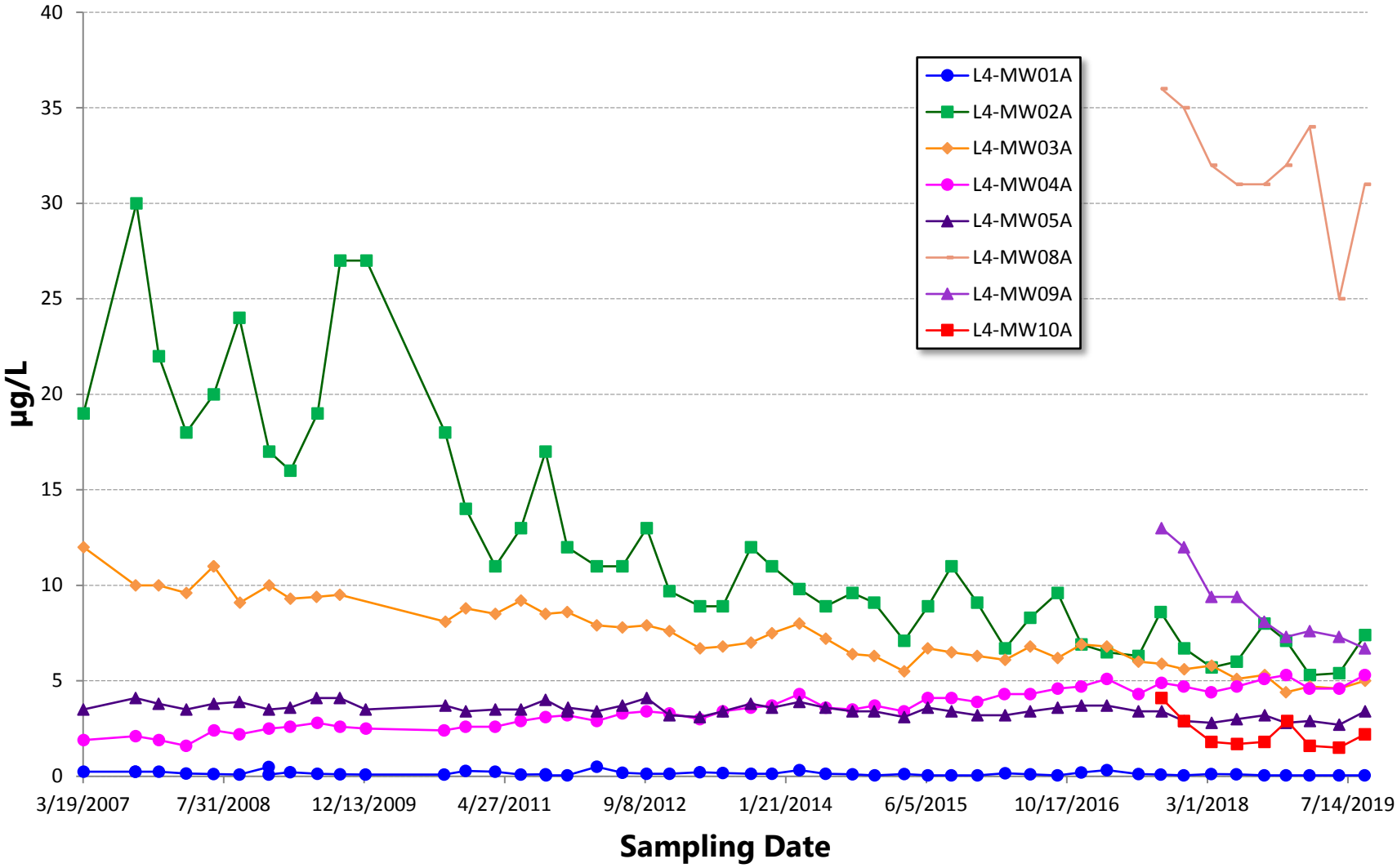
3/1/2018
7/14/2019
Sampling Date


Historical Perchlorate Concentrations in Groundwater
Camp Bonneville, Vancouver, Washington - Landfill 4 B Wells
L4-MW01B
L4-MW02B
L4-MW03B
L4-MW07B
L4-MW08B
L4-MW09B
L4-MW10B
L4-MW11B
µg/L
800
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

Historical RDX Concentrations in Groundwater
Camp Bonneville, Vancouver, Washington - Landfill 4 A Wells



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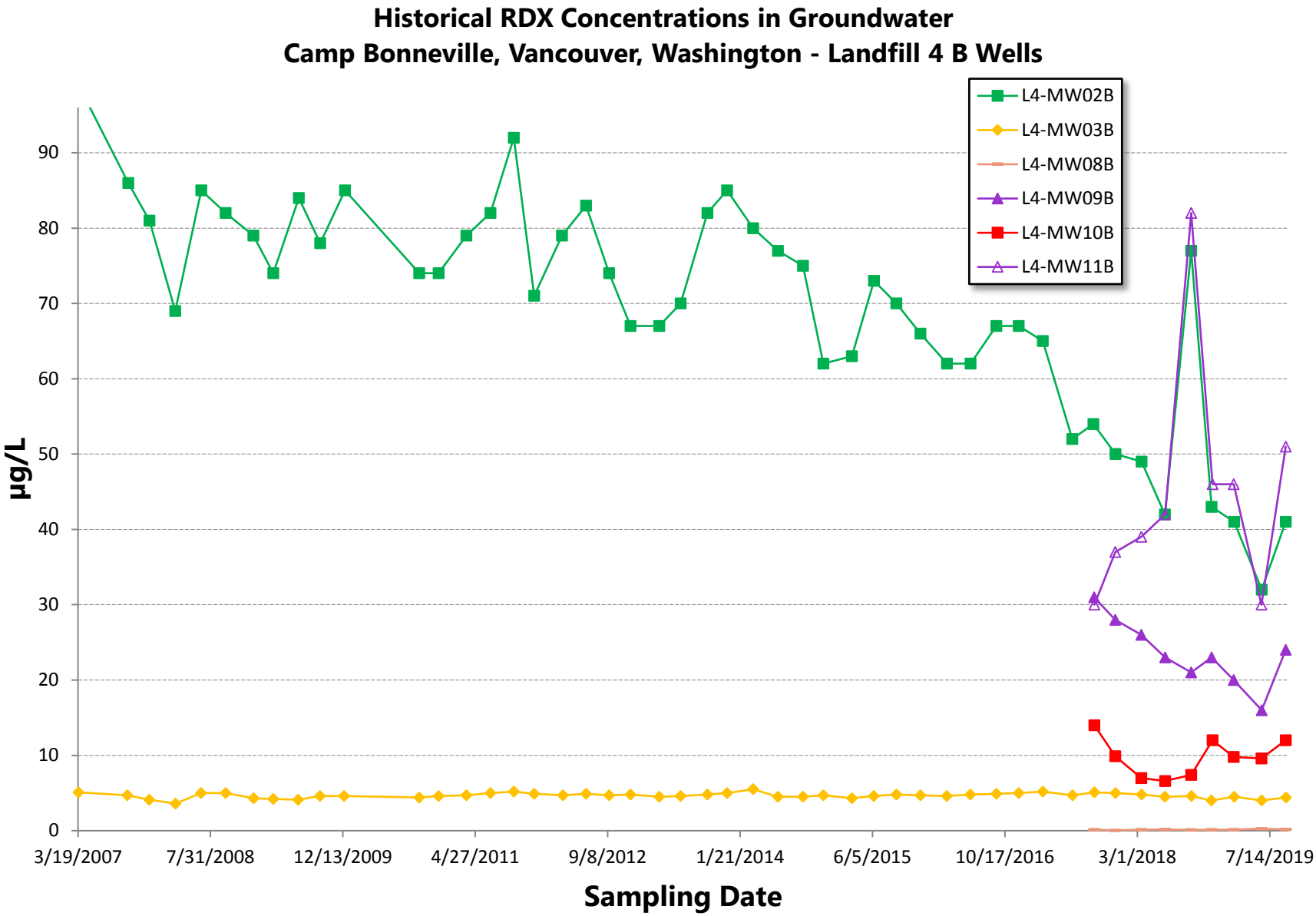

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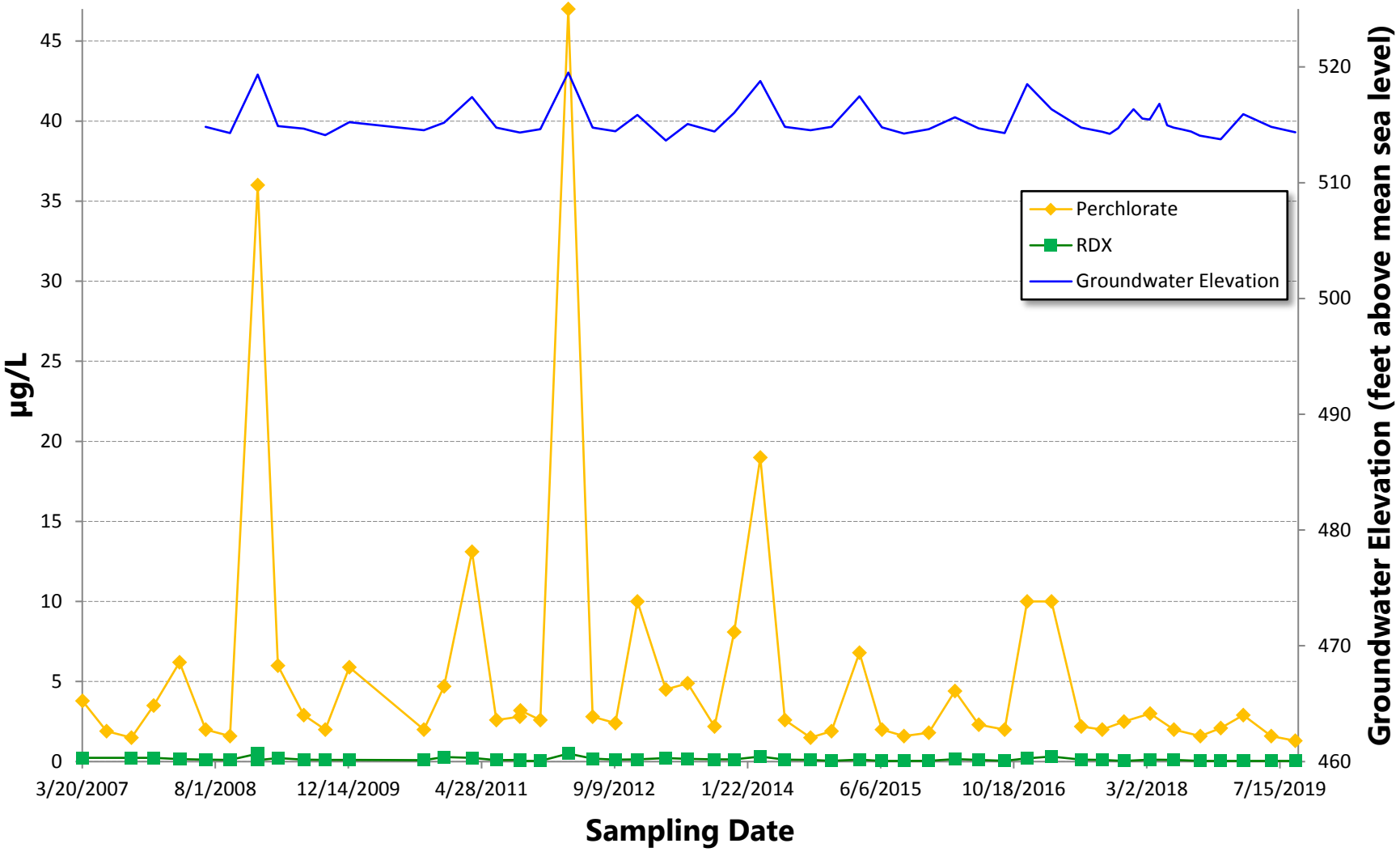
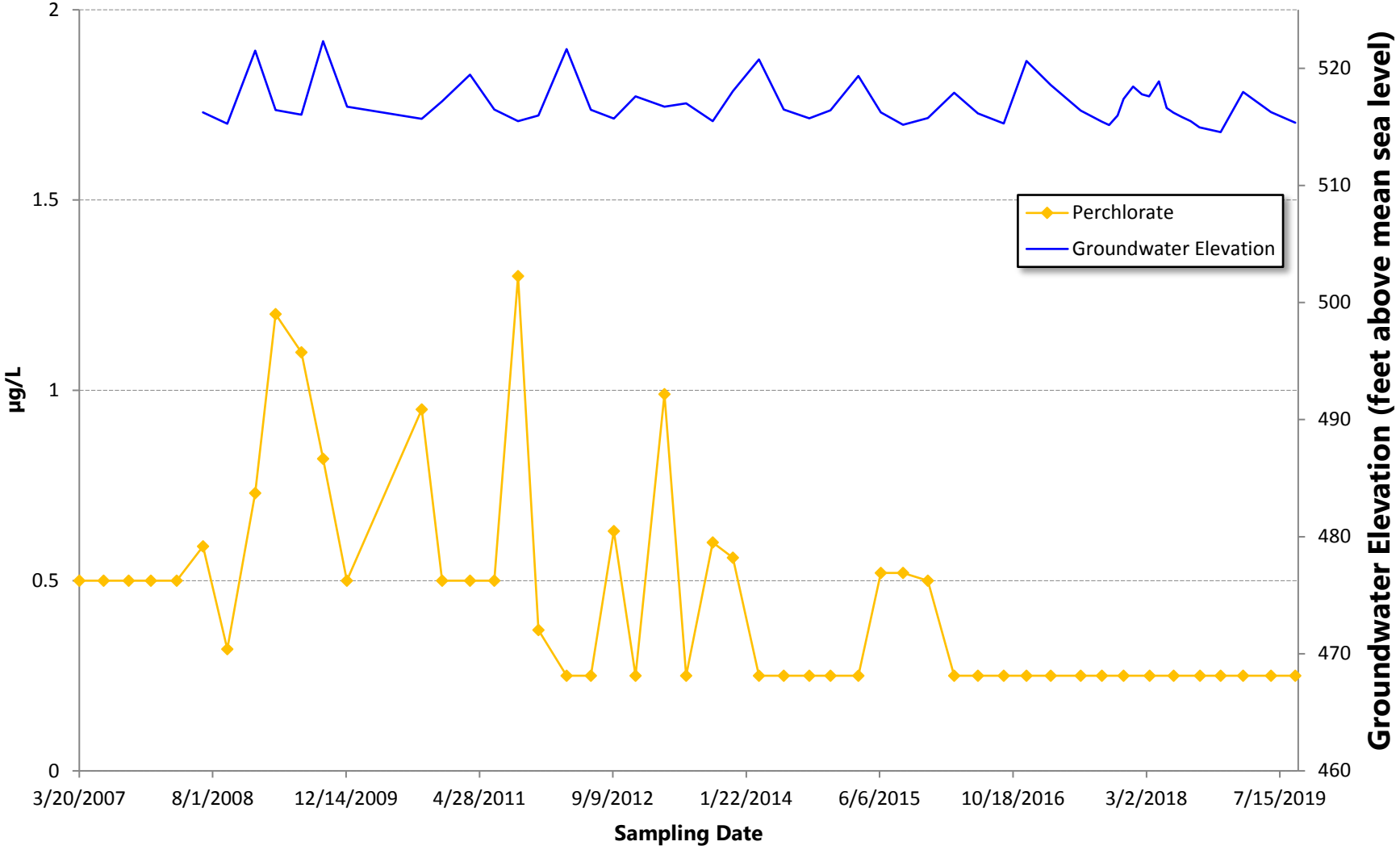
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW01A



Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW01B



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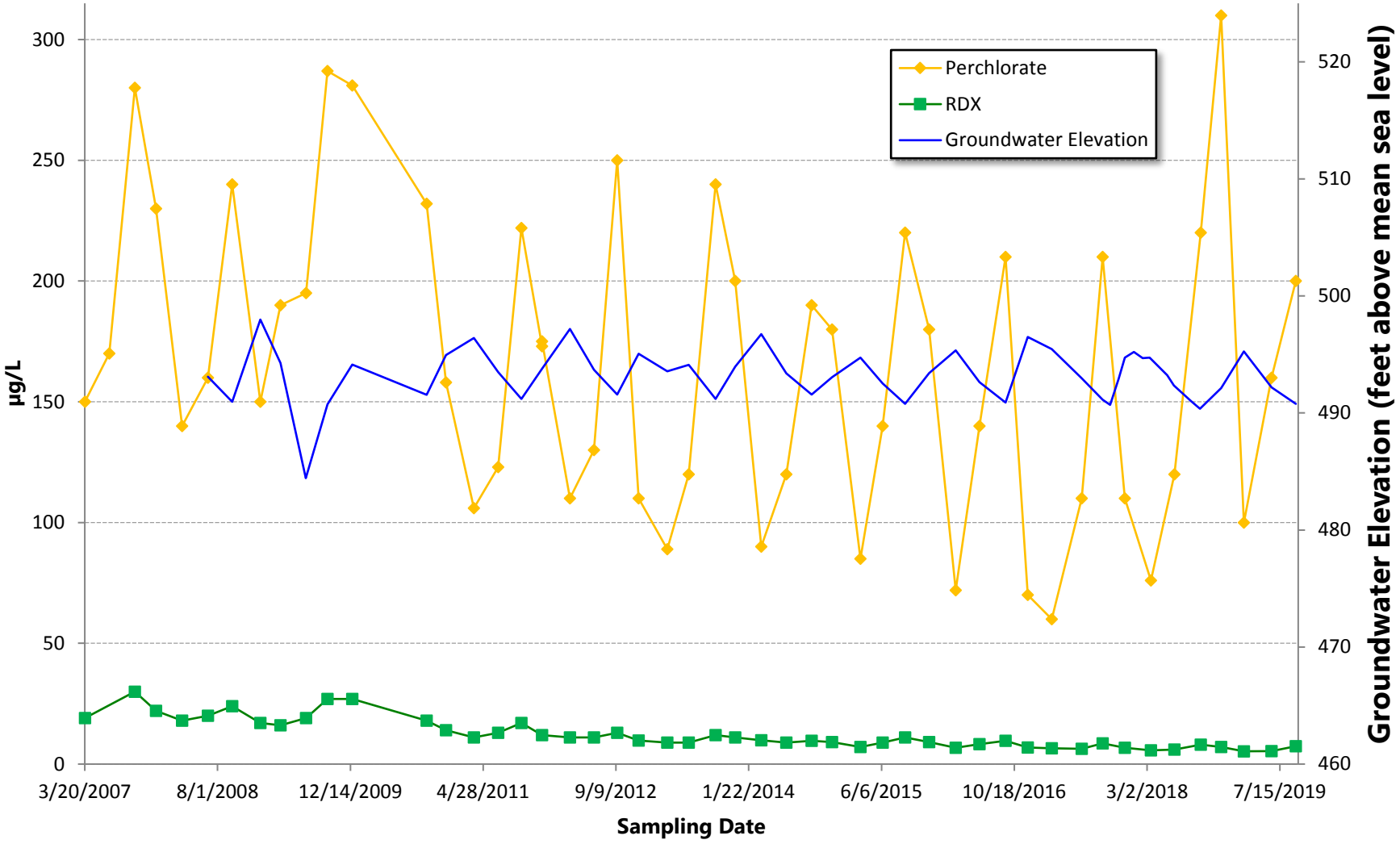
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW02A



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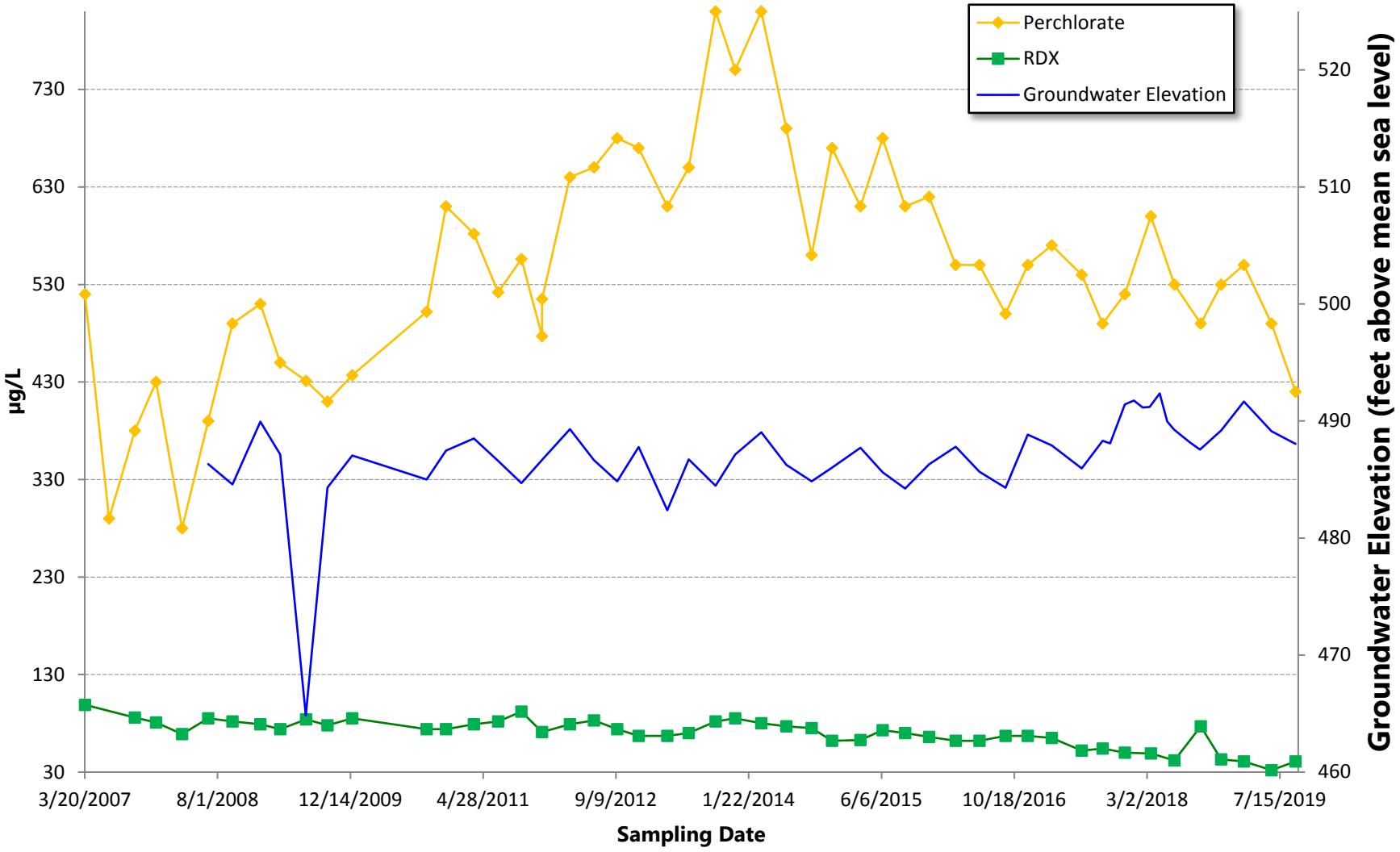
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW02B



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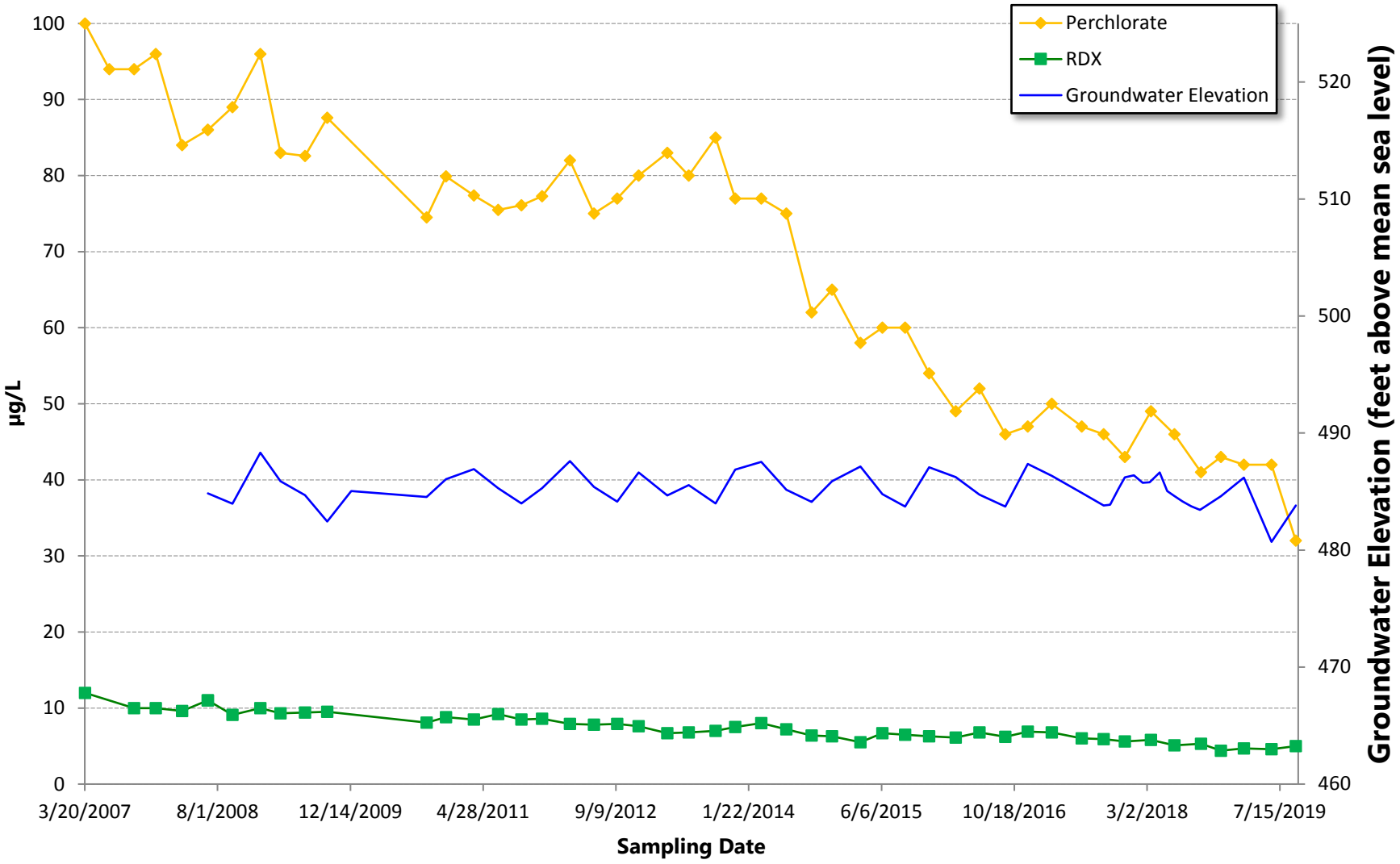
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW03A



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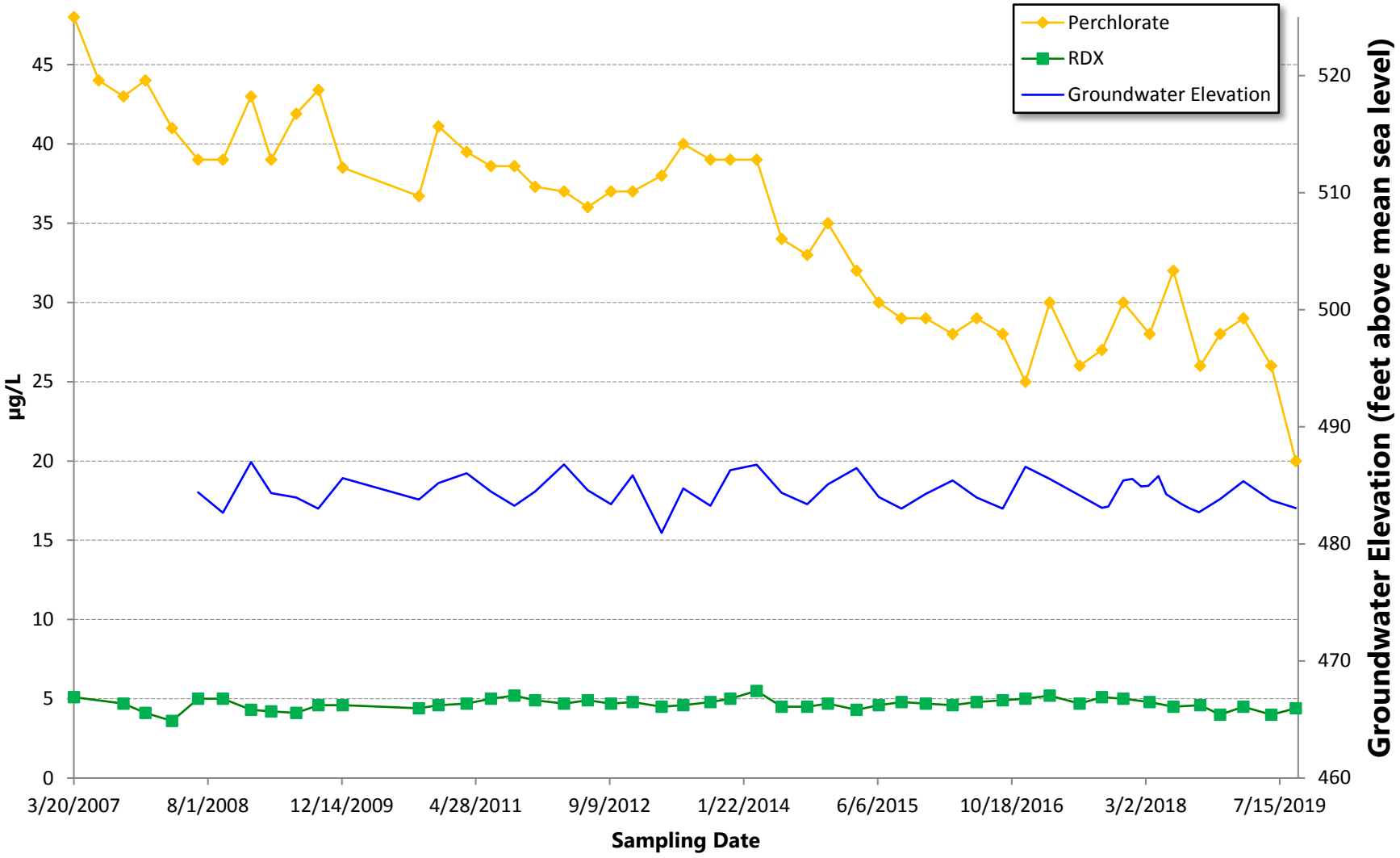
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW03B



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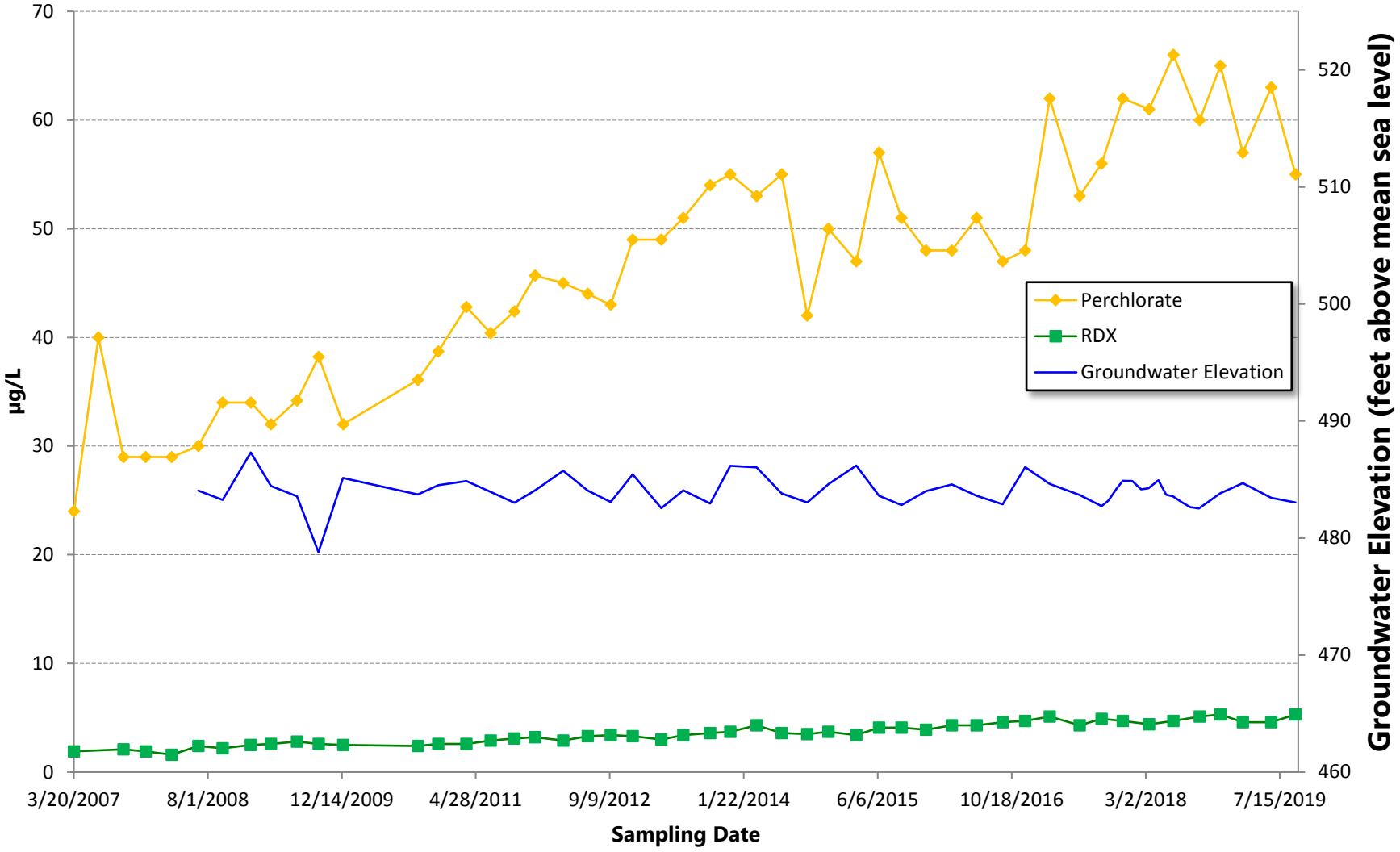
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW04A



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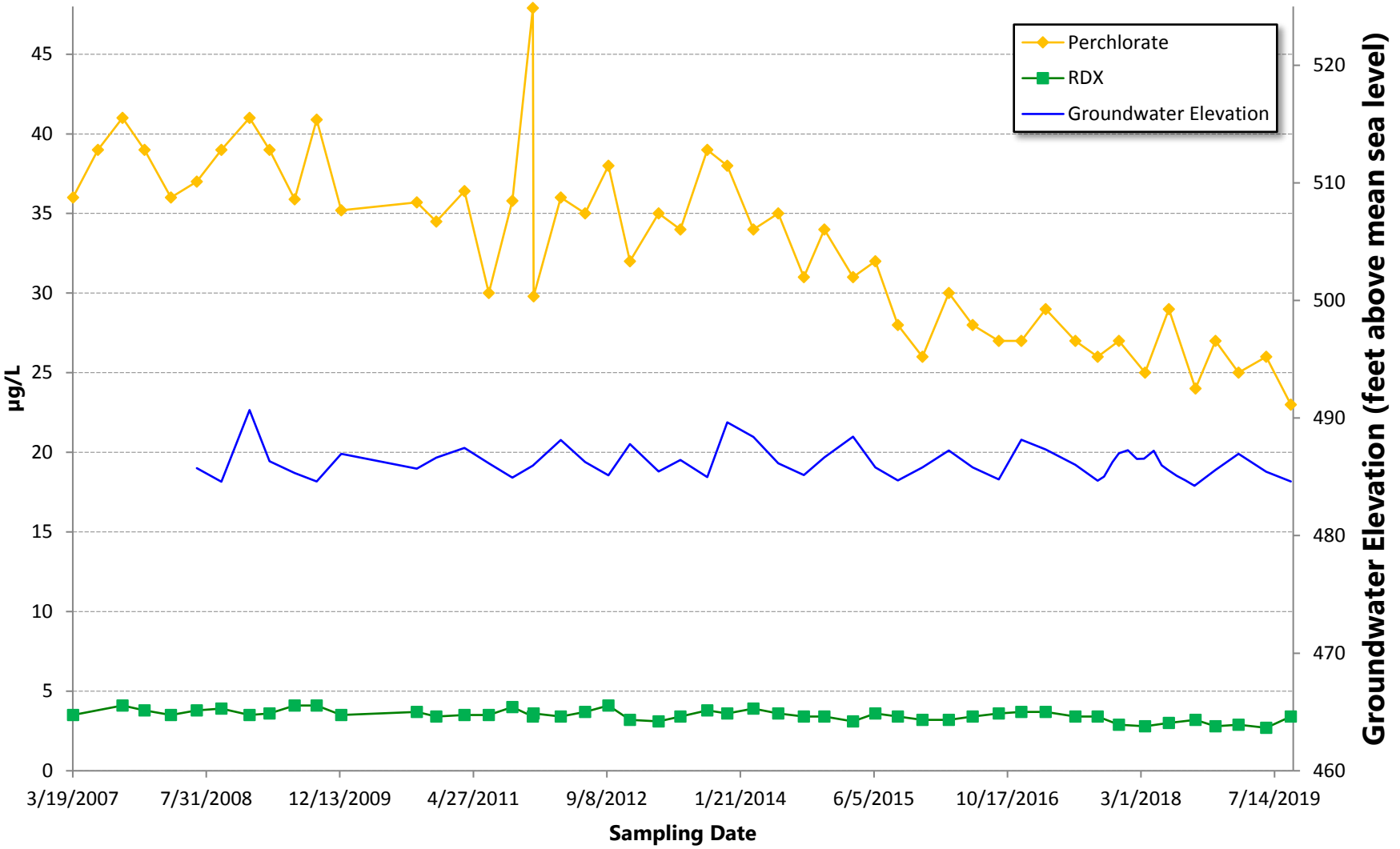
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW05A



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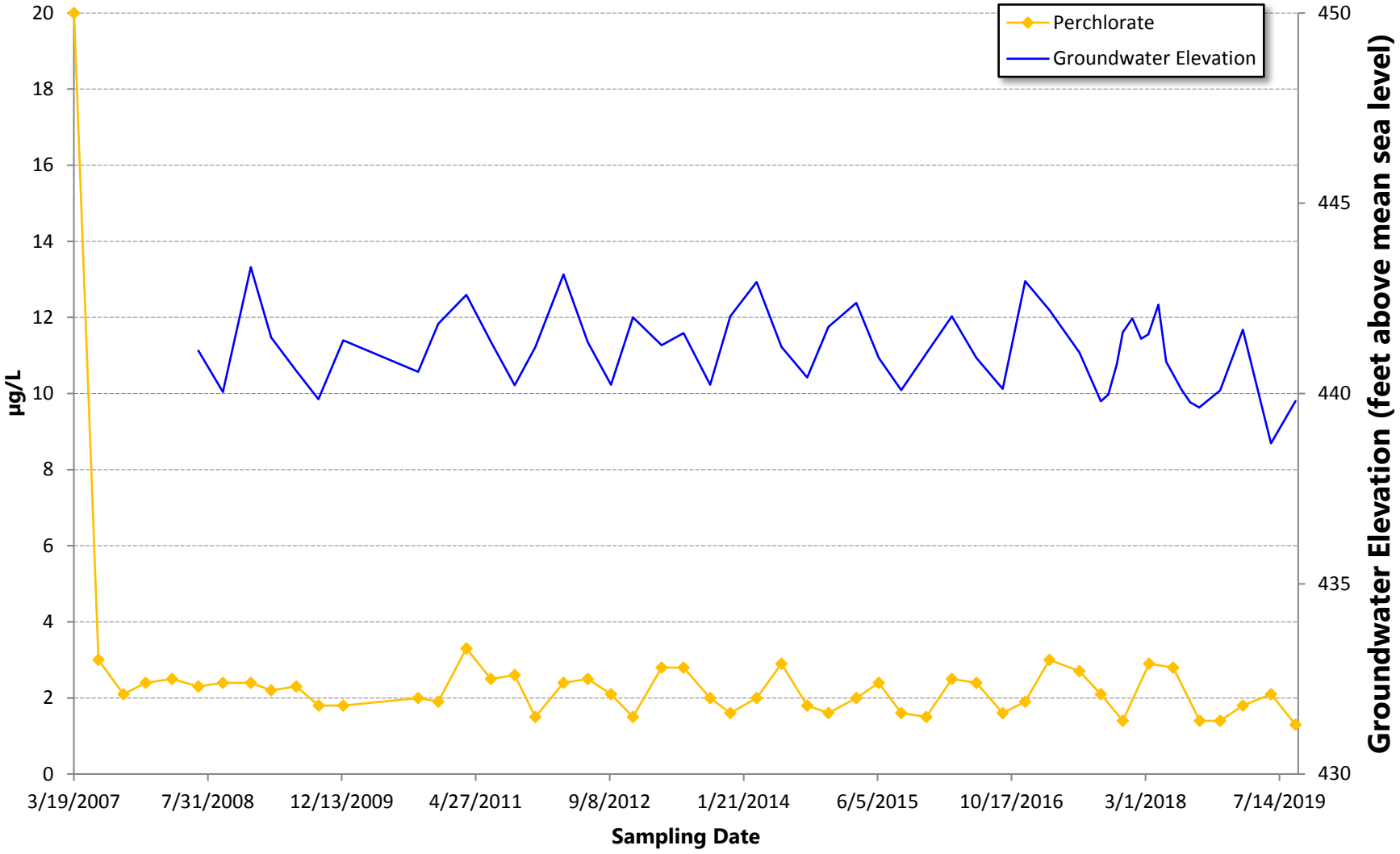
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW07B



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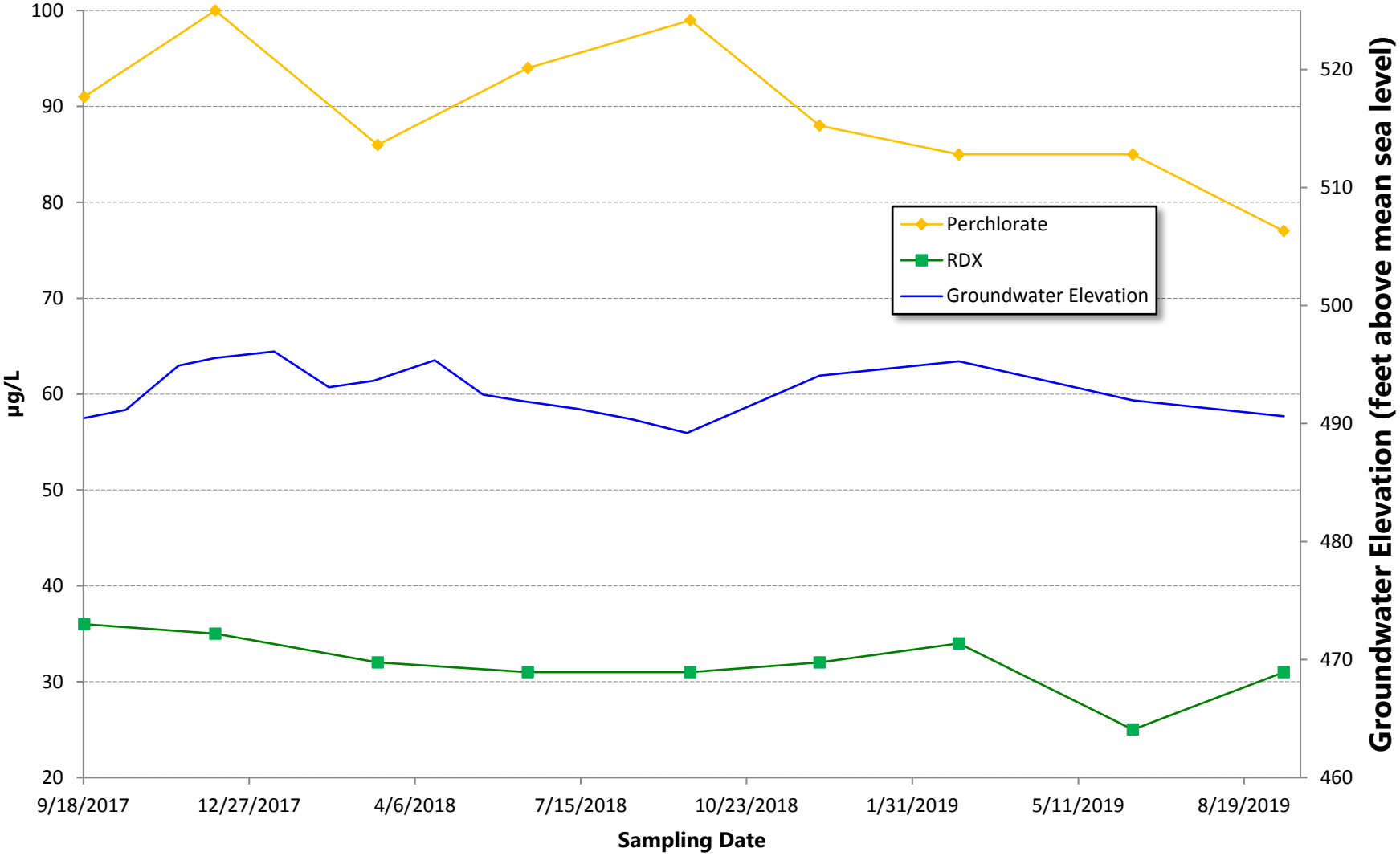
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW08A



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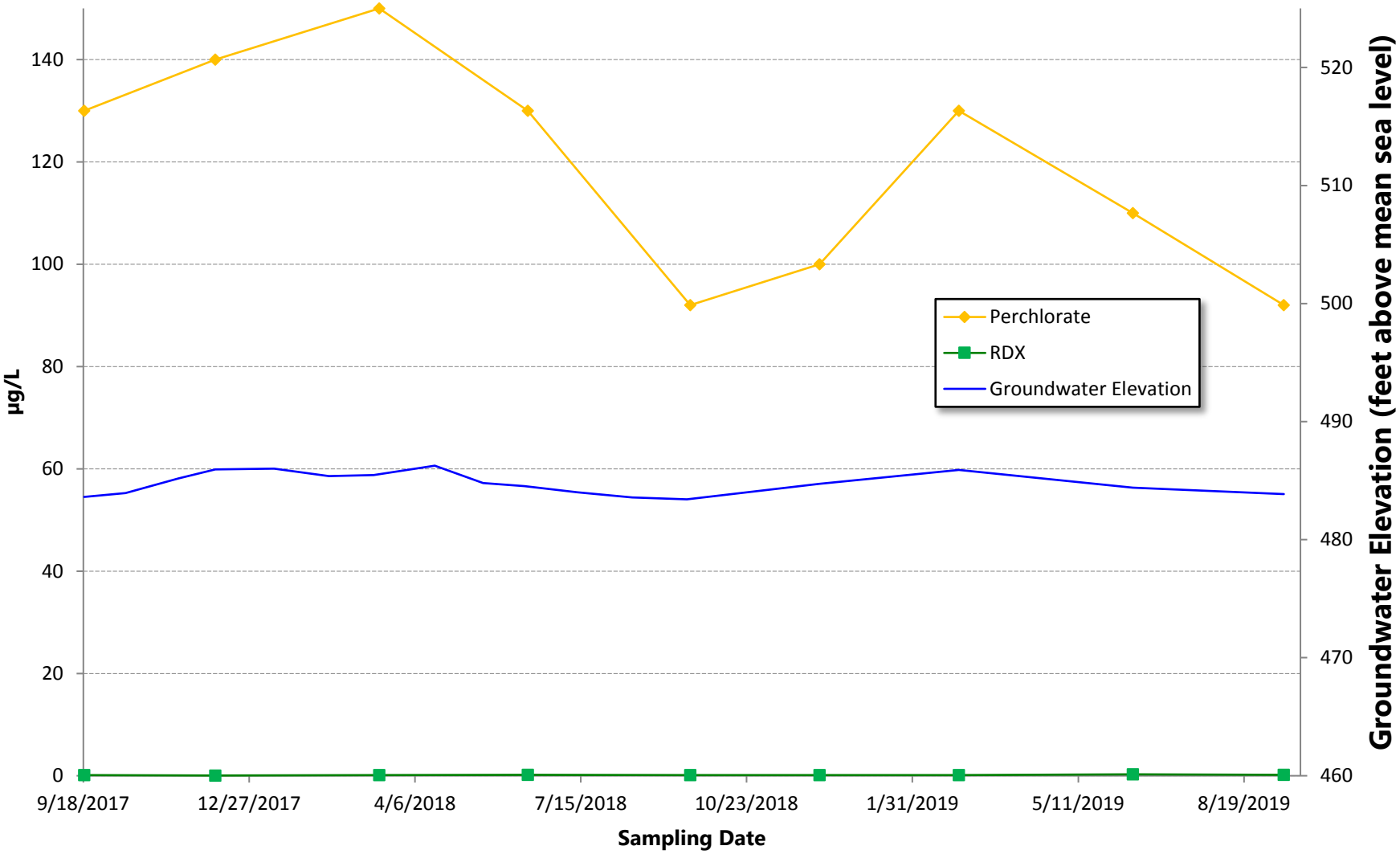
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW08B



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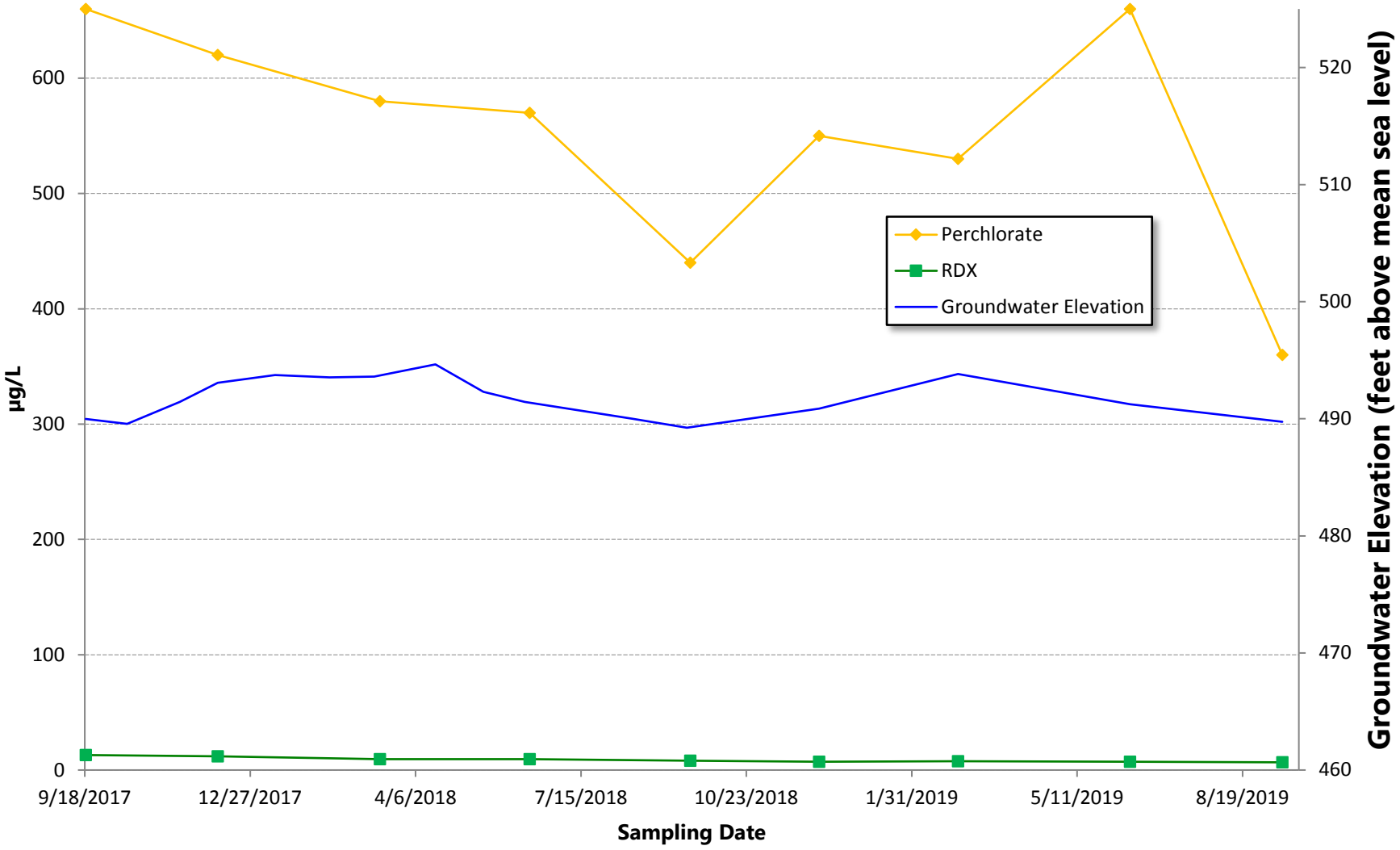
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW09A



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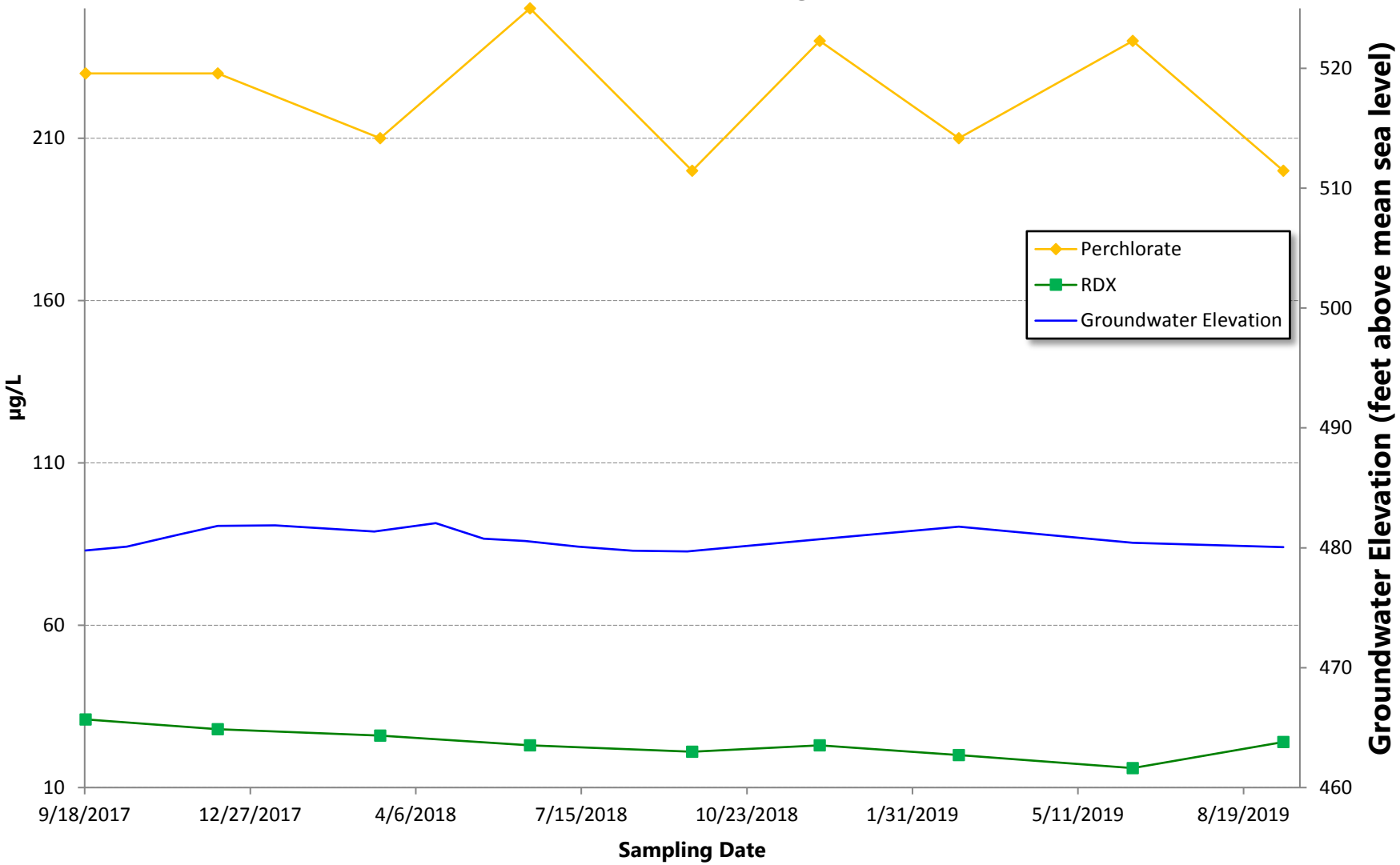
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW09B



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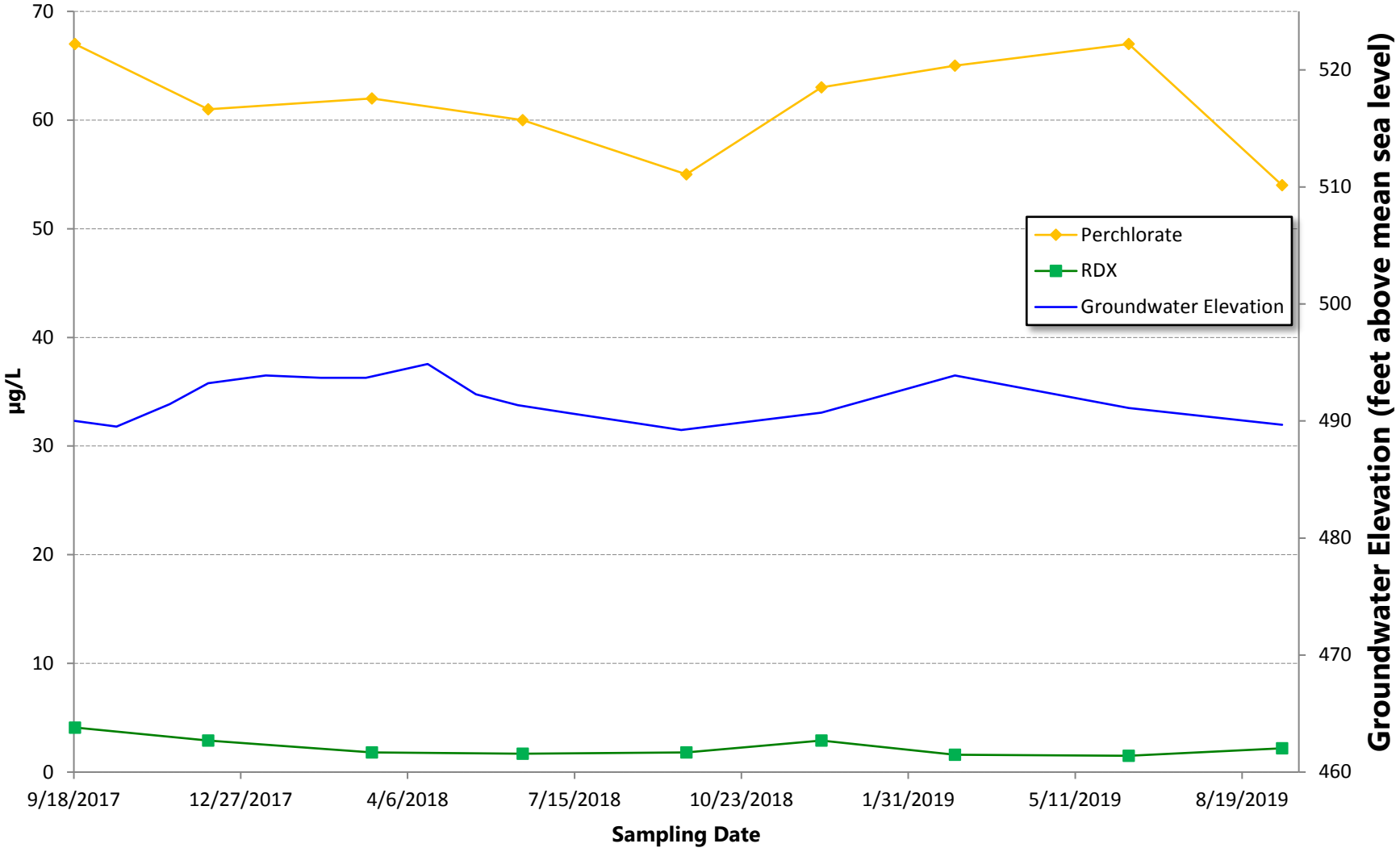
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW010A



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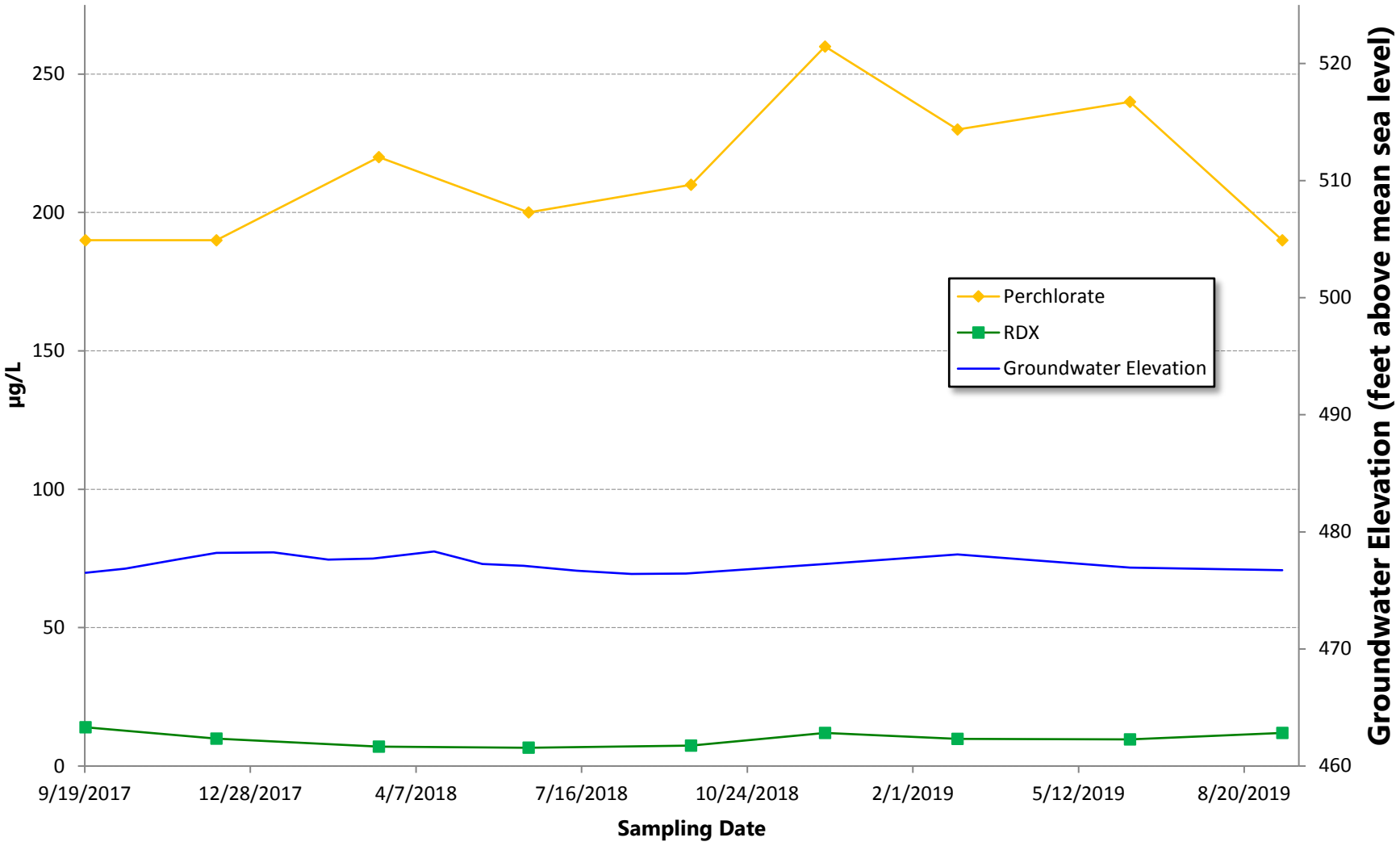
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW010B



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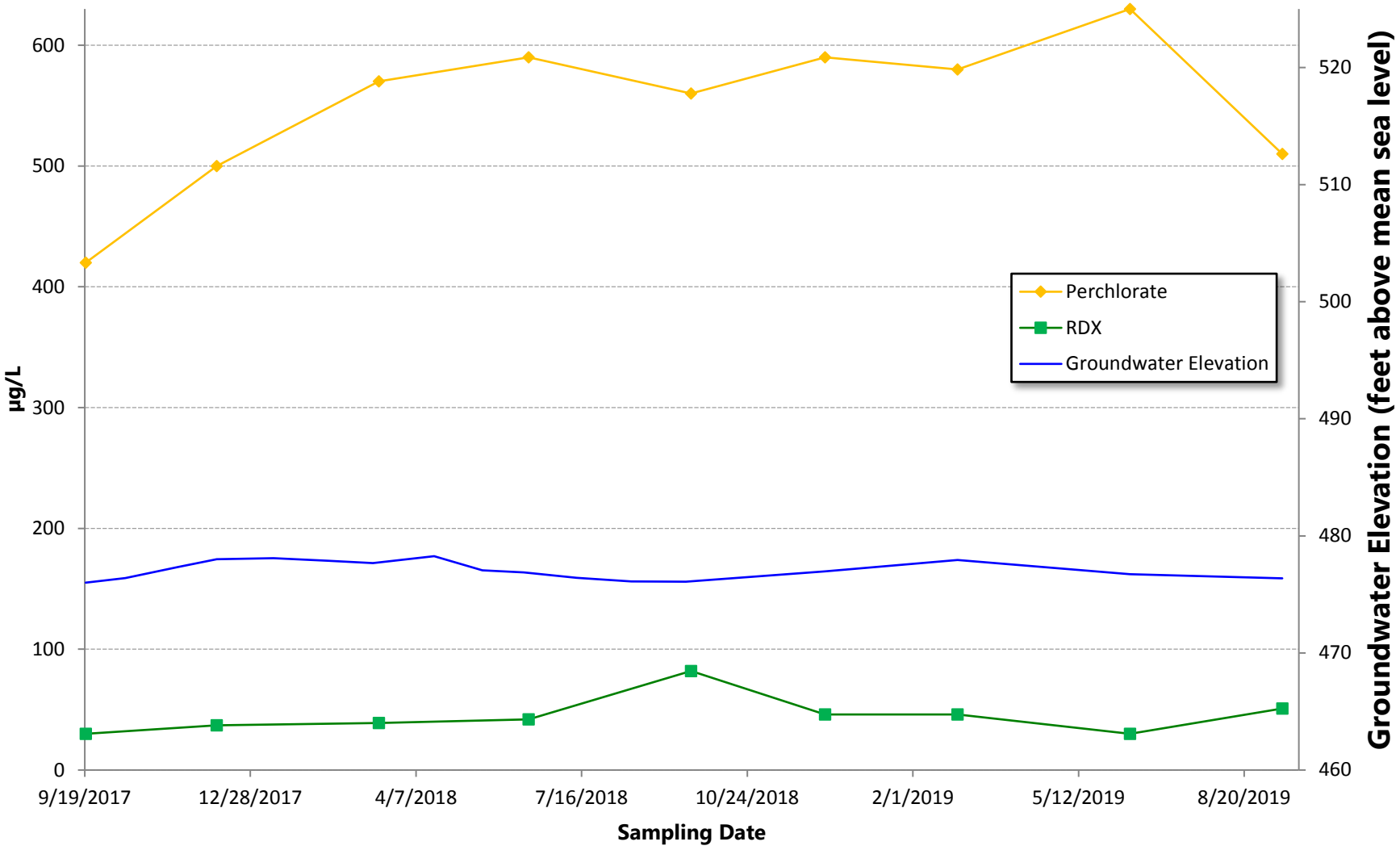
Historical Groundwater Concentrations
Camp Bonneville, Vancouver, Washington - Well L4-MW011B



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