

# PORT WILLIAM FORMER CANNERY SITE CHARACTERIZATION REPORT

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Prepared for:

for



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## ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ACM	Asbestos Containing Materials
ADEC	Alaska Department of Environmental Conservation
bgs	Below Ground Surface
BMP	Best Management Plan
BTEX	Benzene, toluene, ethylbenzene, and total xylenes
COPC	Contaminants of Potential Concern
COC	Chain of Custody
CSM	Conceptual Site Model
DRO	Diesel Range Organics
ESA	Environmental Site Assessment
GRO	Gasoline Range Organics
GPS	Global Positioning System
LOQ	Limit of Quantitation
MHWL	Mean High Water Line
MTG	Migration to Groundwater
PAH	Polynuclear Aromatic Hydrocarbons
PID	Photo-Ionization Detector
POL	Petroleum, Oil, and Lubricant
PPE	Personal Protective Equipment
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RRO	Residual Range Organics
SGS	SGS Laboratory
TAH	Total Aromatic Hydrocarbon
TAqH	Total Aqueous Hydrocarbon
TPEC	Travis/Peterson Environmental Consulting
URS	URS Corporation
USCG	United States Coast Guard
VOC	Volatile Organic Compound
WFOC	Washington Fish and Oyster Company

## 1.0 INTRODUCTION

On behalf of Ocean Beauty Seafoods LLC (Ocean Beauty), Perkins Coie retained Travis/Peterson Environmental Consulting (TPEC), a division of 3-Tier Alaska, to prepare this report to summarize the site characterization activities performed at the Port William Former Cannery (Port William) on Shuyak Island, Alaska. TPEC performed the activities discussed in this report between June 21<sup>st</sup> and 24<sup>th</sup>, 2021. This work was in response to a May 18<sup>th</sup>, 2020, Alaska Department of Environmental Conservation (ADEC) letter requesting Ocean Beauty characterize the extent of petroleum contamination throughout the Port William site (File No. 2600.38.004). TPEC developed a site characterization work plan and ADEC approved it on May 17, 2021. The work plan detailed the site characterization investigation, screening, sampling, laboratory analysis, and reporting of petroleum and mercury-contaminated soils and water within the project site.

This report describes the actions taken to characterize soil and water at Port William. Figure 1 in Appendix A shows the location of the project. Figure 2 in Appendix A shows the project site. The report meets the requirements of 18 Alaska Administrative Code (AAC) 75.335. It describes the methods and procedures under regulatory oversight to identify and characterize the presence and extent of contamination in soil and water at Port William.

## 2.0 OBJECTIVES

The objectives of this report are to present details of the following activities:

- The site description and background;
- Field screening and sampling actions;
- Collection of soil and water samples for laboratory analysis;
- Analysis and summary of investigation results;
- Field decontamination methods; and
- Conclusions and recommendations.

The objective of the proposed work was to delineate contaminated soils, surface water, and groundwater through field screening and laboratory analysis. The extent and boundaries of the scope of work were limited to areas of environmental concern discussed in the 2001 Phase I Environmental Site Assessment (ESA) by URS Corporation (URS). The areas of environmental concern include the Port William facility tank farm including the natural drainage west of the tank farm, areas surrounding where 55-gallon drums were utilized as aboveground storage tanks to store heating fuel for buildings, intertidal zones, and areas where surface soil staining was observed. Figure 3 in Appendix A shows the areas of environmental concern at Port William. No additional work or investigation of other areas of the property was proposed.

## 3.0 SITE DESCRIPTION AND BACKGROUND

### 3.1 Facility Description

Port William is located along Shuyak Strait on the southern end of Shuyak Island, Alaska (Figure 1, Appendix A). Access to the site was via Island Air out of Kodiak, Alaska. The property position is approximately 58.490908° North latitude, -152.583690° West longitude. Port William is situated in Section 33, Township 19 South, Range 20 West, Seward Meridian, United States Geological Survey Quadrangle

58151-A5. The property is currently co-owned by a group of private investors including Bruce and Yvonne Cooper, Sarah Alden, Sharmel Collins, and Richard Holta.

Port William was a herring saltery prior to 1930 and was operated by S. Sklaroff and Sons. In 1930, it began salmon canning operations as the Port of William Packing Company. In 1935, Washington Fish and Oyster Company (WFOC) purchased the cannery. In 1970, Ocean Beauty Seafoods, Inc. purchased WFOC. WFOC then changed its name to Ocean Beauty Seafoods, Inc. in 1971. In 1973, Ocean Beauty Seafoods sold the property to Kodiak King Crab, Inc. Kodiak King Crab sold the property to a private party, Wayne Treat, in 1980. Wayne Treat sold the property to Bruce and Yvonne Cooper in 1986.

In June 2011, J. Mark Krall began leasing the Port William property from the Coopers. Mr. Krall formed an LLC called the Port William Wilderness Lodge for the purpose of running a recreational hunting and fishing outfit out of Port William. During that time, water at the site was supplied from a nearby lake, approximately one-quarter mile north. There is no known drinking water well on Shuyak Island. We understand that Mr. Krall no longer operates the Port William Wilderness Lodge and that the property is currently unoccupied.

### **3.2 2001 Phase I Environmental Site Assessment**

In August-September 2001, URS conducted a Phase I ESA at Port William. During the Phase I ESA, URS identified several areas of potential environmental concern. These areas are discussed below.

#### **Aboveground Storage Tanks (AST)**

A bulk fuel storage tank farm consisting of thirteen tanks was located on the property. Eleven tanks were located within a lined secondary containment area where a black oily mixture of petroleum hydrocarbons, water, and sludge was present. The containment area was observed to be leaking from multiple areas and heavy staining and free product was observed in a small bog area located west of the tank farm. Petroleum staining was observed in a natural drainage area extending from the bog, south to the upper most portion of a cliff face along the shoreline. Staining was observed along the upper portion of the cliff face; however, staining did not extend down the cliff to the shoreline. There was no evidence indicating that contamination from the tank farm had extended to the shoreline of Shuyak Strait.

The two remaining tanks were situated on wooden platforms. Secondary containment was not present surrounding either tank. URS observed heavily stained soils beneath each platform.

Eight shallow subsurface soil samples were collected from the vicinity of the tank farm. Analytical results detected diesel range organics (DRO) and residual range organics (RRO) above 2001 ADEC cleanup levels. DRO ranged from 130 to 49,100 mg/Kg while RRO ranged from 565 to 5,390 mg/Kg. Gasoline range organics (GRO) were detected; however, concentrations were well below ADEC cleanup levels. GRO ranged from non-detect to 9.99 mg/Kg.

URS also identified tanks (55-gallon drums) situated on elevated wooden racks used to store heating fuel outside the Main House, Mess Hall, two employee residences, and the bunkhouse. During the investigation, URS observed at least one 55-gallon drum leaking that was not positioned within a secondary containment.

#### **Drums and Other Chemical Containers**

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**Environmental Consulting**  
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Fairbanks, AK 99701  
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URS found numerous containers of new and unknown used chemicals located in several of the dock buildings. Most of the containers were in the Meat/Shop Building (Figure 2, Appendix A) and consisted of motor oil and gasoline containers. Container sizes varied from quart containers to 55-gallon drums. URS identified several leaking containers and small petroleum hydrocarbon spills scattered throughout the dock facility.

In addition to the environmental concerns mentioned above, URS also identified lead and asbestos as potential environmental concerns. Given the construction dates of the buildings, all original painted surfaces are considered lead-based. URS also suspects that asbestos containing materials (ACM) was observed. Suspected materials include: several types of vinyl sheet flooring and associated adhesive mastic, exterior asphalt shingles, gypsum wallboards and associated joint compound pipe insulation, and retort and boiler insulation.

There is no plan to renovate or demolish any of the buildings at Port William; therefore, lead and asbestos contamination is not included as part of this site characterization.

### **3.3 2018 Port William Bunker C Spill**

A dock at Port William collapsed on February 26, 2018, because of a winter storm that produced wind gusts more than 80 mph. The Pole/Wood Building (Figure 2, Appendix A) located on the dock housed a bladder that contained approximately 3,000-gallons of Fuel Oil No. 6 (Bunker C). When the dock collapsed, the bladder ruptured and released its contents within the shoreline and waters below (Shuyak Strait).

The United States Coast Guard (USCG) responded to the spill. Responders deployed 3,280-feet of large inflatable ocean boom and 550-feet of fast water boom around the dock facility and the adjacent beach. Sorbent materials were placed inside the booms, which produced 1,878 bags of oily waste. The collapsed building was later dismantled which allowed personnel to safely access oiled debris under the building and nearby shore.

After seven weeks, the USCG determined that response efforts were no longer producing measurable results and ended the operation.

## **4.0 CONTAMINANTS OF POTENTIAL CONCERN**

As outlined in the Work Plan, the contaminants of potential concern (COPC) at Port William were diesel fuel, unleaded gasoline, and Bunker C. During the site characterization, TPEC collected soil samples for the following analyses: DRO, RRO, GRO, volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene and xylenes (BTEX), and polynuclear aromatic hydrocarbons (PAH). Any site where the COPC was unknown, TPEC tested for Resource Conservation and Recovery Act (RCRA) metals in addition to the previously mentioned analytical analyses. While investigating the intertidal zone, specifically underneath the dock, if paint chips were discovered, TPEC planned to collect a soil sample and have it analyzed for lead. In addition to soils, TPEC also collected water samples for the following analyses: total aromatic hydrocarbons (TAH), total aqueous hydrocarbons (TAqH), DRO, RRO, GRO, VOC, and PAH.

Analytical results from 2001 detected GRO concentrations well below ADEC cleanup levels. Due to low concentrations of GRO, TPEC did not believe it would be necessary to collect analytical samples

specifically for methyl-t-butyl ether (MTBE), 1,2-dibromoethane (EDB), or 1,2-dichloroethane (1,2 DCA). This is why the approved Work Plan did not include sampling for these contaminants.

Soil and water samples collected for laboratory analysis were submitted to SGS Environmental Laboratories, Inc. (SGS) in Anchorage, Alaska. SGS is an ADEC CS-LAP approved laboratory. The qualified sampler also performed field screening using a photo-ionization detector (PID) to screen soils for VOCs.

The laboratory sampling requirements for the COPC are shown below in Table 1.

**Table 1: Sampling & Laboratory Analysis Requirements**

Contaminants of Potential Concern	Sampling Requirements
Diesel Fuel	DRO, GRO, PAH, VOC, BTEX
Unleaded Gasoline	GRO, PAH, VOC, BTEX
Bunker C	DRO, RRO, BTEX, PAH, VOC
Lead	RCRA Metal
Unknown	DRO, GRO, RRO, PAH, VOC, BTEX, RCRA Metal

#### 4.1 Soil Cleanup Levels

According to the Western Region Climate Center, the nearest weather station (Kitoi Bay) averages 63.81 inches of precipitation per year. The project target soil cleanup levels shown in Table 2 below were established from ADEC, 18 AAC, Section 75.341, *Table B1 - Method Two – Soil Cleanup Levels, Over 40 Inch Zone, Migration to Groundwater* and *Table B2 – Method Two – Petroleum Hydrocarbon Soil Cleanup Levels, Over 40 Inch Zone, Migration to Groundwater*. All non-BTEX VOC project cleanup levels are listed in *Table B1 - Method Two* of 18 AAC, Section 75.341.

**Table 2: Project Soil Cleanup Levels**

Analyte	Units	Cleanup Level (mg/Kg)
DRO	mg/Kg	230
RRO	mg/Kg	9,700
GRO	mg/Kg	260
Benzene	mg/Kg	0.022
Ethylbenzene	mg/Kg	0.13
Total Xylenes	mg/Kg	1.5
Toluene	mg/Kg	6.7
1-Methylnaphthalene	mg/Kg	0.41
2-Methylnaphthalene	mg/Kg	1.3
Acenaphthene	mg/Kg	37
Acenaphthylene	mg/Kg	18
Anthracene	mg/Kg	390
Benzo(a)anthracene	mg/Kg	0.70
Benzo[a]pyrene	mg/Kg	1.2
Benzo[b]fluoranthene	mg/Kg	12

Analyte	Units	Cleanup Level (mg/Kg)
Benzo[g,h,i]perylene	mg/Kg	1,900
Benzo[k]fluoranthene	mg/Kg	120
Chrysene	mg/Kg	600
Dibenz[a,h]anthracene	mg/Kg	1.2
Fluoranthene	mg/Kg	590
Fluorene	mg/Kg	36
Indeno[1,2,3-c,d]pyrene	mg/Kg	12
Naphthalene	mg/Kg	0.038
Phenanthrene	mg/Kg	39
Pyrene	mg/Kg	87
Arsenic	mg/Kg	0.2
Barium	mg/Kg	2100
Cadmium	mg/Kg	9.1
Chromium	mg/Kg	0.089
Lead	mg/Kg	800
Mercury	mg/Kg	0.36
Selenium	mg/Kg	6.9
Silver	mg/Kg	11

#### 4.2 Surface Water Quality Standards

The project target surface water cleanup levels shown in Table 3 were established from ADEC 18 AAC 70.020 (b)(17)(A)(i) *Petroleum Hydrocarbons, Oils, and Grease, for Marine Water Uses, Aquaculture*.

**Table 3:** Surface Water Quality Standards

Analyte	Units	Water Quality Standard
TAqH	µg/L	15
TAH	µg/L	10

#### 4.3 Groundwater Cleanup Levels

The project target water cleanup levels shown in Table 4 were established from ADEC Title 18, Alaska Administrative Code, Section 75.345, *Table C, Groundwater Cleanup Levels* as shown in Table 3 below. All non-BTEX VOC project cleanup levels are as listed in *Table C, Groundwater Cleanup Levels*.

**Table 4:** Project Groundwater Cleanup Levels

Analyte	Units	Cleanup Level
DRO	µg/L	1,500
RRO	µg/L	1,100
GRO	µg/L	2,200
Benzene	µg/L	4.6
Ethylbenzene	µg/L	15

Analyte	Units	Cleanup Level
Total Xylenes	µg/L	190
Toluene	µg/L	1,100
1-Methylnaphthalene	µg/L	11
2-Methylnaphthalene	µg/L	36
Acenaphthene	µg/L	530
Acenaphthylene	µg/L	260
Anthracene	µg/L	43
Benzo(a)anthracene	µg/L	0.30
Benzo[a]pyrene	µg/L	0.25
Benzo[b]fluoranthene	µg/L	2.5
Benzo[g,h,i]perylene	µg/L	0.26
Benzo[k]fluoranthene	µg/L	0.80
Chrysene	µg/L	2.0
Dibenz[a,h]anthracene	µg/L	0.25
Fluoranthene	µg/L	260
Fluorene	µg/L	290
Indeno[1,2,3-c,d]pyrene	µg/L	0.19
Naphthalene	µg/L	1.7
Phenanthrene	µg/L	170
Pyrene	µg/L	120

## 5.0 CHARACTERIZATION AND SAMPLING

This work was conducted in accordance with the ADEC 18 AAC 75 *Oil and Other Hazardous Substances Pollution Control (revised November 2020)*. Where applicable, the site characterization and analysis were modeled after procedures described in the *ADEC Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites (March 2017)*. Sampling efforts were conducted in accordance with the *ADEC Field Sampling Guidance (October 2019)* unless otherwise specified within this document.

Mr. Casey Volk and Mr. Ryan Kingsbery of TPEC conducted field work described within this report. TPEC personnel meet the ADEC definition of “Qualified Environmental Professional” in accordance with 18 AAC 75.333. Qualifications and resumes for all TPEC personnel are available in Appendix G. While on site, TPEC personnel were accompanied by Mr. Carson Kent with BGES Environmental Consulting, who was sent to observe the site investigation on behalf of the Coopers and their insurer. All sample collection and site work were conducted by TPEC personnel. A photographic log documenting all site work is available in Appendix D. The complete TPEC field notes are available in Appendix E.

### 5.1 Soil Sampling for Hydrocarbon Contamination

TPEC personnel hand-dug 22 test pits using shovels and other hand tools at locations of suspected or likely contamination. The locations of soil test pits are shown in Figures 4 and 5 in Appendix A. Upon advancement, GPS coordinates of each soil test pit were recorded in TPEC personnel field notes. The soil samples from the hand-dug test pits allowed for a complete characterization of the horizontal and vertical extents of contaminants at suspected areas of contamination.

Soil samples were collected for field screening at six-inch intervals within each soil test pit (i.e., 0-6", 6"-12", etc.). A stainless-steel trowel was used to collect soils at specified depths from test pit sidewalls. Care was taken to minimize the exposure or agitation of soils prior to sample collection. Each soil sample was comprised of only freshly exposed soils. Test pits were advanced until field screening results fell below the threshold of 10 parts per million (ppm) on the PID or until encountering refusal.

During the Phase I ESA, URS identified free product and heavy staining along the natural drainage west of the tank farm. TPEC personnel investigated the entire drainage as part of the site characterization. TPEC established transects of varying lengths running perpendicular to the flow pathway. Transects were not spaced evenly in 25-foot increments. This was a deviation from the approved work plan and is discussed in further detail in Section 10.0. TPEC dug one test pit along each transect. Test pits were dug near the flow pathway at the area most likely contaminated. The location of test pits within the natural drainage is shown on Figure 5 in Appendix A.

TPEC personnel monitored the digging of test pits using a PID. Since the COPC was weathered petroleum, TPEC used a PID screening threshold of 10 ppm. TPEC also used an analytical sampling kit (laboratory-supplied sampling jars, preservatives, labels, and Chain-of-Custody (COC) necessary for the collection and laboratory analysis of soil samples) on site in addition to olfactory and visual clues to determine the presence or absence of contamination. Test pits that contained a PID field screening higher than 10ppm were selected for laboratory analysis.

Seasonal precipitation and proximity to Shuyak Strait dictated the careful management of excavated soils during contaminated soil excavations. Soil disturbance was minimized whenever possible. TPEC backfilled excavated soils immediately upon collection of soil samples.

### **5.1.1 Field Screening**

The following describes the sampling protocols that TPEC field personnel followed to screen and collect soil samples within soil test pits. Field screening occurred first to characterize the presence (if any) of hydrocarbon contamination within each soil test pit. A MiniRAE™ Systems 3000 PID was the primary equipment utilized for field screening.

TPEC personnel field screened soils for hydrocarbons with a PID in accordance with the ADEC *October 2019 Field Sampling Guidance, Section 5.0 Soil Sampling*. TPEC personnel documented the depth of each screening sample collected within each test pit in the field notes.

#### **5.1.1.1 PID Calibration and Use**

The PID was calibrated according to the manufacturer's specifications in the field using a fresh-air charcoal blank and 100-ppm isobutylene calibration span gas. A re-sealable polyethylene bag with a total capacity not less than eight ounces (approximately 250mL) was filled one-third to one-half full of soil from the screening sample. The soil, sealed in the bag, was allowed to warm up to 40 degrees Fahrenheit where it was held for at least 10 minutes, but no longer than 60 minutes. The soil sample was agitated for approximately 15 seconds at the beginning and end of the headspace development period to assist in

volatilization. The tip of the calibrated PID was then placed inside the bag for thirty seconds or until the reading stabilized.

### **5.1.2 Collection of Samples for Laboratory Analysis**

TPEC personnel collected at least one characterization sample for laboratory analysis from each hand-dug test pit with a PID field screening higher than 10ppm. The field screening sample within each test pit which exhibited the highest heated headspace PID screening result was chosen for laboratory analysis. The purpose of the characterization samples was to determine contaminant presence or absence, determine contaminant concentrations, and to delineate the extents of the contamination. The location of each test pit sample is shown on Figures 4 and 5 in Appendix A.

Per the work plan, TPEC personnel also collected one characterization sample for laboratory analysis from sludge located within the secondary containment of the tank farm. The sludge sample was collected from an area within the containment that readily released sheen when disturbed. The location of the sludge sample is shown on Figure 5 in Appendix A.

While investigating the intertidal zone, TPEC personnel did not observe any paint chips. TPEC did however identify 11 broken/discarded lead-acid batteries within the intertidal zone. TPEC also observed peeling paint chips along the eastern side of the Boat Building located on the dock. TPEC personnel collected one composite sample for laboratory analysis from sand underneath broken/discarded lead-acid batteries as well as from sand beneath the drip line of the Boat Building. The location of each composite sample is shown in Figure 6 in Appendix A.

Prior to collecting analytical samples, equipment and tools were decontaminated to remove soil that may have contain contamination. Shovels and equipment were sprayed with a solution of Alconox and wiped down with paper towels until all soil is removed. Cleaning solution was applied such that it did not drip off the equipment but was absorbed by paper towels used to wipe the equipment.

Soil samples destined for VOC analysis were collected first, followed by samples collected for non-volatile analysis. For volatile analysis, TPEC personnel removed approximately six inches of soil immediately before collecting the sample. While wearing new disposable gloves, TPEC personnel guided soil from the trowel to the proper sampling container. If required, TPEC then poured preservative over the sample before sealing the lid to the container. Following the collection of each analytical sample, TPEC personnel properly labeled each sample with a unique name before placing the sample in a cooler on ice.

Duplicate samples were collected in accordance with Section 7.3 of the approved work plan. Prior to mobilizing to the site, TPEC was uncertain of the total number of samples necessary to adequately characterize the extent of potential contamination and did not request enough preservatives from SGS to sample each test pit for GRO and VOC analysis. This deviation from the work plan is discussed in Section 10.0.

The following describes the naming convention used by TPEC. Samples collected within the vicinity of the tank farm (Figure 5, Appendix A) have the following naming convention: the excavation location (tank farm (TF), drainage (D), or sludge (SLG)), followed by the test pit or sample number within that location (1-8, 1-4, or 1-2), followed by the depth (in inches) at which the sample was collected. For instance, sample D4-18 was collected along the tank farm drainage, at test pit number four, at a depth of 18-inches below

ground surface (bgs). Samples collected outside the tank farm (Figure 4, Appendix A) have a similar naming convention: the location of the excavation, which was the nearest building or structure (wood shack (WS), day tank (DT), mess hall (MH), caretaker home (CH), main residence (MR), and old bunkhouse (OBH)), followed by the test pit number within that building or structure (1-3), followed by the depth (in inches) at which the sample was collected. For example, CH1-24 was collected at the caretaker home, at the first test pit, at a depth of 24-inches bgs.

Samples collected for laboratory analysis are discussed in Section 5.1.4.

### 5.1.3 Excavated/Stockpiled Soil

Excavated soil from hand-dug test pits were temporarily stockpiled next to each test pit. Excavated soils were used to backfill test pits following the collection of analytical samples. Efforts were made to return soils to the excavation matching soil strata.

No stockpiling, transport, or disposal of contaminated soils were involved as part of this investigation.

### 5.1.4 Soil Laboratory Methods

All laboratory soil samples were analyzed for DRO by Method AK102 and RRO by Method AK103. Most laboratory soil samples were analyzed for GRO compounds by Method AK101 and VOCs by EPA Method 8260C. TPEC collected a minimum of one PAH sample at each area of environmental concern at the area most likely contaminated. Each PAH sample was analyzed for PAH by EPA Method 8270D-SIM to comply with the ADEC requirement for PAH sampling for diesel contamination (ADEC *Field Sampling Guidance (October 2019) Appendix F, Note 5*). Additionally, at sites where the COPC was unknown, TPEC collected samples that were analyzed for RCRA metals by Method 6020. TPEC personnel also collected a composite sample for laboratory analysis from the intertidal zone and had it analyzed for lead by Method SW6020. Table 5 below shows the analytical methods and sample requirements.

**Table 5: Laboratory Analytical Methods and Sample Requirements for Soil**

Method	Matrix	Container (jars)	Preservative	Hold time
8260C (VOCs)	Soil	1, 4-oz prewt'd amber	MeOH and 0-6° C	14 days
AK101 (GRO)	Soil	1, 4-oz prewt'd amber	MeOH and 0-6° C	14 days
AK102 (DRO)	Soil	1, 4oz amber glass	0-6° C	14 days
AK103 (RRO)	Soil	1, 4oz amber glass	0-6° C	14 days
SW6020 (RCRA Metals)	Soil	1, 4oz amber glass	0-6° C	14 days
8270D-SIM (PAH)	Soil	1, 4oz amber glass	0-6° C	14 days
SW 6020 (Lead)	Soil	1, 4oz amber glass	0-6° C	14 days

Soil samples destined for volatile analysis were collected first, followed by samples collected for non-volatile analysis. Pre-weighed and pre-labeled soil sample containers were filled to a volume (mass) ranging from 25 to 50 grams of soil (approximately 1/3<sup>rd</sup> container volume) and were immediately preserved by

pouring methanol over the soil and promptly securing the Teflon-lined container lid. Care was taken to ensure soils were completely covered with preservative provided by the analytical laboratory in pre-measured 25mL portions. If more than 25mL of preservative was required for a given sample, documentation of total preservative volume was recorded in the field notes and on the laboratory COC.

#### *Sample Field Preparation*

Sampling was performed in accordance with the applicable regulations:

- All samples were collected using disposable or cleaned and decontaminated sampling equipment;
- Field personnel wore disposable gloves, steel toed boots, reflective vest, and other appropriate Class D personal protective equipment. Gloves and sampling devices were changed between samples;
- Samples were collected as quickly as possible and placed in laboratory supplied containers;
- Soil for analytical sample testing was not obtained from field screening sample material;
- All samples were labeled; and
- All samples were preserved in accordance with laboratory specifications and cooled to a temperature of 0 to 6 degrees Celsius.

## **5.2 Water Sampling for Hydrocarbon Contamination**

### **5.2.1 Surface Water Sampling**

TPEC personnel investigated surface waters within the areas of environmental concern discussed in the 2001 Phase I ESA (Figure 7, Appendix A). A visual assessment of all surface water pooling within proximity to the secondary containment and drainages was conducted. TPEC personnel disturbed pond sediments to release any trapped hydrocarbons as part of the visual assessment process. TPEC personnel did not observe any signs of contamination within surface waters.

### **5.2.2 Cliff Drainage**

The 2001 Phase I ESA noted petroleum staining along the face of the cliff west of the tank farm. TPEC personnel investigated the cliff near the outfall of the natural drainage.

Water from the natural drainage west of the tank farm discharged at the top of the cliff into the intertidal zone before entering Shuyak Strait. TPEC personnel collected one water sample (CD1) and one duplicate sample (CD2) for laboratory analysis from the natural drainage. While investigating the cliff, TPEC discovered a second discharge point along the top of the cliff, north of the initial drainage. TPEC collected a second sample (CD3) at this location. The discharge was a result of water seeping out from the ground and discharging from the cliff into the intertidal zone. A third water sample (CD4) was collected from the end of a natural drainage that flowed through the center of Port William near the facility buildings. Water from this drainage discharged directly behind the equipment shed located within the intertidal zone west of the dock.

TPEC was unable to collect water samples at the point of compliance along the mean high-water line (MHWL) for samples CD1, CD2, and CD3. This deviation from the work plan is discussed in Section 10.0. TPEC selected sampling points based on proximity to the MHWL. Samples were collected as close to the

MHWL as possible. The exact location of each sample point was documented in the field notes and can be seen on Figures 4 and 5 in Appendix A.

Water sampling was completed using hand collection methods. Samples were collected as close to the MHWL as possible. TPEC personnel collected samples using the proper sampling containers with a HCL preservative, collecting water as it ran down the cliff. Water samples destined for VOC analysis were collected first, followed by samples collected for non-volatile analysis. While sampling, TPEC personnel wore disposable gloves which were disposed before collecting the next sample. Field staff filled each container completely, so that no trapped airspaces were present when the lid was closed. Following the collection of each analytical sample, TPEC personnel properly labeled each sample with a unique name before placing the sample in a cooler on ice.

Samples collected for laboratory analysis were analyzed in accordance with Section 5.2.2.1.

### 5.2.2.1 Surface Water Laboratory Methods

All laboratory surface water samples were analyzed for TAH compounds by EPA Method 624 and TAqH by EPA Method 625. Table 6 below shows the analytical methods and sample requirements.

**Table 6:** Laboratory Analytical Methods for Surface Water

Method	Matrix	Container (jars)	Preservative	Hold time
EPA 624 (TAH)	Water	3, 40 mL amber glass VOA vial	HCL and 0-6° C.	14 days
EPA 625 (TAqH)	Water	2, 250-mL amber glass	0-6° C.	7 days

Water samples destined for volatile analysis were collected first, followed by samples collected for semi-volatile analysis.

#### Sample Field Preparation

Sampling was performed in accordance with the applicable regulations:

- All samples were collected using disposable or cleaned and decontaminated sampling equipment;
- Field personnel wore disposable gloves, steel toed boots, reflective vest, and other appropriate Class D personal protective equipment. Gloves and sampling devices were changed between samples;
- Samples were collected as quickly as possible and placed in laboratory supplied containers;
- All samples were labeled; and
- All samples were preserved in accordance with laboratory specifications and cooled to a temperature of 0 to 6 degrees Celsius.

### 5.2.3 Secondary Containment

The 2001 Phase I ESA noted a black oily mixture, approximately one foot deep, of petroleum hydrocarbons, water, and sludge, inside the secondary containment of the tank farm. TPEC personnel investigated the surface water within the secondary containment of the tank farm.

TPEC personnel collected one water sample (SCW1) for laboratory analysis from pooled water within the secondary containment. TPEC collected the water sample from the area most likely contaminated as determined by surface sheen. TPEC documented the exact location of the sample in the field notes. The location of the sample is shown in Figure 5 in Appendix A.

Water sampling was completed using hand collection methods. Samples were collected using a sterile HDPE bottle, dipping at or just below the water surface. Water samples were immediately transferred to the laboratory-supplied sample containers. A duplicate sample (SCW2) was collected in accordance with Section 7.3 of the approved work plan.

Samples collected for laboratory analysis were analyzed in accordance with Section 5.2.3.1. TPEC used groundwater cleanup levels for samples collected from the secondary containment.

### 5.2.3.1 Water Laboratory Methods

All water samples collected for laboratory analysis from the secondary containment were analyzed for GRO compounds by method AK101, VOCs by EPA Method 8260C, DRO by method AK102, RRO by method AK103, and PAH by EPA Method 8270D SIM. Table 7 below shows the analytical methods and sample requirements.

**Table 7: Laboratory Analytical Methods for Water in Secondary Containment**

Method	Matrix	Container (jars)	Preservative	Hold time
8260C (VOC)	Water	3, 40 mL amber glass VOA vial	HCL and 0-6° C.	14 days
AK101 (GRO)	Water	3, 40 mL amber glass VOA vial	HCL and 0-6° C.	14 days
AK103 (RRO)	Water	1, 1 L amber glass	HCL and 0-6° C.	14-40 days
AK102 (DRO)	Water	1, 1 L amber glass	HCL and 0-6° C.	14-40 days
8270D SIM (PAH)	Water	2, 1 L amber glass	0-6° C.	7 days

Water samples destined for volatile analysis were collected first, followed by samples collected for semi-volatile analysis.

#### Sample Field Preparation

Sampling was performed in accordance with the applicable regulations:

- All samples were collected using disposable or cleaned and decontaminated sampling equipment;
- Field personnel wore disposable gloves, steel-toed boots, reflective vest, and other appropriate Class D PPE. Gloves and sampling devices were changed between samples;
- Samples were collected as quickly as possible and placed in laboratory supplied containers;
- All samples were labeled; and
- All samples were preserved in accordance with laboratory specifications and cooled to a temperature of 0° to 6° Celsius.

## 6.0 RESULTS

### 6.1 Soil Samples

The complete analytical results are in the SGS Laboratory Report 1213715 attached in Appendix C. The ADEC Data Review Checklist has also been completed for this report and is enclosed in Appendix C.

Table 1 in Appendix B shows the heated headspace field screening results for all samples collected at Port William. Table 2 in Appendix B shows the laboratory results for DRO, RRO, and GRO. The tabular VOC results, including BTEX, for laboratory samples are available in Table 3 in Appendix B. The tabular PAH results for laboratory samples are available in Table 4 in Appendix B. The RCRA metals results for applicable samples are available in Table 5 in Appendix B.

#### 6.1.1 Test Pit Samples

TPEC collected 86 samples for heated headspace field screening from 22 soil test pits advanced at Port William. Of those samples, 19 were selected for laboratory analysis.

Three field duplicate samples were collected for laboratory analysis. Sample D1-24 is a field duplicate of sample D1-18. Sample MR1-30 is a field duplicate of sample MR1-24. Sample TF5-24 is a field duplicate of sample TF5-12.

Field screening generally yielded high heated headspace results in samples collected from hand-dug soil test pits. Field screenings collected within the vicinity of the tank farm were generally higher than those collected outside the tank farm. Heated headspace field screening results for samples collected from test pits ranged from 0.0ppm to greater than 727.7 ppm.

In laboratory analysis for hand-dug test pits dug outside the vicinity of the tank farm, DRO concentrations ranged from 187 mg/Kg to 21,900mg/Kg. DRO concentrations were found to exceed the applicable ADEC Migration to Groundwater (MTG) cleanup level (230mg/Kg) in test pits DT1, MH1, CH1, MR1, MR2, MH2, and MH3. RRO and GRO concentrations were below ADEC MTG clean up levels.

Hand-dug test pits within the vicinity of the tank farm generally had elevated DRO concentrations. DRO concentrations ranged from 63.8mg/Kg to 78,400 mg/Kg. DRO concentrations were found to exceed the applicable ADEC MTG cleanup level in test pits D1, D2, D3, TF1, TF2, TF3, TF4, D4, TF5, TF6, and TF7. RRO concentrations were found to exceed the applicable ADEC MTG cleanup levels (9,700 mg/Kg) in test pits D1, D3, and TF5. GRO concentrations did not exceed ADEC MTG cleanup levels.

No BTEX analytes were detected in samples collected outside the tank farm. The Limit of Quantitation (LOQ) for two analytes (benzene and ethylbenzene) were higher than the applicable ADEC MTG cleanup levels. The remaining analytes were not detected and were below ADEC MTG cleanup levels.

Similarly, BTEX analytes were generally not detected in samples collected within the tank farm. The LOQ for benzene exceeded the applicable ADEC MTG cleanup level (0.022 mg/Kg) at each sample site. Ethylbenzene and xylenes were detected and above ADEC MTG cleanup levels at test pit D4. The remaining analytes were not detected and were below ADEC MTG cleanup levels.

Several other VOC analytes were detected in samples collected outside and within the tank farm. Detected analytes included 1,2,4-trimethylbenzen, 1,2-dibromo-3-chloropropane, 1,3,5-trimethylbenzene, chloroform, ethylbenzene, naphthalene, and xylenes. Detected analytes that exceeded project cleanup levels included 1,2,4-Trimethylbenzene, 1,3,5-trimethylbenzene, chloroform, ethylbenzene, naphthalene, and xylenes. VOC analyte concentrations that exceeded the applicable ADEC MTG cleanup levels were observed at test pits D1, D2, WS1, MH1, MR2, and D4.

In PAH laboratory analysis several analytes were detected at test pits outside and within the tank farm. Detected analytes included 1-methylnaphthalene, 2-methylnaphthalene, acenaphthene, benzo(a)anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, fluorene, Indeno[1,2,3-c,d] pyrene, naphthalene, phenanthrene, and pyrene. Detected analytes that exceeded project cleanup levels included 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo[a]pyrene, dibenzo[a,h]anthracene, naphthalene, and phenanthrene. PAH analyte concentrations were found to exceed the applicable ADEC MTG cleanup levels at test pits D1, D2, D3, D4, DT1, MH1, MH3, CH1, MR2, MH2, TF4, TF5, and TF7.

A single sample was analyzed for RCRA metals at test pit MH3 located outside the tank farm along the eastern side of the mess hall. Laboratory analysis detected several analytes. Detected analytes included arsenic, barium, cadmium, chromium, and lead. Detected analytes that exceeded project cleanup levels included arsenic (2.34 mg/Kg) and chromium (9.57 mg/Kg). The LOQ for mercury exceeded the applicable ADEC MTG cleanup level of 0.36mg/Kg at test pit MH3.

### **6.1.2 Sludge**

TPEC collected a characterization sample for laboratory analysis from sludge located within the secondary containment at the tank farm. A field duplicate sample was also collected for laboratory analysis. Sample SLD2 is a field duplicate of sample SLD1.

In laboratory analysis DRO concentrations exceeded the applicable ADEC MTG cleanup levels (230 mg/Kg). DRO concentrations ranged from 161,000 mg/Kg to 162,000 mg/Kg. Similarly, RRO concentrations exceeded the applicable ADEC MTG cleanup levels (9,700 mg/Kg). RRO concentrations ranged from 18,100 mg/Kg to 19,500 mg/Kg. GRO concentrations were below ADEC MTG cleanup levels.

BTEX analytes were not detected in sludge samples collected within the secondary containment of the tank farm. The LOQ for benzene exceeded the applicable ADEC MTG cleanup level (0.022mg/Kg) for each sample. The remaining analytes (toluene, ethylbenzene, and xylenes) were not detected and below ADEC MTG cleanup levels.

The remaining VOC analytes were not detected; however, the LOQ for several analytes exceeded the applicable ADEC MTG cleanup level. These analytes included 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichlorobenzene, 1,2,3-trichloropropane, 1,2-dibromoethane, 1,2-dichloroethane, 1,2-dichloropropane, 1,4-dichlorobenzene, 2-hexanone, bromodichloromethane, bromoform, bromomethane, chloroform, dibromochloromethane, dibromomethane, hexachlorobutadiene, methyl-t-butyl ether, methylene chloride, naphthalene,

trichloroethene, cis-1,2-dichloroethene, cis-1,3-dichloropropene, and trans-1,3-dichloropropene. Laboratory results did not show any detected concentrations that exceeded ADEC MTG cleanup levels.

In PAH laboratory analysis several analytes were detected. Analytes that were detected included 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, indeno[1,2,3-c,d]pyrene, naphthalene, phenanthrene, and pyrene. Analytes that were detected that also exceeded project cleanup levels included 1-methylnaphthalene, 2-methylnaphthalene, benzo(a)anthracene, benzo[a]pyrene, dibenzo[a,h]anthracene, naphthalene, and phenanthrene. The LOQ for the analyte naphthalene exceeded the applicable ADEC MTG cleanup level in sample SLG1.

In laboratory analysis for RCRA metals, several analytes were detected. Analytes that had detectable concentrations included arsenic, barium, cadmium, chromium, lead, and mercury. Analytes that were detected that also exceeded ADEC MTG cleanup levels included arsenic (4.83 mg/Kg and 8.37 mg/Kg), chromium (37.8 mg/Kg and 57.2 mg/Kg), and mercury (18.7 mg/Kg and 35.9 mg/Kg).

### **6.1.3 Intertidal Zone**

TPEC personnel collected a composite sample (IZ1) to characterize sand underneath broken/discarded lead-acid batteries within the intertidal zone and underneath the drip line of the eastern side Boat Building that contained peeling paint.

In laboratory analysis for RCRA metals, several analytes had detectable concentrations. Analytes with detectable concentrations included arsenic, barium, chromium, and lead. Analytes with detectable concentrations that exceed ADEC MTG cleanup levels include arsenic and chromium.

In addition to the composite sample, TPEC identified areas along the intertidal zone that had solidified Bunker C deposits. See Section 7.1.3 for additional information regarding solidified Bunker C.

## **6.2 Water Samples**

The complete analytical results are in the SGS Laboratory Report 1213715 attached in Appendix C. The ADEC Data Review Checklist has also been completed for this report and is enclosed in Appendix C.

Table 6 in Appendix B shows the TAH and TAqH results. Table 7 in Appendix B shows the laboratory results for DRO, RRO, and GRO. The tabular VOC results, including BTEX, for laboratory samples are available in Table 8 in Appendix B. The tabular PAH results for applicable samples are available in Table 9 in Appendix B.

### **6.2.1 Cliff Drainages (Surface Water)**

TPEC collected three characterization samples for laboratory analysis from surface water that ultimately discharged into Shuyak Strait. A field duplicate sample was also collected for laboratory analysis. Sample CD2 is a field duplicate of sample CD1.

Laboratory analysis shows that surface water samples analyzed for TAH and TAqH were below State of Alaska Surface Water Quality Standards. Each discharge sample had TAH concentrations that were non-

detect at 2.70 µg/L, which are well below the Water Quality Standards established by 18 AAC 70 (10 µg/L). Similarly, TAqH concentrations in samples CD3 and CD4 were non-detect at 3.10 µg/L and 3.08 µg/L, which are well below the Water Quality Standard (15 µg/L). Samples CD 1 and CD2 had polynuclear aromatic analytes that were detected. Analytes with detected concentrations included benzo(a)anthracene, pyrene, chrysene, and fluoranthene. With detected analytes, samples CD1 and CD2 had TAqH concentrations at 5.61 µg/L and 5.49 µg/L, which are still well below the Water Quality Standard (15 µg/L).

## 6.2.2 Secondary Containment

TPEC collected a characterization sample for laboratory analysis from pooled water within the secondary containment at the tank farm. A field duplicate sample was also collected for laboratory analysis. Sample SCW2 was a field duplicate of sample SCW1.

The laboratory results showed that DRO concentrations exceeded the applicable ADEC groundwater cleanup levels (1,500 µg/L). DRO concentrations ranged from 1,860 µg/L to 2,020 µg/L. Similarly, RRO concentrations exceeded the applicable ADEC groundwater cleanup levels (1,100 µg/L). RRO concentrations ranged from 1,330 µg/L to 1,680 µg/L. GRO concentrations were not detected.

VOC analytes were not detected in laboratory analysis; however, the LOQ for several VOC analytes exceeded the applicable ADEC groundwater cleanup levels. Analytes that had an LOQ above ADEC cleanup levels included 1,2,3-trichloropropane, carbon disulfide, P & M – xylenes, tert-butylbenzene, and trans-1,3-dichloropropene. Of these five analytes, none are considered to be an indicator for petroleum contaminated sites. VOCs known to be indicator compounds for petroleum contaminated sites, such as BTEX, had LOQs beneath ADEC cleanup levels. Therefore, the five analytes with LOQs exceeding ADEC cleanup levels are not COPC.

In PAH laboratory analysis several analytes were detected, however, none exceeded ADEC groundwater cleanup levels. Detected analytes included acenaphthene, benzo(a)anthracene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

## 7.0 DISCUSSION

### 7.1 Soil Samples

#### 7.1.1 Soil Test Pits

Field screening and laboratory analysis of soil samples collected from hand-dug test pits near buildings outside the vicinity of the tank farm found evidence of hydrocarbon contamination. Heated headspace field screening results from many of the test pits were found to be elevated. Field screenings indicated that petroleum contamination was most abundant just above the bedrock layer.

During the Phase I ESA, URS identified several 55-gallon drums situated on elevated wooden racks used to store heating fuel outside of buildings. TPEC dug test pits at areas where 55-gallon drums were observed. When fuel tanks were not observed outside of a building, TPEC used olfactory and visual clues to help determine where tanks may have once been stored and dug test pits at those locations. Indications of contamination were present in nearly all test pits except for test pits CH2 and OBH1. Many of the test pits

emitted a diesel fuel odor. Laboratory analysis of soil samples confirmed that DRO contamination was present beneath heating fuel drums throughout the site except for test pit WS1. Various elevated VOC and PAH analytes were also detected at test pits below heating fuel tanks.

TPEC collected a sample along the eastern side of the mess hall (MH3-6) and had it analyzed for RCRA metals. The sample exceeded ADEC cleanup levels for arsenic (2.34 mg/Kg) and chromium (9.57 mg/Kg). TPEC believes these exceedances are a result of natural backgrounds, see Section 7.1.2 for explanation.

TPEC believes that the vertical and horizontal extents of contamination below heating fuel tanks have been adequately defined. TPEC believes that these spills likely occurred over long periods of time. The vertical extent of contamination appears to be limited by the underlying bedrock. The average depth of each test pit before reaching refusal (bedrock) was approximately 18-inches bgs. The horizontal extents of contamination have been sufficiently delineated for the purposes of this site characterization as the TPEC investigation suggests that contamination has not spread far from the impact site.

TPEC believes approximately one cubic yard of contamination exists beneath each historic heating oil tank. Therefore, TPEC believes approximately eight cubic yards of contamination exists outside buildings at the site.

Field screening and laboratory analysis of soil samples collected from hand-dug test pits within the vicinity of the tank farm found evidence of hydrocarbon contamination. Heated headspace field screening results from many of the test pits were found to be elevated. Similar to test pits outside the vicinity of the tank farm, tank farm field screenings indicated that petroleum contamination was most abundant just above bedrock.

Additionally, olfactory, and visual indicators of hydrocarbon contamination were present in nearly all test pits within the vicinity of the tank farm except for test pits TF1, TF2, and TF6. Many of the test pits emitted a diesel fuel odor while others contained Bunker C. This corresponds with the findings from the 2001 Phase I ESA conducted by URS. Laboratory analysis of soil samples confirmed that both DRO and RRO contaminants were present at the tank farm. In test pits D1, D3, and TF5, TPEC observed free product (Bunker C). As expected, laboratory results noted high RRO concentrations in soil samples from these test pits. Various elevated VOC and PAH analytes were also detected at test pits throughout the tank farm.

TPEC believes that the vertical and horizontal extents of contamination at the tank farm have been adequately defined. The vertical extents of contamination appear to be limited by the underlying bedrock. The average depth of test pits before reaching refusal (bedrock) was approximately 18-inches bgs. The horizontal extents of contamination appear to be limited by the topography of the area. The test pits on the far north (TF1 and TF8) and south side (TF2) of the tank farm investigation area were found to have lower heated headspace field screenings. To ensure that contamination had not migrated north and south of the tank farm, TPEC collected laboratory samples from test pits TF1 and TF2. Laboratory analysis confirmed the absence of petroleum contamination at test pits TF1 and TF2. Contamination appears to be limited to the footprint of the secondary containment and the lower elevations west of the secondary containment along the natural drainage. Assuming the impacted area around the vicinity of the tank farm has an average depth of 18 inches, TPEC estimates there is approximately 425 to 475 cubic yards of contaminated soil on site.

### **7.1.2 Sludge**

The work plan stated that TPEC would collect a sludge sample within the tank farms, secondary containment at the area most likely contaminated. TPEC personnel walked the perimeter of the tank farm while simultaneously watching for releases of sheen from the sediment along the perimeter of the secondary containment. TPEC selected the area where the greatest amount of sheen was observed.

Laboratory results indicated that sludge within the secondary containment had the highest concentration of DRO (161,000 mg/Kg and 162,000 mg/Kg) at the site. This result was likely due to the holding of diesel fuel within the above ground storage tanks within the secondary containment.

Laboratory analysis detected high concentrations of arsenic, ranging from 4.83 mg/Kg to 8.37 mg/Kg, above ADEC MTG cleanup levels (0.20mg/Kg). TPEC believes the exceedance of arsenic is likely due to natural background concentrations. While characterizing the site, TPEC observed a thick layer of ash, ranging from 1 to 4-inches thick in most test pits. The layer of ash are the remains of the Novarupta volcanic eruption which took place in 1912. Volcanic eruptions release a natural source of arsenic into the environment which explains the high concentrations.

Laboratory analysis also detected high concentrations of chromium, ranging from 37.8 mg/Kg to 57.2 mg/Kg, above ADEC MTG cleanup levels (0.089 mg/Kg). TPEC believes the exceedance of chromium was due to background concentrations. Naturally occurring chromium is present in Alaska and is usually present as chromium III whereas chromium VI is often derived from human activities. Chromium VI has rarely been detected at contaminated sites in Alaska, as this metal is primarily associated with industrial and manufacturing processes. Other than the historical uses noted previously, which are not typically associated with the use of chromium VI, the subject property did not support industrial or manufacturing activities that could create chromium VI. In addition, the presence of chromium, above ADEC cleanup levels, at other locations within the subject property indicate that high levels of chromium are likely present due to background concentrations.

Both sludge samples had elevated levels of mercury that exceeded ADEC cleanup levels. TPEC believes the exceedance of mercury may be due to broken thermometers. Bunker C is so viscous that it must be heated before use. TPEC believes that at some point in the history of the site, the above ground storage tanks had thermometers attached to them, or an operator regularly lowered a thermometer into tanks to monitor temperature. This was standard operating procedure. Over time, thermometers may have broken and discharged their mercury into the secondary containment causing elevated levels of mercury above ADEC cleanup levels.

TPEC estimates there is approximately 35 to 45 cubic yards of contaminated sludge within the secondary containment.

### **7.1.3 Intertidal Zone**

TPEC collected a composite sample along the intertidal zone from soils underneath broken/discarded batteries and along the drip line of the Boat Building. Laboratory analysis detected arsenic and chromium above ADEC cleanup levels. TPEC believes these exceedances are due to background concentrations. See Section 7.1.2 for a detailed explanation.

While investigating the intertidal zone, TPEC observed two areas with solidified Bunker C. The first location was east of the dock and had a surface area of approximately 20” long by 12” wide. The second location had a much larger deposit of Bunker C. Below the dock, TPEC observed a pile of metallic debris that had been dumped from a hole in the floor of the shop above. TPEC believes that Bunker C mixed into the pile of metallic debris following the spill that took place in 2018. TPEC does not believe these areas pose a threat since the Bunker C has solidified. TPEC did not observe Bunker C at any other areas within the intertidal zone. The location of the Bunker C can be seen in Figure 8 in Appendix A.

## **7.2 Water Samples**

### **7.2.1 Cliff Drainages**

The surface water samples collected from the cliff drainages (CD1-CD4) had TAH and TAqH concentrations well below ADEC Water Quality Standards. TPEC observed a hydrocarbon sheen on surface water samples CD1, CD2, and CD3. The presence of a visible sheen on the surface waters violates the ADEC Water Quality Standards. Prior to collecting samples, TPEC dug test pits up gradient of the cliff, likely biasing the samples high and releasing a hydrocarbon sheen. TPEC does not believe a hydrocarbon sheen would have been present in sampling jars had the soils up gradient not been disturbed prior to collection.

### **7.2.2 Secondary Containment**

TPEC observed large amounts of hydrocarbon sheen on the pooled water within the secondary containment. Laboratory results confirmed elevated hydrocarbon concentrations (DRO and RRO) in those waters. The presence of contamination within the secondary containment indicated that areas down gradient of the tank farm (natural drainage and Shuyak Strait) had potential to be impacted. TPEC analyzed the surface water from the natural drainage down gradient of the tank farm. Laboratory analysis confirmed that TAH and TAqH concentrations were below ADEC Water Quality Standards (See Section 6.2.1). All VOC and PAH analytes were below ADEC cleanup levels. TPEC estimates that approximately 13,000 gallons of contaminated water is pooled within the secondary containment.

During the investigation, TPEC personnel observed 13 dilapidated ASTs within the vicinity of the tank farm. Historical aerial photographs show 11 ASTs situated within the tank farms secondary containment and two isolated tanks outside the containment. TPEC personnel observed approximately 200-gallons of POL water within a standing tank, inside the secondary containment, located near sample TF1-6 (Figure 5, Appendix A).

## **7.3 Areas Investigated Outside the Scope of Work**

The approved work plan stated that there were no plans to renovate or demolish any of the buildings at Port William. Therefore, lead and ACM samples were not collected as part of this site characterization. However, while on site, TPEC investigated the dock facility to assess potential for a past or threatened future release of hazardous substances. TPEC disclosed the condition of the dock to the ADEC with a telephone call and a PowerPoint presentation on August 13, 2021.

TPEC inspected an old dry dock located approximately 600-feet northeast of the tank farm. TPEC observed several discarded lead-acid batteries along the intertidal zone. TPEC did not observe any other area of environmental concern at the dry dock.

While walking to the dry dock, TPEC walked by an old, collapsed building approximately 150-feet northwest of the old bunk house. TPEC believes this building was the old cannery pulley house. Within the collapsed structure, TPEC observed two 55-gallon drums that appeared to contain old Bunker C. The base of each drum was damaged/corroded and Bunker C had seeped through cracks and solidified in place. TPEC also observed a large bucket of grease with no lid that was exposed to the elements. TPEC was unable to access soils beneath the Bunker C and grease; however, any spillage is believed to have spilled onto building debris and may not have reached the soils beneath.

## **8.0 CONCEPTUAL SITE MODEL**

TPEC prepared a preliminary Conceptual Site Model (CSM) for the areas that were investigated at Port William. Due to the isolated location, human exposure at the site is limited to intermittent residents, recreational users, and trespassers. Preliminary exposure pathways include the ingestion and dermal absorption of contaminants from soil, inhalation of outdoor and indoor air, ingestion and dermal absorption of surface water, direct contact with sediment, and ingestion of wild or farmed foods. According to the CSM, soil, groundwater, surface water, air exposure, sediment, and biota medias pose the most significant concern. The human health conceptual site model graphic form is attached in Appendix F.

## **9.0 INVESTIGATION DERIVED WASTE**

Investigative derived waste for this project included decontamination waste (i.e., paper towels), disposable PPE, and disposable sampling equipment. Investigative derived waste was placed in sealed trash bags. TPEC disposed all investigative derived waste into the ADEC-permitted Kodiak Island Borough Landfill in Kodiak.

Excavated soil from hand-dug test pits was temporarily stockpiled next to each test pit. Excavated soils were immediately backfilled in the test pits at the completion of soil sampling.

TPEC did not generate any liquid investigative derived wastes. An Alconox solution was used to decontaminate equipment. The solution was applied in such a manner that it did not drip off the equipment but was absorbed by paper towels used to wipe the equipment.

## **10.0 DEVIATIONS FROM THE WORK PLAN**

TPEC planned to dig test pits within the natural drainage along transects that were evenly spaced in 25-foot increments. Once on site, TPEC was unable to evenly space transects in 25-foot increments. Due to the topography of the natural drainage, along with four consecutive days of precipitation, test pits were not accurately profiled. Test pits immediately filled with water preventing the collection of field screening samples. As a result, TPEC elected to dig test pits along natural terraces within the drainage. Digging test pits on an elevated flat surface enabled TPEC to collect field screening samples without having test pits filling with water.

TPEC intended to collect GRO and VOC soil samples from each test pit requiring analytical sampling. TPEC was uncertain of the total number of samples necessary to adequately characterize the extent of contamination at the site in advance of the work. While characterizing the site, TPEC ran out of the preservative methanol which is required for GRO and VOC analysis. To ensure each area of environmental concern had GRO and VOC analysis, TPEC did not collect GRO and VOC at select test pits within the tank farm (TP1, TP2, TP3, TP4, TP5, and TP6) and at test pit MH3. TPEC concluded that, because previous samples in proximity had already been analyzed for GRO and VOC, such analyses at select test pits within the tank farm would not be necessary.

TPEC planned on collecting water samples at the point of compliance along the MHWL directly below the drainage outfall west of the tank farm to determine if potential contamination migration was impacting marine water quality. While collecting water samples CD1, CD2, and CD3, TPEC was unable to collect a sample at the point of compliance at the MHWL. The location of MHWL was along the base of the cliff within a pile of rocks which TPEC could not access. The absence of this sample does not impact interpretation of the data because other points along the drainage prior to this location were sampled.

TPEC calibrated field equipment daily; however, TPEC did not record calibration results in the field notebook. This is a deviation from the approved work plan.

No other deviations from the approved work plan occurred.

## **11.0 QUALITY CONTROL**

All soil and water samples were collected and handled in accordance with standards outlined in the ADEC Field Sampling Guidance (October 2019). The majority of samples were collected and stored in proper sampling containers and placed in a cooler on ice. Several samples were placed in improper sampling jars; however, TPEC coordinated with SGS beforehand to confirm that placing soil in improper sampling jars would not affect data usability. See Section 3.d of the Data Review Checklist for more information. Field duplicate samples were collected simultaneously from the same sampling location as the parent sample. TPEC personnel used identical sampling methods to retrieve one duplicate for every 10 samples for each sample matrix. Field duplicate samples were collected from screening locations exhibiting the highest PID heated headspace screening results. Chain of Custody records were maintained for each sample. Samples were kept between zero (0) and six (6) degrees centigrade (°C). TPEC personnel placed custody seals on all coolers to determine if the samples may have been tampered with while being transported to the laboratory. Trip blanks remained with the samples after collection and were analyzed by SGS. All samples were received by SGS within sample holding times. All laboratory method blanks, sample duplicates and matrix spikes met quality control definitions. This section discusses quality control methods and results for all soil and water samples collected for laboratory analysis at Port William.

### **11.1 Soil Samples**

Failed surrogate recoveries occurred for 18 soil samples collected from Port William. In general, these failed surrogate recoveries likely occurred because soil samples contained high enough levels of petroleum contamination to effectively mask surrogate detection. Failed surrogate recoveries included 13 samples (D1-18, D1-24, D3-12, MH1-0, CH1-24, MR1-30, SLG1, SLG 2, MR2-22, D4-18, TF5-12, TF5-24, and TF7-18) analyzed for PAH analysis (8270D SIM). Seven samples (D1-18, D1-24, D3-12, SLG1, SLG2, TF5-12, and TF5-24) fail surrogate recoveries for DRO analysis (AK102). Eleven samples (D1-18, D1-24,

D3-12, WS1-12, DT1-17, MR1-24, SLG 1, SLG2, MR2-22, MH2-6, and D4-18) failed surrogate recoveries for GRO analysis (AK101). Two samples (D3-12 and TF5-12) failed surrogate recoveries for RRO analysis (AK103). Fourteen samples (D1-18, D1-24, D3-12, D2-17, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, SLG1, SLG 2, MR2-22, MH2-6, and D4-18) failed surrogate recoveries for VOC analysis (Method: SW8260D).

Multiple soil samples collected from Port William had VOC analytes with LOQs greater than the ADEC MTG cleanup level. These results are summarized in Table 8 below.

**Table 8:** Laboratory Samples for VOC Analyte w/ Limit of Quantitation Above the MTG Cleanup Level

VOC Analyte with LOQ Above MTG Cleanup Level	Affected Samples
1, 1, 1, 2-Tetrachloroethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1, 1, 2, 2-Tetrachloroethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1, 1, 2-Trichloroethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1,1-Dichloroethane	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
1, 2, 3-Trichlorobenzene	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, and MH2-6
1, 2, 3-Trichloropropane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1, 2, 4-Trichlorobenzene	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
1, 2-Dibromoethane (EDB)	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1, 2-Dichloroethane	D1-18, D1-24, D3-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
1, 2-Dichloropropane	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
1, 3-Dichloropropane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
1, 4-Dichlorobenzene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
2-Hexanone	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Benzene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Bromodichloromethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-30, SLG1, SLG2, MH2-6, and D4-18
Bromomethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Carbon tetrachloride	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0,

	CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Chloroform	D1-18, D1-24, D2-17, D3-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Dibromochloromethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Dibromomethane	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Hexachlorobutadiene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
Methyl-t-butyl ether	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
Methylene chloride	D1-18, D1-24, D3-12, WS1-12, MH1-0, CH1-24, SLG1, SLG2, MH2-6, and D4-18
Naphthalene	D3-12, WS1-12, DT1-17, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MH2-6, and D4-18
Trichloroethene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-30, SLG1, SLG2, MH2-6, and D4-18
Vinyl chloride	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
cis-1,3-Dichloropropene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18
trans-1,3-Dichloropropene	D1-18, D1-24, D2-17, D3-12, WS1-12, DT1-17, MH1-0, CH1-24, MR1-24, MR1-30, SLG1, SLG2, MR2-22, MH2-6, and D4-18

Most samples collected from Port William had VOC analytes with LOQs above ADEC MTG cleanup levels. TPEC believes that the usability of the collected VOC data remains valid because all soil samples containing VOC analytes with elevated LOQs were collected in areas with detectable concentrations of hydrocarbon range organics like RRO and/or DRO. According to SGS laboratory personnel, it is common for Method SW8260D analysis to be disrupted by detectable concentrations of petroleum within a sample. Furthermore, SGS laboratory personnel stated that the VOC analytes, in particular (1,2,3-trichloropropane, EDB, and dibromochloromethane) are the only remaining low-level VOC analytes processed using selected ion monitoring (SIM) under Method 8260D. Because of this, the SIM process routinely elevates the limit of quantitation for these three VOC analytes. See the Data Review Checklist in Appendix C for more information.

Multiple soil samples collected from Port William had PAH analytes with LOQs greater than the MTG cleanup level. These results are summarized in Table 9 below.

**Table 9:** Laboratory Samples for PAH Analyte w/ Limit of Quantitation Above the MTG Cleanup Level

PAH Analyte with LOQ Above MTG Cleanup Level	Affected Samples
1-Methylnaphthalene	D3-12
2-Methylnaphthalene	D3-12 and SLG1

Acenaphthylene	SLG1 and SLG2
Benzo(a)Anthracene	TF7-18
Benzo[a]pyrene	TF5-24 and TF7-18
Dibenzo[a,h]anthracene	TF5-24 and TF7-18
Naphthalene	D2-17, D3-12, WS1-12, MRI-24, MRI-30, SLG1, MR2-22, and TF3-15

Several samples collected from Port William had PAH analytes with LOQs above ADEC MTG cleanup levels. Similar to VOC analysis, TPEC believes that the usability of the collected PAH data remains valid because all soil samples containing PAH analytes with elevated LOQs were collected in areas with detectable concentrations of hydrocarbon range organics like RRO and/or DRO.

## 11.2 Water Samples

Two water samples collected from Port William had VOC analytes with LOQs greater than the MTG cleanup levels. Both samples (SCW1 and SCW2) were collected from the tank farms secondary containment. Analytes with elevated LOQs above ADEC cleanup levels include 1,2,3-trichloropropane, carbon disulfide, P & M -xylene, tert-butylbenzene, and trans-1,3-dichloropropene. TPEC believes that the usability of the collected VOC data remains valid because each water sample containing VOC analytes with elevated LOQs were collected in areas with detectable concentrations of hydrocarbon range organics like RRO and/or DRO.

## 12.0 SITE RECOMMENDATIONS AND CONCLUSIONS

Based on the findings of this investigation, contaminated soils and water exist at the Port William facility. Hydrocarbon contaminated soils, primarily DRO, more than the applicable ADEC MTG cleanup levels were present throughout the site. Areas of contamination outside the tank farm were attributed to leaking fuel tanks used to store heating fuel. Areas of contamination within the vicinity of the tank farm were a result of leaking aboveground storage tanks over decades of time. Past use of Bunker C at the facility may have caused high RRO concentrations that exceed the applicable ADEC cleanup levels. The equipment necessary to operate an old tank farm may have attributed to the exceedance of mercury found in sludge within the secondary containment area. Additionally, hydrocarbon-contaminated water with concentrations exceeding the applicable ADEC groundwater cleanup levels was present in the pooled water within the secondary containment area.

TPEC has the following recommendations to address the immediate risks:

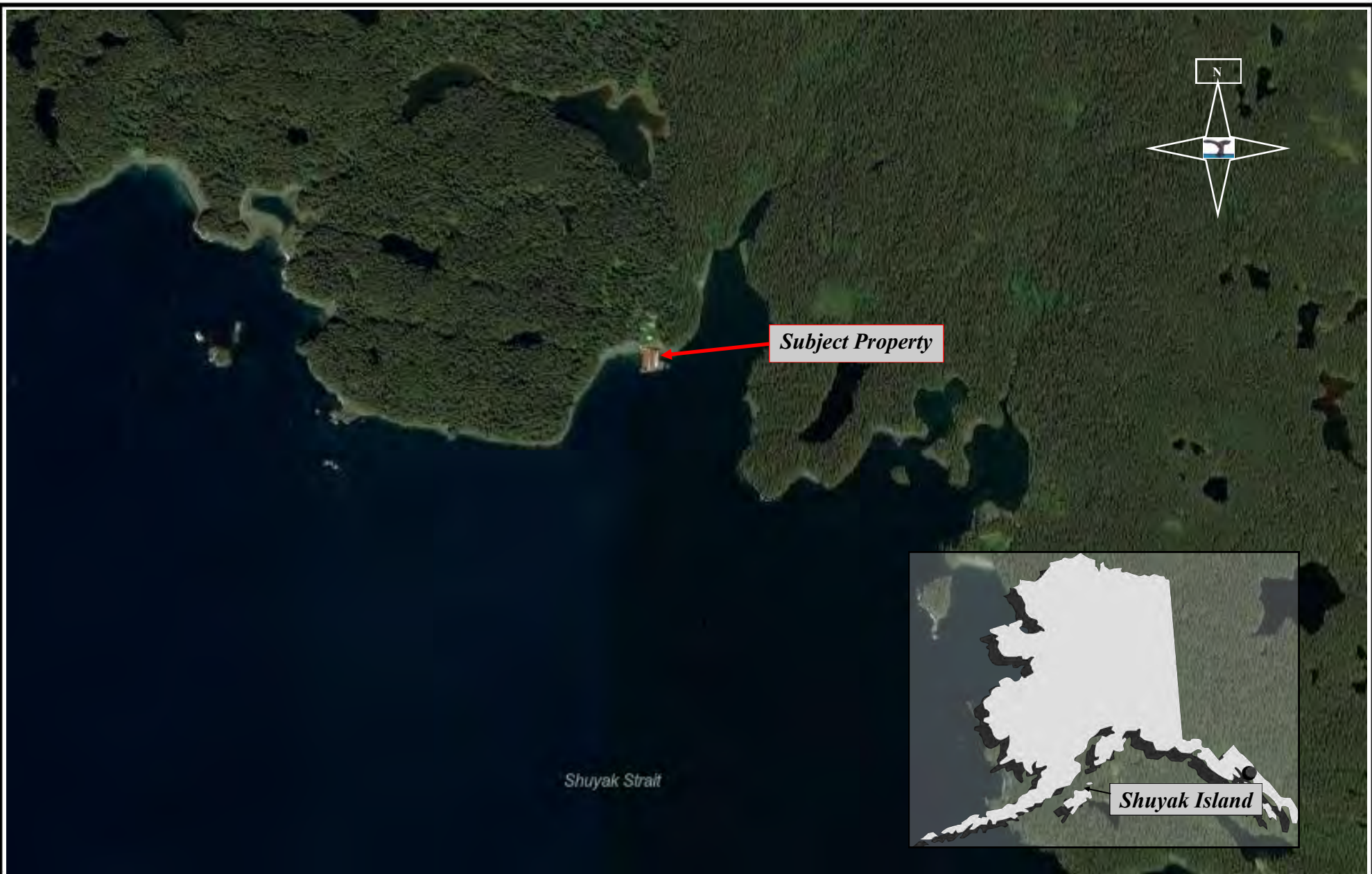
- Remove contaminated soil underneath each heating fuel tank near facility buildings. TPEC estimates approximately one cubic yard of contaminated soil is present underneath each heating fuel tank.
- Remove contaminated soil underneath and down gradient of tank farm. TPEC estimates approximately 450 cubic yards of contaminated soil exists within the vicinity of the tank farm.
- Remove approximately 35 to 45 cubic yards of sludge within the secondary containment.
- Remove all ASTs and POL water located in the Tank Farm. TPEC estimates approximately 200-gallons of POL water within one of the ASTs.

- Develop a work plan to treat the approximately 13,000 gallons of contaminated water pooled within the secondary containment area at the tank farm.
- Remove the building material and petroleum fluids from the collapsed pully house and investigate the soils beneath to ensure soils are not contaminated.

### 13.0 LITERATURE CITED

- 18 AAC 70 *Water Quality Standards, Revised as of March 2020*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska.
- 18 AAC 75 *Oil and Other Hazardous Substances Pollution Control, Revised as of November, 2020*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska.
- ADEC, 2017. *Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska. Anchorage, Alaska.
- ADEC, 2018. *Procedures for Calculating Cumulative Risk*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska. Anchorage, Alaska.
- ADEC, 2019. *Field Sampling Guidance*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska.
- ADEC, 2019. Minimum Quality Assurance Requirements for Sample Handling, Reports, and Laboratory Data– *Technical Memorandum*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska.
- ADEC, 2020. *Transport, Treatment, & Disposal Approval Form for Contaminated Media*. State of Alaska, Department of Environmental Conservation, Juneau, Alaska. Available at [dec.alaska.gov/spar/csp/guidance\\_forms](http://dec.alaska.gov/spar/csp/guidance_forms)

APPENDIX A:  
Figures



<p>Travis/Peterson Environmental Consulting, Inc.          3305 Arctic Boulevard, Suite 102          Anchorage, AK 99503          907-522-4337</p>	<p align="center"><b>Port William Former Cannery          Site Characterization Work Plan          Shuyak Island, Alaska</b></p>	<p align="right">Location and Vicinity Map           Figure #1</p>	
<p><b>Project No: 1072-06</b></p>	<p><b>File: Company/Projects/1072/06</b></p>	<p><b>Date: 2/23/2021</b></p>	<p><b>Scale: None</b></p>



Travis/Peterson Environmental Consulting, Inc.  
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**Port William Former Cannery  
 Site Characterization Work Plan  
 Shuyak Island, Alaska**

Site Map  
 Figure #2

Project No: 1072-06

File: Company/Projects/1072/06

Date: 10/1/2021

Scale: 1" = 165'



**Legend**

-  Tank Farm
-  Natural Drainage
-  Cliff
-  Intertidal Zone

Travis/Peterson Environmental Consulting, Inc.  
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**Port William Former Cannery  
 Site Characterization Work Plan  
 Shuyak Island, Alaska**

**Areas of Environmental Concern Map  
 Figure #3**

**Project No: 1072-06**

**File: Company/Projects/1072/06**

**Date: 10/1/2021**

**Scale: 1" = 140'**



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## Port William Former Cannery Site Characterization Report

Shuyak Island, Alaska

Facility Sample Locations  
 (Excluding Intertidal Zone and Tank Farm)

Figure #4

Project No: 1072-06

File: Company/Projects/1072/06

Date: 6/28/2021

Scale: 1" = 65'



Legend	
<span style="color: blue;">●</span>	Water Sample
<span style="color: red;">●</span>	Soil Sample
<span style="color: purple;">●</span>	Test Pit w/ No Sample
*	Duplicate Sample
<span style="color: yellow;">---</span>	Natural Drainage

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**Port William Former Cannery  
 Site Characterization Report**

Shuyak Island, Alaska

Tank Farm Sample Locations  
 Figure #5

Project No: 1072-06

File: Company/Projects/1072/06

Date: 6/28/2021

Scale: 1" = 25'



**Legend**

● Composite Sample

Notes:  
 Composite sample (IZ1) made up of 13 sample points. Analyzed for RCRA Metals.

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**Port William Former Cannery  
 Site Characterization Report**

Shuyak Island, Alaska

**Intertidal Zone RCRA Metal Sample Locations**

Figure #6

**Project No: 1072-06**


**File: Company/Projects/1072/06**

**Date: 6/28/2021**

**Scale: 1" = 45'**



**Legend**

 Surface Water Investigation Boundary

<p>Travis/Peterson Environmental Consulting, Inc.          3305 Arctic Boulevard, Suite 102          Anchorage, AK 99503          907-522-4337</p>	<p><b>Port William Former Cannery          Site Characterization Work Plan          Shuyak Island, Alaska</b></p>	<p>Surface Water Boundary Map          Figure #7</p>	
<p>Project No: 1072-06</p>	<p>File: Company/Projects/1072/06</p>	<p>Date: 2/23/2021</p>	<p>Scale: 1" = 140'</p>



Legend	
●	Solidified Bunker C

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**Port William Former Cannery  
 Site Characterization Report**

Shuyak Island, Alaska

Solidified Bunker C Locations  
 Figure #8

**Project No: 1072-06**

**File: Company/Projects/1072/06**

**Date: 6/28/2021**

**Scale: 1" = 45'**

**APPENDIX B:**  
**Results Data Tables**

**Table 1: Heated Headspace Field Screening**

Sample ID	Depth (in)	PID Reading
		ppm
D1-0	0	14.8
D1-6	6	9.7
D1-12	12	45.5
<b>D1-18 *</b>	<b>18</b>	<b>63.7</b>
D1-22	22	40.1
D2-0	0	58.3
D2-6	6	61.1
D2-12	12	274.1
<b>D2-17</b>	<b>17</b>	<b>727.7</b>
D3-0	0	9.7
D3-6	6	44.0
<b>D3-12</b>	<b>12</b>	<b>19.7</b>
WS1-0	0	33.8
WS1-6	6	19.1
<b>WS1-12</b>	<b>12</b>	<b>38.4</b>
WS1-18	18	1.4
WS1-24	24	4.2
WS1-30	30	0.0
DT1-0	0	10.9
DT1-6	7	4.7
DT1-12	12	3.8
<b>DT1-17</b>	<b>17</b>	<b>11.3</b>
OBH1-0	0	0.9
<b>MH1-0</b>	<b>0</b>	<b>45.7</b>
MH1-6	6	42.5
CH1-0	0	0.5
CH1-6	6	3.7
CH1-12	12	49.9
CH1-18	18	51.1
<b>CH1-24</b>	<b>24</b>	<b>121.9</b>
CH2-0	0	2.4
CH2-6	6	0.3
CH2-12	12	0.2
CH2-18	18	0.4
MR1-0	0	16.1
MR1-6	6	2.5
MR1-12	12	13.1
MR1-18	18	11.9
<b>MR1-24 *</b>	<b>24</b>	<b>336.2</b>
MR2-0	0	5.1
MR2-6	6	43.3
MR2-12	12	134.1
MR2-18	18	301.9
<b>MR2-22</b>	<b>22</b>	<b>305.2</b>

Notes:  
**Bolded** values indicate analytical sample.  
 \* indicates duplicate sample location.  
 Cells highlight in yellow indicate that sample came from within the vicinity of the Tank Farm.

Sample ID	Depth (ft)	PID Reading
		ppm
MH2-0	0	3.0
<b>MH2-6</b>	<b>6</b>	<b>35.7</b>
MH2-11	11	15.6
MH3-0	0	1.1
<b>MH3-6</b>	<b>6</b>	<b>31.8</b>
MH3-12	12	26.6
TF1-0	0	8.6
<b>TF1-6</b>	<b>6</b>	<b>11.0</b>
TF2-0	0	3.9
TF2-6	6	6.6
<b>TF2-12</b>	<b>12</b>	<b>8.9</b>
TF2-18	18	3.8
TF2-24	24	3.6
TF3-0	0	1.9
TF3-6	6	6.8
TF3-12	12	7.6
<b>TF3-15</b>	<b>15</b>	<b>11.4</b>
<b>TF4-0</b>	<b>0</b>	<b>7.4</b>
TF4-6	6	2.4
TF4-12	12	6.5
TF4-18	18	4.3
TF4-24	24	2.2
TF4-30	30	1.3
D4-0	0	84.2
D4-6	6	271.1
D4-12	12	268.2
<b>D4-18</b>	<b>18</b>	<b>307.1</b>
TF5-0	0	24.7
TF5-6	6	106.4
<b>TF5-12 *</b>	<b>12</b>	<b>111.3</b>
TF5-18	18	108.9
TF6-0	0	4.6
TF6-6	6	4.0
<b>TF6-12</b>	<b>12</b>	<b>9.8</b>
TF6-18	18	7.0
TF7-0	0	37.4
TF7-6	6	36.4
TF7-12	12	74.7
<b>TF7-18</b>	<b>18</b>	<b>106.4</b>
TF8-0	0	1.0
TF8-6	6	0.9
TF8-12	12	0.9

Notes:  
**Bolded** values indicate analytical sample.  
 \* indicates duplicate sample location.  
 Cells highlight in yellow indicate that the sample came from within the vicinity of the Tank Farm.

**TABLE 2: DRO, RRO, and GRO Results (Soil)**

Sample ID	Approx. Depth (in)	Solids	DRO	RRO	GRO
		%	230 mg/Kg	9,700 mg/Kg	260 mg/Kg
D1-18	18	46.3	<b>65,800</b>	<b>13,600</b>	11.8 U
D1-24	18	43.8	<b>78,400</b>	<b>16,800</b>	10.1 U
D2-17	17	50.8	<b>6,320</b>	1,200	20.2
D3-12	12	37.1	<b>73,100</b>	<b>26,100</b>	12.6 U
WS1-12	12	43.8	187	1,140	12.0 U
DT1-17	17	51.9	<b>4,160</b>	704	6.27 U
MH1-0	Surface	36.6	<b>16,200</b>	539	12.1 U
CH1-24	24	34.7	<b>21,900</b>	1,150 U	12.3 U
MR1-24	24	65.1	<b>2,940</b>	153 U	5.08 U
MR1-30	30	59.1	<b>4,620</b>	328	25.5
SLG1	1	36.8	<b>161,000</b>	<b>19,500</b>	11.8 U
SLG2	1	36.9	<b>162,000</b>	<b>18,100</b>	15.8
MR2-22	22	66.7	<b>8,570</b>	1,640	28.8
MH2-6	6	34.2	<b>3,550</b>	4,700	13.6 U
TF1-6	6	29.0	139	343 U	-
TF2-12	12	58.3	63.8	256	-
TF3-15	15	35.8	<b>440</b>	2690	-
TF4-0	Surface	29.6	<b>373</b>	1,440	-
D4-18	18	39.2	<b>23,000</b>	4,330	33.5
TF5-12	12	51.6	<b>48,800</b>	<b>28,900</b>	-
TF5-24	12	52.6	<b>53,000</b>	<b>32,100</b>	-
TF6-12	12	52.6	144	269	-
TF7-18	18	57.0	<b>41,400</b>	9,240	-
MH3-6	6	50.0	<b>647</b>	1,780	-

Notes:

**Bolded** values in **red** indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.

U indicates the analyte was analyzed for but not detected.

Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.

Sample D1-24 is a field duplicate of sample D1-18.

Sample MR1-30 is a field duplicate of sample MR1-24.

Sample SLD2 is a field duplicate of sample SLD1.

Sample TF5-24 is a field duplicate of sample TF5-12.

TABLE 3A: VOC Results (Soil)

Analyte	Cleanup Level	D1-18	D1-24	D2-17	D3-12	WS1-12	DT1-17	MH1-0	CH1-24
	mg/Kg								
1,1,1,2-Tetrachloroethane	0.022	0.0943 U	0.0161 U	0.0549 U	0.1 U	0.0961 U	0.0502 U	0.0967 U	0.0986 U
1,1,1-Trichloroethane	32	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,1,2,2-Tetrachloroethane	0.003	0.00943 U	0.0202 U	0.00549 U	0.01 U	0.00961 U	0.00502 U	0.00967 U	0.00986 U
1,1,2-Trichloroethane	0.0014	0.00377 U	0.101 U	0.0022 U	0.00402 U	0.00384 U	0.00201 U	0.00387 U	0.00394 U
1,1-Dichloroethane	0.092	0.118 U	0.202 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,1-Dichloroethene	1.2	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,1-Dichloropropene	None Available	0.118 U	0.403 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,2,3-Trichlorobenzene	0.15	0.236 U	0.0806 U	0.137 U	0.251 U	0.24 U	0.125 U	0.242 U	0.247 U
1,2,3-Trichloropropane	0.000031	0.00943 U	0.101 U	0.00549 U	0.01 U	0.00961 U	0.00502 U	0.00967 U	0.00986 U
1,2,4-Trichlorobenzene	0.082	0.118 U	0.403 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,2,4-Trimethylbenzene	0.61	0.769	0.403 U	0.165	0.251 U	0.24 U	0.125 U	0.242 U	0.247 U
1,2-Dibromo-3-chloropropane	None Available	0.471 U	1.11	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
1,2-Dibromoethane	0.00024	0.00471 U	0.202 U	0.00275 U	0.00502 U	0.0048 U	0.00251 U	0.00484 U	0.00493 U
1,2-Dichlorobenzene	2.4	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,2-Dichloroethane	0.0055	0.00943 U	0.0504 U	0.00549 U	0.01 U	0.00961 U	0.00502 U	0.00967 U	0.00986 U
1,2-Dichloropropane	0.03	0.0471 U	0.101 U	0.0275 U	0.0502 U	0.048 U	0.0251 U	0.0484 U	0.0493 U
1,3,5-Trimethylbenzene	0.66	0.207	0.0202 U	0.0769	0.126 U	0.12 U	0.0627 U	0.25	0.123 U
1,3-Dichlorobenzene	2.3	0.118 U	0.202 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
1,3-Dichloropropane	None Available	0.0471 U	0.403 U	0.0275 U	0.0502 U	0.048 U	0.0251 U	0.0484 U	0.0493 U
1,4-Dichlorobenzene	0.037	0.118 U	0.00322 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
2,2-Dichloropropane	None Available	0.118 U	0.302 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
2-Butanone (MEK)	15	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
2-Chlorotoluene	None Available	0.118 U	0.0504 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
2-Hexanone	0.11	0.471 U	0.101 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
4-Chlorotoluene	None Available	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
4-Isopropyltoluene	None Available	0.471 U	0.101 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
4-Methyl-2-pentanone (MIBK)	18	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Acetone	38	0.118 U	0.101 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Benzene	0.022	0.0589 U	0.101 U	0.0343 U	0.0628 U	0.06 U	0.0314 U	0.0605 U	0.0616 U
Bromobenzene	0.36	0.118 U	0.0504 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Bromochloromethane	None Available	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Bromodichloromethane	0.0043	0.00943 U	0.00943 U	0.00549 U	0.01 U	0.00961 U	0.00502 U	0.00967 U	0.00986 U
Bromoform	0.1	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Bromomethane	0.024	0.0943 U	0.0943 U	0.0549 U	0.1 U	0.0961 U	0.0502 U	0.0967 U	0.0986 U
Carbon disulfide	2.9	0.471 U	0.471 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
Carbon tetrachloride	0.021	0.0589 U	0.0589 U	0.0343 U	0.0628 U	0.06 U	0.0314 U	0.0605 U	0.0616 U
Chlorobenzene	0.46	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Chloroethane	72	0.943 U	0.943 U	0.549 U	1 U	0.961 U	0.502 U	0.967 U	0.986 U
Chloroform	0.0071	0.0189 U	0.0189 U	0.011 U	0.0201 U	0.238	0.01 U	0.0193 U	0.0197 U
Chloromethane	0.61	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Dibromochloromethane	0.0027	0.0236 U	0.0236 U	0.0137 U	0.0251 U	0.024 U	0.0125 U	0.0242 U	0.0247 U
Dibromomethane	0.025	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Dichlorodifluoromethane	3.9	0.236 U	0.236 U	0.137 U	0.251 U	0.24 U	0.125 U	0.242 U	0.247 U
Ethylbenzene	0.13	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Freon-113	310	0.471 U	0.471 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
Hexachlorobutadiene	0.02	0.0943 U	0.0943 U	0.0549 U	0.1 U	0.0961 U	0.0502 U	0.0967 U	0.0986 U
Isopropylbenzene (Cumene)	5.6	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Methyl-t-butyl ether	0.33	0.471 U	0.471 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
Methylene chloride	0.4	0.471 U	0.471 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
Naphthalene	0.038	3.02 U	3.02	1.156	0.126 U	0.12 U	0.0627 U	0.385	0.123 U
P & M -Xylene	None Available	0.236 U	0.236 U	0.137 U	0.251 U	0.24 U	0.125 U	0.242 U	0.247 U
Styrene	10	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Tetrachloroethene	0.19	0.0589 U	0.0589 U	0.0343 U	0.0628 U	0.06 U	0.0314 U	0.0605 U	0.0616 U
Toluene	6.7	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
Trichloroethene	0.011	0.0236 U	0.0236 U	0.0137 U	0.0251 U	0.024 U	0.0125 U	0.0242 U	0.0247 U
Trichlorofluoromethane	41	0.236 U	0.236 U	0.137 U	0.251 U	0.24 U	0.125 U	0.242 U	0.247 U
Vinyl acetate	1.1	0.471 U	0.471 U	0.275 U	0.502 U	0.48 U	0.251 U	0.484 U	0.493 U
Vinyl chloride	0.0008	0.00377 U	0.00377 U	0.0022 U	0.00402 U	0.00384 U	0.00201 U	0.00387 U	0.00394 U
Xylenes (total)	1.5	0.354 U	0.354 U	0.206 U	0.377 U	0.36 U	0.188 U	0.363 U	0.37 U
cis-1,2-Dichloroethene	0.12	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
cis-1,3-Dichloropropene	0.018	0.0589 U	0.0589 U	0.0343 U	0.0628 U	0.06 U	0.0314 U	0.0605 U	0.0616 U
n-Butylbenzene	23	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
n-Propylbenzene	9.1	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
o-Xylene	None Available	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
sec-Butylbenzene	42	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
tert-Butylbenzene	11	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
trans-1,2-Dichloroethene	1.3	0.118 U	0.118 U	0.0686 U	0.126 U	0.12 U	0.0627 U	0.121 U	0.123 U
trans-1,3-Dichloropropene	0.018	0.0589 U	0.0589 U	0.0343 U	0.0628 U	0.06 U	0.0314 U	0.0605 U	0.0616 U

Notes:

**Bolded** values in red indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.

**Blue** values indicates LOQ was above the ADEC Cleanup Level.

U Indicates the analyte was analyzed for but not detected.

Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.

Sample D1-24 is a field duplicate of sample D1-18.

TABLE 3B: VOC Results (Soil)

Analyte	Cleanup Level	MR1-24	MR1-30	SLG1	SLG2	MR2-22	MH2-6	D4-18
	mg/Kg							
1,1,1,2-Tetrachloroethane	0.022	0.0406 U	0.0478 U	0.0943 U	0.102 U	0.0373 U	0.109 U	0.0969 U
1,1,1-Trichloroethane	32	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,1,2,2-Tetrachloroethane	0.003	0.00406 U	0.00478 U	0.00943 U	0.0102 U	0.00373 U	0.0109 U	0.00969 U
1,1,2-Trichloroethane	0.0014	0.00163 U	0.00191 U	0.00377 U	0.0041 U	0.00149 U	0.00435 U	0.00388 U
1,1-Dichloroethane	0.092	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,1-Dichloroethene	1.2	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,1-Dichloropropene	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,2,3-Trichlorobenzene	0.15	0.102 U	0.119 U	0.236 U	0.256 U	0.0932 U	0.272 U	0.242 U
1,2,3-Trichloropropane	0.000031	0.00406 U	0.00478 U	0.00943 U	0.0102 U	0.00373 U	0.0109 U	0.00969 U
1,2,4-Trichlorobenzene	0.082	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,2,4-Trimethylbenzene	0.61	0.102 U	0.119 U	0.236 U	0.256 U	0.262	0.272 U	4.75
1,2-Dibromo-3-chloropropane	None Available	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
1,2-Dibromoethane	0.00024	0.00203 U	0.00239 U	0.00471 U	0.00512 U	0.00186 U	0.00543 U	0.00484 U
1,2-Dichlorobenzene	2.4	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,2-Dichloroethane	0.0055	0.00406 U	0.00478 U	0.00943 U	0.0102 U	0.00373 U	0.0109 U	0.00969 U
1,2-Dichloropropane	0.03	0.0203 U	0.0239 U	0.0471 U	0.0512 U	0.0186 U	0.0543 U	0.0484 U
1,3,5-Trimethylbenzene	0.66	0.0508 U	0.0597 U	0.118 U	0.128 U	0.267	0.136 U	1.52
1,3-Dichlorobenzene	2.3	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
1,3-Dichloropropane	None Available	0.0203 U	0.0239 U	0.0471 U	0.0512 U	0.0186 U	0.0543 U	0.0484 U
1,4-Dichlorobenzene	0.037	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
2,2-Dichloropropane	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
2-Butanone (MEK)	15	0.508 U	0.597 U	1.18 U	1.28 U	0.466 U	1.36 U	1.21 U
2-Chlorotoluene	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
2-Hexanone	0.11	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
4-Chlorotoluene	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
4-Isopropyltoluene	None Available	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
4-Methyl-2-pentanone (MIBK)	18	0.508 U	0.597 U	1.18 U	1.28 U	0.466 U	1.36 U	1.21 U
Acetone	38	0.508 U	0.597 U	1.18 U	1.28 U	0.466 U	1.36 U	1.21 U
Benzene	0.022	0.0254 U	0.0298 U	0.0589 U	0.064 U	0.0233 U	0.0679 U	0.0606 U
Bromobenzene	0.36	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Bromochloromethane	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Bromodichloromethane	0.0043	0.00406 U	0.00478 U	0.00943 U	0.0102 U	0.00373 U	0.0109 U	0.00969 U
Bromoform	0.1	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Bromomethane	0.024	0.0406 U	0.0478 U	0.0943 U	0.102 U	0.0373 U	0.109 U	0.0969 U
Carbon disulfide	2.9	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
Carbon tetrachloride	0.021	0.0254 U	0.0298 U	0.0589 U	0.064 U	0.0233 U	0.0679 U	0.0606 U
Chlorobenzene	0.46	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Chloroethane	72	0.406 U	0.478 U	0.943 U	1.02 U	0.373 U	1.09 U	0.969 U
Chloroform	0.0071	0.00813 U	0.00955 U	0.0189 U	0.0205 U	0.00746 U	0.0217 U	0.0194 U
Chloromethane	0.61	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Dibromochloromethane	0.0027	0.0102 U	0.0119 U	0.0236 U	0.0256 U	0.00932 U	0.0272 U	0.0242 U
Dibromomethane	0.025	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Dichlorodifluoromethane	3.9	0.102 U	0.119 U	0.236 U	0.256 U	0.0932 U	0.272 U	0.242 U
Ethylbenzene	0.13	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.941
Freon-113	310	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
Hexachlorobutadiene	0.02	0.0406 U	0.0478 U	0.0943 U	0.102 U	0.0373 U	0.109 U	0.0969 U
Isopropylbenzene (Cumene)	5.6	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0652	0.136 U	0.121 U
Methyl-t-butyl ether	0.33	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
Methylene chloride	0.4	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
Naphthalene	0.038	0.0508 U	0.0597 U	0.118 U	0.128 U	0.638	0.136 U	1.63
P & M-Xylene	None Available	0.102 U	0.119 U	0.236 U	0.256 U	0.0932 U	0.272 U	2.81
Styrene	10	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Tetrachloroethene	0.19	0.0254 U	0.0298 U	0.0589 U	0.064 U	0.0233 U	0.0679 U	0.0606 U
Toluene	6.7	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
Trichloroethene	0.011	0.0102 U	0.0119 U	0.0236 U	0.0256 U	0.00932 U	0.0272 U	0.0242 U
Trichlorofluoromethane	41	0.102 U	0.119 U	0.236 U	0.256 U	0.0932 U	0.272 U	0.242 U
Vinyl acetate	1.1	0.203 U	0.239 U	0.471 U	0.512 U	0.186 U	0.543 U	0.484 U
Vinyl chloride	0.0008	0.00163 U	0.00191 U	0.00377 U	0.0041 U	0.00149 U	0.00435 U	0.00388 U
Xylenes (total)	1.5	0.152 U	0.179 U	0.354 U	0.384 U	0.14 U	0.407 U	4.8
cis-1,2-Dichloroethene	0.12	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
cis-1,3-Dichloropropene	0.018	0.0254 U	0.0298 U	0.0589 U	0.064 U	0.0233 U	0.0679 U	0.0606 U
n-Butylbenzene	23	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
n-Propylbenzene	9.1	0.0508 U	0.0597 U	0.118 U	0.128 U	0.118	0.136 U	0.291
o-Xylene	None Available	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	1.99
sec-Butylbenzene	42	0.0508 U	0.0597 U	0.118 U	0.128 U	0.189	0.136 U	0.121 U
tert-Butylbenzene	11	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
trans-1,2-Dichloroethene	1.3	0.0508 U	0.0597 U	0.118 U	0.128 U	0.0466 U	0.136 U	0.121 U
trans-1,3-Dichloropropene	0.018	0.0254 U	0.0298 U	0.0589 U	0.064 U	0.0233 U	0.0679 U	0.0606 U

Notes:

**Bolded** values in red indicate exceedence of ADEC Method Two, "Migration to Groundwater Cleanup Level".

**Blue** values indicates LOQ was above the ADEC Cleanup Level.

U Indicates the analyte was analyzed for but not detected.

Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.

Sample MR1-30 is a field duplicate of sample MR1-24.

Sample SLD2 is a field duplicate of sample SLD1.

Table 4A: PAH Results (Soil)

Analyte	Cleanup Level	D1-18	D1-24	D2-17	D3-12	WS1-12	DT1-17	MH1-0	CH1-24	MR1-24	MR1-30	SLG1	SLG2
	mg/Kg												
1-Methylnaphthalene	0.41	<b>178</b>	<b>179</b>	<b>3.71</b>	<b>3.37 U</b>	0.282 U	0.0955 U	<b>8.24</b>	<b>7.85</b>	0.189 U	1.05 U	<b>47.8</b>	<b>69</b>
2-Methylnaphthalene	1.3	<b>153</b>	<b>148</b>	<b>4</b>	<b>3.37 U</b>	0.282 U	0.0955 U	<b>10.7</b>	<b>6.12</b>	0.189 U	1.05 U	<b>31.5 U</b>	<b>42.9</b>
Acenaphthene	37	<b>28.5</b>	<b>29.1</b>	<b>0.759</b>	<b>3.37 U</b>	0.282 U	0.0955 U	0.676 U	1.78 U	0.189 U	1.05 U	<b>31.5 U</b>	<b>32.9 U</b>
Acenaphthylene	18	<b>13.5 U</b>	<b>14.1 U</b>	<b>0.246 U</b>	<b>3.37 U</b>	0.282 U	0.0955 U	0.676 U	1.78 U	0.189 U	1.05 U	<b>31.5 U</b>	<b>32.9 U</b>
Anthracene	390	<b>13.5 U</b>	<b>14.1 U</b>	<b>0.246 U</b>	<b>3.37 U</b>	0.282 U	0.0955 U	0.676 U	1.78 U	0.189 U	1.05 U	<b>31.5 U</b>	<b>32.9 U</b>
Benzo(a)Anthracene	0.7	<b>2.76</b>	<b>2.83</b>	<b>0.246 U</b>	<b>1.16</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0428	0.0421 U	<b>5.74</b>	<b>5.6</b>
Benzo[a]pyrene	1.2	<b>1.38</b>	<b>1.58</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0665	0.058	<b>6.79</b>	<b>5.59</b>
Benzo[b]Fluoranthene	20	<b>1.16</b>	<b>0.564 U</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0903	0.0817	11.1	9.55
Benzo[g,h,i]perylene	1,900	<b>0.759</b>	<b>0.849</b>	<b>0.246 U</b>	<b>1.02</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.047	0.0816	6.7	5.36
Benzo[k]fluoranthene	120	<b>0.538 U</b>	<b>0.564 U</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0378 U	0.0421 U	3.62	2.73
Chrysene	600	<b>4.05</b>	<b>4.73</b>	<b>0.26</b>	<b>0.933</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0626	0.0459	12.3	11.3
Dibenzo[a,h]anthracene	1.2	<b>0.538 U</b>	<b>0.564 U</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0378 U	0.0421 U	<b>1.53</b>	<b>1.45</b>
Fluoranthene	590	<b>2.92</b>	<b>3.4</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0378 U	0.0421 U	12.4	10.4
Fluorene	36	<b>29.8</b>	<b>35</b>	<b>0.774</b>	<b>3.37 U</b>	0.282 U	0.0955 U	4.76	5.34	0.189 U	1.05 U	<b>31.5 U</b>	<b>32.9 U</b>
Indeno[1,2,3-c,d] pyrene	12	<b>0.538 U</b>	<b>0.564 U</b>	<b>0.246 U</b>	<b>0.673 U</b>	0.282 U	0.0955 U	0.135 U	0.0713 U	0.0408	0.0704	5	4.05
Naphthalene	0.038	<b>17.9</b>	<b>18.3</b>	<b>0.197 U</b>	<b>2.69 U</b>	<b>0.282 U</b>	<b>0.0764</b>	<b>2.49</b>	<b>1.43</b>	<b>0.151 U</b>	<b>0.842 U</b>	<b>25.2 U</b>	<b>26.3</b>
Phenanthrene	39	<b>65.4</b>	<b>70.8</b>	<b>1.83</b>	<b>3.37 U</b>	0.282 U	0.0955 U	13.7	10.1	0.189 U	1.05 U	<b>38.5</b>	<b>40</b>
Pyrene	87	<b>11.3</b>	<b>14.2</b>	<b>0.793</b>	<b>9.4</b>	0.282 U	0.0955 U	0.649	0.502	0.146	0.0946	27.1	25.9

Notes:  
**Bolded** values in **red** indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.  
**Blue** values indicates LOQ was above the ADEC Cleanup Level.  
 U Indicates the analyte was analyzed for but not detected.  
 Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.  
  
 Sample D1-24 is a field duplicate of sample D1-18.  
 Sample MR1-30 is a field duplicate of sample MR1-24.  
 Sample SLD2 is a field duplicate of sample SLD1.

Table 4B: PAH Results (Soil)

Analyte	Cleanup Level	MR2-22	MH2-6	TF1-6	TF2-12	TF3-15	TF4-0	D4-18	TF5-12	TF5-24	TF6-12	TF7-18	MH3-6
	mg/Kg												
1-Methylnaphthalene	0.41	<b>2.58</b>	<b>3.56</b>	0.0859 U	0.0426 U	0.349 U	0.299	<b>13</b>	<b>152</b>	<b>222</b>	0.0435 U	<b>40.1</b>	<b>0.568</b>
2-Methylnaphthalene	1.3	<b>3.61</b>	<b>2.23</b>	0.0859 U	0.0426 U	0.349 U	0.35	<b>16.7</b>	<b>233</b>	<b>326</b>	0.0435 U	<b>51.9</b>	0.772
Acenaphthene	37	0.185 U	10.5	0.0859 U	0.0426 U	0.349 U	0.148	7.97 U	14.9	18.3	0.0435 U	8.04	0.648
Acenaphthylene	18	0.185 U	5.08	0.0859 U	0.0426 U	0.349 U	0.155	7.97 U	12 U	3.64 U	0.0435 U	2.49 U	1.26
Anthracene	390	0.185 U	43.4	0.136	0.0426 U	0.349 U	0.219	7.97 U	12 U	5.24	0.0435 U	2.49 U	2.91
Benzo(a)Anthracene	0.7	0.185 U	<b>58.1</b>	0.24	0.0426 U	0.349 U	0.394	0.319 U	<b>3.48</b>	<b>3.95</b>	0.0435 U	<b>2.49 U</b>	<b>5.57</b>
Benzo[a]pyrene	1.2	0.185 U	<b>56.8</b>	0.205	0.0426 U	0.349 U	0.514	0.319 U	<b>2.46</b>	<b>3.64 U</b>	0.0435 U	<b>2.49 U</b>	<b>5.66</b>
Benzo[b]Fluoranthene	20	0.185 U	<b>53.1</b>	0.733	0.0426 U	0.349 U	0.601	0.319 U	0.48 U	3.64 U	0.0435 U	2.49 U	7.65
Benzo[g,h,i]perylene	1,900	0.185 U	27.9	0.165	0.0426 U	0.349 U	0.32	0.319 U	1.39	3.64 U	0.0435 U	2.49 U	2.93
Benzo[k]fluoranthene	120	0.185 U	12	0.248	0.0426 U	0.349 U	0.176	0.319 U	0.48 U	3.64 U	0.0435 U	2.49 U	2.17
Chrysene	600	0.185 U	61.7	0.824	0.0426 U	0.349 U	0.523	0.527	7.22	7.3	0.045	2.49 U	6.26
Dibenzo[a,h]anthracene	1.2	0.185 U	<b>6.52</b>	0.0859 U	0.0426 U	0.349 U	0.083 U	0.319 U	0.48 U	<b>3.64 U</b>	0.0435 U	<b>2.49 U</b>	0.835
Fluoranthene	590	0.185 U	117	1.31	0.0586	0.349 U	0.962	0.825	3.93	3.67	0.0435 U	2.49 U	15.5
Fluorene	36	1.34	15.4	0.0859 U	0.0426 U	0.349 U	0.292	7.97 U	23	27.4	0.0435 U	7.32	2.25
Indeno[1,2,3-c,d] pyrene	12	0.185 U	<b>21.1</b>	0.162	0.0426 U	0.349 U	0.274	0.319 U	0.48 U	3.64 U	0.0435 U	2.49 U	2.78
Naphthalene	0.038	<b>0.148 U</b>	<b>1.39</b>	<b>0.0687</b>	0.034	<b>0.349 U</b>	<b>0.611</b>	<b>10.7</b>	<b>38.4</b>	<b>40.2</b>	0.0348 U	<b>6.17</b>	<b>2.67</b>
Phenanthrene	39	1.08	<b>178</b>	0.215	0.0841	0.349 U	1.57	7.97 U	<b>40.9</b>	<b>44.8</b>	0.0435 U	12.3	18.7
Pyrene	87	0.25	<b>189</b>	1.08	0.0812	0.349 U	0.984	2.28	13.7	15.8	0.0505	8.59	14.4

Notes:  
**Bolded** values in **red** indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.  
**Blue** values indicates LOQ was above the ADEC Cleanup Level.  
 U Indicates the analyte was analyzed for but not detected.  
 Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.  
  
 Sample TF5-24 is a field duplicate of sample TF5-12.

**Table 5: RCRA Metals (Soil)**

Analyte	Cleanup Level mg/Kg	Sample ID			
		SLD1	SLD2	MH3-6	IZ1
Arsenic	0.2	<b>8.37</b>	<b>4.83</b>	<b>2.34</b>	<b>5.14</b>
Barium	2100	203	184	108	5.69
Cadmium	9.1	0.645	0.535 U	0.706	0.225 U
Chromium	0.089	<b>57.2</b>	<b>37.8</b>	<b>9.57</b>	<b>96</b>
Lead	N/A	1510	967	349	456
Mercury	0.36	<b>35.9</b>	<b>18.7</b>	0.703 U	0.337 U
Selenium	6.9	5.17 U	5.235 U	4.68 U	2.25 U
Silver	11	1.29 U	1.34 U	1.17 U	0.562 U

Notes:

**Bolded** values in **red** indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.

**Blue** values indicates LOQ was above the ADEC Cleanup Level.

U Indicates the analyte was analyzed for but not detected.

Cells highlighted in yellow mean the sample came from within the vicinity of the Tank Farm.

Sample SLD2 is a field duplicate of sample SLD1.

**Table 6: TAH and TAqH Results (Water)**

Analyte	Cleanup Level	Sample ID			
	$\mu\text{g/L}$	CD1	CD2	CD3	CD4
TAH	10	2.7 U	2.7 U	2.7 U	2.7 U
TAqH	15	5.61	5.49	3.10 U	3.08 U

Notes:  
U Indicates the analyte was analyzed for but not detected.  
Sample CD2 is a field duplicate of sample CD1.

**TABLE 7: GRO, DRO, & RRO Results (Water)**

Sample ID	DRO	RRO	GRO
	1,500 µg/L	1,100 µg/L	2,200 µg/Kg
SCW1	<b>2,020</b>	<b>1,680</b>	100 U
SCW2	<b>1,860</b>	<b>1,330</b>	100 U

Notes:

**Bolded** values in **red** indicate exceedence of ADEC Method Two, 'Migration to Groundwater Cleanup Level'.  
U Indicates the analyte was analyzed for but not detected.

Sample SW2 is a field duplicate of sample SW1.

**TABLE 8: VOC RESULTS (Water)**

Analyte	Cleanup Level	SCW1	SCW2
	µg/L		
1,1,1,2-Tetrachloroethane	5.7	0.500 U	0.500 U
1,1,1-Trichloroethane	8,000	1.00 U	1.00 U
1,1,2,2-Tetrachloroethane	0.76	0.500 U	0.500 U
1,1,2-Trichloroethane	0.41	0.400 U	0.400 U
1,1-Dichloroethane	28	1.00 U	1.00 U
1,1-Dichloroethene	None Available	1.00 U	1.00 U
1,1-Dichloropropene	None Available	1.00 U	1.00 U
1,2,3-Trichlorobenzene	7.0	1.00 U	1.00 U
1,2,3-Trichloropropane	0.0075	1.00 U	1.00 U
1,2,4-Trichlorobenzene	4.0	1.00 U	1.00 U
1,2,4-Trimethylbenzene	56	1.00 U	1.00 U
1,2-Dibromo-3-chloropropane	None Available	10.0 U	10.0 U
1,2-Dibromoethane	0.075	0.0750 U	0.0750 U
1,2-Dichlorobenzene	300	1.00 U	1.00 U
1,2-Dichloroethane	1.7	0.500 U	0.500 U
1,2-Dichloropropane	8.2	1.00 U	1.00 U
1,3,5-Trimethylbenzene	60	1.00 U	1.00 U
1,3-Dichlorobenzene	300	1.00 U	1.00 U
1,3-Dichloropropane	4.7	0.500 U	0.500 U
1,4-Dichlorobenzene	4.8	0.500 U	0.500 U
2,2-Dichloropropane	None Available	1.00 U	1.00 U
2-Butanone (MEK)	5,600	10.0 U	10.0 U
2-Chlorotoluene	None Available	1.00 U	1.00 U
2-Hexanone	38	10.0 U	10.0 U
4-Chlorotoluene	None Available	1.00 U	1.00 U
4-Isopropyltoluene	None Available	1.00 U	1.00 U
4-Methyl-2-pentanone (MIBK)	6,300	10.0 U	10.0 U
Benzene	62	0.400 U	0.400 U
Bromobenzene	7.5	1.00 U	1.00 U
Bromochloromethane	1.3	1.00 U	1.00 U
Bromodichloromethane	33	0.500 U	0.500 U
Bromoform	7.5	1.00 U	1.00 U
Bromomethane	810	5.00 U	5.00 U
Carbon disulfide	4.6	10.0 U	10.0 U
Carbon tetrachloride	78	1.00 U	1.00 U
Chlorobenzene	None Available	0.500 U	0.500 U
Chloroethane	2.2	1.00 U	1.00 U
Chloroform	190	1.00 U	1.00 U
Chloromethane	None Available	1.00 U	1.00 U
Dibromochloromethane	None Available	0.500 U	0.500 U
Dibromomethane	8.7	1.00 U	1.00 U
Dichlorodifluoromethane	8.3	1.00 U	1.00 U
Ethylbenzene	200	1.00 U	1.00 U
Freon-113	15	10.0 U	10.0 U
Hexachlorobutadiene	None Available	1.00 U	1.00 U
Isopropylbenzene (Cumene)	1.4	1.00 U	1.00 U
Methyl-t-butyl ether	450	10.0 U	10.0 U
Methylene chloride	110	10.0 U	10.0 U
Naphthalene	140	1.00 U	1.00 U
P & M -Xylene	1.70	2.00 U	2.00 U
Styrene	1,000	1.00 U	1.00 U
Tetrachloroethene	660	1.00 U	1.00 U
Toluene	None Available	1.00 U	1.00 U
Trichloroethene	None Available	1.00 U	1.00 U
Trichlorofluoromethane	2,000	1.00 U	1.00 U
Vinyl acetate	1,200	10.0 U	10.0 U
Vinyl chloride	690	0.150 U	0.150 U
Xylenes (total)	None Available	3.00 U	3.00 U
cis-1,2-Dichloroethene	1,100	1.00 U	1.00 U
cis-1,3-Dichloropropene	None Available	0.500 U	0.500 U
n-Butylbenzene	None Available	1.00 U	1.00 U
n-Propylbenzene	None Available	1.00 U	1.00 U
o-Xylene	5,200	1.00 U	1.00 U
sec-Butylbenzene	410	1.00 U	1.00 U
tert-Butylbenzene	0.19	1.00 U	1.00 U
trans-1,2-Dichloroethene	190	1.00 U	1.00 U
trans-1,3-Dichloropropene	0.018	1.00 U	1.00 U

Notes:

Blue values indicates LOQ was above the ADEC Cleanup Level.

U Indicates the analyte was analyzed for but not detected.

Sample D1-24 is a field duplicate of sample D1-18.

**Table 9: PAH Results (Water)**

Analyte	Cleanup Level	SCW1	SCW2
	µg/L		
1-Methylnaphthalene	11	0.0521 U	0.0472 U
2-Methylnaphthalene	36	0.0521 U	0.0472 U
Acenaphthene	530	0.302	0.485
Acenaphthylene	260	0.0521 U	0.0472 U
Anthracene	43	0.0521 U	0.106
Benzo(a)Anthracene	0.3	0.0871	0.181
Benzo[a]pyrene	0.25	0.0208 U	0.0189 U
Benzo[b]Fluoranthene	2.5	0.0913	0.132
Benzo[g,h,i]perylene	0.26	0.0521 U	0.0472 U
Benzo[k]fluoranthene	0.8	0.0521 U	0.0472 U
Chrysene	2	0.196	0.345
Dibenzo[a,h]anthracene	0.25	0.0208 U	0.0189 U
Fluoranthene	260	1.02	1.31
Fluorene	290	0.302	0.677
Indeno[1,2,3-c,d] pyrene	0.19	0.0521 U	0.0472 U
Naphthalene	1.7	0.125	0.133
Phenanthrene	170	0.102	1.13
Pyrene	120	0.626	1.06

Notes:  
U Indicates the analyte was analyzed for but not detected.  
Sample SW2 is a field duplicate of sample SW1.

**APPENDIX C:**  
**SGS Laboratory Report and ADEC Data Review Checklist**



## Laboratory Report of Analysis

To: Travis/Peterson (TPECI)  
3305 Arctic Blvd. Suite 102  
Anchorage, AK 99503  
(907)522-4337

Report Number: **1213715**

Client Project: **Port William**

Dear Casey Volk,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Chuck at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,  
SGS North America Inc.

---

Chuck Homestead  
Project Manager  
Charles.Homestead@sgs.com

Date

## Case Narrative

SGS Client: **Travis/Peterson (TPECI)**

SGS Project: **1213715**

Project Name/Site: **Port William**

Project Contact: **Casey Volk**

Refer to sample receipt form for information on sample condition.

### **D1-18 (1213715001) PS**

AK102 - Surrogate recovery for 5a-androstane does not meet QC criteria due to matrix interference.

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

### **D1-24 (1213715002) PS**

AK102 - Surrogate recovery for 5a-androstane does not meet QC criteria due to matrix interference.

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

### **D3-12 (1213715003) PS**

AK102/103 - Surrogate recoveries for 5a-androstane and n-triacontane do not meet QC criteria due to matrix interference.

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

### **D2-17 (1213715004) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due to the dark color of the extract.

### **WS1-12 (1213715005) PS**

8260D - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

### **DT1-17 (1213715006) PS**

## Case Narrative

SGS Client: **Travis/Peterson (TPECI)**

SGS Project: **1213715**

Project Name/Site: **Port William**

Project Contact: **Casey Volk**

8260D - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due to the dark color of the extract.

### **MH1-0 (1213715007) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria due to matrix interference.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

### **CH1-24 (1213715008) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

### **MR1-24 (1213715011) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

### **MR1-30 (1213715012) PS**

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene does not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was analyzed at a dilution due to matrix interference with internal standards.

### **SLG1 (1213715013) PS**

AK102 - Surrogate recovery for 5a-androstane does not meet QC criteria due to matrix interference.

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

### **SLG2 (1213715014) PS**

AK102 - Surrogate recovery for 5a-androstane does not meet QC criteria due to matrix interference.

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

## Case Narrative

SGS Client: **Travis/Peterson (TPECI)**

SGS Project: **1213715**

Project Name/Site: **Port William**

Project Contact: **Casey Volk**

### **MR2-22 (1213715015) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria due to matrix interference.

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria due to sample matrix interference.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due to the dark color of the extract.

### **MH2-6 (1213715016) PS**

8260D - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

### **TF3-15 (1213715021) PS**

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due to the dark color of the extract.

### **D4-18 (1213715023) PS**

8260D - VOC surrogate recovery for 4-bromofluorobenzene does not meet QC criteria. Sample analyzed twice, results confirm.

AK101 - Surrogate recovery for 4-bromofluorobenzene does not meet QC criteria, sample analyzed twice results confirm.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due matrix interference with internal standards.

8270D SIM - PAH surrogate recovery for 2-methylnaphthalene-d10 does not meet QC criteria due to sample dilution.

### **TF5-12 (1213715024) PS**

AK102/103 - Surrogate recoveries for 5a-androstane and n-triacontane do not meet QC criteria due to sample dilution.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

8270D SIM - The PAH LOQs are elevated due to sample dilution. The sample was diluted due to the dark color of the extract.

### **TF5-24 (1213715025) PS**

AK102 - Surrogate recovery for 5a-androstane does not meet QC criteria due to matrix interference.

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilution.

8270D SIM - PAH elevated LOQs are due to sample dilution. The sample was diluted due to matrix interference with internal standards.

### **TF7-18 (1213715028) PS**

8270D SIM - PAH surrogate recoveries for 2-methylnaphthalene-d10 and fluoranthene-d10 do not meet QC criteria due to sample dilutions.

8270D SIM - PAH elevated LOQs are due to sample dilution. The sample was diluted due to matrix interference with internal standards.

### **LCS for HBN 1821693 [VXX/37345 (1620388) LCS**



### Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
<b>8270D SIM (PAH)</b>				
1213705007	LABREFQC	XMS12724	Benzo[k]fluoranthene	RP
1213715001	D1-18	XMS12722	Benzo[b]Fluoranthene	BLC
1213715001	D1-18	XMS12722	Benzo[k]fluoranthene	SP
1213715001	D1-18	XMS12722	Chrysene	BLC
1213715001	D1-18	XMS12722	Fluoranthene	BLC
1213715002	D1-24	XMS12722	Benzo(a)Anthracene	BLC
1213715002	D1-24	XMS12722	Chrysene	BLC
1213715002	D1-24	XMS12722	Fluoranthene	BLC
1213715003	D3-12	XMS12722	Chrysene	RP
1213715004	D2-17	XMS12722	Chrysene	BLC
1213715007	MH1-0	XMS12722	Benzo[b]Fluoranthene	BLC
1213715007	MH1-0	XMS12728	Phenanthrene	BLC
1213715008	CH1-24	XMS12728	Phenanthrene	BLC
1213715011	MR1-24	XMS12722	Benzo[k]fluoranthene	RP
1213715012	MR1-30	XMS12728	Benzo[b]Fluoranthene	BLC
1213715012	MR1-30	XMS12728	Benzo[k]fluoranthene	RP
1213715013	SLG1	XMS12728	Benzo[k]fluoranthene	RP
1213715013	SLG1	XMS12728	Dibenzo[a,h]anthracene	BLC
1213715013	SLG1	XMS12728	Fluoranthene	BLC
1213715014	SLG2	XMS12728	Benzo[k]fluoranthene	RP
1213715014	SLG2	XMS12728	Fluoranthene	BLC
1213715015	MR2-22	XMS12728	Phenanthrene	BLC
1213715016	MH2-6	XMS12728	Benzo[k]fluoranthene	RP
1213715019	TF1-6	XMS12728	Benzo[b]Fluoranthene	BLC
1213715019	TF1-6	XMS12728	Benzo[k]fluoranthene	RP
1213715020	TF2-12	XMS12728	Benzo(a)Anthracene	RP
1213715022	TF4-0	XMS12728	Benzo[k]fluoranthene	RP
1213715023	D4-18	XMS12728	Chrysene	BLC
1213715024	TF5-12	XMS12746	Acenaphthene	BLC
1213715024	TF5-12	XMS12728	Benzo(a)Anthracene	BLC
1213715024	TF5-12	XMS12728	Benzo[g,h,i]perylene	RP
1213715025	TF5-24	XMS12736	Acenaphthene	BLC
1213715027	TF6-12	XMS12744	Benzo[k]fluoranthene	RP
1213715028	TF7-18	XMS12736	Acenaphthene	BLC
1213715028	TF7-18	XMS12736	Phenanthrene	BLC
1213715030	MH3-6	XMS12734	Benzo[k]fluoranthene	RP
<b>8270D SIM LV (PAH)</b>				
1213715010	SCW2	XMS12734	1-Methylnaphthalene	BLC

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### Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
1213715010	SCW2	XMS12734	Acenaphthene	BLC
<b>SW8260D</b>				
1213715015	MR2-22	VMS20881	4-Isopropyltoluene	SP

#### Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

## Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 DW Chemistry (Provisionally Certified as of 05/27/2021 for Mercury by EPA200.8, Nitrate as N by SM 4500NO3-F and VOCs by EPA 524.2) & Microbiology & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020B, 7470A, 7471B, 8015C, 8021B, 8082A, 8260D, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
TNTC	Too Numerous To Count
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.



### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
D1-18	1213715001	06/21/2021	06/25/2021	Soil/Solid (dry weight)
D1-24	1213715002	06/21/2021	06/25/2021	Soil/Solid (dry weight)
D3-12	1213715003	06/21/2021	06/25/2021	Soil/Solid (dry weight)
D2-17	1213715004	06/21/2021	06/25/2021	Soil/Solid (dry weight)
WS1-12	1213715005	06/22/2021	06/25/2021	Soil/Solid (dry weight)
DT1-17	1213715006	06/22/2021	06/25/2021	Soil/Solid (dry weight)
MH1-0	1213715007	06/22/2021	06/25/2021	Soil/Solid (dry weight)
CH1-24	1213715008	06/22/2021	06/25/2021	Soil/Solid (dry weight)
SCW1	1213715009	06/22/2021	06/25/2021	Water (Surface, Eff., Ground)
SCW2	1213715010	06/22/2021	06/25/2021	Water (Surface, Eff., Ground)
MR1-24	1213715011	06/22/2021	06/25/2021	Soil/Solid (dry weight)
MR1-30	1213715012	06/22/2021	06/25/2021	Soil/Solid (dry weight)
SLG1	1213715013	06/22/2021	06/25/2021	Soil/Solid (dry weight)
SLG2	1213715014	06/22/2021	06/25/2021	Soil/Solid (dry weight)
MR2-22	1213715015	06/22/2021	06/25/2021	Soil/Solid (dry weight)
MH2-6	1213715016	06/22/2021	06/25/2021	Soil/Solid (dry weight)
CD1	1213715017	06/23/2021	06/25/2021	Water (Surface, Eff., Ground)
CD2	1213715018	06/23/2021	06/25/2021	Water (Surface, Eff., Ground)
TF1-6	1213715019	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF2-12	1213715020	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF3-15	1213715021	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF4-0	1213715022	06/23/2021	06/25/2021	Soil/Solid (dry weight)
D4-18	1213715023	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF5-12	1213715024	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF5-24	1213715025	06/23/2021	06/25/2021	Soil/Solid (dry weight)
CD3	1213715026	06/23/2021	06/25/2021	Water (Surface, Eff., Ground)
TF6-12	1213715027	06/23/2021	06/25/2021	Soil/Solid (dry weight)
TF7-18	1213715028	06/23/2021	06/25/2021	Soil/Solid (dry weight)
CD4	1213715029	06/24/2021	06/25/2021	Water (Surface, Eff., Ground)
MH3-6	1213715030	06/24/2021	06/25/2021	Soil/Solid (dry weight)
IZ1	1213715031	06/24/2021	06/25/2021	Soil/Solid (dry weight)
Trip Blank Water	1213715032	06/21/2021	06/25/2021	Water (Surface, Eff., Ground)
Trip Blank Soil	1213715033	06/21/2021	06/25/2021	Soil/Solid (dry weight)

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### Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
<u>Method</u>	<u>Method Description</u>			
8270D SIM LV (PAH)	8270 PAH SIM GC/MS LV			
8270D SIM (PAH)	8270 PAH SIM Semi-Volatiles GC/MS			
AK103	Diesel/Residual Range Organics			
AK102	Diesel/Residual Range Organics			
AK103	DRO/RRO Low Volume Water			
AK102	DRO/RRO Low Volume Water			
AK101	Gasoline Range Organics (S)			
AK101	Gasoline Range Organics (W)			
SW6020B	Metals by ICP-MS (S)			
SM21 2540G	Percent Solids SM2540G			
SW8260D	VOC 8260 (S) Field Extracted			
SW8260D	Volatile Organic Compounds (W) FULL			

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### Detectable Results Summary

Client Sample ID: **D1-18**

Lab Sample ID: 1213715001

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	178000	ug/kg
2-Methylnaphthalene	153000	ug/kg
Acenaphthene	28500	ug/kg
Benzo(a)Anthracene	2760	ug/kg
Benzo[a]pyrene	1380	ug/kg
Benzo[b]Fluoranthene	1160	ug/kg
Benzo[g,h,i]perylene	759	ug/kg
Chrysene	4050	ug/kg
Fluoranthene	2920	ug/kg
Fluorene	29800	ug/kg
Naphthalene	17900	ug/kg
Phenanthrene	65400	ug/kg
Pyrene	11300	ug/kg
<b>Semivolatile Organic Fuels</b>		
Diesel Range Organics	65800	mg/kg
Residual Range Organics	13600	mg/kg
<b>Volatile GC/MS</b>		
1,2,4-Trimethylbenzene	769	ug/kg
1,3,5-Trimethylbenzene	207	ug/kg
Naphthalene	3020	ug/kg

Client Sample ID: **D1-24**

Lab Sample ID: 1213715002

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	179000	ug/kg
2-Methylnaphthalene	148000	ug/kg
Acenaphthene	29100	ug/kg
Benzo(a)Anthracene	2830	ug/kg
Benzo[a]pyrene	1580	ug/kg
Benzo[g,h,i]perylene	849	ug/kg
Chrysene	4730	ug/kg
Fluoranthene	3400	ug/kg
Fluorene	35000	ug/kg
Naphthalene	18300	ug/kg
Phenanthrene	70800	ug/kg
Pyrene	14200	ug/kg
<b>Semivolatile Organic Fuels</b>		
Diesel Range Organics	78400	mg/kg
Residual Range Organics	16800	mg/kg
<b>Volatile GC/MS</b>		
1,2,4-Trimethylbenzene	339	ug/kg
Naphthalene	1110	ug/kg

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### Detectable Results Summary

Client Sample ID: **D3-12**

Lab Sample ID: 1213715003

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo(a)Anthracene	1160	ug/kg
Benzo[g,h,i]perylene	1020	ug/kg
Chrysene	933	ug/kg
Pyrene	9400	ug/kg
Diesel Range Organics	73100	mg/kg
Residual Range Organics	26100	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **D2-17**

Lab Sample ID: 1213715004

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	3710	ug/kg
2-Methylnaphthalene	4000	ug/kg
Acenaphthene	759	ug/kg
Chrysene	260	ug/kg
Fluorene	774	ug/kg
Phenanthrene	1830	ug/kg
Pyrene	793	ug/kg
Diesel Range Organics	6320	mg/kg
Residual Range Organics	1200	mg/kg
Gasoline Range Organics	20.2	mg/kg
1,2,4-Trimethylbenzene	165	ug/kg
1,3,5-Trimethylbenzene	76.9	ug/kg
Naphthalene	156	ug/kg

**Semivolatile Organic Fuels**

**Volatile Fuels**

**Volatile GC/MS**

Client Sample ID: **WS1-12**

Lab Sample ID: 1213715005

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	187	mg/kg
Residual Range Organics	1140	mg/kg
Chloroform	238	ug/kg

**Volatile GC/MS**

Client Sample ID: **DT1-17**

Lab Sample ID: 1213715006

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	4160	mg/kg
Residual Range Organics	704	mg/kg

Client Sample ID: **MH1-0**

Lab Sample ID: 1213715007

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	8240	ug/kg
2-Methylnaphthalene	10700	ug/kg
Fluorene	4760	ug/kg
Naphthalene	2490	ug/kg
Phenanthrene	13700	ug/kg
Pyrene	649	ug/kg
Diesel Range Organics	16200	mg/kg
1,3,5-Trimethylbenzene	250	ug/kg
Naphthalene	385	ug/kg

**Semivolatile Organic Fuels**

**Volatile GC/MS**

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### Detectable Results Summary

Client Sample ID: **CH1-24**

Lab Sample ID: 1213715008

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	7850	ug/kg
2-Methylnaphthalene	6120	ug/kg
Fluorene	5340	ug/kg
Phenanthrene	10100	ug/kg
Pyrene	502	ug/kg
Diesel Range Organics	21900	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **SCW1**

Lab Sample ID: 1213715009

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Acenaphthene	0.302	ug/L
Benzo(a)Anthracene	0.0871	ug/L
Benzo[b]Fluoranthene	0.0913	ug/L
Chrysene	0.196	ug/L
Fluoranthene	1.02	ug/L
Fluorene	0.302	ug/L
Naphthalene	0.125	ug/L
Phenanthrene	0.102	ug/L
Pyrene	0.626	ug/L
Diesel Range Organics	2.02	mg/L
Residual Range Organics	1.68	mg/L

**Semivolatile Organic Fuels**

Client Sample ID: **SCW2**

Lab Sample ID: 1213715010

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Acenaphthene	0.485	ug/L
Anthracene	0.106	ug/L
Benzo(a)Anthracene	0.181	ug/L
Benzo[b]Fluoranthene	0.132	ug/L
Chrysene	0.345	ug/L
Fluoranthene	1.31	ug/L
Fluorene	0.677	ug/L
Naphthalene	0.133	ug/L
Phenanthrene	1.13	ug/L
Pyrene	1.06	ug/L
Diesel Range Organics	1.86	mg/L
Residual Range Organics	1.33	mg/L

**Semivolatile Organic Fuels**

Client Sample ID: **MR1-24**

Lab Sample ID: 1213715011

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo(a)Anthracene	42.8	ug/kg
Benzo[a]pyrene	66.5	ug/kg
Benzo[b]Fluoranthene	90.3	ug/kg
Benzo[g,h,i]perylene	47.0	ug/kg
Chrysene	62.6	ug/kg
Indeno[1,2,3-c,d] pyrene	40.8	ug/kg
Pyrene	146	ug/kg
Diesel Range Organics	2940	mg/kg

**Semivolatile Organic Fuels**

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### Detectable Results Summary

Client Sample ID: **MR1-30**

Lab Sample ID: 1213715012

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo[a]pyrene	58.0	ug/kg
Benzo[b]Fluoranthene	81.7	ug/kg
Benzo[g,h,i]perylene	81.6	ug/kg
Chrysene	45.9	ug/kg
Indeno[1,2,3-c,d] pyrene	70.4	ug/kg
Pyrene	94.6	ug/kg
<b>Semivolatile Organic Fuels</b>		
Diesel Range Organics	4620	mg/kg
Residual Range Organics	328	mg/kg
<b>Volatile Fuels</b>		
Gasoline Range Organics	25.5	mg/kg

Client Sample ID: **SLG1**

Lab Sample ID: 1213715013

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	8.37	mg/kg
Barium	203	mg/kg
Cadmium	0.645	mg/kg
Chromium	57.2	mg/kg
Lead	1510	mg/kg
Mercury	35.9	mg/kg

**Polynuclear Aromatics GC/MS**

1-Methylnaphthalene	47800	ug/kg
Benzo(a)Anthracene	5740	ug/kg
Benzo[a]pyrene	6790	ug/kg
Benzo[b]Fluoranthene	11100	ug/kg
Benzo[g,h,i]perylene	6700	ug/kg
Benzo[k]fluoranthene	3620	ug/kg
Chrysene	12300	ug/kg
Dibenzo[a,h]anthracene	1530	ug/kg
Fluoranthene	12400	ug/kg
Indeno[1,2,3-c,d] pyrene	5000	ug/kg
Phenanthrene	38500	ug/kg
Pyrene	27100	ug/kg
<b>Semivolatile Organic Fuels</b>		
Diesel Range Organics	161000	mg/kg
Residual Range Organics	19500	mg/kg

### Detectable Results Summary

Client Sample ID: **SLG2**  
 Lab Sample ID: 1213715014

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	4.83	mg/kg
Barium	184	mg/kg
Chromium	37.8	mg/kg
Lead	967	mg/kg
Mercury	18.7	mg/kg

**Polynuclear Aromatics GC/MS**

1-Methylnaphthalene	69000	ug/kg
2-Methylnaphthalene	42900	ug/kg
Benzo(a)Anthracene	5600	ug/kg
Benzo[a]pyrene	5590	ug/kg
Benzo[b]Fluoranthene	9550	ug/kg
Benzo[g,h,i]perylene	5360	ug/kg
Benzo[k]fluoranthene	2730	ug/kg
Chrysene	11300	ug/kg
Dibenzo[a,h]anthracene	1450	ug/kg
Fluoranthene	10400	ug/kg
Indeno[1,2,3-c,d] pyrene	4050	ug/kg
Phenanthrene	40000	ug/kg
Pyrene	25900	ug/kg

**Semivolatile Organic Fuels**

Diesel Range Organics	162000	mg/kg
Residual Range Organics	18100	mg/kg
Gasoline Range Organics	15.8	mg/kg

**Volatile Fuels**

Client Sample ID: **MR2-22**  
 Lab Sample ID: 1213715015

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	2580	ug/kg
2-Methylnaphthalene	3610	ug/kg
Fluorene	1340	ug/kg
Phenanthrene	1080	ug/kg
Pyrene	250	ug/kg

**Semivolatile Organic Fuels**

Diesel Range Organics	8570	mg/kg
Residual Range Organics	1640	mg/kg
Gasoline Range Organics	28.8	mg/kg

**Volatile Fuels**

**Volatile GC/MS**

1,2,4-Trimethylbenzene	262	ug/kg
1,3,5-Trimethylbenzene	267	ug/kg
Isopropylbenzene (Cumene)	65.2	ug/kg
Naphthalene	638	ug/kg
n-Propylbenzene	118	ug/kg
sec-Butylbenzene	189	ug/kg

### Detectable Results Summary

Client Sample ID: **MH2-6**  
 Lab Sample ID: 1213715016

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	3560	ug/kg
2-Methylnaphthalene	2230	ug/kg
Acenaphthene	10500	ug/kg
Acenaphthylene	5080	ug/kg
Anthracene	43400	ug/kg
Benzo(a)Anthracene	58100	ug/kg
Benzo[a]pyrene	56800	ug/kg
Benzo[b]Fluoranthene	53100	ug/kg
Benzo[g,h,i]perylene	27900	ug/kg
Benzo[k]fluoranthene	12000	ug/kg
Chrysene	61700	ug/kg
Dibenzo[a,h]anthracene	6520	ug/kg
Fluoranthene	117000	ug/kg
Fluorene	15400	ug/kg
Indeno[1,2,3-c,d] pyrene	21100	ug/kg
Naphthalene	1390	ug/kg
Phenanthrene	178000	ug/kg
Pyrene	189000	ug/kg
Diesel Range Organics	3550	mg/kg
Residual Range Organics	4700	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **CD1**  
 Lab Sample ID: 1213715017

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo(a)Anthracene	0.183	ug/L
Chrysene	0.419	ug/L
Fluoranthene	0.347	ug/L
Pyrene	1.19	ug/L

Client Sample ID: **CD2**  
 Lab Sample ID: 1213715018

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzo(a)Anthracene	0.170	ug/L
Chrysene	0.387	ug/L
Fluoranthene	0.330	ug/L
Pyrene	1.14	ug/L



### Detectable Results Summary

Client Sample ID: **TF1-6**

Lab Sample ID: 1213715019

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Anthracene	136	ug/kg
Benzo(a)Anthracene	240	ug/kg
Benzo[a]pyrene	205	ug/kg
Benzo[b]Fluoranthene	733	ug/kg
Benzo[g,h,i]perylene	165	ug/kg
Benzo[k]fluoranthene	248	ug/kg
Chrysene	824	ug/kg
Fluoranthene	1310	ug/kg
Indeno[1,2,3-c,d] pyrene	162	ug/kg
Phenanthrene	215	ug/kg
Pyrene	1080	ug/kg
Diesel Range Organics	130	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **TF2-12**

Lab Sample ID: 1213715020

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Fluoranthene	58.6	ug/kg
Phenanthrene	84.1	ug/kg
Pyrene	81.2	ug/kg
Diesel Range Organics	63.8	mg/kg
Residual Range Organics	256	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **TF3-15**

Lab Sample ID: 1213715021

**Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	440	mg/kg
Residual Range Organics	2690	mg/kg

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### Detectable Results Summary

Client Sample ID: **TF4-0**  
 Lab Sample ID: 1213715022

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	299	ug/kg
2-Methylnaphthalene	350	ug/kg
Acenaphthene	148	ug/kg
Acenaphthylene	155	ug/kg
Anthracene	219	ug/kg
Benzo(a)Anthracene	394	ug/kg
Benzo[a]pyrene	514	ug/kg
Benzo[b]Fluoranthene	601	ug/kg
Benzo[g,h,i]perylene	320	ug/kg
Benzo[k]fluoranthene	176	ug/kg
Chrysene	523	ug/kg
Fluoranthene	962	ug/kg
Fluorene	292	ug/kg
Indeno[1,2,3-c,d] pyrene	274	ug/kg
Naphthalene	611	ug/kg
Phenanthrene	1570	ug/kg
Pyrene	984	ug/kg
Diesel Range Organics	373	mg/kg
Residual Range Organics	1440	mg/kg

Client Sample ID: **D4-18**  
 Lab Sample ID: 1213715023

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	13000	ug/kg
2-Methylnaphthalene	16700	ug/kg
Chrysene	527	ug/kg
Fluoranthene	825	ug/kg
Naphthalene	10700	ug/kg
Pyrene	2280	ug/kg
Diesel Range Organics	23000	mg/kg
Residual Range Organics	4330	mg/kg

**Semivolatile Organic Fuels**

**Volatile Fuels  
 Volatile GC/MS**

Gasoline Range Organics	33.5	mg/kg
1,2,4-Trimethylbenzene	4750	ug/kg
1,3,5-Trimethylbenzene	1520	ug/kg
Ethylbenzene	941	ug/kg
Isopropylbenzene (Cumene)	121	ug/kg
Naphthalene	1630	ug/kg
n-Propylbenzene	291	ug/kg
o-Xylene	1990	ug/kg
P & M -Xylene	2810	ug/kg
Xylenes (total)	4800	ug/kg



### Detectable Results Summary

Client Sample ID: **TF5-12**

Lab Sample ID: 1213715024

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	152000	ug/kg
2-Methylnaphthalene	233000	ug/kg
Acenaphthene	14900	ug/kg
Benzo(a)Anthracene	3480	ug/kg
Benzo[a]pyrene	2460	ug/kg
Benzo[g,h,i]perylene	1390	ug/kg
Chrysene	7220	ug/kg
Fluoranthene	3930	ug/kg
Fluorene	23000	ug/kg
Naphthalene	38400	ug/kg
Phenanthrene	40900	ug/kg
Pyrene	13700	ug/kg
Diesel Range Organics	48800	mg/kg
Residual Range Organics	28900	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **TF5-24**

Lab Sample ID: 1213715025

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	222000	ug/kg
2-Methylnaphthalene	326000	ug/kg
Acenaphthene	18300	ug/kg
Anthracene	5240	ug/kg
Benzo(a)Anthracene	3950	ug/kg
Chrysene	7300	ug/kg
Fluoranthene	3670	ug/kg
Fluorene	27400	ug/kg
Naphthalene	40200	ug/kg
Phenanthrene	44800	ug/kg
Pyrene	15800	ug/kg
Diesel Range Organics	53000	mg/kg
Residual Range Organics	32100	mg/kg

**Semivolatile Organic Fuels**

Client Sample ID: **TF6-12**

Lab Sample ID: 1213715027

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Chrysene	45.0	ug/kg
Pyrene	50.5	ug/kg
Diesel Range Organics	144	mg/kg
Residual Range Organics	269	mg/kg

**Semivolatile Organic Fuels**

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### Detectable Results Summary

Client Sample ID: **TF7-18**  
 Lab Sample ID: 1213715028

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	40100	ug/kg
2-Methylnaphthalene	51900	ug/kg
Acenaphthene	8040	ug/kg
Fluorene	7320	ug/kg
Naphthalene	6170	ug/kg
Phenanthrene	12300	ug/kg
Pyrene	8590	ug/kg
Diesel Range Organics	41400	mg/kg
Residual Range Organics	9240	mg/kg

Client Sample ID: **MH3-6**  
 Lab Sample ID: 1213715030

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Barium	108	mg/kg
Cadmium	0.706	mg/kg
Chromium	9.57	mg/kg
Lead	349	mg/kg

**Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1-Methylnaphthalene	568	ug/kg
2-Methylnaphthalene	772	ug/kg
Acenaphthene	648	ug/kg
Acenaphthylene	1260	ug/kg
Anthracene	2910	ug/kg
Benzo(a)Anthracene	5570	ug/kg
Benzo[a]pyrene	5660	ug/kg
Benzo[b]Fluoranthene	7650	ug/kg
Benzo[g,h,i]perylene	2930	ug/kg
Benzo[k]fluoranthene	2170	ug/kg
Chrysene	6260	ug/kg
Dibenzo[a,h]anthracene	835	ug/kg
Fluoranthene	15500	ug/kg
Fluorene	2250	ug/kg
Indeno[1,2,3-c,d] pyrene	2780	ug/kg
Naphthalene	2670	ug/kg
Phenanthrene	18700	ug/kg
Pyrene	14400	ug/kg
Diesel Range Organics	647	mg/kg
Residual Range Organics	1780	mg/kg

Client Sample ID: **IZ1**  
 Lab Sample ID: 1213715031

**Metals by ICP/MS**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Arsenic	5.14	mg/kg
Barium	5.69	mg/kg
Chromium	96.0	mg/kg
Lead	456	mg/kg



### Results of D1-18

Client Sample ID: **D1-18**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715001  
 Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):46.3  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	178000	13500	3370	ug/kg	250		07/08/21 22:50
2-Methylnaphthalene	153000	13500	3370	ug/kg	250		07/08/21 22:50
Acenaphthene	28500	13500	3370	ug/kg	250		07/08/21 22:50
Acenaphthylene	13500 U	13500	3370	ug/kg	250		07/08/21 22:50
Anthracene	13500 U	13500	3370	ug/kg	250		07/08/21 22:50
Benzo(a)Anthracene	2760	538	135	ug/kg	10		07/08/21 03:13
Benzo[a]pyrene	1380	538	135	ug/kg	10		07/08/21 03:13
Benzo[b]Fluoranthene	1160	538	135	ug/kg	10		07/08/21 03:13
Benzo[g,h,i]perylene	759	538	135	ug/kg	10		07/08/21 03:13
Benzo[k]fluoranthene	538 U	538	135	ug/kg	10		07/08/21 03:13
Chrysene	4050	538	135	ug/kg	10		07/08/21 03:13
Dibenzo[a,h]anthracene	538 U	538	135	ug/kg	10		07/08/21 03:13
Fluoranthene	2920	538	135	ug/kg	10		07/08/21 03:13
Fluorene	29800	13500	3370	ug/kg	250		07/08/21 22:50
Indeno[1,2,3-c,d] pyrene	538 U	538	135	ug/kg	10		07/08/21 03:13
Naphthalene	17900	10800	2690	ug/kg	250		07/08/21 22:50
Phenanthrene	65400	13500	3370	ug/kg	250		07/08/21 22:50
Pyrene	11300	538	135	ug/kg	10		07/08/21 03:13
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	250		07/08/21 22:50
Fluoranthene-d10 (surr)	950	*	54-113	%	10		07/08/21 03:13

### Batch Information

Analytical Batch: XMS12722  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 03:13  
 Container ID: 1213715001-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.586 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 22:50  
 Container ID: 1213715001-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.586 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D1-18**

Client Sample ID: **D1-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715001  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):46.3  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	65800	431	134	mg/kg	10		06/30/21 16:57

**Surrogates**

5a Androstane (surr)	327 *	50-150		%	10		06/30/21 16:57
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:57  
Container ID: 1213715001-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.108 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	13600	2150	926	mg/kg	10		06/30/21 16:57

**Surrogates**

n-Triacontane-d62 (surr)	104	50-150		%	10		06/30/21 16:57
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:57  
Container ID: 1213715001-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.108 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of D1-18**

Client Sample ID: **D1-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715001  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):46.3  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	11.8 U	11.8	3.54	mg/kg	1		07/08/21 11:57
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	13.2 *	50-150		%	1		07/08/21 11:57

**Batch Information**

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 11:57  
Container ID: 1213715001-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:06  
Prep Initial Wt./Vol.: 45.244 g  
Prep Extract Vol: 49.318 mL

Print Date: 07/27/2021 1:18:18PM



Results of D1-18

Client Sample ID: D1-18  
Client Project ID: Port William  
Lab Sample ID: 1213715001  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):46.3  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	94.3 U	94.3	29.2	ug/kg	1		07/02/21 18:05
1,1,1-Trichloroethane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,1,2,2-Tetrachloroethane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 18:05
1,1,2-Trichloroethane	3.77 U	3.77	1.18	ug/kg	1		07/02/21 18:05
1,1-Dichloroethane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,1-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,1-Dichloropropene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,2,3-Trichlorobenzene	236 U	236	70.7	ug/kg	1		07/02/21 18:05
1,2,3-Trichloropropane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 18:05
1,2,4-Trichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,2,4-Trimethylbenzene	769	236	70.7	ug/kg	1		07/02/21 18:05
1,2-Dibromo-3-chloropropane	471 U	471	146	ug/kg	1		07/02/21 18:05
1,2-Dibromoethane	4.71 U	4.71	1.89	ug/kg	1		07/02/21 18:05
1,2-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,2-Dichloroethane	9.43 U	9.43	3.30	ug/kg	1		07/02/21 18:05
1,2-Dichloropropane	47.1 U	47.1	14.6	ug/kg	1		07/02/21 18:05
1,3,5-Trimethylbenzene	207	118	36.8	ug/kg	1		07/02/21 18:05
1,3-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
1,3-Dichloropropane	47.1 U	47.1	14.6	ug/kg	1		07/02/21 18:05
1,4-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
2,2-Dichloropropane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
2-Butanone (MEK)	1180 U	1180	368	ug/kg	1		07/02/21 18:05
2-Chlorotoluene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
2-Hexanone	471 U	471	146	ug/kg	1		07/02/21 18:05
4-Chlorotoluene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
4-Isopropyltoluene	471 U	471	118	ug/kg	1		07/02/21 18:05
4-Methyl-2-pentanone (MIBK)	1180 U	1180	368	ug/kg	1		07/02/21 18:05
Acetone	1180 U	1180	368	ug/kg	1		07/02/21 18:05
Benzene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 18:05
Bromobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Bromochloromethane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Bromodichloromethane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 18:05
Bromoform	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Bromomethane	94.3 U	94.3	29.2	ug/kg	1		07/02/21 18:05
Carbon disulfide	471 U	471	146	ug/kg	1		07/02/21 18:05
Carbon tetrachloride	58.9 U	58.9	18.4	ug/kg	1		07/02/21 18:05
Chlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05

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Results of D1-18

Client Sample ID: D1-18  
Client Project ID: Port William  
Lab Sample ID: 1213715001  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):46.3  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	943 U	943	292	ug/kg	1		07/02/21 18:05
Chloroform	18.9 U	18.9	4.71	ug/kg	1		07/02/21 18:05
Chloromethane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
cis-1,2-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
cis-1,3-Dichloropropene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 18:05
Dibromochloromethane	23.6 U	23.6	7.07	ug/kg	1		07/02/21 18:05
Dibromomethane	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Dichlorodifluoromethane	236 U	236	70.7	ug/kg	1		07/02/21 18:05
Ethylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Freon-113	471 U	471	146	ug/kg	1		07/02/21 18:05
Hexachlorobutadiene	94.3 U	94.3	29.2	ug/kg	1		07/02/21 18:05
Isopropylbenzene (Cumene)	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Methylene chloride	471 U	471	146	ug/kg	1		07/02/21 18:05
Methyl-t-butyl ether	471 U	471	146	ug/kg	1		07/02/21 18:05
Naphthalene	3020	118	36.8	ug/kg	1		07/02/21 18:05
n-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
n-Propylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
o-Xylene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
P & M -Xylene	236 U	236	70.7	ug/kg	1		07/02/21 18:05
sec-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Styrene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
tert-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
Tetrachloroethene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 18:05
Toluene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
trans-1,2-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 18:05
trans-1,3-Dichloropropene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 18:05
Trichloroethene	23.6 U	23.6	7.07	ug/kg	1		07/02/21 18:05
Trichlorofluoromethane	236 U	236	70.7	ug/kg	1		07/02/21 18:05
Vinyl acetate	471 U	471	146	ug/kg	1		07/02/21 18:05
Vinyl chloride	3.77 U	3.77	1.18	ug/kg	1		07/02/21 18:05
Xylenes (total)	354 U	354	107	ug/kg	1		07/02/21 18:05
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	116	71-136		%	1		07/02/21 18:05
4-Bromofluorobenzene (surr)	14.7 *	55-151		%	1		07/02/21 18:05
Toluene-d8 (surr)	99.6	85-116		%	1		07/02/21 18:05

Print Date: 07/27/2021 1:18:18PM



**Results of D1-18**

Client Sample ID: **D1-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715001  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):46.3  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 18:05  
Container ID: 1213715001-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:06  
Prep Initial Wt./Vol.: 45.244 g  
Prep Extract Vol: 49.318 mL

Print Date: 07/27/2021 1:18:18PM



### Results of D1-24

Client Sample ID: **D1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715002  
 Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):43.8  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	179000	14100	3530	ug/kg	250		07/08/21 23:31
2-Methylnaphthalene	148000	14100	3530	ug/kg	250		07/08/21 23:31
Acenaphthene	29100	14100	3530	ug/kg	250		07/08/21 23:31
Acenaphthylene	14100 U	14100	3530	ug/kg	250		07/08/21 23:31
Anthracene	14100 U	14100	3530	ug/kg	250		07/08/21 23:31
Benzo(a)Anthracene	2830	564	141	ug/kg	10		07/08/21 03:34
Benzo[a]pyrene	1580	564	141	ug/kg	10		07/08/21 03:34
Benzo[b]Fluoranthene	564 U	564	141	ug/kg	10		07/08/21 03:34
Benzo[g,h,i]perylene	849	564	141	ug/kg	10		07/08/21 03:34
Benzo[k]fluoranthene	564 U	564	141	ug/kg	10		07/08/21 03:34
Chrysene	4730	564	141	ug/kg	10		07/08/21 03:34
Dibenzo[a,h]anthracene	564 U	564	141	ug/kg	10		07/08/21 03:34
Fluoranthene	3400	564	141	ug/kg	10		07/08/21 03:34
Fluorene	35000	14100	3530	ug/kg	250		07/08/21 23:31
Indeno[1,2,3-c,d] pyrene	564 U	564	141	ug/kg	10		07/08/21 03:34
Naphthalene	18300	11300	2820	ug/kg	250		07/08/21 23:31
Phenanthrene	70800	14100	3530	ug/kg	250		07/08/21 23:31
Pyrene	14200	14100	3530	ug/kg	250		07/08/21 23:31
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	250		07/08/21 23:31
Fluoranthene-d10 (surr)	1010	*	54-113	%	10		07/08/21 03:34

### Batch Information

Analytical Batch: XMS12722  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 03:34  
 Container ID: 1213715002-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.75 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 23:31  
 Container ID: 1213715002-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.75 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D1-24**

Client Sample ID: **D1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715002  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	78400	454	141	mg/kg	10		06/30/21 17:17

**Surrogates**

5a Androstane (surr)	373 *	50-150		%	10		06/30/21 17:17
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:17  
Container ID: 1213715002-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.16 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	16800	2270	976	mg/kg	10		06/30/21 17:17

**Surrogates**

n-Triacontane-d62 (surr)	110	50-150		%	10		06/30/21 17:17
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:17  
Container ID: 1213715002-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.16 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of D1-24

Client Sample ID: **D1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715002  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	10.1 U	10.1	3.02	mg/kg	1		07/08/21 11:39
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	10.8 *	50-150		%	1		07/08/21 11:39

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 11:39  
Container ID: 1213715002-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:10  
Prep Initial Wt./Vol.: 77.878 g  
Prep Extract Vol: 68.7584 mL

Print Date: 07/27/2021 1:18:18PM



Results of D1-24

Client Sample ID: D1-24  
Client Project ID: Port William  
Lab Sample ID: 1213715002  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	80.6 U	80.6	25.0	ug/kg	1		07/02/21 17:16
1,1,1-Trichloroethane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,1,2,2-Tetrachloroethane	8.06 U	8.06	2.50	ug/kg	1		07/02/21 17:16
1,1,2-Trichloroethane	3.22 U	3.22	1.01	ug/kg	1		07/02/21 17:16
1,1-Dichloroethane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,1-Dichloroethene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,1-Dichloropropene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,2,3-Trichlorobenzene	202 U	202	60.5	ug/kg	1		07/02/21 17:16
1,2,3-Trichloropropane	8.06 U	8.06	2.50	ug/kg	1		07/02/21 17:16
1,2,4-Trichlorobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,2,4-Trimethylbenzene	339	202	60.5	ug/kg	1		07/02/21 17:16
1,2-Dibromo-3-chloropropane	403 U	403	125	ug/kg	1		07/02/21 17:16
1,2-Dibromoethane	4.03 U	4.03	1.61	ug/kg	1		07/02/21 17:16
1,2-Dichlorobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,2-Dichloroethane	8.06 U	8.06	2.82	ug/kg	1		07/02/21 17:16
1,2-Dichloropropane	40.3 U	40.3	12.5	ug/kg	1		07/02/21 17:16
1,3,5-Trimethylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,3-Dichlorobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
1,3-Dichloropropane	40.3 U	40.3	12.5	ug/kg	1		07/02/21 17:16
1,4-Dichlorobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
2,2-Dichloropropane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
2-Butanone (MEK)	1010 U	1010	314	ug/kg	1		07/02/21 17:16
2-Chlorotoluene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
2-Hexanone	403 U	403	125	ug/kg	1		07/02/21 17:16
4-Chlorotoluene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
4-Isopropyltoluene	403 U	403	101	ug/kg	1		07/02/21 17:16
4-Methyl-2-pentanone (MIBK)	1010 U	1010	314	ug/kg	1		07/02/21 17:16
Acetone	1010 U	1010	314	ug/kg	1		07/02/21 17:16
Benzene	50.4 U	50.4	15.7	ug/kg	1		07/02/21 17:16
Bromobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Bromochloromethane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Bromodichloromethane	8.06 U	8.06	2.50	ug/kg	1		07/02/21 17:16
Bromoform	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Bromomethane	80.6 U	80.6	25.0	ug/kg	1		07/02/21 17:16
Carbon disulfide	403 U	403	125	ug/kg	1		07/02/21 17:16
Carbon tetrachloride	50.4 U	50.4	15.7	ug/kg	1		07/02/21 17:16
Chlorobenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16

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### Results of D1-24

Client Sample ID: **D1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715002  
 Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):43.8  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	806 U	806	250	ug/kg	1		07/02/21 17:16
Chloroform	16.1 U	16.1	4.03	ug/kg	1		07/02/21 17:16
Chloromethane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
cis-1,2-Dichloroethene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
cis-1,3-Dichloropropene	50.4 U	50.4	15.7	ug/kg	1		07/02/21 17:16
Dibromochloromethane	20.2 U	20.2	6.05	ug/kg	1		07/02/21 17:16
Dibromomethane	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Dichlorodifluoromethane	202 U	202	60.5	ug/kg	1		07/02/21 17:16
Ethylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Freon-113	403 U	403	125	ug/kg	1		07/02/21 17:16
Hexachlorobutadiene	80.6 U	80.6	25.0	ug/kg	1		07/02/21 17:16
Isopropylbenzene (Cumene)	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Methylene chloride	403 U	403	125	ug/kg	1		07/02/21 17:16
Methyl-t-butyl ether	403 U	403	125	ug/kg	1		07/02/21 17:16
Naphthalene	1110	101	31.4	ug/kg	1		07/02/21 17:16
n-Butylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
n-Propylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
o-Xylene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
P & M -Xylene	202 U	202	60.5	ug/kg	1		07/02/21 17:16
sec-Butylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Styrene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
tert-Butylbenzene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
Tetrachloroethene	50.4 U	50.4	15.7	ug/kg	1		07/02/21 17:16
Toluene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
trans-1,2-Dichloroethene	101 U	101	31.4	ug/kg	1		07/02/21 17:16
trans-1,3-Dichloropropene	50.4 U	50.4	15.7	ug/kg	1		07/02/21 17:16
Trichloroethene	20.2 U	20.2	6.05	ug/kg	1		07/02/21 17:16
Trichlorofluoromethane	202 U	202	60.5	ug/kg	1		07/02/21 17:16
Vinyl acetate	403 U	403	125	ug/kg	1		07/02/21 17:16
Vinyl chloride	3.22 U	3.22	1.01	ug/kg	1		07/02/21 17:16
Xylenes (total)	302 U	302	91.9	ug/kg	1		07/02/21 17:16
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	114	71-136		%	1		07/02/21 17:16
4-Bromofluorobenzene (surr)	9.4 *	55-151		%	1		07/02/21 17:16
Toluene-d8 (surr)	99.3	85-116		%	1		07/02/21 17:16

Print Date: 07/27/2021 1:18:18PM



**Results of D1-24**

Client Sample ID: **D1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715002  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:10  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 17:16  
Container ID: 1213715002-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:10  
Prep Initial Wt./Vol.: 77.878 g  
Prep Extract Vol: 68.7584 mL

Print Date: 07/27/2021 1:18:18PM



Results of D3-12

Client Sample ID: D3-12
Client Project ID: Port William
Lab Sample ID: 1213715003
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):37.1
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12722
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/08/21 03:54
Container ID: 1213715003-A

Prep Batch: XXX45071
Prep Method: SW3550C
Prep Date/Time: 06/30/21 06:46
Prep Initial Wt./Vol.: 22.538 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/08/21 23:51
Container ID: 1213715003-A

Prep Batch: XXX45071
Prep Method: SW3550C
Prep Date/Time: 06/30/21 06:46
Prep Initial Wt./Vol.: 22.538 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D3-12**

Client Sample ID: **D3-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715003  
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):37.1  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	73100	537	166	mg/kg	10		06/30/21 17:36
<b>Surrogates</b>							
5a Androstane (surr)	280 *	50-150		%	10		06/30/21 17:36

**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:36  
Container ID: 1213715003-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.162 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	26100	2680	1150	mg/kg	10		06/30/21 17:36
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	217 *	50-150		%	10		06/30/21 17:36

**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:36  
Container ID: 1213715003-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.162 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of D3-12

Client Sample ID: **D3-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715003  
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):37.1  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	12.6 U	12.6	3.77	mg/kg	1		07/08/21 11:21
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	4.1 *	50-150		%	1		07/08/21 11:21

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 11:21  
Container ID: 1213715003-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 17:16  
Prep Initial Wt./Vol.: 82.99 g  
Prep Extract Vol: 77.2362 mL

Print Date: 07/27/2021 1:18:18PM



Results of D3-12

Client Sample ID: D3-12  
Client Project ID: Port William  
Lab Sample ID: 1213715003  
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):37.1  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	100 U	100	31.1	ug/kg	1		07/02/21 16:43
1,1,1-Trichloroethane	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,1,2,2-Tetrachloroethane	10.0 U	10.0	3.11	ug/kg	1		07/02/21 16:43
1,1,2-Trichloroethane	4.02 U	4.02	1.26	ug/kg	1		07/02/21 16:43
1,1-Dichloroethane	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,1-Dichloroethene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,1-Dichloropropene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,2,3-Trichlorobenzene	251 U	251	75.3	ug/kg	1		07/02/21 16:43
1,2,3-Trichloropropane	10.0 U	10.0	3.11	ug/kg	1		07/02/21 16:43
1,2,4-Trichlorobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,2,4-Trimethylbenzene	251 U	251	75.3	ug/kg	1		07/02/21 16:43
1,2-Dibromo-3-chloropropane	502 U	502	156	ug/kg	1		07/02/21 16:43
1,2-Dibromoethane	5.02 U	5.02	2.01	ug/kg	1		07/02/21 16:43
1,2-Dichlorobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,2-Dichloroethane	10.0 U	10.0	3.52	ug/kg	1		07/02/21 16:43
1,2-Dichloropropane	50.2 U	50.2	15.6	ug/kg	1		07/02/21 16:43
1,3,5-Trimethylbenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,3-Dichlorobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
1,3-Dichloropropane	50.2 U	50.2	15.6	ug/kg	1		07/02/21 16:43
1,4-Dichlorobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
2,2-Dichloropropane	126 U	126	39.2	ug/kg	1		07/02/21 16:43
2-Butanone (MEK)	1260 U	1260	392	ug/kg	1		07/02/21 16:43
2-Chlorotoluene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
2-Hexanone	502 U	502	156	ug/kg	1		07/02/21 16:43
4-Chlorotoluene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
4-Isopropyltoluene	502 U	502	126	ug/kg	1		07/02/21 16:43
4-Methyl-2-pentanone (MIBK)	1260 U	1260	392	ug/kg	1		07/02/21 16:43
Acetone	1260 U	1260	392	ug/kg	1		07/02/21 16:43
Benzene	62.8 U	62.8	19.6	ug/kg	1		07/02/21 16:43
Bromobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43
Bromochloromethane	126 U	126	39.2	ug/kg	1		07/02/21 16:43
Bromodichloromethane	10.0 U	10.0	3.11	ug/kg	1		07/02/21 16:43
Bromoform	126 U	126	39.2	ug/kg	1		07/02/21 16:43
Bromomethane	100 U	100	31.1	ug/kg	1		07/02/21 16:43
Carbon disulfide	502 U	502	156	ug/kg	1		07/02/21 16:43
Carbon tetrachloride	62.8 U	62.8	19.6	ug/kg	1		07/02/21 16:43
Chlorobenzene	126 U	126	39.2	ug/kg	1		07/02/21 16:43

Print Date: 07/27/2021 1:18:18PM



Results of D3-12

Client Sample ID: D3-12
Client Project ID: Port William
Lab Sample ID: 1213715003
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):37.1
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



**Results of D3-12**

Client Sample ID: **D3-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715003  
Lab Project ID: 1213715

Collection Date: 06/21/21 17:16  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):37.1  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 16:43  
Container ID: 1213715003-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 17:16  
Prep Initial Wt./Vol.: 82.99 g  
Prep Extract Vol: 77.2362 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D2-17**

Client Sample ID: **D2-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715004  
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):50.8  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	3710	246	61.4	ug/kg	5		07/08/21 01:11
2-Methylnaphthalene	4000	246	61.4	ug/kg	5		07/08/21 01:11
Acenaphthene	759	246	61.4	ug/kg	5		07/08/21 01:11
Acenaphthylene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Anthracene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Benzo(a)Anthracene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Benzo[a]pyrene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Benzo[b]Fluoranthene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Benzo[g,h,i]perylene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Benzo[k]fluoranthene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Chrysene	260	246	61.4	ug/kg	5		07/08/21 01:11
Dibenzo[a,h]anthracene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Fluoranthene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Fluorene	774	246	61.4	ug/kg	5		07/08/21 01:11
Indeno[1,2,3-c,d] pyrene	246 U	246	61.4	ug/kg	5		07/08/21 01:11
Naphthalene	197 U	197	49.2	ug/kg	5		07/08/21 01:11
Phenanthrene	1830	246	61.4	ug/kg	5		07/08/21 01:11
Pyrene	793	246	61.4	ug/kg	5		07/08/21 01:11
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	81.8	58-103		%	5		07/08/21 01:11
Fluoranthene-d10 (surr)	71.2	54-113		%	5		07/08/21 01:11

**Batch Information**

Analytical Batch: XMS12722  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/08/21 01:11  
Container ID: 1213715004-A

Prep Batch: XXX45071  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 06:46  
Prep Initial Wt./Vol.: 22.546 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D2-17**

Client Sample ID: **D2-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715004  
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):50.8  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	6320	39.2	12.2	mg/kg	1		06/30/21 15:08

**Surrogates**

5a Androstane (surr)	116	50-150		%	1		06/30/21 15:08
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 15:08  
Container ID: 1213715004-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.152 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1200	196	84.3	mg/kg	1		06/30/21 15:08

**Surrogates**

n-Triacontane-d62 (surr)	88.6	50-150		%	1		06/30/21 15:08
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 15:08  
Container ID: 1213715004-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.152 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of D2-17

Client Sample ID: **D2-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715004  
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):50.8  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	20.2	6.86	2.06	mg/kg	1		07/08/21 11:03
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	89.3	50-150		%	1		07/08/21 11:03

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 11:03  
Container ID: 1213715004-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 18:15  
Prep Initial Wt./Vol.: 122.301 g  
Prep Extract Vol: 85.2214 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D2-17**

Client Sample ID: **D2-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715004  
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):50.8  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	54.9 U	54.9	17.0	ug/kg	1		07/02/21 16:59
1,1,1-Trichloroethane	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,1,2,2-Tetrachloroethane	5.49 U	5.49	1.70	ug/kg	1		07/02/21 16:59
1,1,2-Trichloroethane	2.20 U	2.20	0.686	ug/kg	1		07/02/21 16:59
1,1-Dichloroethane	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,1-Dichloroethene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,1-Dichloropropene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,2,3-Trichlorobenzene	137 U	137	41.2	ug/kg	1		07/02/21 16:59
1,2,3-Trichloropropane	5.49 U	5.49	1.70	ug/kg	1		07/02/21 16:59
1,2,4-Trichlorobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,2,4-Trimethylbenzene	165	137	41.2	ug/kg	1		07/02/21 16:59
1,2-Dibromo-3-chloropropane	275 U	275	85.1	ug/kg	1		07/02/21 16:59
1,2-Dibromoethane	2.75 U	2.75	1.10	ug/kg	1		07/02/21 16:59
1,2-Dichlorobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,2-Dichloroethane	5.49 U	5.49	1.92	ug/kg	1		07/02/21 16:59
1,2-Dichloropropane	27.5 U	27.5	8.51	ug/kg	1		07/02/21 16:59
1,3,5-Trimethylbenzene	76.9	68.6	21.4	ug/kg	1		07/02/21 16:59
1,3-Dichlorobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
1,3-Dichloropropane	27.5 U	27.5	8.51	ug/kg	1		07/02/21 16:59
1,4-Dichlorobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
2,2-Dichloropropane	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
2-Butanone (MEK)	686 U	686	214	ug/kg	1		07/02/21 16:59
2-Chlorotoluene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
2-Hexanone	275 U	275	85.1	ug/kg	1		07/02/21 16:59
4-Chlorotoluene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
4-Isopropyltoluene	275 U	275	68.6	ug/kg	1		07/02/21 16:59
4-Methyl-2-pentanone (MIBK)	686 U	686	214	ug/kg	1		07/02/21 16:59
Acetone	686 U	686	214	ug/kg	1		07/02/21 16:59
Benzene	34.3 U	34.3	10.7	ug/kg	1		07/02/21 16:59
Bromobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
Bromochloromethane	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
Bromodichloromethane	5.49 U	5.49	1.70	ug/kg	1		07/02/21 16:59
Bromoform	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59
Bromomethane	54.9 U	54.9	17.0	ug/kg	1		07/02/21 16:59
Carbon disulfide	275 U	275	85.1	ug/kg	1		07/02/21 16:59
Carbon tetrachloride	34.3 U	34.3	10.7	ug/kg	1		07/02/21 16:59
Chlorobenzene	68.6 U	68.6	21.4	ug/kg	1		07/02/21 16:59

Print Date: 07/27/2021 1:18:18PM



Results of D2-17

Client Sample ID: D2-17
Client Project ID: Port William
Lab Sample ID: 1213715004
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):50.8
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



**Results of D2-17**

Client Sample ID: **D2-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715004  
Lab Project ID: 1213715

Collection Date: 06/21/21 18:15  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):50.8  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 16:59  
Container ID: 1213715004-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 18:15  
Prep Initial Wt./Vol.: 122.301 g  
Prep Extract Vol: 85.2214 mL

Print Date: 07/27/2021 1:18:18PM



Results of **WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
2-Methylnaphthalene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Acenaphthene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Acenaphthylene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Anthracene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Benzo(a)Anthracene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Benzo[a]pyrene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Benzo[b]Fluoranthene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Benzo[g,h,i]perylene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Benzo[k]fluoranthene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Chrysene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Dibenzo[a,h]anthracene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Fluoranthene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Fluorene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Indeno[1,2,3-c,d] pyrene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Naphthalene	226 U	226	56.4	ug/kg	5		07/08/21 01:31
Phenanthrene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
Pyrene	282 U	282	70.5	ug/kg	5		07/08/21 01:31
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	75.5	58-103		%	5		07/08/21 01:31
Fluoranthene-d10 (surr)	72	54-113		%	5		07/08/21 01:31

**Batch Information**

Analytical Batch: XMS12722  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/08/21 01:31  
Container ID: 1213715005-A

Prep Batch: XXX45071  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 06:46  
Prep Initial Wt./Vol.: 22.764 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	187	45.2	14.0	mg/kg	1		06/30/21 14:29

**Surrogates**

5a Androstane (surr)	77.2	50-150		%	1		06/30/21 14:29
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:29  
Container ID: 1213715005-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.333 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1140	226	97.1	mg/kg	1		06/30/21 14:29

**Surrogates**

n-Triacontane-d62 (surr)	84	50-150		%	1		06/30/21 14:29
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:29  
Container ID: 1213715005-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.333 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	12.0 U	12.0	3.60	mg/kg	1		07/02/21 00:38
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	38.2 *	50-150		%	1		07/02/21 00:38

**Batch Information**

Analytical Batch: VFC15691  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/02/21 00:38  
Container ID: 1213715005-B

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 09:34  
Prep Initial Wt./Vol.: 51 g  
Prep Extract Vol: 53.6572 mL

Print Date: 07/27/2021 1:18:18PM



Results of **WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	96.1 U	96.1	29.8	ug/kg	1		07/01/21 21:22
1,1,1-Trichloroethane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,1,2,2-Tetrachloroethane	9.61 U	9.61	2.98	ug/kg	1		07/01/21 21:22
1,1,2-Trichloroethane	3.84 U	3.84	1.20	ug/kg	1		07/01/21 21:22
1,1-Dichloroethane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,1-Dichloroethene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,1-Dichloropropene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,2,3-Trichlorobenzene	240 U	240	72.0	ug/kg	1		07/01/21 21:22
1,2,3-Trichloropropane	9.61 U	9.61	2.98	ug/kg	1		07/01/21 21:22
1,2,4-Trichlorobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,2,4-Trimethylbenzene	240 U	240	72.0	ug/kg	1		07/01/21 21:22
1,2-Dibromo-3-chloropropane	480 U	480	149	ug/kg	1		07/01/21 21:22
1,2-Dibromoethane	4.80 U	4.80	1.92	ug/kg	1		07/01/21 21:22
1,2-Dichlorobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,2-Dichloroethane	9.61 U	9.61	3.36	ug/kg	1		07/01/21 21:22
1,2-Dichloropropane	48.0 U	48.0	14.9	ug/kg	1		07/01/21 21:22
1,3,5-Trimethylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,3-Dichlorobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
1,3-Dichloropropane	48.0 U	48.0	14.9	ug/kg	1		07/01/21 21:22
1,4-Dichlorobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
2,2-Dichloropropane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
2-Butanone (MEK)	1200 U	1200	375	ug/kg	1		07/01/21 21:22
2-Chlorotoluene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
2-Hexanone	480 U	480	149	ug/kg	1		07/01/21 21:22
4-Chlorotoluene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
4-Isopropyltoluene	480 U	480	120	ug/kg	1		07/01/21 21:22
4-Methyl-2-pentanone (MIBK)	1200 U	1200	375	ug/kg	1		07/01/21 21:22
Acetone	1200 U	1200	375	ug/kg	1		07/01/21 21:22
Benzene	60.0 U	60.0	18.7	ug/kg	1		07/01/21 21:22
Bromobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Bromochloromethane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Bromodichloromethane	9.61 U	9.61	2.98	ug/kg	1		07/01/21 21:22
Bromoform	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Bromomethane	96.1 U	96.1	29.8	ug/kg	1		07/01/21 21:22
Carbon disulfide	480 U	480	149	ug/kg	1		07/01/21 21:22
Carbon tetrachloride	60.0 U	60.0	18.7	ug/kg	1		07/01/21 21:22
Chlorobenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22

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Results of **WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	961 U	961	298	ug/kg	1		07/01/21 21:22
Chloroform	238	19.2	4.80	ug/kg	1		07/01/21 21:22
Chloromethane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
cis-1,2-Dichloroethene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
cis-1,3-Dichloropropene	60.0 U	60.0	18.7	ug/kg	1		07/01/21 21:22
Dibromochloromethane	24.0 U	24.0	7.20	ug/kg	1		07/01/21 21:22
Dibromomethane	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Dichlorodifluoromethane	240 U	240	72.0	ug/kg	1		07/01/21 21:22
Ethylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Freon-113	480 U	480	149	ug/kg	1		07/01/21 21:22
Hexachlorobutadiene	96.1 U	96.1	29.8	ug/kg	1		07/01/21 21:22
Isopropylbenzene (Cumene)	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Methylene chloride	480 U	480	149	ug/kg	1		07/01/21 21:22
Methyl-t-butyl ether	480 U	480	149	ug/kg	1		07/01/21 21:22
Naphthalene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
n-Butylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
n-Propylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
o-Xylene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
P & M -Xylene	240 U	240	72.0	ug/kg	1		07/01/21 21:22
sec-Butylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Styrene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
tert-Butylbenzene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
Tetrachloroethene	60.0 U	60.0	18.7	ug/kg	1		07/01/21 21:22
Toluene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
trans-1,2-Dichloroethene	120 U	120	37.5	ug/kg	1		07/01/21 21:22
trans-1,3-Dichloropropene	60.0 U	60.0	18.7	ug/kg	1		07/01/21 21:22
Trichloroethene	24.0 U	24.0	7.20	ug/kg	1		07/01/21 21:22
Trichlorofluoromethane	240 U	240	72.0	ug/kg	1		07/01/21 21:22
Vinyl acetate	480 U	480	149	ug/kg	1		07/01/21 21:22
Vinyl chloride	3.84 U	3.84	1.20	ug/kg	1		07/01/21 21:22
Xylenes (total)	360 U	360	110	ug/kg	1		07/01/21 21:22
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	102	71-136		%	1		07/01/21 21:22
4-Bromofluorobenzene (surr)	42.5 *	55-151		%	1		07/01/21 21:22
Toluene-d8 (surr)	100	85-116		%	1		07/01/21 21:22

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Results of **WS1-12**

Client Sample ID: **WS1-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715005  
Lab Project ID: 1213715

Collection Date: 06/22/21 09:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):43.8  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Analyst: MDT  
Analytical Date/Time: 07/01/21 21:22  
Container ID: 1213715005-B

Prep Batch: VXX37345  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 09:34  
Prep Initial Wt./Vol.: 51 g  
Prep Extract Vol: 53.6572 mL

Print Date: 07/27/2021 1:18:18PM



Results of DT1-17

Client Sample ID: DT1-17  
Client Project ID: Port William  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
2-Methylnaphthalene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Acenaphthene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Acenaphthylene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Anthracene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Benzo(a)Anthracene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Benzo[a]pyrene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Benzo[b]Fluoranthene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Benzo[g,h,i]perylene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Benzo[k]fluoranthene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Chrysene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Dibenzo[a,h]anthracene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Fluoranthene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Fluorene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Indeno[1,2,3-c,d] pyrene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Naphthalene	76.4 U	76.4	19.1	ug/kg	1		07/08/21 01:51
Phenanthrene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
Pyrene	95.5 U	95.5	23.9	ug/kg	1		07/08/21 01:51
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	73.6	58-103		%	1		07/08/21 01:51
Fluoranthene-d10 (surr)	76.6	54-113		%	1		07/08/21 01:51

Batch Information

Analytical Batch: XMS12722  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/08/21 01:51  
Container ID: 1213715006-A

Prep Batch: XXX45071  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 06:46  
Prep Initial Wt./Vol.: 11.348 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of DT1-17

Client Sample ID: DT1-17  
Client Project ID: Port William  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	4160	76.6	23.7	mg/kg	1		06/30/21 14:39

Surrogates

5a Androstane (surr)	103	50-150		%	1		06/30/21 14:39
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Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:39  
Container ID: 1213715006-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.094 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	704	383	165	mg/kg	1		06/30/21 14:39

Surrogates

n-Triacontane-d62 (surr)	97.8	50-150		%	1		06/30/21 14:39
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Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:39  
Container ID: 1213715006-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.094 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of DT1-17

Client Sample ID: **DT1-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	6.27 U	6.27	1.88	mg/kg	1		07/02/21 01:32
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	33.6 *	50-150		%	1		07/02/21 01:32

### Batch Information

Analytical Batch: VFC15691  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/02/21 01:32  
Container ID: 1213715006-B

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 11:09  
Prep Initial Wt./Vol.: 146.693 g  
Prep Extract Vol: 95.5516 mL

Print Date: 07/27/2021 1:18:18PM



Results of DT1-17

Client Sample ID: DT1-17  
Client Project ID: Port William  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	50.2 U	50.2	15.6	ug/kg	1		07/01/21 21:37
1,1,1-Trichloroethane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,1,2,2-Tetrachloroethane	5.02 U	5.02	1.56	ug/kg	1		07/01/21 21:37
1,1,2-Trichloroethane	2.01 U	2.01	0.627	ug/kg	1		07/01/21 21:37
1,1-Dichloroethane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,1-Dichloroethene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,1-Dichloropropene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,2,3-Trichlorobenzene	125 U	125	37.6	ug/kg	1		07/01/21 21:37
1,2,3-Trichloropropane	5.02 U	5.02	1.56	ug/kg	1		07/01/21 21:37
1,2,4-Trichlorobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,2,4-Trimethylbenzene	125 U	125	37.6	ug/kg	1		07/01/21 21:37
1,2-Dibromo-3-chloropropane	251 U	251	77.8	ug/kg	1		07/01/21 21:37
1,2-Dibromoethane	2.51 U	2.51	1.00	ug/kg	1		07/01/21 21:37
1,2-Dichlorobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,2-Dichloroethane	5.02 U	5.02	1.76	ug/kg	1		07/01/21 21:37
1,2-Dichloropropane	25.1 U	25.1	7.78	ug/kg	1		07/01/21 21:37
1,3,5-Trimethylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,3-Dichlorobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
1,3-Dichloropropane	25.1 U	25.1	7.78	ug/kg	1		07/01/21 21:37
1,4-Dichlorobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
2,2-Dichloropropane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
2-Butanone (MEK)	627 U	627	196	ug/kg	1		07/01/21 21:37
2-Chlorotoluene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
2-Hexanone	251 U	251	77.8	ug/kg	1		07/01/21 21:37
4-Chlorotoluene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
4-Isopropyltoluene	251 U	251	62.7	ug/kg	1		07/01/21 21:37
4-Methyl-2-pentanone (MIBK)	627 U	627	196	ug/kg	1		07/01/21 21:37
Acetone	627 U	627	196	ug/kg	1		07/01/21 21:37
Benzene	31.4 U	31.4	9.79	ug/kg	1		07/01/21 21:37
Bromobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Bromochloromethane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Bromodichloromethane	5.02 U	5.02	1.56	ug/kg	1		07/01/21 21:37
Bromoform	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Bromomethane	50.2 U	50.2	15.6	ug/kg	1		07/01/21 21:37
Carbon disulfide	251 U	251	77.8	ug/kg	1		07/01/21 21:37
Carbon tetrachloride	31.4 U	31.4	9.79	ug/kg	1		07/01/21 21:37
Chlorobenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37

Print Date: 07/27/2021 1:18:18PM



Results of DT1-17

Client Sample ID: DT1-17  
Client Project ID: Port William  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	502 U	502	156	ug/kg	1		07/01/21 21:37
Chloroform	10.0 U	10.0	2.51	ug/kg	1		07/01/21 21:37
Chloromethane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
cis-1,2-Dichloroethene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
cis-1,3-Dichloropropene	31.4 U	31.4	9.79	ug/kg	1		07/01/21 21:37
Dibromochloromethane	12.5 U	12.5	3.76	ug/kg	1		07/01/21 21:37
Dibromomethane	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Dichlorodifluoromethane	125 U	125	37.6	ug/kg	1		07/01/21 21:37
Ethylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Freon-113	251 U	251	77.8	ug/kg	1		07/01/21 21:37
Hexachlorobutadiene	50.2 U	50.2	15.6	ug/kg	1		07/01/21 21:37
Isopropylbenzene (Cumene)	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Methylene chloride	251 U	251	77.8	ug/kg	1		07/01/21 21:37
Methyl-t-butyl ether	251 U	251	77.8	ug/kg	1		07/01/21 21:37
Naphthalene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
n-Butylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
n-Propylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
o-Xylene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
P & M -Xylene	125 U	125	37.6	ug/kg	1		07/01/21 21:37
sec-Butylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Styrene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
tert-Butylbenzene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
Tetrachloroethene	31.4 U	31.4	9.79	ug/kg	1		07/01/21 21:37
Toluene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
trans-1,2-Dichloroethene	62.7 U	62.7	19.6	ug/kg	1		07/01/21 21:37
trans-1,3-Dichloropropene	31.4 U	31.4	9.79	ug/kg	1		07/01/21 21:37
Trichloroethene	12.5 U	12.5	3.76	ug/kg	1		07/01/21 21:37
Trichlorofluoromethane	125 U	125	37.6	ug/kg	1		07/01/21 21:37
Vinyl acetate	251 U	251	77.8	ug/kg	1		07/01/21 21:37
Vinyl chloride	2.01 U	2.01	0.627	ug/kg	1		07/01/21 21:37
Xylenes (total)	188 U	188	57.2	ug/kg	1		07/01/21 21:37
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	104	71-136		%	1		07/01/21 21:37
4-Bromofluorobenzene (surr)	47.6 *	55-151		%	1		07/01/21 21:37
Toluene-d8 (surr)	99.2	85-116		%	1		07/01/21 21:37

Print Date: 07/27/2021 1:18:18PM



Results of **DT1-17**

Client Sample ID: **DT1-17**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715006  
Lab Project ID: 1213715

Collection Date: 06/22/21 11:09  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.9  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Analyst: MDT  
Analytical Date/Time: 07/01/21 21:37  
Container ID: 1213715006-B

Prep Batch: VXX37345  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 11:09  
Prep Initial Wt./Vol.: 146.693 g  
Prep Extract Vol: 95.5516 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MH1-0

Client Sample ID: **MH1-0**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715007  
 Lab Project ID: 1213715

Collection Date: 06/22/21 12:39  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):36.6  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	8240	676	169	ug/kg	5		07/09/21 00:12
2-Methylnaphthalene	10700	676	169	ug/kg	5		07/09/21 00:12
Acenaphthene	676 U	676	169	ug/kg	5		07/09/21 00:12
Acenaphthylene	676 U	676	169	ug/kg	5		07/09/21 00:12
Anthracene	676 U	676	169	ug/kg	5		07/09/21 00:12
Benzo(a)Anthracene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Benzo[a]pyrene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Benzo[b]Fluoranthene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Benzo[g,h,i]perylene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Benzo[k]fluoranthene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Chrysene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Dibenzo[a,h]anthracene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Fluoranthene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Fluorene	4760	676	169	ug/kg	5		07/09/21 00:12
Indeno[1,2,3-c,d] pyrene	135 U	135	33.8	ug/kg	1		07/08/21 02:12
Naphthalene	2490	541	135	ug/kg	5		07/09/21 00:12
Phenanthrene	13700	676	169	ug/kg	5		07/09/21 00:12
Pyrene	649	135	33.8	ug/kg	1		07/08/21 02:12
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	105	*	58-103	%	5		07/09/21 00:12
Fluoranthene-d10 (surr)	81.2		54-113	%	1		07/08/21 02:12

### Batch Information

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 00:12  
 Container ID: 1213715007-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 11.374 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12722  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 02:12  
 Container ID: 1213715007-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 11.374 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MH1-0**

Client Sample ID: **MH1-0**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715007  
Lab Project ID: 1213715

Collection Date: 06/22/21 12:39  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.6  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	16200	108	33.4	mg/kg	1		06/30/21 14:49

**Surrogates**

5a Androstane (surr)	110	50-150		%	1		06/30/21 14:49
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:49  
Container ID: 1213715007-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.213 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	539 U	539	232	mg/kg	1		06/30/21 14:49

**Surrogates**

n-Triacontane-d62 (surr)	97.4	50-150		%	1		06/30/21 14:49
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:49  
Container ID: 1213715007-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.213 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MH1-0

Client Sample ID: **MH1-0**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715007  
Lab Project ID: 1213715

Collection Date: 06/22/21 12:39  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.6  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	12.1 U	12.1	3.63	mg/kg	1		07/08/21 10:45
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	53.7	50-150		%	1		07/08/21 10:45

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 10:45  
Container ID: 1213715007-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 12:39  
Prep Initial Wt./Vol.: 100.152 g  
Prep Extract Vol: 88.542 mL

Print Date: 07/27/2021 1:18:18PM



Results of MH1-0

Client Sample ID: MH1-0
Client Project ID: Port William
Lab Sample ID: 1213715007
Lab Project ID: 1213715

Collection Date: 06/22/21 12:39
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):36.6
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



### Results of MH1-0

Client Sample ID: **MH1-0**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715007  
 Lab Project ID: 1213715

Collection Date: 06/22/21 12:39  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):36.6  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	967 U	967	300	ug/kg	1		07/02/21 17:49
Chloroform	19.3 U	19.3	4.84	ug/kg	1		07/02/21 17:49
Chloromethane	121 U	121	37.7	ug/kg	1		07/02/21 17:49
cis-1,2-Dichloroethene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
cis-1,3-Dichloropropene	60.5 U	60.5	18.9	ug/kg	1		07/02/21 17:49
Dibromochloromethane	24.2 U	24.2	7.26	ug/kg	1		07/02/21 17:49
Dibromomethane	121 U	121	37.7	ug/kg	1		07/02/21 17:49
Dichlorodifluoromethane	242 U	242	72.6	ug/kg	1		07/02/21 17:49
Ethylbenzene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
Freon-113	484 U	484	150	ug/kg	1		07/02/21 17:49
Hexachlorobutadiene	96.7 U	96.7	30.0	ug/kg	1		07/02/21 17:49
Isopropylbenzene (Cumene)	121 U	121	37.7	ug/kg	1		07/02/21 17:49
Methylene chloride	484 U	484	150	ug/kg	1		07/02/21 17:49
Methyl-t-butyl ether	484 U	484	150	ug/kg	1		07/02/21 17:49
Naphthalene	385	121	37.7	ug/kg	1		07/02/21 17:49
n-Butylbenzene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
n-Propylbenzene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
o-Xylene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
P & M -Xylene	242 U	242	72.6	ug/kg	1		07/02/21 17:49
sec-Butylbenzene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
Styrene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
tert-Butylbenzene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
Tetrachloroethene	60.5 U	60.5	18.9	ug/kg	1		07/02/21 17:49
Toluene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
trans-1,2-Dichloroethene	121 U	121	37.7	ug/kg	1		07/02/21 17:49
trans-1,3-Dichloropropene	60.5 U	60.5	18.9	ug/kg	1		07/02/21 17:49
Trichloroethene	24.2 U	24.2	7.26	ug/kg	1		07/02/21 17:49
Trichlorofluoromethane	242 U	242	72.6	ug/kg	1		07/02/21 17:49
Vinyl acetate	484 U	484	150	ug/kg	1		07/02/21 17:49
Vinyl chloride	3.87 U	3.87	1.21	ug/kg	1		07/02/21 17:49
Xylenes (total)	363 U	363	110	ug/kg	1		07/02/21 17:49
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	109	71-136		%	1		07/02/21 17:49
4-Bromofluorobenzene (surr)	34.6 *	55-151		%	1		07/02/21 17:49
Toluene-d8 (surr)	100	85-116		%	1		07/02/21 17:49

Print Date: 07/27/2021 1:18:18PM



Results of **MH1-0**

Client Sample ID: **MH1-0**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715007  
Lab Project ID: 1213715

Collection Date: 06/22/21 12:39  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.6  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 17:49  
Container ID: 1213715007-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 12:39  
Prep Initial Wt./Vol.: 100.152 g  
Prep Extract Vol: 88.542 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CH1-24

Client Sample ID: **CH1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715008  
 Lab Project ID: 1213715

Collection Date: 06/22/21 13:47  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):34.7  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	7850	1780	446	ug/kg	25		07/09/21 00:53
2-Methylnaphthalene	6120	1780	446	ug/kg	25		07/09/21 00:53
Acenaphthene	1780 U	1780	446	ug/kg	25		07/09/21 00:53
Acenaphthylene	1780 U	1780	446	ug/kg	25		07/09/21 00:53
Anthracene	1780 U	1780	446	ug/kg	25		07/09/21 00:53
Benzo(a)Anthracene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Benzo[a]pyrene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Benzo[b]Fluoranthene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Benzo[g,h,i]perylene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Benzo[k]fluoranthene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Chrysene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Dibenzo[a,h]anthracene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Fluoranthene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Fluorene	5340	1780	446	ug/kg	25		07/09/21 00:53
Indeno[1,2,3-c,d] pyrene	71.3 U	71.3	17.8	ug/kg	1		07/08/21 02:32
Naphthalene	1430 U	1430	357	ug/kg	25		07/09/21 00:53
Phenanthrene	10100	1780	446	ug/kg	25		07/09/21 00:53
Pyrene	502	71.3	17.8	ug/kg	1		07/08/21 02:32
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	25		07/09/21 00:53
Fluoranthene-d10 (surr)	79.2		54-113	%	1		07/08/21 02:32

### Batch Information

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 00:53  
 Container ID: 1213715008-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.743 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12722  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 02:32  
 Container ID: 1213715008-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.743 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of CH1-24

Client Sample ID: CH1-24  
Client Project ID: Port William  
Lab Sample ID: 1213715008  
Lab Project ID: 1213715

Collection Date: 06/22/21 13:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.7  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	21900	229	71.1	mg/kg	4		06/30/21 15:48

Surrogates

5a Androstane (surr)	112	50-150		%	4		06/30/21 15:48
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Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 15:48  
Container ID: 1213715008-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.151 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1150 U	1150	493	mg/kg	4		06/30/21 15:48

Surrogates

n-Triacontane-d62 (surr)	75.1	50-150		%	4		06/30/21 15:48
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Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 15:48  
Container ID: 1213715008-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.151 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CH1-24

Client Sample ID: **CH1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715008  
Lab Project ID: 1213715

Collection Date: 06/22/21 13:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.7  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	12.3 U	12.3	3.70	mg/kg	1		07/08/21 10:27
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	50.1	50-150		%	1		07/08/21 10:27

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 10:27  
Container ID: 1213715008-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 13:47  
Prep Initial Wt./Vol.: 123.73 g  
Prep Extract Vol: 105.813 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CH1-24

Client Sample ID: **CH1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715008  
 Lab Project ID: 1213715

Collection Date: 06/22/21 13:47  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):34.7  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	98.6 U	98.6	30.6	ug/kg	1		07/02/21 15:37
1,1,1-Trichloroethane	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,1,2,2-Tetrachloroethane	9.86 U	9.86	3.06	ug/kg	1		07/02/21 15:37
1,1,2-Trichloroethane	3.94 U	3.94	1.23	ug/kg	1		07/02/21 15:37
1,1-Dichloroethane	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,1-Dichloroethene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,1-Dichloropropene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,2,3-Trichlorobenzene	247 U	247	74.0	ug/kg	1		07/02/21 15:37
1,2,3-Trichloropropane	9.86 U	9.86	3.06	ug/kg	1		07/02/21 15:37
1,2,4-Trichlorobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,2,4-Trimethylbenzene	247 U	247	74.0	ug/kg	1		07/02/21 15:37
1,2-Dibromo-3-chloropropane	493 U	493	153	ug/kg	1		07/02/21 15:37
1,2-Dibromoethane	4.93 U	4.93	1.97	ug/kg	1		07/02/21 15:37
1,2-Dichlorobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,2-Dichloroethane	9.86 U	9.86	3.45	ug/kg	1		07/02/21 15:37
1,2-Dichloropropane	49.3 U	49.3	15.3	ug/kg	1		07/02/21 15:37
1,3,5-Trimethylbenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,3-Dichlorobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
1,3-Dichloropropane	49.3 U	49.3	15.3	ug/kg	1		07/02/21 15:37
1,4-Dichlorobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
2,2-Dichloropropane	123 U	123	38.5	ug/kg	1		07/02/21 15:37
2-Butanone (MEK)	1230 U	1230	385	ug/kg	1		07/02/21 15:37
2-Chlorotoluene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
2-Hexanone	493 U	493	153	ug/kg	1		07/02/21 15:37
4-Chlorotoluene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
4-Isopropyltoluene	493 U	493	123	ug/kg	1		07/02/21 15:37
4-Methyl-2-pentanone (MIBK)	1230 U	1230	385	ug/kg	1		07/02/21 15:37
Acetone	1230 U	1230	385	ug/kg	1		07/02/21 15:37
Benzene	61.6 U	61.6	19.2	ug/kg	1		07/02/21 15:37
Bromobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37
Bromochloromethane	123 U	123	38.5	ug/kg	1		07/02/21 15:37
Bromodichloromethane	9.86 U	9.86	3.06	ug/kg	1		07/02/21 15:37
Bromoform	123 U	123	38.5	ug/kg	1		07/02/21 15:37
Bromomethane	98.6 U	98.6	30.6	ug/kg	1		07/02/21 15:37
Carbon disulfide	493 U	493	153	ug/kg	1		07/02/21 15:37
Carbon tetrachloride	61.6 U	61.6	19.2	ug/kg	1		07/02/21 15:37
Chlorobenzene	123 U	123	38.5	ug/kg	1		07/02/21 15:37

Print Date: 07/27/2021 1:18:18PM



Results of CH1-24

Client Sample ID: CH1-24
Client Project ID: Port William
Lab Sample ID: 1213715008
Lab Project ID: 1213715

Collection Date: 06/22/21 13:47
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):34.7
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



Results of **CH1-24**

Client Sample ID: **CH1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715008  
Lab Project ID: 1213715

Collection Date: 06/22/21 13:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.7  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 15:37  
Container ID: 1213715008-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 13:47  
Prep Initial Wt./Vol.: 123.73 g  
Prep Extract Vol: 105.813 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SCW1**

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
2-Methylnaphthalene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Acenaphthene	0.302	0.0521	0.0156	ug/L	1		07/09/21 12:36
Acenaphthylene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Anthracene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Benzo(a)Anthracene	0.0871	0.0521	0.0156	ug/L	1		07/09/21 12:36
Benzo[a]pyrene	0.0208 U	0.0208	0.00646	ug/L	1		07/09/21 12:36
Benzo[b]Fluoranthene	0.0913	0.0521	0.0156	ug/L	1		07/09/21 12:36
Benzo[g,h,i]perylene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Benzo[k]fluoranthene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Chrysene	0.196	0.0521	0.0156	ug/L	1		07/09/21 12:36
Dibenzo[a,h]anthracene	0.0208 U	0.0208	0.00646	ug/L	1		07/09/21 12:36
Fluoranthene	1.02	0.0521	0.0156	ug/L	1		07/09/21 12:36
Fluorene	0.302	0.0521	0.0156	ug/L	1		07/09/21 12:36
Indeno[1,2,3-c,d] pyrene	0.0521 U	0.0521	0.0156	ug/L	1		07/09/21 12:36
Naphthalene	0.125	0.104	0.0323	ug/L	1		07/09/21 12:36
Phenanthrene	0.102	0.0521	0.0156	ug/L	1		07/09/21 12:36
Pyrene	0.626	0.0521	0.0156	ug/L	1		07/09/21 12:36
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	46.4	42-86		%	1		07/09/21 12:36
Fluoranthene-d10 (surr)	60	50-97		%	1		07/09/21 12:36

**Batch Information**

Analytical Batch: XMS12734  
Analytical Method: 8270D SIM LV (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 12:36  
Container ID: 1213715009-C

Prep Batch: XXX45053  
Prep Method: SW3535A  
Prep Date/Time: 06/28/21 13:00  
Prep Initial Wt./Vol.: 240 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SCW1**

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	2.02	0.556	0.167	mg/L	1		06/29/21 17:54
<b>Surrogates</b>							
5a Androstane (surr)	102	50-150		%	1		06/29/21 17:54

**Batch Information**

Analytical Batch: XFC15977  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/29/21 17:54  
Container ID: 1213715009-A

Prep Batch: XXX45064  
Prep Method: SW3520C  
Prep Date/Time: 06/28/21 16:33  
Prep Initial Wt./Vol.: 270 mL  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1.68	0.463	0.139	mg/L	1		06/29/21 17:54
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	108	50-150		%	1		06/29/21 17:54

**Batch Information**

Analytical Batch: XFC15977  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/29/21 17:54  
Container ID: 1213715009-A

Prep Batch: XXX45064  
Prep Method: SW3520C  
Prep Date/Time: 06/28/21 16:33  
Prep Initial Wt./Vol.: 270 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of SCW1

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		07/01/21 02:32
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	82.6	50-150		%	1		07/01/21 02:32

### Batch Information

Analytical Batch: VFC15685  
Analytical Method: AK101  
Analyst: IJV  
Analytical Date/Time: 07/01/21 02:32  
Container ID: 1213715009-E

Prep Batch: VXX37332  
Prep Method: SW5030B  
Prep Date/Time: 06/30/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SCW1**

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		07/02/21 18:19
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		07/02/21 18:19
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 18:19
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
Bromoform	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Bromomethane	5.00 U	5.00	2.00	ug/L	1		07/02/21 18:19
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
Chloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19

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Results of **SCW1**

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Chloromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:19
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Freon-113	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Naphthalene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 18:19
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Styrene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:19
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:19
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		07/02/21 18:19
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		07/02/21 18:19
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	97.8	81-118		%	1		07/02/21 18:19
4-Bromofluorobenzene (surr)	99.9	85-114		%	1		07/02/21 18:19
Toluene-d8 (surr)	99	89-112		%	1		07/02/21 18:19

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Results of **SCW1**

Client Sample ID: **SCW1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715009  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:15  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:19  
Container ID: 1213715009-E

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SCW2**

Client Sample ID: **SCW2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715010  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
2-Methylnaphthalene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
Acenaphthene	0.485	0.0472	0.0142	ug/L	1		07/09/21 12:57
Acenaphthylene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
Anthracene	0.106	0.0472	0.0142	ug/L	1		07/09/21 12:57
Benzo(a)Anthracene	0.181	0.0472	0.0142	ug/L	1		07/09/21 12:57
Benzo[a]pyrene	0.0189 U	0.0189	0.00585	ug/L	1		07/09/21 12:57
Benzo[b]Fluoranthene	0.132	0.0472	0.0142	ug/L	1		07/09/21 12:57
Benzo[g,h,i]perylene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
Benzo[k]fluoranthene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
Chrysene	0.345	0.0472	0.0142	ug/L	1		07/09/21 12:57
Dibenzo[a,h]anthracene	0.0189 U	0.0189	0.00585	ug/L	1		07/09/21 12:57
Fluoranthene	1.31	0.0472	0.0142	ug/L	1		07/09/21 12:57
Fluorene	0.677	0.0472	0.0142	ug/L	1		07/09/21 12:57
Indeno[1,2,3-c,d] pyrene	0.0472 U	0.0472	0.0142	ug/L	1		07/09/21 12:57
Naphthalene	0.133	0.0943	0.0292	ug/L	1		07/09/21 12:57
Phenanthrene	1.13	0.0472	0.0142	ug/L	1		07/09/21 12:57
Pyrene	1.06	0.0472	0.0142	ug/L	1		07/09/21 12:57
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	54.3	42-86		%	1		07/09/21 12:57
Fluoranthene-d10 (surr)	66.1	50-97		%	1		07/09/21 12:57

**Batch Information**

Analytical Batch: XMS12734  
Analytical Method: 8270D SIM LV (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 12:57  
Container ID: 1213715010-C

Prep Batch: XXX45053  
Prep Method: SW3535A  
Prep Date/Time: 06/28/21 13:00  
Prep Initial Wt./Vol.: 265 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SCW2**

Client Sample ID: **SCW2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715010  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	1.86	0.588	0.176	mg/L	1		06/29/21 18:03

**Surrogates**

5a Androstane (surr)	87.9	50-150		%	1		06/29/21 18:03
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**Batch Information**

Analytical Batch: XFC15977  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/29/21 18:03  
Container ID: 1213715010-A

Prep Batch: XXX45064  
Prep Method: SW3520C  
Prep Date/Time: 06/28/21 16:33  
Prep Initial Wt./Vol.: 255 mL  
Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1.33	0.490	0.147	mg/L	1		06/29/21 18:03

**Surrogates**

n-Triacontane-d62 (surr)	90.6	50-150		%	1		06/29/21 18:03
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**Batch Information**

Analytical Batch: XFC15977  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/29/21 18:03  
Container ID: 1213715010-A

Prep Batch: XXX45064  
Prep Method: SW3520C  
Prep Date/Time: 06/28/21 16:33  
Prep Initial Wt./Vol.: 255 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of SCW2

Client Sample ID: **SCW2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715010  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		07/01/21 02:51
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	79.7	50-150		%	1		07/01/21 02:51

### Batch Information

Analytical Batch: VFC15685  
Analytical Method: AK101  
Analyst: IJV  
Analytical Date/Time: 07/01/21 02:51  
Container ID: 1213715010-E

Prep Batch: VXX37332  
Prep Method: SW5030B  
Prep Date/Time: 06/30/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

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Results of **SCW2**

Client Sample ID: **SCW2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715010  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		07/02/21 18:34
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		07/02/21 18:34
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 18:34
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
Bromoform	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Bromomethane	5.00 U	5.00	2.00	ug/L	1		07/02/21 18:34
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
Chloroethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34

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### Results of SCW2

Client Sample ID: **SCW2**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715010  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
 Received Date: 06/25/21 12:41  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Chloromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 18:34
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Freon-113	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Naphthalene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 18:34
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Styrene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:34
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		07/02/21 18:34
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		07/02/21 18:34
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		07/02/21 18:34
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	98.8	81-118		%	1		07/02/21 18:34
4-Bromofluorobenzene (surr)	99.4	85-114		%	1		07/02/21 18:34
Toluene-d8 (surr)	98.4	89-112		%	1		07/02/21 18:34

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Results of **SCW2**

Client Sample ID: **SCW2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715010  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:20  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:34  
Container ID: 1213715010-E

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MR1-24

Client Sample ID: **MR1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715011  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):65.1  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
2-Methylnaphthalene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Acenaphthene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Acenaphthylene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Anthracene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Benzo(a)Anthracene	42.8	37.8	9.46	ug/kg	1		07/08/21 02:53
Benzo[a]pyrene	66.5	37.8	9.46	ug/kg	1		07/08/21 02:53
Benzo[b]Fluoranthene	90.3	37.8	9.46	ug/kg	1		07/08/21 02:53
Benzo[g,h,i]perylene	47.0	37.8	9.46	ug/kg	1		07/08/21 02:53
Benzo[k]fluoranthene	37.8 U	37.8	9.46	ug/kg	1		07/08/21 02:53
Chrysene	62.6	37.8	9.46	ug/kg	1		07/08/21 02:53
Dibenzo[a,h]anthracene	37.8 U	37.8	9.46	ug/kg	1		07/08/21 02:53
Fluoranthene	37.8 U	37.8	9.46	ug/kg	1		07/08/21 02:53
Fluorene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Indeno[1,2,3-c,d] pyrene	40.8	37.8	9.46	ug/kg	1		07/08/21 02:53
Naphthalene	151 U	151	37.8	ug/kg	5		07/09/21 01:13
Phenanthrene	189 U	189	47.3	ug/kg	5		07/09/21 01:13
Pyrene	146	37.8	9.46	ug/kg	1		07/08/21 02:53
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	99.8	58-103		%	5		07/09/21 01:13
Fluoranthene-d10 (surr)	67.6	54-113		%	1		07/08/21 02:53

### Batch Information

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 01:13  
 Container ID: 1213715011-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.858 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12722  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/08/21 02:53  
 Container ID: 1213715011-A

Prep Batch: XXX45071  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 06:46  
 Prep Initial Wt./Vol.: 22.858 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR1-24

Client Sample ID: MR1-24  
Client Project ID: Port William  
Lab Sample ID: 1213715011  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):65.1  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	2940	30.6	9.50	mg/kg	1		06/30/21 14:58
<b>Surrogates</b>							
5a Androstane (surr)	78.4	50-150		%	1		06/30/21 14:58

Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:58  
Container ID: 1213715011-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.089 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	153 U	153	65.9	mg/kg	1		06/30/21 14:58
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	79.9	50-150		%	1		06/30/21 14:58

Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 14:58  
Container ID: 1213715011-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 30.089 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MR1-24

Client Sample ID: **MR1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715011  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):65.1  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	5.08 U	5.08	1.52	mg/kg	1		07/15/21 20:47
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	32.7 *	50-150		%	1		07/15/21 20:47

### Batch Information

Analytical Batch: VFC15714  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/15/21 20:47  
Container ID: 1213715011-B

Prep Batch: VXX37429  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:33  
Prep Initial Wt./Vol.: 80.233 g  
Prep Extract Vol: 53.0301 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MR1-24

Client Sample ID: **MR1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715011  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):65.1  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	40.6 U	40.6	12.6	ug/kg	1		07/02/21 15:53
1,1,1-Trichloroethane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,1,2,2-Tetrachloroethane	4.06 U	4.06	1.26	ug/kg	1		07/02/21 15:53
1,1,2-Trichloroethane	1.63 U	1.63	0.508	ug/kg	1		07/02/21 15:53
1,1-Dichloroethane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,1-Dichloroethene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,1-Dichloropropene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,2,3-Trichlorobenzene	102 U	102	30.5	ug/kg	1		07/02/21 15:53
1,2,3-Trichloropropane	4.06 U	4.06	1.26	ug/kg	1		07/02/21 15:53
1,2,4-Trichlorobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,2,4-Trimethylbenzene	102 U	102	30.5	ug/kg	1		07/02/21 15:53
1,2-Dibromo-3-chloropropane	203 U	203	63.0	ug/kg	1		07/02/21 15:53
1,2-Dibromoethane	2.03 U	2.03	0.813	ug/kg	1		07/02/21 15:53
1,2-Dichlorobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,2-Dichloroethane	4.06 U	4.06	1.42	ug/kg	1		07/02/21 15:53
1,2-Dichloropropane	20.3 U	20.3	6.30	ug/kg	1		07/02/21 15:53
1,3,5-Trimethylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,3-Dichlorobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
1,3-Dichloropropane	20.3 U	20.3	6.30	ug/kg	1		07/02/21 15:53
1,4-Dichlorobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
2,2-Dichloropropane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
2-Butanone (MEK)	508 U	508	158	ug/kg	1		07/02/21 15:53
2-Chlorotoluene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
2-Hexanone	203 U	203	63.0	ug/kg	1		07/02/21 15:53
4-Chlorotoluene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
4-Isopropyltoluene	203 U	203	50.8	ug/kg	1		07/02/21 15:53
4-Methyl-2-pentanone (MIBK)	508 U	508	158	ug/kg	1		07/02/21 15:53
Acetone	508 U	508	158	ug/kg	1		07/02/21 15:53
Benzene	25.4 U	25.4	7.92	ug/kg	1		07/02/21 15:53
Bromobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Bromochloromethane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Bromodichloromethane	4.06 U	4.06	1.26	ug/kg	1		07/02/21 15:53
Bromoform	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Bromomethane	40.6 U	40.6	12.6	ug/kg	1		07/02/21 15:53
Carbon disulfide	203 U	203	63.0	ug/kg	1		07/02/21 15:53
Carbon tetrachloride	25.4 U	25.4	7.92	ug/kg	1		07/02/21 15:53
Chlorobenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53

Print Date: 07/27/2021 1:18:18PM



**Results of MR1-24**

Client Sample ID: **MR1-24**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715011  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):65.1  
 Location:

**Results by Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	406 U	406	126	ug/kg	1		07/02/21 15:53
Chloroform	8.13 U	8.13	2.03	ug/kg	1		07/02/21 15:53
Chloromethane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
cis-1,2-Dichloroethene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
cis-1,3-Dichloropropene	25.4 U	25.4	7.92	ug/kg	1		07/02/21 15:53
Dibromochloromethane	10.2 U	10.2	3.05	ug/kg	1		07/02/21 15:53
Dibromomethane	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Dichlorodifluoromethane	102 U	102	30.5	ug/kg	1		07/02/21 15:53
Ethylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Freon-113	203 U	203	63.0	ug/kg	1		07/02/21 15:53
Hexachlorobutadiene	40.6 U	40.6	12.6	ug/kg	1		07/02/21 15:53
Isopropylbenzene (Cumene)	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Methylene chloride	203 U	203	63.0	ug/kg	1		07/02/21 15:53
Methyl-t-butyl ether	203 U	203	63.0	ug/kg	1		07/02/21 15:53
Naphthalene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
n-Butylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
n-Propylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
o-Xylene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
P & M -Xylene	102 U	102	30.5	ug/kg	1		07/02/21 15:53
sec-Butylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Styrene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
tert-Butylbenzene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
Tetrachloroethene	25.4 U	25.4	7.92	ug/kg	1		07/02/21 15:53
Toluene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
trans-1,2-Dichloroethene	50.8 U	50.8	15.8	ug/kg	1		07/02/21 15:53
trans-1,3-Dichloropropene	25.4 U	25.4	7.92	ug/kg	1		07/02/21 15:53
Trichloroethene	10.2 U	10.2	3.05	ug/kg	1		07/02/21 15:53
Trichlorofluoromethane	102 U	102	30.5	ug/kg	1		07/02/21 15:53
Vinyl acetate	203 U	203	63.0	ug/kg	1		07/02/21 15:53
Vinyl chloride	1.63 U	1.63	0.508	ug/kg	1		07/02/21 15:53
Xylenes (total)	152 U	152	46.3	ug/kg	1		07/02/21 15:53
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	115	71-136		%	1		07/02/21 15:53
4-Bromofluorobenzene (surr)	43.7 *	55-151		%	1		07/02/21 15:53
Toluene-d8 (surr)	99.4	85-116		%	1		07/02/21 15:53

Print Date: 07/27/2021 1:18:18PM



Results of **MR1-24**

Client Sample ID: **MR1-24**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715011  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:33  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):65.1  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 15:53  
Container ID: 1213715011-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:33  
Prep Initial Wt./Vol.: 80.233 g  
Prep Extract Vol: 53.0301 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR1-30

Client Sample ID: MR1-30
Client Project ID: Port William
Lab Sample ID: 1213715012
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):59.1
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various PAHs like 1-Methylnaphthalene, Benzo(a)Anthracene, etc., with their respective values and analysis dates.

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists 2-Methylnaphthalene-d10 (surr) and Fluoranthene-d10 (surr).

Batch Information

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/09/21 01:54
Container ID: 1213715012-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.627 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS12744
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/15/21 16:42
Container ID: 1213715012-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.627 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR1-30

Client Sample ID: MR1-30
Client Project ID: Port William
Lab Sample ID: 1213715012
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):59.1
Location:

Results by Semivolatile Organic Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Diesel Range Organics and Surrogates (5a Androstane).

Batch Information

Analytical Batch: XFC15980
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 06/30/21 15:18
Container ID: 1213715012-A

Prep Batch: XXX45074
Prep Method: SW3550C
Prep Date/Time: 06/30/21 07:29
Prep Initial Wt./Vol.: 30.214 g
Prep Extract Vol: 5 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Residual Range Organics and Surrogates (n-Triacontane-d62).

Batch Information

Analytical Batch: XFC15980
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 06/30/21 15:18
Container ID: 1213715012-A

Prep Batch: XXX45074
Prep Method: SW3550C
Prep Date/Time: 06/30/21 07:29
Prep Initial Wt./Vol.: 30.214 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MR1-30**

Client Sample ID: **MR1-30**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715012  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):59.1  
Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	25.5		5.97	1.79	mg/kg	1		07/08/21 10:08
<b>Surrogates</b>								
4-Bromofluorobenzene (surr)	81.2		50-150		%	1		07/08/21 10:08

Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 10:08  
Container ID: 1213715012-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:52  
Prep Initial Wt./Vol.: 84.583 g  
Prep Extract Vol: 59.6306 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR1-30

Client Sample ID: MR1-30
Client Project ID: Port William
Lab Sample ID: 1213715012
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):59.1
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



### Results of MR1-30

Client Sample ID: **MR1-30**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715012  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):59.1  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	478 U	478	148	ug/kg	1		07/02/21 17:32
Chloroform	9.55 U	9.55	2.39	ug/kg	1		07/02/21 17:32
Chloromethane	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
cis-1,2-Dichloroethene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
cis-1,3-Dichloropropene	29.8 U	29.8	9.31	ug/kg	1		07/02/21 17:32
Dibromochloromethane	11.9 U	11.9	3.58	ug/kg	1		07/02/21 17:32
Dibromomethane	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
Dichlorodifluoromethane	119 U	119	35.8	ug/kg	1		07/02/21 17:32
Ethylbenzene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
Freon-113	239 U	239	74.0	ug/kg	1		07/02/21 17:32
Hexachlorobutadiene	47.8 U	47.8	14.8	ug/kg	1		07/02/21 17:32
Isopropylbenzene (Cumene)	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
Methylene chloride	239 U	239	74.0	ug/kg	1		07/02/21 17:32
Methyl-t-butyl ether	239 U	239	74.0	ug/kg	1		07/02/21 17:32
Naphthalene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
n-Butylbenzene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
n-Propylbenzene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
o-Xylene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
P & M -Xylene	119 U	119	35.8	ug/kg	1		07/02/21 17:32
sec-Butylbenzene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
Styrene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
tert-Butylbenzene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
Tetrachloroethene	29.8 U	29.8	9.31	ug/kg	1		07/02/21 17:32
Toluene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
trans-1,2-Dichloroethene	59.7 U	59.7	18.6	ug/kg	1		07/02/21 17:32
trans-1,3-Dichloropropene	29.8 U	29.8	9.31	ug/kg	1		07/02/21 17:32
Trichloroethene	11.9 U	11.9	3.58	ug/kg	1		07/02/21 17:32
Trichlorofluoromethane	119 U	119	35.8	ug/kg	1		07/02/21 17:32
Vinyl acetate	239 U	239	74.0	ug/kg	1		07/02/21 17:32
Vinyl chloride	1.91 U	1.91	0.597	ug/kg	1		07/02/21 17:32
Xylenes (total)	179 U	179	54.4	ug/kg	1		07/02/21 17:32
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	109	71-136		%	1		07/02/21 17:32
4-Bromofluorobenzene (surr)	57.1	55-151		%	1		07/02/21 17:32
Toluene-d8 (surr)	103	85-116		%	1		07/02/21 17:32

Print Date: 07/27/2021 1:18:18PM



Results of **MR1-30**

Client Sample ID: **MR1-30**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715012  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):59.1  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 17:32  
Container ID: 1213715012-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:52  
Prep Initial Wt./Vol.: 84.583 g  
Prep Extract Vol: 59.6306 mL

Print Date: 07/27/2021 1:18:18PM



### Results of SLG1

Client Sample ID: **SLG1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715013  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.8  
Location:

### Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Arsenic	8.37	2.59	0.802	mg/kg	10		07/07/21 18:00
Barium	203	0.776	0.243	mg/kg	10		07/07/21 18:00
Cadmium	0.645	0.517	0.160	mg/kg	10		07/07/21 18:00
Chromium	57.2	2.59	0.802	mg/kg	10		07/07/21 18:00
Lead	1510	5.17	1.60	mg/kg	100		07/08/21 11:29
Mercury	35.9	7.76	2.59	mg/kg	100		07/08/21 11:29
Selenium	5.17 U	5.17	1.60	mg/kg	10		07/07/21 18:00
Silver	1.29 U	1.29	0.388	mg/kg	10		07/07/21 18:00

### Batch Information

Analytical Batch: MMS11184  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/08/21 11:29  
Container ID: 1213715013-A

Prep Batch: MX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.051 g  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11182  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/07/21 18:00  
Container ID: 1213715013-A

Prep Batch: MX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.051 g  
Prep Extract Vol: 50 mL

Print Date: 07/27/2021 1:18:18PM



### Results of SLG1

Client Sample ID: **SLG1**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715013  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):36.8  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	47800	31500	7880	ug/kg	250		07/16/21 17:05
2-Methylnaphthalene	31500 U	31500	7880	ug/kg	250		07/16/21 17:05
Acenaphthene	31500 U	31500	7880	ug/kg	250		07/16/21 17:05
Acenaphthylene	31500 U	31500	7880	ug/kg	250		07/16/21 17:05
Anthracene	31500 U	31500	7880	ug/kg	250		07/16/21 17:05
Benzo(a)Anthracene	5740	1260	315	ug/kg	10		07/09/21 04:17
Benzo[a]pyrene	6790	1260	315	ug/kg	10		07/09/21 04:17
Benzo[b]Fluoranthene	11100	1260	315	ug/kg	10		07/09/21 04:17
Benzo[g,h,i]perylene	6700	1260	315	ug/kg	10		07/09/21 04:17
Benzo[k]fluoranthene	3620	1260	315	ug/kg	10		07/09/21 04:17
Chrysene	12300	1260	315	ug/kg	10		07/09/21 04:17
Dibenzo[a,h]anthracene	1530	1260	315	ug/kg	10		07/09/21 04:17
Fluoranthene	12400	1260	315	ug/kg	10		07/09/21 04:17
Fluorene	31500 U	31500	7880	ug/kg	250		07/16/21 17:05
Indeno[1,2,3-c,d] pyrene	5000	1260	315	ug/kg	10		07/09/21 04:17
Naphthalene	25200 U	25200	6300	ug/kg	250		07/16/21 17:05
Phenanthrene	38500	31500	7880	ug/kg	250		07/16/21 17:05
Pyrene	27100	1260	315	ug/kg	10		07/09/21 04:17
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	250		07/16/21 17:05
Fluoranthene-d10 (surr)	594	*	54-113	%	10		07/09/21 04:17

### Batch Information

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 04:17  
 Container ID: 1213715013-A

Prep Batch: XXX45075  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 09:21  
 Prep Initial Wt./Vol.: 12.133 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12746  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/16/21 17:05  
 Container ID: 1213715013-A

Prep Batch: XXX45075  
 Prep Method: SW3550C  
 Prep Date/Time: 06/30/21 09:21  
 Prep Initial Wt./Vol.: 12.133 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SLG1**

Client Sample ID: **SLG1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715013  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.8  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	161000	1050	327	mg/kg	10		06/30/21 17:56
<b>Surrogates</b>							
5a Androstane (surr)	323 *	50-150		%	10		06/30/21 17:56

**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:56  
Container ID: 1213715013-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.468 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	19500	5270	2270	mg/kg	10		06/30/21 17:56
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	128	50-150		%	10		06/30/21 17:56

**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:56  
Container ID: 1213715013-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.468 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of SLG1

Client Sample ID: **SLG1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715013  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.8  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	11.8 U	11.8	3.54	mg/kg	1		07/20/21 03:49
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	57.6	50-150		%	1		07/20/21 03:49

### Batch Information

Analytical Batch: VFC15719  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/20/21 03:49  
Container ID: 1213715013-B

Prep Batch: VXX37449  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:50  
Prep Initial Wt./Vol.: 106.41 g  
Prep Extract Vol: 92.2647 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SLG1**

Client Sample ID: **SLG1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715013  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.8  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	94.3 U	94.3	29.2	ug/kg	1		07/02/21 15:04
1,1,1-Trichloroethane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,1,2,2-Tetrachloroethane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 15:04
1,1,2-Trichloroethane	3.77 U	3.77	1.18	ug/kg	1		07/02/21 15:04
1,1-Dichloroethane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,1-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,1-Dichloropropene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,2,3-Trichlorobenzene	236 U	236	70.7	ug/kg	1		07/02/21 15:04
1,2,3-Trichloropropane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 15:04
1,2,4-Trichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,2,4-Trimethylbenzene	236 U	236	70.7	ug/kg	1		07/02/21 15:04
1,2-Dibromo-3-chloropropane	471 U	471	146	ug/kg	1		07/02/21 15:04
1,2-Dibromoethane	4.71 U	4.71	1.89	ug/kg	1		07/02/21 15:04
1,2-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,2-Dichloroethane	9.43 U	9.43	3.30	ug/kg	1		07/02/21 15:04
1,2-Dichloropropane	47.1 U	47.1	14.6	ug/kg	1		07/02/21 15:04
1,3,5-Trimethylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,3-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
1,3-Dichloropropane	47.1 U	47.1	14.6	ug/kg	1		07/02/21 15:04
1,4-Dichlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
2,2-Dichloropropane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
2-Butanone (MEK)	1180 U	1180	368	ug/kg	1		07/02/21 15:04
2-Chlorotoluene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
2-Hexanone	471 U	471	146	ug/kg	1		07/02/21 15:04
4-Chlorotoluene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
4-Isopropyltoluene	471 U	471	118	ug/kg	1		07/02/21 15:04
4-Methyl-2-pentanone (MIBK)	1180 U	1180	368	ug/kg	1		07/02/21 15:04
Acetone	1180 U	1180	368	ug/kg	1		07/02/21 15:04
Benzene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 15:04
Bromobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Bromochloromethane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Bromodichloromethane	9.43 U	9.43	2.92	ug/kg	1		07/02/21 15:04
Bromoform	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Bromomethane	94.3 U	94.3	29.2	ug/kg	1		07/02/21 15:04
Carbon disulfide	471 U	471	146	ug/kg	1		07/02/21 15:04
Carbon tetrachloride	58.9 U	58.9	18.4	ug/kg	1		07/02/21 15:04
Chlorobenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04

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### Results of SLG1

Client Sample ID: **SLG1**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715013  
 Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):36.8  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	943 U	943	292	ug/kg	1		07/02/21 15:04
Chloroform	18.9 U	18.9	4.71	ug/kg	1		07/02/21 15:04
Chloromethane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
cis-1,2-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
cis-1,3-Dichloropropene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 15:04
Dibromochloromethane	23.6 U	23.6	7.07	ug/kg	1		07/02/21 15:04
Dibromomethane	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Dichlorodifluoromethane	236 U	236	70.7	ug/kg	1		07/02/21 15:04
Ethylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Freon-113	471 U	471	146	ug/kg	1		07/02/21 15:04
Hexachlorobutadiene	94.3 U	94.3	29.2	ug/kg	1		07/02/21 15:04
Isopropylbenzene (Cumene)	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Methylene chloride	471 U	471	146	ug/kg	1		07/02/21 15:04
Methyl-t-butyl ether	471 U	471	146	ug/kg	1		07/02/21 15:04
Naphthalene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
n-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
n-Propylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
o-Xylene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
P & M -Xylene	236 U	236	70.7	ug/kg	1		07/02/21 15:04
sec-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Styrene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
tert-Butylbenzene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
Tetrachloroethene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 15:04
Toluene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
trans-1,2-Dichloroethene	118 U	118	36.8	ug/kg	1		07/02/21 15:04
trans-1,3-Dichloropropene	58.9 U	58.9	18.4	ug/kg	1		07/02/21 15:04
Trichloroethene	23.6 U	23.6	7.07	ug/kg	1		07/02/21 15:04
Trichlorofluoromethane	236 U	236	70.7	ug/kg	1		07/02/21 15:04
Vinyl acetate	471 U	471	146	ug/kg	1		07/02/21 15:04
Vinyl chloride	3.77 U	3.77	1.18	ug/kg	1		07/02/21 15:04
Xylenes (total)	354 U	354	107	ug/kg	1		07/02/21 15:04
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	110	71-136		%	1		07/02/21 15:04
4-Bromofluorobenzene (surr)	7.7 *	55-151		%	1		07/02/21 15:04
Toluene-d8 (surr)	100	85-116		%	1		07/02/21 15:04

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**Results of SLG1**

Client Sample ID: **SLG1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715013  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:50  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.8  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 15:04  
Container ID: 1213715013-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:50  
Prep Initial Wt./Vol.: 106.41 g  
Prep Extract Vol: 92.2647 mL

Print Date: 07/27/2021 1:18:18PM



**Results of SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Arsenic	4.83	2.67	0.829	mg/kg	10		07/07/21 18:04
Barium	184	0.802	0.251	mg/kg	10		07/07/21 18:04
Cadmium	0.535 U	0.535	0.166	mg/kg	10		07/07/21 18:04
Chromium	37.8	2.67	0.829	mg/kg	10		07/07/21 18:04
Lead	967	5.35	1.66	mg/kg	100		07/08/21 11:34
Mercury	18.7	8.02	2.67	mg/kg	100		07/08/21 11:34
Selenium	5.35 U	5.35	1.66	mg/kg	10		07/07/21 18:04
Silver	1.34 U	1.34	0.401	mg/kg	10		07/07/21 18:04

**Batch Information**

Analytical Batch: MMS11184  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/08/21 11:34  
Container ID: 1213715014-A

Prep Batch: MXX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.012 g  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11182  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/07/21 18:04  
Container ID: 1213715014-A

Prep Batch: MXX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.012 g  
Prep Extract Vol: 50 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	69000	32900	8220	ug/kg	250		07/15/21 17:23
2-Methylnaphthalene	42900	32900	8220	ug/kg	250		07/15/21 17:23
Acenaphthene	32900 U	32900	8220	ug/kg	250		07/15/21 17:23
Acenaphthylene	32900 U	32900	8220	ug/kg	250		07/15/21 17:23
Anthracene	32900 U	32900	8220	ug/kg	250		07/15/21 17:23
Benzo(a)Anthracene	5600	1310	329	ug/kg	10		07/09/21 04:38
Benzo[a]pyrene	5590	1310	329	ug/kg	10		07/09/21 04:38
Benzo[b]Fluoranthene	9550	1310	329	ug/kg	10		07/09/21 04:38
Benzo[g,h,i]perylene	5360	1310	329	ug/kg	10		07/09/21 04:38
Benzo[k]fluoranthene	2730	1310	329	ug/kg	10		07/09/21 04:38
Chrysene	11300	1310	329	ug/kg	10		07/09/21 04:38
Dibenzo[a,h]anthracene	1450	1310	329	ug/kg	10		07/09/21 04:38
Fluoranthene	10400	1310	329	ug/kg	10		07/09/21 04:38
Fluorene	32900 U	32900	8220	ug/kg	250		07/15/21 17:23
Indeno[1,2,3-c,d] pyrene	4050	1310	329	ug/kg	10		07/09/21 04:38
Naphthalene	26300 U	26300	6570	ug/kg	250		07/15/21 17:23
Phenanthrene	40000	32900	8220	ug/kg	250		07/15/21 17:23
Pyrene	25900	1310	329	ug/kg	10		07/09/21 04:38
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	250		07/15/21 17:23
Fluoranthene-d10 (surr)	588	*	54-113	%	10		07/09/21 04:38

**Batch Information**

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 04:38  
Container ID: 1213715014-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 11.577 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12744  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/15/21 17:23  
Container ID: 1213715014-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 11.577 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	162000	1080	334	mg/kg	10		06/30/21 18:16

**Surrogates**

5a Androstane (surr)	311 *	50-150		%	10		06/30/21 18:16
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:16  
Container ID: 1213715014-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.078 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	18100	5380	2320	mg/kg	10		06/30/21 18:16

**Surrogates**

n-Triacontane-d62 (surr)	102	50-150		%	10		06/30/21 18:16
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**Batch Information**

Analytical Batch: XFC15980  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:16  
Container ID: 1213715014-A

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 07:29  
Prep Initial Wt./Vol.: 15.078 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of **SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

### Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	15.8		12.8	3.84	mg/kg	1		07/08/21 09:50
<b>Surrogates</b>								
4-Bromofluorobenzene (surr)	38.8	*	50-150		%	1		07/08/21 09:50

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 09:50  
Container ID: 1213715014-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:52  
Prep Initial Wt./Vol.: 79.18 g  
Prep Extract Vol: 74.923 mL

Print Date: 07/27/2021 1:18:18PM



Results of **SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	102 U	102	31.8	ug/kg	1		07/02/21 15:20
1,1,1-Trichloroethane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,1,2,2-Tetrachloroethane	10.2 U	10.2	3.18	ug/kg	1		07/02/21 15:20
1,1,2-Trichloroethane	4.10 U	4.10	1.28	ug/kg	1		07/02/21 15:20
1,1-Dichloroethane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,1-Dichloroethene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,1-Dichloropropene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,2,3-Trichlorobenzene	256 U	256	76.8	ug/kg	1		07/02/21 15:20
1,2,3-Trichloropropane	10.2 U	10.2	3.18	ug/kg	1		07/02/21 15:20
1,2,4-Trichlorobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,2,4-Trimethylbenzene	256 U	256	76.8	ug/kg	1		07/02/21 15:20
1,2-Dibromo-3-chloropropane	512 U	512	159	ug/kg	1		07/02/21 15:20
1,2-Dibromoethane	5.12 U	5.12	2.05	ug/kg	1		07/02/21 15:20
1,2-Dichlorobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,2-Dichloroethane	10.2 U	10.2	3.59	ug/kg	1		07/02/21 15:20
1,2-Dichloropropane	51.2 U	51.2	15.9	ug/kg	1		07/02/21 15:20
1,3,5-Trimethylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,3-Dichlorobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
1,3-Dichloropropane	51.2 U	51.2	15.9	ug/kg	1		07/02/21 15:20
1,4-Dichlorobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
2,2-Dichloropropane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
2-Butanone (MEK)	1280 U	1280	399	ug/kg	1		07/02/21 15:20
2-Chlorotoluene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
2-Hexanone	512 U	512	159	ug/kg	1		07/02/21 15:20
4-Chlorotoluene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
4-Isopropyltoluene	512 U	512	128	ug/kg	1		07/02/21 15:20
4-Methyl-2-pentanone (MIBK)	1280 U	1280	399	ug/kg	1		07/02/21 15:20
Acetone	1280 U	1280	399	ug/kg	1		07/02/21 15:20
Benzene	64.0 U	64.0	20.0	ug/kg	1		07/02/21 15:20
Bromobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Bromochloromethane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Bromodichloromethane	10.2 U	10.2	3.18	ug/kg	1		07/02/21 15:20
Bromoform	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Bromomethane	102 U	102	31.8	ug/kg	1		07/02/21 15:20
Carbon disulfide	512 U	512	159	ug/kg	1		07/02/21 15:20
Carbon tetrachloride	64.0 U	64.0	20.0	ug/kg	1		07/02/21 15:20
Chlorobenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20

Print Date: 07/27/2021 1:18:18PM



Results of **SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	1020 U	1020	318	ug/kg	1		07/02/21 15:20
Chloroform	20.5 U	20.5	5.12	ug/kg	1		07/02/21 15:20
Chloromethane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
cis-1,2-Dichloroethene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
cis-1,3-Dichloropropene	64.0 U	64.0	20.0	ug/kg	1		07/02/21 15:20
Dibromochloromethane	25.6 U	25.6	7.68	ug/kg	1		07/02/21 15:20
Dibromomethane	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Dichlorodifluoromethane	256 U	256	76.8	ug/kg	1		07/02/21 15:20
Ethylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Freon-113	512 U	512	159	ug/kg	1		07/02/21 15:20
Hexachlorobutadiene	102 U	102	31.8	ug/kg	1		07/02/21 15:20
Isopropylbenzene (Cumene)	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Methylene chloride	512 U	512	159	ug/kg	1		07/02/21 15:20
Methyl-t-butyl ether	512 U	512	159	ug/kg	1		07/02/21 15:20
Naphthalene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
n-Butylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
n-Propylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
o-Xylene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
P & M -Xylene	256 U	256	76.8	ug/kg	1		07/02/21 15:20
sec-Butylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Styrene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
tert-Butylbenzene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
Tetrachloroethene	64.0 U	64.0	20.0	ug/kg	1		07/02/21 15:20
Toluene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
trans-1,2-Dichloroethene	128 U	128	39.9	ug/kg	1		07/02/21 15:20
trans-1,3-Dichloropropene	64.0 U	64.0	20.0	ug/kg	1		07/02/21 15:20
Trichloroethene	25.6 U	25.6	7.68	ug/kg	1		07/02/21 15:20
Trichlorofluoromethane	256 U	256	76.8	ug/kg	1		07/02/21 15:20
Vinyl acetate	512 U	512	159	ug/kg	1		07/02/21 15:20
Vinyl chloride	4.10 U	4.10	1.28	ug/kg	1		07/02/21 15:20
Xylenes (total)	384 U	384	117	ug/kg	1		07/02/21 15:20
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	114	71-136		%	1		07/02/21 15:20
4-Bromofluorobenzene (surr)	6.9 *	55-151		%	1		07/02/21 15:20
Toluene-d8 (surr)	99.8	85-116		%	1		07/02/21 15:20

Print Date: 07/27/2021 1:18:18PM



**Results of SLG2**

Client Sample ID: **SLG2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715014  
Lab Project ID: 1213715

Collection Date: 06/22/21 15:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):36.9  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 15:20  
Container ID: 1213715014-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 15:52  
Prep Initial Wt./Vol.: 79.18 g  
Prep Extract Vol: 74.923 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR2-22

Client Sample ID: MR2-22  
Client Project ID: Port William  
Lab Sample ID: 1213715015  
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):66.7  
Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	2580	185	46.1	ug/kg	5		07/09/21 03:16
2-Methylnaphthalene	3610	185	46.1	ug/kg	5		07/09/21 03:16
Acenaphthene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Acenaphthylene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Anthracene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Benzo(a)Anthracene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Benzo[a]pyrene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Benzo[b]Fluoranthene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Benzo[g,h,i]perylene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Benzo[k]fluoranthene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Chrysene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Dibenzo[a,h]anthracene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Fluoranthene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Fluorene	1340	185	46.1	ug/kg	5		07/09/21 03:16
Indeno[1,2,3-c,d] pyrene	185 U	185	46.1	ug/kg	5		07/09/21 03:16
Naphthalene	148 U	148	36.9	ug/kg	5		07/09/21 03:16
Phenanthrene	1080	185	46.1	ug/kg	5		07/09/21 03:16
Pyrene	250	185	46.1	ug/kg	5		07/09/21 03:16
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	147	*	58-103	%	5		07/09/21 03:16
Fluoranthene-d10 (surr)	82.8		54-113	%	5		07/09/21 03:16

Batch Information

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 03:16  
Container ID: 1213715015-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.859 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MR2-22**

Client Sample ID: **MR2-22**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715015  
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):66.7  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	8570	120	37.1	mg/kg	4		06/30/21 18:36

**Surrogates**

5a Androstane (surr)	125	50-150		%	4		06/30/21 18:36
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:36  
Container ID: 1213715015-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.046 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1640	599	258	mg/kg	4		06/30/21 18:36

**Surrogates**

n-Triacontane-d62 (surr)	90	50-150		%	4		06/30/21 18:36
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:36  
Container ID: 1213715015-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.046 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MR2-22

Client Sample ID: **MR2-22**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715015  
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):66.7  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	28.8		4.66	1.40	mg/kg	1		07/08/21 08:38
<b>Surrogates</b>								
4-Bromofluorobenzene (surr)	207	*	50-150		%	1		07/08/21 08:38

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 08:38  
Container ID: 1213715015-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 16:36  
Prep Initial Wt./Vol.: 86.876 g  
Prep Extract Vol: 53.9681 mL

Print Date: 07/27/2021 1:18:18PM



Results of MR2-22

Client Sample ID: MR2-22  
Client Project ID: Port William  
Lab Sample ID: 1213715015  
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):66.7  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	37.3 U	37.3	11.6	ug/kg	1		07/02/21 16:10
1,1,1-Trichloroethane	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,1,2,2-Tetrachloroethane	3.73 U	3.73	1.16	ug/kg	1		07/02/21 16:10
1,1,2-Trichloroethane	1.49 U	1.49	0.466	ug/kg	1		07/02/21 16:10
1,1-Dichloroethane	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,1-Dichloroethene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,1-Dichloropropene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,2,3-Trichlorobenzene	93.2 U	93.2	28.0	ug/kg	1		07/02/21 16:10
1,2,3-Trichloropropane	3.73 U	3.73	1.16	ug/kg	1		07/02/21 16:10
1,2,4-Trichlorobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,2,4-Trimethylbenzene	262	93.2	28.0	ug/kg	1		07/02/21 16:10
1,2-Dibromo-3-chloropropane	186 U	186	57.8	ug/kg	1		07/02/21 16:10
1,2-Dibromoethane	1.86 U	1.86	0.746	ug/kg	1		07/02/21 16:10
1,2-Dichlorobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,2-Dichloroethane	3.73 U	3.73	1.30	ug/kg	1		07/02/21 16:10
1,2-Dichloropropane	18.6 U	18.6	5.78	ug/kg	1		07/02/21 16:10
1,3,5-Trimethylbenzene	267	46.6	14.5	ug/kg	1		07/02/21 16:10
1,3-Dichlorobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
1,3-Dichloropropane	18.6 U	18.6	5.78	ug/kg	1		07/02/21 16:10
1,4-Dichlorobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
2,2-Dichloropropane	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
2-Butanone (MEK)	466 U	466	145	ug/kg	1		07/02/21 16:10
2-Chlorotoluene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
2-Hexanone	186 U	186	57.8	ug/kg	1		07/02/21 16:10
4-Chlorotoluene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
4-Isopropyltoluene	186 U	186	46.6	ug/kg	1		07/02/21 16:10
4-Methyl-2-pentanone (MIBK)	466 U	466	145	ug/kg	1		07/02/21 16:10
Acetone	466 U	466	145	ug/kg	1		07/02/21 16:10
Benzene	23.3 U	23.3	7.27	ug/kg	1		07/02/21 16:10
Bromobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
Bromochloromethane	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
Bromodichloromethane	3.73 U	3.73	1.16	ug/kg	1		07/02/21 16:10
Bromoform	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10
Bromomethane	37.3 U	37.3	11.6	ug/kg	1		07/02/21 16:10
Carbon disulfide	186 U	186	57.8	ug/kg	1		07/02/21 16:10
Carbon tetrachloride	23.3 U	23.3	7.27	ug/kg	1		07/02/21 16:10
Chlorobenzene	46.6 U	46.6	14.5	ug/kg	1		07/02/21 16:10

Print Date: 07/27/2021 1:18:18PM



Results of MR2-22

Client Sample ID: MR2-22
Client Project ID: Port William
Lab Sample ID: 1213715015
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):66.7
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



Results of **MR2-22**

Client Sample ID: **MR2-22**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715015  
Lab Project ID: 1213715

Collection Date: 06/22/21 16:36  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):66.7  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/02/21 16:10  
Container ID: 1213715015-B

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 16:36  
Prep Initial Wt./Vol.: 86.876 g  
Prep Extract Vol: 53.9681 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MH2-6**

Client Sample ID: **MH2-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	3560		729	182	ug/kg	10		07/09/21 04:58
2-Methylnaphthalene	2230		729	182	ug/kg	10		07/09/21 04:58
Acenaphthene	10500		729	182	ug/kg	10		07/09/21 04:58
Acenaphthylene	5080		729	182	ug/kg	10		07/09/21 04:58
Anthracene	43400		7290	1820	ug/kg	100		07/16/21 17:26
Benzo(a)Anthracene	58100		7290	1820	ug/kg	100		07/16/21 17:26
Benzo[a]pyrene	56800		7290	1820	ug/kg	100		07/16/21 17:26
Benzo[b]Fluoranthene	53100		7290	1820	ug/kg	100		07/16/21 17:26
Benzo[g,h,i]perylene	27900		7290	1820	ug/kg	100		07/16/21 17:26
Benzo[k]fluoranthene	12000		729	182	ug/kg	10		07/09/21 04:58
Chrysene	61700		7290	1820	ug/kg	100		07/16/21 17:26
Dibenzo[a,h]anthracene	6520		729	182	ug/kg	10		07/09/21 04:58
Fluoranthene	117000		14600	3650	ug/kg	200		07/19/21 08:14
Fluorene	15400		729	182	ug/kg	10		07/09/21 04:58
Indeno[1,2,3-c,d] pyrene	21100		7290	1820	ug/kg	100		07/16/21 17:26
Naphthalene	1390		583	146	ug/kg	10		07/09/21 04:58
Phenanthrene	178000		14600	3650	ug/kg	200		07/19/21 08:14
Pyrene	189000		14600	3650	ug/kg	200		07/19/21 08:14
<b>Surrogates</b>								
2-Methylnaphthalene-d10 (surr)	88.4		58-103		%	10		07/09/21 04:58
Fluoranthene-d10 (surr)	102		54-113		%	10		07/09/21 04:58

Print Date: 07/27/2021 1:18:18PM



### Results of MH2-6

Client Sample ID: **MH2-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

### Results by Polynuclear Aromatics GC/MS

#### Batch Information

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 04:58  
Container ID: 1213715016-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.558 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12758  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/19/21 08:14  
Container ID: 1213715016-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.558 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12746  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/16/21 17:26  
Container ID: 1213715016-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.558 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MH2-6**

Client Sample ID: **MH2-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	3550	233	72.4	mg/kg	4		06/30/21 19:45
<b>Surrogates</b>							
5a Androstane (surr)	101	50-150		%	4		06/30/21 19:45

**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 19:45  
Container ID: 1213715016-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.069 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	4700	1170	502	mg/kg	4		06/30/21 19:45
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	104	50-150		%	4		06/30/21 19:45

**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 19:45  
Container ID: 1213715016-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.069 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of MH2-6**

Client Sample ID: **MH2-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	13.6 U	13.6	4.07	mg/kg	1		07/02/21 01:14
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	8.8 *	50-150		%	1		07/02/21 01:14

**Batch Information**

Analytical Batch: VFC15691  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/02/21 01:14  
Container ID: 1213715016-B

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 17:47  
Prep Initial Wt./Vol.: 92.288 g  
Prep Extract Vol: 85.7265 mL

Print Date: 07/27/2021 1:18:18PM



Results of MH2-6

Client Sample ID: MH2-6  
Client Project ID: Port William  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,2-Dichlorobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
2-Butanone (MEK)	1360 U	1360	424	ug/kg	1		07/01/21 21:52
4-Chlorotoluene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Chloroethane	1090 U	1090	337	ug/kg	1		07/01/21 21:52
Methylene chloride	543 U	543	168	ug/kg	1		07/01/21 21:52
n-Butylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
P & M -Xylene	272 U	272	81.5	ug/kg	1		07/01/21 21:52
tert-Butylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Vinyl acetate	543 U	543	168	ug/kg	1		07/01/21 21:52
n-Propylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
o-Xylene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
sec-Butylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Styrene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Tetrachloroethene	67.9 U	67.9	21.2	ug/kg	1		07/01/21 21:52
Toluene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Vinyl chloride	4.35 U	4.35	1.36	ug/kg	1		07/01/21 21:52
Xylenes (total)	407 U	407	124	ug/kg	1		07/01/21 21:52
1,2-Dibromoethane	5.43 U	5.43	2.17	ug/kg	1		07/01/21 21:52
1,2-Dichloroethane	10.9 U	10.9	3.80	ug/kg	1		07/01/21 21:52
1,2-Dichloropropane	54.3 U	54.3	16.8	ug/kg	1		07/01/21 21:52
2-Chlorotoluene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
2-Hexanone	543 U	543	168	ug/kg	1		07/01/21 21:52
4-Isopropyltoluene	543 U	543	136	ug/kg	1		07/01/21 21:52
Chlorobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Chloroform	21.7 U	21.7	5.43	ug/kg	1		07/01/21 21:52
1,1-Dichloroethane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,1-Dichloroethene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Chloromethane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Methyl-t-butyl ether	543 U	543	168	ug/kg	1		07/01/21 21:52
Naphthalene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,2,3-Trichlorobenzene	272 U	272	81.5	ug/kg	1		07/01/21 21:52
1,1,1,2-Tetrachloroethane	109 U	109	33.7	ug/kg	1		07/01/21 21:52
1,1,1-Trichloroethane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,1,2,2-Tetrachloroethane	10.9 U	10.9	3.37	ug/kg	1		07/01/21 21:52
1,1,2-Trichloroethane	4.35 U	4.35	1.36	ug/kg	1		07/01/21 21:52
1,2,3-Trichloropropane	10.9 U	10.9	3.37	ug/kg	1		07/01/21 21:52

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### Results of MH2-6

Client Sample ID: **MH2-6**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715016  
 Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):34.2  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,2,4-Trichlorobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,2,4-Trimethylbenzene	272 U	272	81.5	ug/kg	1		07/01/21 21:52
1,2-Dibromo-3-chloropropane	543 U	543	168	ug/kg	1		07/01/21 21:52
1,3,5-Trimethylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,3-Dichlorobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
1,3-Dichloropropane	54.3 U	54.3	16.8	ug/kg	1		07/01/21 21:52
1,4-Dichlorobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
2,2-Dichloropropane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
4-Methyl-2-pentanone (MIBK)	1360 U	1360	424	ug/kg	1		07/01/21 21:52
Acetone	1360 U	1360	424	ug/kg	1		07/01/21 21:52
Benzene	67.9 U	67.9	21.2	ug/kg	1		07/01/21 21:52
Bromobenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Bromochloromethane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Bromodichloromethane	10.9 U	10.9	3.37	ug/kg	1		07/01/21 21:52
Bromoform	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Bromomethane	109 U	109	33.7	ug/kg	1		07/01/21 21:52
Carbon disulfide	543 U	543	168	ug/kg	1		07/01/21 21:52
Carbon tetrachloride	67.9 U	67.9	21.2	ug/kg	1		07/01/21 21:52
cis-1,2-Dichloroethene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
cis-1,3-Dichloropropene	67.9 U	67.9	21.2	ug/kg	1		07/01/21 21:52
Dibromochloromethane	27.2 U	27.2	8.15	ug/kg	1		07/01/21 21:52
Dibromomethane	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Dichlorodifluoromethane	272 U	272	81.5	ug/kg	1		07/01/21 21:52
Ethylbenzene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
Freon-113	543 U	543	168	ug/kg	1		07/01/21 21:52
Hexachlorobutadiene	109 U	109	33.7	ug/kg	1		07/01/21 21:52
Isopropylbenzene (Cumene)	136 U	136	42.4	ug/kg	1		07/01/21 21:52
trans-1,2-Dichloroethene	136 U	136	42.4	ug/kg	1		07/01/21 21:52
trans-1,3-Dichloropropene	67.9 U	67.9	21.2	ug/kg	1		07/01/21 21:52
Trichloroethene	27.2 U	27.2	8.15	ug/kg	1		07/01/21 21:52
Trichlorofluoromethane	272 U	272	81.5	ug/kg	1		07/01/21 21:52
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	103	71-136		%	1		07/01/21 21:52
4-Bromofluorobenzene (surr)	9.3 *	55-151		%	1		07/01/21 21:52
Toluene-d8 (surr)	102	85-116		%	1		07/01/21 21:52

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Results of **MH2-6**

Client Sample ID: **MH2-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715016  
Lab Project ID: 1213715

Collection Date: 06/22/21 17:47  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):34.2  
Location:

Results by **Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Analyst: MDT  
Analytical Date/Time: 07/01/21 21:52  
Container ID: 1213715016-B

Prep Batch: VXX37345  
Prep Method: SW5035A  
Prep Date/Time: 06/22/21 17:47  
Prep Initial Wt./Vol.: 92.288 g  
Prep Extract Vol: 85.7265 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD1

Client Sample ID: **CD1**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715017  
 Lab Project ID: 1213715

Collection Date: 06/23/21 08:38  
 Received Date: 06/25/21 12:41  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Acenaphthene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Benzo(a)Anthracene	0.183	0.0543	0.0163	ug/L	1		07/09/21 13:17
Benzo[g,h,i]perylene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Dibenzo[a,h]anthracene	0.0217 U	0.0217	0.00674	ug/L	1		07/09/21 13:17
Indeno[1,2,3-c,d] pyrene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Phenanthrene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Pyrene	1.19	0.0543	0.0163	ug/L	1		07/09/21 13:17
Acenaphthylene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Anthracene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Benzo[a]pyrene	0.0217 U	0.0217	0.00674	ug/L	1		07/09/21 13:17
Benzo[b]Fluoranthene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Benzo[k]fluoranthene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Chrysene	0.419	0.0543	0.0163	ug/L	1		07/09/21 13:17
Fluoranthene	0.347	0.0543	0.0163	ug/L	1		07/09/21 13:17
Fluorene	0.0543 U	0.0543	0.0163	ug/L	1		07/09/21 13:17
Naphthalene	0.109 U	0.109	0.0337	ug/L	1		07/09/21 13:17
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	48.9	42-86		%	1		07/09/21 13:17
Fluoranthene-d10 (surr)	66	50-97		%	1		07/09/21 13:17

### Batch Information

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 13:17  
 Container ID: 1213715017-A

Prep Batch: XXX45053  
 Prep Method: SW3535A  
 Prep Date/Time: 06/28/21 13:00  
 Prep Initial Wt./Vol.: 230 mL  
 Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD1

Client Sample ID: **CD1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715017  
Lab Project ID: 1213715

Collection Date: 06/23/21 08:38  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:49
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 18:49
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:49
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 18:49
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 18:49

### Surrogates

1,2-Dichloroethane-D4 (surr)	97.6	81-118		%	1		07/02/21 18:49
4-Bromofluorobenzene (surr)	98.8	85-114		%	1		07/02/21 18:49
Toluene-d8 (surr)	98.1	89-112		%	1		07/02/21 18:49

### Batch Information

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 18:49  
Container ID: 1213715017-C

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD2

Client Sample ID: **CD2**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715018  
 Lab Project ID: 1213715

Collection Date: 06/23/21 08:49  
 Received Date: 06/25/21 12:41  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Acenaphthene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Acenaphthylene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Anthracene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Benzo(a)Anthracene	0.170	0.0510	0.0153	ug/L	1		07/09/21 13:37
Benzo[a]pyrene	0.0204 U	0.0204	0.00633	ug/L	1		07/09/21 13:37
Benzo[b]Fluoranthene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Benzo[g,h,i]perylene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Benzo[k]fluoranthene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Chrysene	0.387	0.0510	0.0153	ug/L	1		07/09/21 13:37
Dibenzo[a,h]anthracene	0.0204 U	0.0204	0.00633	ug/L	1		07/09/21 13:37
Fluoranthene	0.330	0.0510	0.0153	ug/L	1		07/09/21 13:37
Fluorene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Indeno[1,2,3-c,d] pyrene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Naphthalene	0.102 U	0.102	0.0316	ug/L	1		07/09/21 13:37
Phenanthrene	0.0510 U	0.0510	0.0153	ug/L	1		07/09/21 13:37
Pyrene	1.14	0.0510	0.0153	ug/L	1		07/09/21 13:37
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	45.7	42-86		%	1		07/09/21 13:37
Fluoranthene-d10 (surr)	59.1	50-97		%	1		07/09/21 13:37

### Batch Information

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 13:37  
 Container ID: 1213715018-A

Prep Batch: XXX45053  
 Prep Method: SW3535A  
 Prep Date/Time: 06/28/21 13:00  
 Prep Initial Wt./Vol.: 245 mL  
 Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD2

Client Sample ID: **CD2**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715018  
Lab Project ID: 1213715

Collection Date: 06/23/21 08:49  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 19:04
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:04
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:04
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 19:04
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:04
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	99	81-118		%	1		07/02/21 19:04
4-Bromofluorobenzene (surr)	99	85-114		%	1		07/02/21 19:04
Toluene-d8 (surr)	98.9	89-112		%	1		07/02/21 19:04

### Batch Information

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 19:04  
Container ID: 1213715018-C

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF1-6

Client Sample ID: TF1-6
Client Project ID: Port William
Lab Sample ID: 1213715019
Lab Project ID: 1213715

Collection Date: 06/23/21 12:00
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):29.0
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/09/21 02:14
Container ID: 1213715019-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.597 g
Prep Extract Vol: 5 mL



Results of TF1-6

Client Sample ID: TF1-6  
Client Project ID: Port William  
Lab Sample ID: 1213715019  
Lab Project ID: 1213715

Collection Date: 06/23/21 12:00  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):29.0  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	130	68.6	21.3	mg/kg	1		06/30/21 16:17

Surrogates

5a Androstane (surr)	84.5	50-150		%	1		06/30/21 16:17
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Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:17  
Container ID: 1213715019-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.198 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	343 U	343	147	mg/kg	1		06/30/21 16:17

Surrogates

n-Triacontane-d62 (surr)	86.3	50-150		%	1		06/30/21 16:17
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Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:17  
Container ID: 1213715019-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.198 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF2-12

Client Sample ID: TF2-12
Client Project ID: Port William
Lab Sample ID: 1213715020
Lab Project ID: 1213715

Collection Date: 06/23/21 12:40
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):58.3
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/09/21 02:35
Container ID: 1213715020-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.691 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF2-12

Client Sample ID: TF2-12
Client Project ID: Port William
Lab Sample ID: 1213715020
Lab Project ID: 1213715

Collection Date: 06/23/21 12:40
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):58.3
Location:

Results by Semivolatile Organic Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Diesel Range Organics, 63.8, 34.3, 10.6, mg/kg, 1, 06/30/21 16:27

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 5a Androstane (surr), 81.4, 50-150, %, 1, 06/30/21 16:27

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 06/30/21 16:27
Container ID: 1213715020-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.018 g
Prep Extract Vol: 5 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Residual Range Organics, 256, 172, 73.8, mg/kg, 1, 06/30/21 16:27

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: n-Triacontane-d62 (surr), 82.2, 50-150, %, 1, 06/30/21 16:27

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 06/30/21 16:27
Container ID: 1213715020-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.018 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF3-15

Client Sample ID: TF3-15
Client Project ID: Port William
Lab Sample ID: 1213715021
Lab Project ID: 1213715

Collection Date: 06/23/21 13:34
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):35.8
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their surrogate compounds with associated quality and detection data.

Batch Information

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/09/21 03:36
Container ID: 1213715021-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.51 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of TF3-15**

Client Sample ID: **TF3-15**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715021  
Lab Project ID: 1213715

Collection Date: 06/23/21 13:34  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):35.8  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	440	54.9	17.0	mg/kg	1		06/30/21 17:36
<b>Surrogates</b>							
5a Androstane (surr)	97.4	50-150		%	1		06/30/21 17:36

**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:36  
Container ID: 1213715021-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.489 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	2690	275	118	mg/kg	1		06/30/21 17:36
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	91	50-150		%	1		06/30/21 17:36

**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:36  
Container ID: 1213715021-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.489 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF4-0

Client Sample ID: TF4-0
Client Project ID: Port William
Lab Sample ID: 1213715022
Lab Project ID: 1213715

Collection Date: 06/23/21 14:19
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):29.6
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their surrogate compounds with associated quality and detection data.

Batch Information

Analytical Batch: XMS12728
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/09/21 02:55
Container ID: 1213715022-A

Prep Batch: XXX45075
Prep Method: SW3550C
Prep Date/Time: 06/30/21 09:21
Prep Initial Wt./Vol.: 22.865 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of TF4-0**

Client Sample ID: **TF4-0**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715022  
Lab Project ID: 1213715

Collection Date: 06/23/21 14:19  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):29.6  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	373	66.4	20.6	mg/kg	1		06/30/21 16:37

**Surrogates**

5a Androstane (surr)	81.6	50-150		%	1		06/30/21 16:37
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:37  
Container ID: 1213715022-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.479 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1440	332	143	mg/kg	1		06/30/21 16:37

**Surrogates**

n-Triacontane-d62 (surr)	79.1	50-150		%	1		06/30/21 16:37
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 16:37  
Container ID: 1213715022-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.479 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

Results by **Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	13000	7970	1990	ug/kg	125		07/15/21 17:03
2-Methylnaphthalene	16700	7970	1990	ug/kg	125		07/15/21 17:03
Acenaphthene	7970 U	7970	1990	ug/kg	125		07/15/21 17:03
Acenaphthylene	7970 U	7970	1990	ug/kg	125		07/15/21 17:03
Anthracene	7970 U	7970	1990	ug/kg	125		07/15/21 17:03
Benzo(a)Anthracene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Benzo[a]pyrene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Benzo[b]Fluoranthene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Benzo[g,h,i]perylene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Benzo[k]fluoranthene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Chrysene	527	319	79.7	ug/kg	5		07/09/21 03:57
Dibenzo[a,h]anthracene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Fluoranthene	825	319	79.7	ug/kg	5		07/09/21 03:57
Fluorene	7970 U	7970	1990	ug/kg	125		07/15/21 17:03
Indeno[1,2,3-c,d] pyrene	319 U	319	79.7	ug/kg	5		07/09/21 03:57
Naphthalene	10700	6380	1590	ug/kg	125		07/15/21 17:03
Phenanthrene	7970 U	7970	1990	ug/kg	125		07/15/21 17:03
Pyrene	2280	319	79.7	ug/kg	5		07/09/21 03:57
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	0	*	58-103	%	125		07/15/21 17:03
Fluoranthene-d10 (surr)	72.2		54-113	%	5		07/09/21 03:57

**Batch Information**

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 03:57  
Container ID: 1213715023-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.515 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12744  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/15/21 17:03  
Container ID: 1213715023-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.515 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

**Results by Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	23000	204	63.2	mg/kg	4		06/30/21 18:26

**Surrogates**

5a Androstane (surr)	97.9	50-150		%	4		06/30/21 18:26
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:26  
Container ID: 1213715023-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.038 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	4330	1020	438	mg/kg	4		06/30/21 18:26

**Surrogates**

n-Triacontane-d62 (surr)	63	50-150		%	4		06/30/21 18:26
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 18:26  
Container ID: 1213715023-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.038 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

**Results by Volatile Fuels**

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	33.5		12.1	3.63	mg/kg	1		07/08/21 09:14
<b>Surrogates</b>								
4-Bromofluorobenzene (surr)	39.1	*	50-150		%	1		07/08/21 09:14

**Batch Information**

Analytical Batch: VFC15700  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/08/21 09:14  
Container ID: 1213715023-B

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 06/23/21 16:52  
Prep Initial Wt./Vol.: 73.326 g  
Prep Extract Vol: 69.5943 mL

Print Date: 07/27/2021 1:18:18PM



Results of **D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	96.9 U	96.9	30.0	ug/kg	1		07/06/21 18:33
1,1,1-Trichloroethane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,1,2,2-Tetrachloroethane	9.69 U	9.69	3.00	ug/kg	1		07/06/21 18:33
1,1,2-Trichloroethane	3.88 U	3.88	1.21	ug/kg	1		07/06/21 18:33
1,1-Dichloroethane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,1-Dichloroethene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,1-Dichloropropene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,2,3-Trichlorobenzene	242 U	242	72.7	ug/kg	1		07/06/21 18:33
1,2,3-Trichloropropane	9.69 U	9.69	3.00	ug/kg	1		07/06/21 18:33
1,2,4-Trichlorobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,2,4-Trimethylbenzene	4750	242	72.7	ug/kg	1		07/06/21 18:33
1,2-Dibromo-3-chloropropane	484 U	484	150	ug/kg	1		07/06/21 18:33
1,2-Dibromoethane	4.84 U	4.84	1.94	ug/kg	1		07/06/21 18:33
1,2-Dichlorobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,2-Dichloroethane	9.69 U	9.69	3.39	ug/kg	1		07/06/21 18:33
1,2-Dichloropropane	48.4 U	48.4	15.0	ug/kg	1		07/06/21 18:33
1,3,5-Trimethylbenzene	1520	121	37.8	ug/kg	1		07/06/21 18:33
1,3-Dichlorobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
1,3-Dichloropropane	48.4 U	48.4	15.0	ug/kg	1		07/06/21 18:33
1,4-Dichlorobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
2,2-Dichloropropane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
2-Butanone (MEK)	1210 U	1210	378	ug/kg	1		07/06/21 18:33
2-Chlorotoluene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
2-Hexanone	484 U	484	150	ug/kg	1		07/06/21 18:33
4-Chlorotoluene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
4-Isopropyltoluene	484 U	484	121	ug/kg	1		07/06/21 18:33
4-Methyl-2-pentanone (MIBK)	1210 U	1210	378	ug/kg	1		07/06/21 18:33
Acetone	1210 U	1210	378	ug/kg	1		07/06/21 18:33
Benzene	60.6 U	60.6	18.9	ug/kg	1		07/06/21 18:33
Bromobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Bromochloromethane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Bromodichloromethane	9.69 U	9.69	3.00	ug/kg	1		07/06/21 18:33
Bromoform	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Bromomethane	96.9 U	96.9	30.0	ug/kg	1		07/06/21 18:33
Carbon disulfide	484 U	484	150	ug/kg	1		07/06/21 18:33
Carbon tetrachloride	60.6 U	60.6	18.9	ug/kg	1		07/06/21 18:33
Chlorobenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33

Print Date: 07/27/2021 1:18:18PM



Results of **D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	969 U	969	300	ug/kg	1		07/06/21 18:33
Chloroform	19.4 U	19.4	4.84	ug/kg	1		07/06/21 18:33
Chloromethane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
cis-1,2-Dichloroethene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
cis-1,3-Dichloropropene	60.6 U	60.6	18.9	ug/kg	1		07/06/21 18:33
Dibromochloromethane	24.2 U	24.2	7.27	ug/kg	1		07/06/21 18:33
Dibromomethane	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Dichlorodifluoromethane	242 U	242	72.7	ug/kg	1		07/06/21 18:33
Ethylbenzene	941	121	37.8	ug/kg	1		07/06/21 18:33
Freon-113	484 U	484	150	ug/kg	1		07/06/21 18:33
Hexachlorobutadiene	96.9 U	96.9	30.0	ug/kg	1		07/06/21 18:33
Isopropylbenzene (Cumene)	121	121	37.8	ug/kg	1		07/06/21 18:33
Methylene chloride	484 U	484	150	ug/kg	1		07/06/21 18:33
Methyl-t-butyl ether	484 U	484	150	ug/kg	1		07/06/21 18:33
Naphthalene	1630	121	37.8	ug/kg	1		07/06/21 18:33
n-Butylbenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
n-Propylbenzene	291	121	37.8	ug/kg	1		07/06/21 18:33
o-Xylene	1990	121	37.8	ug/kg	1		07/06/21 18:33
P & M -Xylene	2810	242	72.7	ug/kg	1		07/06/21 18:33
sec-Butylbenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Styrene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
tert-Butylbenzene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
Tetrachloroethene	60.6 U	60.6	18.9	ug/kg	1		07/06/21 18:33
Toluene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
trans-1,2-Dichloroethene	121 U	121	37.8	ug/kg	1		07/06/21 18:33
trans-1,3-Dichloropropene	60.6 U	60.6	18.9	ug/kg	1		07/06/21 18:33
Trichloroethene	24.2 U	24.2	7.27	ug/kg	1		07/06/21 18:33
Trichlorofluoromethane	242 U	242	72.7	ug/kg	1		07/06/21 18:33
Vinyl acetate	484 U	484	150	ug/kg	1		07/06/21 18:33
Vinyl chloride	3.88 U	3.88	1.21	ug/kg	1		07/06/21 18:33
Xylenes (total)	4800	363	110	ug/kg	1		07/06/21 18:33
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	107	71-136		%	1		07/06/21 18:33
4-Bromofluorobenzene (surr)	23.8 *	55-151		%	1		07/06/21 18:33
Toluene-d8 (surr)	99.1	85-116		%	1		07/06/21 18:33

Print Date: 07/27/2021 1:18:18PM



**Results of D4-18**

Client Sample ID: **D4-18**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715023  
Lab Project ID: 1213715

Collection Date: 06/23/21 16:52  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):39.2  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20887  
Analytical Method: SW8260D  
Analyst: S.S  
Analytical Date/Time: 07/06/21 18:33  
Container ID: 1213715023-B

Prep Batch: VXX37362  
Prep Method: SW5035A  
Prep Date/Time: 06/23/21 16:52  
Prep Initial Wt./Vol.: 73.326 g  
Prep Extract Vol: 69.5943 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF5-12

Client Sample ID: TF5-12
Client Project ID: Port William
Lab Sample ID: 1213715024
Lab Project ID: 1213715

Collection Date: 06/23/21 18:20
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):51.6
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their surrogate compounds with associated quality and detection data.



**Results of TF5-12**

Client Sample ID: **TF5-12**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715024  
Lab Project ID: 1213715

Collection Date: 06/23/21 18:20  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):51.6  
Location:

**Results by Polynuclear Aromatics GC/MS**

**Batch Information**

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 05:18  
Container ID: 1213715024-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.712 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12758  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/19/21 07:33  
Container ID: 1213715024-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.712 g  
Prep Extract Vol: 5 mL

Analytical Batch: XMS12746  
Analytical Method: 8270D SIM (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/16/21 17:46  
Container ID: 1213715024-A

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 09:21  
Prep Initial Wt./Vol.: 22.712 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF5-12

Client Sample ID: TF5-12
Client Project ID: Port William
Lab Sample ID: 1213715024
Lab Project ID: 1213715

Collection Date: 06/23/21 18:20
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):51.6
Location:

Results by Semivolatile Organic Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Diesel Range Organics, 48800, 382, 118, mg/kg, 10, 06/30/21 20:25

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 5a Androstane (surr), 275, \*, 50-150, %, 10, 06/30/21 20:25

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 06/30/21 20:25
Container ID: 1213715024-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.441 g
Prep Extract Vol: 5 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Residual Range Organics, 28900, 1910, 821, mg/kg, 10, 06/30/21 20:25

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: n-Triacontane-d62 (surr), 42.6, \*, 50-150, %, 10, 06/30/21 20:25

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 06/30/21 20:25
Container ID: 1213715024-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.441 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF5-24

Client Sample ID: TF5-24
Client Project ID: Port William
Lab Sample ID: 1213715025
Lab Project ID: 1213715

Collection Date: 06/23/21 18:30
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):52.6
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12736
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/11/21 11:49
Container ID: 1213715025-A

Prep Batch: XXX45086
Prep Method: SW3550C
Prep Date/Time: 07/01/21 13:39
Prep Initial Wt./Vol.: 11.753 g
Prep Extract Vol: 5 mL

Analytical Batch: XMS12732
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/12/21 17:21
Container ID: 1213715025-A

Prep Batch: XXX45086
Prep Method: SW3550C
Prep Date/Time: 07/01/21 13:39
Prep Initial Wt./Vol.: 11.753 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF5-24

Client Sample ID: TF5-24  
Client Project ID: Port William  
Lab Sample ID: 1213715025  
Lab Project ID: 1213715

Collection Date: 06/23/21 18:30  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):52.6  
Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	53000	759	235	mg/kg	10		06/30/21 20:45
<b>Surrogates</b>							
5a Androstane (surr)	198 *	50-150		%	10		06/30/21 20:45

Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 20:45  
Container ID: 1213715025-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 15.026 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	32100	3790	1630	mg/kg	10		06/30/21 20:45
<b>Surrogates</b>							
n-Triacontane-d62 (surr)	109	50-150		%	10		06/30/21 20:45

Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 20:45  
Container ID: 1213715025-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 15.026 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of CD3**

Client Sample ID: **CD3**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715026  
Lab Project ID: 1213715

Collection Date: 06/23/21 18:22  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Polynuclear Aromatics GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Anthracene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Benzo[b]Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Chrysene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Fluorene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Phenanthrene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Pyrene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Acenaphthene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Acenaphthylene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Benzo(a)Anthracene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Benzo[a]pyrene	0.0200 U	0.0200	0.00620	ug/L	1		07/09/21 16:00
Benzo[g,h,i]perylene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Benzo[k]fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Dibenzo[a,h]anthracene	0.0200 U	0.0200	0.00620	ug/L	1		07/09/21 16:00
Fluoranthene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	0.0150	ug/L	1		07/09/21 16:00
Naphthalene	0.100 U	0.100	0.0310	ug/L	1		07/09/21 16:00
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	49.2	42-86		%	1		07/09/21 16:00
Fluoranthene-d10 (surr)	60.1	50-97		%	1		07/09/21 16:00

**Batch Information**

Analytical Batch: XMS12734  
Analytical Method: 8270D SIM LV (PAH)  
Analyst: LAW  
Analytical Date/Time: 07/09/21 16:00  
Container ID: 1213715026-A

Prep Batch: XXX45072  
Prep Method: SW3535A  
Prep Date/Time: 06/29/21 10:00  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD3

Client Sample ID: **CD3**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715026  
Lab Project ID: 1213715

Collection Date: 06/23/21 18:22  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:19
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:19
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 19:19
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 19:19
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:19
<b>Surrogates</b>							
Toluene-d8 (surr)	99	89-112		%	1		07/02/21 19:19
4-Bromofluorobenzene (surr)	99.8	85-114		%	1		07/02/21 19:19
1,2-Dichloroethane-D4 (surr)	98.5	81-118		%	1		07/02/21 19:19

### Batch Information

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 19:19  
Container ID: 1213715026-C

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF6-12

Client Sample ID: TF6-12
Client Project ID: Port William
Lab Sample ID: 1213715027
Lab Project ID: 1213715

Collection Date: 06/23/21 19:24
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):57.0
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12744
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/15/21 16:22
Container ID: 1213715027-A

Prep Batch: XXX45086
Prep Method: SW3550C
Prep Date/Time: 07/01/21 13:39
Prep Initial Wt./Vol.: 22.719 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF6-12

Client Sample ID: TF6-12
Client Project ID: Port William
Lab Sample ID: 1213715027
Lab Project ID: 1213715

Collection Date: 06/23/21 19:24
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):57.0
Location:

Results by Semivolatile Organic Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Diesel Range Organics and Surrogates (5a Androstane).

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 06/30/21 16:47
Container ID: 1213715027-A
Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.172 g
Prep Extract Vol: 5 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Residual Range Organics and Surrogates (n-Triacontane-d62).

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 06/30/21 16:47
Container ID: 1213715027-A
Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 30.172 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of TF7-18

Client Sample ID: TF7-18
Client Project ID: Port William
Lab Sample ID: 1213715028
Lab Project ID: 1213715

Collection Date: 06/23/21 20:02
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):50.0
Location:

Results by Polynuclear Aromatics GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various polynuclear aromatic hydrocarbons and their detection results.

Batch Information

Analytical Batch: XMS12736
Analytical Method: 8270D SIM (PAH)
Analyst: LAW
Analytical Date/Time: 07/11/21 12:09
Container ID: 1213715028-A

Prep Batch: XXX45086
Prep Method: SW3550C
Prep Date/Time: 07/01/21 13:39
Prep Initial Wt./Vol.: 11.307 g
Prep Extract Vol: 5 mL



Results of TF7-18

Client Sample ID: TF7-18
Client Project ID: Port William
Lab Sample ID: 1213715028
Lab Project ID: 1213715

Collection Date: 06/23/21 20:02
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):50.0
Location:

Results by Semivolatile Organic Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Diesel Range Organics, 41400, 315, 97.7, mg/kg, 4, 06/30/21 20:05

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 5a Androstane (surr), 123, 50-150, %, 4, 06/30/21 20:05

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK102
Analyst: IVM
Analytical Date/Time: 06/30/21 20:05
Container ID: 1213715028-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 15.215 g
Prep Extract Vol: 5 mL

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: Residual Range Organics, 9240, 1580, 678, mg/kg, 4, 06/30/21 20:05

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: n-Triacontane-d62 (surr), 98, 50-150, %, 4, 06/30/21 20:05

Batch Information

Analytical Batch: XFC15979
Analytical Method: AK103
Analyst: IVM
Analytical Date/Time: 06/30/21 20:05
Container ID: 1213715028-A

Prep Batch: XXX45076
Prep Method: SW3550C
Prep Date/Time: 06/30/21 10:22
Prep Initial Wt./Vol.: 15.215 g
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD4

Client Sample ID: **CD4**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715029  
 Lab Project ID: 1213715

Collection Date: 06/24/21 08:58  
 Received Date: 06/25/21 12:41  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Acenaphthene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Acenaphthylene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Benzo(a)Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Benzo[a]pyrene	0.0192 U	0.0192	0.00596	ug/L	1		07/09/21 16:21
Benzo[b]Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Benzo[g,h,i]perylene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Benzo[k]fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Chrysene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Dibenzo[a,h]anthracene	0.0192 U	0.0192	0.00596	ug/L	1		07/09/21 16:21
Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Fluorene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Indeno[1,2,3-c,d] pyrene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Naphthalene	0.0962 U	0.0962	0.0298	ug/L	1		07/09/21 16:21
Phenanthrene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
Pyrene	0.0481 U	0.0481	0.0144	ug/L	1		07/09/21 16:21
<b>Surrogates</b>							
2-Methylnaphthalene-d10 (surr)	65.6	42-86		%	1		07/09/21 16:21
Fluoranthene-d10 (surr)	73.3	50-97		%	1		07/09/21 16:21

### Batch Information

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM LV (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 16:21  
 Container ID: 1213715029-A

Prep Batch: XXX45072  
 Prep Method: SW3535A  
 Prep Date/Time: 06/29/21 10:00  
 Prep Initial Wt./Vol.: 260 mL  
 Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:18:18PM



### Results of CD4

Client Sample ID: **CD4**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715029  
Lab Project ID: 1213715

Collection Date: 06/24/21 08:58  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.400 U	0.400	0.120	ug/L	1		07/02/21 19:33
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:33
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:33
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 19:33
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 19:33
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	97.9	81-118		%	1		07/02/21 19:33
4-Bromofluorobenzene (surr)	98.9	85-114		%	1		07/02/21 19:33
Toluene-d8 (surr)	99.4	89-112		%	1		07/02/21 19:33

### Batch Information

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 19:33  
Container ID: 1213715029-C

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MH3-6

Client Sample ID: **MH3-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715030  
Lab Project ID: 1213715

Collection Date: 06/24/21 08:56  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):40.9  
Location:

### Results by Metals by ICP/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Arsenic	2.34 U	2.34	0.726	mg/kg	10		07/07/21 18:08
Barium	108	0.703	0.220	mg/kg	10		07/07/21 18:08
Cadmium	0.706	0.468	0.145	mg/kg	10		07/07/21 18:08
Chromium	9.57	2.34	0.726	mg/kg	10		07/07/21 18:08
Lead	349	0.468	0.145	mg/kg	10		07/07/21 18:08
Mercury	0.703 U	0.703	0.234	mg/kg	10		07/07/21 18:08
Selenium	4.68 U	4.68	1.45	mg/kg	10		07/07/21 18:08
Silver	1.17 U	1.17	0.351	mg/kg	10		07/07/21 18:08

### Batch Information

Analytical Batch: MMS11182  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/07/21 18:08  
Container ID: 1213715030-A

Prep Batch: MX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.045 g  
Prep Extract Vol: 50 mL

Print Date: 07/27/2021 1:18:18PM



### Results of MH3-6

Client Sample ID: **MH3-6**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715030  
 Lab Project ID: 1213715

Collection Date: 06/24/21 08:56  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):40.9  
 Location:

### Results by Polynuclear Aromatics GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1-Methylnaphthalene	568		305	76.3	ug/kg	5		07/09/21 20:47
2-Methylnaphthalene	772		305	76.3	ug/kg	5		07/09/21 20:47
Acenaphthene	648		305	76.3	ug/kg	5		07/09/21 20:47
Acenaphthylene	1260		305	76.3	ug/kg	5		07/09/21 20:47
Anthracene	2910		305	76.3	ug/kg	5		07/09/21 20:47
Benzo(a)Anthracene	5570		305	76.3	ug/kg	5		07/09/21 20:47
Benzo[a]pyrene	5660		305	76.3	ug/kg	5		07/09/21 20:47
Benzo[b]Fluoranthene	7650		1530	382	ug/kg	25		07/11/21 13:31
Benzo[g,h,i]perylene	2930		305	76.3	ug/kg	5		07/09/21 20:47
Benzo[k]fluoranthene	2170		305	76.3	ug/kg	5		07/09/21 20:47
Chrysene	6260		305	76.3	ug/kg	5		07/09/21 20:47
Dibenzo[a,h]anthracene	835		305	76.3	ug/kg	5		07/09/21 20:47
Fluoranthene	15500		1530	382	ug/kg	25		07/11/21 13:31
Fluorene	2250		305	76.3	ug/kg	5		07/09/21 20:47
Indeno[1,2,3-c,d] pyrene	2780		305	76.3	ug/kg	5		07/09/21 20:47
Naphthalene	2670		244	61.1	ug/kg	5		07/09/21 20:47
Phenanthrene	18700		1530	382	ug/kg	25		07/11/21 13:31
Pyrene	14400		1530	382	ug/kg	25		07/11/21 13:31
<b>Surrogates</b>								
2-Methylnaphthalene-d10 (surr)	73.6		58-103		%	5		07/09/21 20:47
Fluoranthene-d10 (surr)	71.6		54-113		%	5		07/09/21 20:47

### Batch Information

Analytical Batch: XMS12736  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/11/21 13:31  
 Container ID: 1213715030-A

Prep Batch: XXX45086  
 Prep Method: SW3550C  
 Prep Date/Time: 07/01/21 13:39  
 Prep Initial Wt./Vol.: 22.547 g  
 Prep Extract Vol: 5 mL

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM (PAH)  
 Analyst: LAW  
 Analytical Date/Time: 07/09/21 20:47  
 Container ID: 1213715030-A

Prep Batch: XXX45086  
 Prep Method: SW3550C  
 Prep Date/Time: 07/01/21 13:39  
 Prep Initial Wt./Vol.: 22.547 g  
 Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of **MH3-6**

Client Sample ID: **MH3-6**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715030  
Lab Project ID: 1213715

Collection Date: 06/24/21 08:56  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):40.9  
Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	647	48.6	15.1	mg/kg	1		06/30/21 17:46

**Surrogates**

5a Androstane (surr)	76.6	50-150		%	1		06/30/21 17:46
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK102  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:46  
Container ID: 1213715030-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.242 g  
Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	1780	243	104	mg/kg	1		06/30/21 17:46

**Surrogates**

n-Triacontane-d62 (surr)	68.1	50-150		%	1		06/30/21 17:46
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**Batch Information**

Analytical Batch: XFC15979  
Analytical Method: AK103  
Analyst: IVM  
Analytical Date/Time: 06/30/21 17:46  
Container ID: 1213715030-A

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 06/30/21 10:22  
Prep Initial Wt./Vol.: 30.242 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



**Results of IZ1**

Client Sample ID: **IZ1**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715031  
Lab Project ID: 1213715

Collection Date: 06/24/21 09:45  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):87.8  
Location:

**Results by Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Arsenic	5.14	1.12	0.349	mg/kg	10		07/07/21 18:13
Barium	5.69	0.337	0.106	mg/kg	10		07/07/21 18:13
Cadmium	0.225 U	0.225	0.0697	mg/kg	10		07/07/21 18:13
Chromium	96.0	1.12	0.349	mg/kg	10		07/07/21 18:13
Lead	456	2.25	0.697	mg/kg	100		07/08/21 11:38
Mercury	0.337 U	0.337	0.112	mg/kg	10		07/07/21 18:13
Selenium	2.25 U	2.25	0.697	mg/kg	10		07/07/21 18:13
Silver	0.562 U	0.562	0.169	mg/kg	10		07/07/21 18:13

**Batch Information**

Analytical Batch: MMS11184  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/08/21 11:38  
Container ID: 1213715031-A

Prep Batch: MX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.013 g  
Prep Extract Vol: 50 mL

Analytical Batch: MMS11182  
Analytical Method: SW6020B  
Analyst: DMM  
Analytical Date/Time: 07/07/21 18:13  
Container ID: 1213715031-A

Prep Batch: MX34356  
Prep Method: SW3050B  
Prep Date/Time: 07/05/21 16:32  
Prep Initial Wt./Vol.: 1.013 g  
Prep Extract Vol: 50 mL

Print Date: 07/27/2021 1:18:18PM



### Results of Trip Blank Water

Client Sample ID: **Trip Blank Water**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715032  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		07/01/21 00:26
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	72.7	50-150		%	1		07/01/21 00:26

### Batch Information

Analytical Batch: VFC15685  
Analytical Method: AK101  
Analyst: IJV  
Analytical Date/Time: 07/01/21 00:26  
Container ID: 1213715032-A

Prep Batch: VXX37332  
Prep Method: SW5030B  
Prep Date/Time: 06/30/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



Results of Trip Blank Water

Client Sample ID: Trip Blank Water
Client Project ID: Port William
Lab Sample ID: 1213715032
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06
Received Date: 06/25/21 12:41
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



### Results of Trip Blank Water

Client Sample ID: **Trip Blank Water**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715032  
 Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
 Received Date: 06/25/21 12:41  
 Matrix: Water (Surface, Eff., Ground)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Chloromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		07/02/21 17:35
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		07/02/21 17:35
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Freon-113	10.0 U	10.0	3.10	ug/L	1		07/02/21 17:35
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		07/02/21 17:35
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		07/02/21 17:35
Naphthalene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
o-Xylene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		07/02/21 17:35
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Styrene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Toluene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		07/02/21 17:35
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		07/02/21 17:35
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		07/02/21 17:35
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		07/02/21 17:35
<b>Surrogates</b>							
1,2-Dichloroethane-D4 (surr)	98.1	81-118		%	1		07/02/21 17:35
4-Bromofluorobenzene (surr)	101	85-114		%	1		07/02/21 17:35
Toluene-d8 (surr)	100	89-112		%	1		07/02/21 17:35

Print Date: 07/27/2021 1:18:18PM



**Results of Trip Blank Water**

Client Sample ID: **Trip Blank Water**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715032  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Water (Surface, Eff., Ground)  
Solids (%):  
Location:

**Results by Volatile GC/MS**

**Batch Information**

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Analyst: JMG  
Analytical Date/Time: 07/02/21 17:35  
Container ID: 1213715032-A

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/21 06:00  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:18PM



### Results of Trip Blank Soil

Client Sample ID: **Trip Blank Soil**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715033  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):  
Location:

### Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.56 U	2.56	0.767	mg/kg	1		07/01/21 20:46
<b>Surrogates</b>							
4-Bromofluorobenzene (surr)	90.2	50-150		%	1		07/01/21 20:46

### Batch Information

Analytical Batch: VFC15691  
Analytical Method: AK101  
Analyst: MDT  
Analytical Date/Time: 07/01/21 20:46  
Container ID: 1213715033-A

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:06  
Prep Initial Wt./Vol.: 48.896 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:18PM



### Results of Trip Blank Soil

Client Sample ID: **Trip Blank Soil**  
 Client Project ID: **Port William**  
 Lab Sample ID: 1213715033  
 Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
 Received Date: 06/25/21 12:41  
 Matrix: Soil/Solid (dry weight)  
 Solids (%):  
 Location:

### Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	20.5 U	20.5	6.34	ug/kg	1		07/01/21 19:50
1,1,1-Trichloroethane	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,1,2,2-Tetrachloroethane	2.05 U	2.05	0.634	ug/kg	1		07/01/21 19:50
1,1,2-Trichloroethane	0.818 U	0.818	0.256	ug/kg	1		07/01/21 19:50
1,1-Dichloroethane	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,1-Dichloroethene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,1-Dichloropropene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,2,3-Trichlorobenzene	51.1 U	51.1	15.3	ug/kg	1		07/01/21 19:50
1,2,3-Trichloropropane	2.05 U	2.05	0.634	ug/kg	1		07/01/21 19:50
1,2,4-Trichlorobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,2,4-Trimethylbenzene	51.1 U	51.1	15.3	ug/kg	1		07/01/21 19:50
1,2-Dibromo-3-chloropropane	102 U	102	31.7	ug/kg	1		07/01/21 19:50
1,2-Dibromoethane	1.02 U	1.02	0.409	ug/kg	1		07/01/21 19:50
1,2-Dichlorobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,2-Dichloroethane	2.05 U	2.05	0.716	ug/kg	1		07/01/21 19:50
1,2-Dichloropropane	10.2 U	10.2	3.17	ug/kg	1		07/01/21 19:50
1,3,5-Trimethylbenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,3-Dichlorobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
1,3-Dichloropropane	10.2 U	10.2	3.17	ug/kg	1		07/01/21 19:50
1,4-Dichlorobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
2,2-Dichloropropane	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
2-Butanone (MEK)	256 U	256	79.8	ug/kg	1		07/01/21 19:50
2-Chlorotoluene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
2-Hexanone	102 U	102	31.7	ug/kg	1		07/01/21 19:50
4-Chlorotoluene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
4-Isopropyltoluene	102 U	102	25.6	ug/kg	1		07/01/21 19:50
4-Methyl-2-pentanone (MIBK)	256 U	256	79.8	ug/kg	1		07/01/21 19:50
Acetone	256 U	256	79.8	ug/kg	1		07/01/21 19:50
Benzene	12.8 U	12.8	3.99	ug/kg	1		07/01/21 19:50
Bromobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
Bromochloromethane	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
Bromodichloromethane	2.05 U	2.05	0.634	ug/kg	1		07/01/21 19:50
Bromoform	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50
Bromomethane	20.5 U	20.5	6.34	ug/kg	1		07/01/21 19:50
Carbon disulfide	102 U	102	31.7	ug/kg	1		07/01/21 19:50
Carbon tetrachloride	12.8 U	12.8	3.99	ug/kg	1		07/01/21 19:50
Chlorobenzene	25.6 U	25.6	7.98	ug/kg	1		07/01/21 19:50

Print Date: 07/27/2021 1:18:18PM



Results of Trip Blank Soil

Client Sample ID: Trip Blank Soil
Client Project ID: Port William
Lab Sample ID: 1213715033
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06
Received Date: 06/25/21 12:41
Matrix: Soil/Solid (dry weight)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical compounds and their detection results.

Print Date: 07/27/2021 1:18:18PM



### Results of Trip Blank Soil

Client Sample ID: **Trip Blank Soil**  
Client Project ID: **Port William**  
Lab Sample ID: 1213715033  
Lab Project ID: 1213715

Collection Date: 06/21/21 16:06  
Received Date: 06/25/21 12:41  
Matrix: Soil/Solid (dry weight)  
Solids (%):  
Location:

### Results by Volatile GC/MS

#### Batch Information

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Analyst: MDT  
Analytical Date/Time: 07/01/21 19:50  
Container ID: 1213715033-A

Prep Batch: VXX37345  
Prep Method: SW5035A  
Prep Date/Time: 06/21/21 16:06  
Prep Initial Wt./Vol.: 48.896 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:18PM



### Method Blank

Blank ID: MB for HBN 1821762 [MXX/34356]  
Blank Lab ID: 1620831

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715013, 1213715014, 1213715030, 1213715031

### Results by SW6020B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Arsenic	0.500U	1.00	0.310	mg/kg
Barium	0.150U	0.300	0.0940	mg/kg
Cadmium	0.100U	0.200	0.0620	mg/kg
Chromium	0.500U	1.00	0.310	mg/kg
Lead	0.100U	0.200	0.0620	mg/kg
Mercury	0.150U	0.300	0.100	mg/kg
Selenium	1.00U	2.00	0.620	mg/kg
Silver	0.250U	0.500	0.150	mg/kg

### Batch Information

Analytical Batch: MMS11180  
Analytical Method: SW6020B  
Instrument: Perkin Elmer Nexlon P5  
Analyst: DMM  
Analytical Date/Time: 7/7/2021 4:35:43PM

Prep Batch: MXX34356  
Prep Method: SW3050B  
Prep Date/Time: 7/5/2021 4:32:07PM  
Prep Initial Wt./Vol.: 1 g  
Prep Extract Vol: 50 mL

Print Date: 07/27/2021 1:18:25PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [MXX34356]

Blank Spike Lab ID: 1620832

Date Analyzed: 07/07/2021 16:39

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715013, 1213715014, 1213715030, 1213715031

### Results by SW6020B

Parameter	Blank Spike (mg/kg)			CL
	Spike	Result	Rec (%)	
Arsenic	50	52.4	105	( 82-118 )
Barium	50	47.1	94	( 86-116 )
Cadmium	5	5.07	101	( 84-116 )
Chromium	20	20.2	101	( 83-119 )
Lead	50	53.7	107	( 84-118 )
Mercury	0.5	0.521	104	( 74-126 )
Selenium	50	56.6	113	( 80-119 )
Silver	5	5.57	111	( 83-118 )

### Batch Information

Analytical Batch: MMS11180

Analytical Method: SW6020B

Instrument: Perkin Elmer Nexlon P5

Analyst: DMM

Prep Batch: MXX34356

Prep Method: SW3050B

Prep Date/Time: 07/05/2021 16:32

Spike Init Wt./Vol.: 50 mg/kg Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:18:28PM



### Matrix Spike Summary

Original Sample ID: 1620833  
 MS Sample ID: 1620834 MS  
 MSD Sample ID: 1620835 MSD

Analysis Date: 07/07/2021 16:08  
 Analysis Date: 07/07/2021 16:12  
 Analysis Date: 07/07/2021 16:16  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715013, 1213715014, 1213715030, 1213715031

### Results by SW6020B

Parameter	Sample	Matrix Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Arsenic	5.42	45.6	50.9	100	50.0	54.0	97	82-118	5.97	(< 20 )
Barium	41.3	45.6	89.4	106	50.0	94.0	106	86-116	5.04	(< 20 )
Cadmium	0.313	4.56	4.84	99	5.00	5.20	98	84-116	6.98	(< 20 )
Chromium	24.5	18.2	47.2	124 *	20.0	51.7	136 *	83-119	9.24	(< 20 )
Lead	16.1	45.6	63.5	104	50.0	65.3	98	84-118	2.83	(< 20 )
Mercury	0.137U	0.456	.51	112	0.500	0.548	110	74-126	7.25	(< 20 )
Selenium	0.910U	45.6	47.3	104	50.0	50.9	102	80-119	7.34	(< 20 )
Silver	0.228U	4.56	5.1	112	5.00	5.39	108	83-118	5.59	(< 20 )

### Batch Information

Analytical Batch: MMS11180  
 Analytical Method: SW6020B  
 Instrument: Perkin Elmer Nexlon P5  
 Analyst: DMM  
 Analytical Date/Time: 7/7/2021 4:12:41PM

Prep Batch: MX34356  
 Prep Method: Soils/Solids Digest for Metals by ICP-MS  
 Prep Date/Time: 7/5/2021 4:32:07PM  
 Prep Initial Wt./Vol.: 1.10g  
 Prep Extract Vol: 50.00mL

Print Date: 07/27/2021 1:18:29PM



### Bench Spike Summary

Original Sample ID: 1620833  
MS Sample ID: 1620836 BND  
MSD Sample ID:

Analysis Date: 07/07/2021 16:08  
Analysis Date: 07/07/2021 16:21  
Analysis Date:  
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715013, 1213715014, 1213715030, 1213715031

### Results by SW6020B

Parameter	Sample	Matrix Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chromium	24.5	114	143	104				75-125		

### Batch Information

Analytical Batch: MMS11180  
Analytical Method: SW6020B  
Instrument: Perkin Elmer Nexlon P5  
Analyst: DMM  
Analytical Date/Time: 7/7/2021 4:21:00PM

Prep Batch: MXX34356  
Prep Method: Soils/Solids Digest for Metals by ICP-MS  
Prep Date/Time: 7/5/2021 4:32:07PM  
Prep Initial Wt./Vol.: 1.10g  
Prep Extract Vol: 50.00mL

Print Date: 07/27/2021 1:18:29PM



### Method Blank

Blank ID: MB for HBN 1821524 [SPT/11310]  
Blank Lab ID: 1619562

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027, 1213715028, 1213715030, 1213715031

### Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

### Batch Information

Analytical Batch: SPT11310  
Analytical Method: SM21 2540G  
Instrument:  
Analyst: TMM  
Analytical Date/Time: 6/29/2021 6:14:00PM

Print Date: 07/27/2021 1:18:30PM



### Duplicate Sample Summary

Original Sample ID: 1213715016

Duplicate Sample ID: 1619563

Analysis Date: 06/29/2021 18:14

Matrix: Soil/Solid (dry weight)

QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015, 1213715016, 1213715019, 1213715020,

### Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	34.2	36.9	%	7.60	(< 15 )

### Batch Information

Analytical Batch: SPT11310

Analytical Method: SM21 2540G

Instrument:

Analyst: TMM

Print Date: 07/27/2021 1:18:31PM



### Duplicate Sample Summary

Original Sample ID: 1213717005

Duplicate Sample ID: 1619564

QC for Samples:

1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027,  
1213715028, 1213715030, 1213715031

Analysis Date: 06/29/2021 18:14

Matrix: Soil/Solid (dry weight)

### Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	92.5	92.5	%	0.01	(< 15 )

### Batch Information

Analytical Batch: SPT11310

Analytical Method: SM21 2540G

Instrument:

Analyst: TMM

Print Date: 07/27/2021 1:18:31PM



### Method Blank

Blank ID: MB for HBN 1821579 [VXX/37332]  
Blank Lab ID: 1619801

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1213715009, 1213715010, 1213715032

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	92.4	50-150		%

### Batch Information

Analytical Batch: VFC15685  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: IJV  
Analytical Date/Time: 6/30/2021 9:51:00AM

Prep Batch: VXX37332  
Prep Method: SW5030B  
Prep Date/Time: 6/30/2021 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:35PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37332]  
Blank Spike Lab ID: 1619804  
Date Analyzed: 06/30/2021 10:46

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37332]  
Spike Duplicate Lab ID: 1619805  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715032

### Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	1.02	102	1.00	1.03	103	( 60-120 )	0.65	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	0.0500	112	0.0500	114	( 50-150 )	2.00
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### Batch Information

Analytical Batch: **VFC15685**  
Analytical Method: **AK101**  
Instrument: **Agilent 7890 PID/FID**  
Analyst: **IJV**

Prep Batch: **VXX37332**  
Prep Method: **SW5030B**  
Prep Date/Time: **06/30/2021 06:00**  
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL  
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:37PM



### Method Blank

Blank ID: MB for HBN 1821693 [VXX/37345]

Blank Lab ID: 1620387

QC for Samples:

1213715005, 1213715006, 1213715016, 1213715033

Matrix: Soil/Solid (dry weight)

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.400U	0.800	0.250	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	25.0U	50.0	15.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	25.0U	50.0	15.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.500U	1.00	0.400	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	50.0U	100	31.0	ug/kg
4-Chlorotoluene	12.5U	25.0	7.80	ug/kg
4-Isopropyltoluene	50.0U	100	25.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	78.0	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	6.20	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

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### Method Blank

Blank ID: MB for HBN 1821693 [VXX/37345]

Blank Lab ID: 1620387

QC for Samples:

1213715005, 1213715006, 1213715016, 1213715033

Matrix: Soil/Solid (dry weight)

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloroform	2.00U	4.00	1.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	25.0U	50.0	15.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	2.50U	5.00	1.50	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	101	71-136		%
4-Bromofluorobenzene (surr)	93.7	55-151		%
Toluene-d8 (surr)	99.3	85-116		%

Print Date: 07/27/2021 1:18:40PM



**Method Blank**

Blank ID: MB for HBN 1821693 [VXX/37345]  
Blank Lab ID: 1620387

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715005, 1213715006, 1213715016, 1213715033

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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**Batch Information**

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Instrument: VRA Agilent GC/MS 7890B/5977A  
Analyst: MDT  
Analytical Date/Time: 7/1/2021 4:37:00PM

Prep Batch: VXX37345  
Prep Method: SW5035A  
Prep Date/Time: 7/1/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:40PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37345]

Blank Spike Lab ID: 1620388

Date Analyzed: 07/01/2021 16:53

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
1,1,1,2-Tetrachloroethane	750	785	105	(78-125)
1,1,1-Trichloroethane	750	746	100	(73-130)
1,1,2,2-Tetrachloroethane	750	770	103	(70-124)
1,1,2-Trichloroethane	750	765	102	(78-121)
1,1-Dichloroethane	750	719	96	(76-125)
1,1-Dichloroethene	750	739	99	(70-131)
1,1-Dichloropropene	750	712	95	(76-125)
1,2,3-Trichlorobenzene	750	826	110	(66-130)
1,2,3-Trichloropropane	750	746	100	(73-125)
1,2,4-Trichlorobenzene	750	802	107	(67-129)
1,2,4-Trimethylbenzene	750	727	97	(75-123)
1,2-Dibromo-3-chloropropane	750	749	100	(61-132)
1,2-Dibromoethane	750	790	105	(78-122)
1,2-Dichlorobenzene	750	751	100	(78-121)
1,2-Dichloroethane	750	700	93	(73-128)
1,2-Dichloropropane	750	739	99	(76-123)
1,3,5-Trimethylbenzene	750	724	97	(73-124)
1,3-Dichlorobenzene	750	737	98	(77-121)
1,3-Dichloropropane	750	744	99	(77-121)
1,4-Dichlorobenzene	750	744	99	(75-120)
2,2-Dichloropropane	750	778	104	(67-133)
2-Butanone (MEK)	2250	2330	104	(51-148)
2-Chlorotoluene	750	726	97	(75-122)
2-Hexanone	2250	2290	102	(53-145)
4-Chlorotoluene	750	739	99	(72-124)
4-Isopropyltoluene	750	726	97	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2270	101	(65-135)
Acetone	2250	1940	86	(36-164)
Benzene	750	707	94	(77-121)
Bromobenzene	750	752	100	(78-121)
Bromochloromethane	750	735	98	(78-125)
Bromodichloromethane	750	830	111	(75-127)
Bromoform	750	756	101	(67-132)
Bromomethane	750	731	97	(53-143)

Print Date: 07/27/2021 1:18:42PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37345]

Blank Spike Lab ID: 1620388

Date Analyzed: 07/01/2021 16:53

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1130	1240	110	(63-132)
Carbon tetrachloride	750	775	103	(70-135)
Chlorobenzene	750	713	95	(79-120)
Chloroethane	750	719	96	(59-139)
Chloroform	750	718	96	(78-123)
Chloromethane	750	686	91	(50-136)
cis-1,2-Dichloroethene	750	736	98	(77-123)
cis-1,3-Dichloropropene	750	816	109	(74-126)
Dibromochloromethane	750	749	100	(74-126)
Dibromomethane	750	760	101	(78-125)
Dichlorodifluoromethane	750	727	97	(29-149)
Ethylbenzene	750	695	93	(76-122)
Freon-113	1130	1100	98	(66-136)
Hexachlorobutadiene	750	764	102	(61-135)
Isopropylbenzene (Cumene)	750	714	95	(68-134)
Methylene chloride	750	727	97	(70-128)
Methyl-t-butyl ether	1130	1070	96	(73-125)
Naphthalene	750	818	109	(62-129)
n-Butylbenzene	750	751	100	(70-128)
n-Propylbenzene	750	726	97	(73-125)
o-Xylene	750	716	95	(77-123)
P & M -Xylene	1500	1360	91	(77-124)
sec-Butylbenzene	750	711	95	(73-126)
Styrene	750	743	99	(76-124)
tert-Butylbenzene	750	721	96	(73-125)
Tetrachloroethene	750	725	97	(73-128)
Toluene	750	710	95	(77-121)
trans-1,2-Dichloroethene	750	749	100	(74-125)
trans-1,3-Dichloropropene	750	743	99	(71-130)
Trichloroethene	750	731	97	(77-123)
Trichlorofluoromethane	750	1080	144	* (62-140)
Vinyl acetate	750	804	107	(50-151)
Vinyl chloride	750	804	107	(56-135)
Xylenes (total)	2250	2080	92	(78-124)

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### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37345]

Blank Spike Lab ID: 1620388

Date Analyzed: 07/01/2021 16:53

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	750	100		( 71-136 )
4-Bromofluorobenzene (surr)	750	96		( 55-151 )
Toluene-d8 (surr)	750	101		( 85-116 )

### Batch Information

Analytical Batch: VMS20876

Analytical Method: SW8260D

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: MDT

Prep Batch: VXX37345

Prep Method: SW5035A

Prep Date/Time: 07/01/2021 06:00

Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:18:42PM



### Matrix Spike Summary

Original Sample ID: 1620386  
 MS Sample ID: 1620389 MS  
 MSD Sample ID: 1620390 MSD

Analysis Date: 07/01/2021 20:05  
 Analysis Date: 07/01/2021 18:17  
 Analysis Date: 07/01/2021 18:32  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	14.4U	1080	1140	105	1080	1150	106	78-125	0.41	(< 20)
1,1,1-Trichloroethane	18.1U	1080	1070	99	1080	1080	100	73-130	0.37	(< 20)
1,1,2,2-Tetrachloroethane	1.45U	1080	1120	103	1080	1160	107	70-124	3.30	(< 20)
1,1,2-Trichloroethane	0.575U	1080	1140	105	1080	1140	105	78-121	0.03	(< 20)
1,1-Dichloroethane	18.1U	1080	1050	97	1080	1030	96	76-125	1.20	(< 20)
1,1-Dichloroethene	18.1U	1080	1070	99	1080	1070	99	70-131	0.44	(< 20)
1,1-Dichloropropene	18.1U	1080	1020	94	1080	1030	95	76-125	1.10	(< 20)
1,2,3-Trichlorobenzene	36.1U	1080	1290	119	1080	1270	118	66-130	1.50	(< 20)
1,2,3-Trichloropropane	1.45U	1080	1100	101	1080	1120	103	73-125	1.70	(< 20)
1,2,4-Trichlorobenzene	18.1U	1080	1240	114	1080	1180	109	67-129	4.40	(< 20)
1,2,4-Trimethylbenzene	36.1U	1080	1020	94	1080	1070	99	75-123	5.00	(< 20)
1,2-Dibromo-3-chloropropane	72.0U	1080	1140	105	1080	1140	105	61-132	0.00	(< 20)
1,2-Dibromoethane	0.720U	1080	1180	109	1080	1170	108	78-122	0.46	(< 20)
1,2-Dichlorobenzene	18.1U	1080	1040	96	1080	1070	99	78-121	2.20	(< 20)
1,2-Dichloroethane	1.45U	1080	1030	96	1080	1010	94	73-128	2.00	(< 20)
1,2-Dichloropropane	7.20U	1080	1080	99	1080	1070	99	76-123	0.57	(< 20)
1,3,5-Trimethylbenzene	18.1U	1080	1010	93	1080	1050	97	73-124	4.50	(< 20)
1,3-Dichlorobenzene	18.1U	1080	1030	95	1080	1060	98	77-121	3.20	(< 20)
1,3-Dichloropropane	7.20U	1080	1090	101	1080	1090	101	77-121	0.00	(< 20)
1,4-Dichlorobenzene	18.1U	1080	1040	96	1080	1070	99	75-120	2.70	(< 20)
2,2-Dichloropropane	18.1U	1080	1120	104	1080	1130	104	67-133	0.35	(< 20)
2-Butanone (MEK)	181U	3250	3590	111	3250	3470	107	51-148	3.40	(< 20)
2-Chlorotoluene	18.1U	1080	1010	94	1080	1060	98	75-122	4.20	(< 20)
2-Hexanone	72.0U	3250	3560	110	3250	3520	108	53-145	1.20	(< 20)
4-Chlorotoluene	18.1U	1080	1020	94	1080	1060	98	72-124	4.00	(< 20)
4-Isopropyltoluene	72.0U	1080	1020	94	1080	1050	97	73-127	2.80	(< 20)
4-Methyl-2-pentanone (MIBK)	181U	3250	3480	107	3250	3380	104	65-135	2.90	(< 20)
Acetone	181U	3250	3000	93	3250	2910	90	36-164	3.20	(< 20)
Benzene	9.00U	1080	1040	96	1080	1040	96	77-121	0.24	(< 20)
Bromobenzene	18.1U	1080	1050	97	1080	1100	102	78-121	4.90	(< 20)
Bromochloromethane	18.1U	1080	1090	101	1080	1080	100	78-125	1.20	(< 20)
Bromodichloromethane	1.45U	1080	1220	113	1080	1200	111	75-127	1.80	(< 20)
Bromoform	18.1U	1080	1120	104	1080	1120	103	67-132	0.52	(< 20)
Bromomethane	14.4U	1080	1020	94	1080	994	92	53-143	2.60	(< 20)
Carbon disulfide	72.0U	1620	1830	113	1620	1850	114	63-132	0.82	(< 20)
Carbon tetrachloride	9.00U	1080	1120	103	1080	1120	103	70-135	0.23	(< 20)
Chlorobenzene	18.1U	1080	1020	95	1080	1040	96	79-120	1.30	(< 20)

Print Date: 07/27/2021 1:18:43PM



### Matrix Spike Summary

Original Sample ID: 1620386  
 MS Sample ID: 1620389 MS  
 MSD Sample ID: 1620390 MSD

Analysis Date: 07/01/2021 20:05  
 Analysis Date: 07/01/2021 18:17  
 Analysis Date: 07/01/2021 18:32  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	145U	1080	1010	94	1080	1000	93	59-139	1.10	(< 20)
Chloroform	2.88U	1080	1040	96	1080	1040	96	78-123	0.38	(< 20)
Chloromethane	18.1U	1080	904	84	1080	883	82	50-136	2.30	(< 20)
cis-1,2-Dichloroethene	18.1U	1080	1050	97	1080	1040	96	77-123	1.10	(< 20)
cis-1,3-Dichloropropene	9.00U	1080	1210	112	1080	1200	111	74-126	0.96	(< 20)
Dibromochloromethane	3.61U	1080	1110	103	1080	1110	102	74-126	0.59	(< 20)
Dibromomethane	18.1U	1080	1140	105	1080	1110	102	78-125	2.80	(< 20)
Dichlorodifluoromethane	36.1U	1080	1150	106	1080	1110	102	29-149	3.90	(< 20)
Ethylbenzene	18.1U	1080	994	92	1080	1010	93	76-122	1.70	(< 20)
Freon-113	72.0U	1620	1560	96	1620	1560	96	66-136	0.14	(< 20)
Hexachlorobutadiene	14.4U	1080	1320	122	1080	1350	124	61-135	2.00	(< 20)
Isopropylbenzene (Cumene)	18.1U	1080	1010	93	1080	1020	94	68-134	0.89	(< 20)
Methylene chloride	72.0U	1080	1070	99	1080	1060	98	70-128	1.20	(< 20)
Methyl-t-butyl ether	72.0U	1620	1610	99	1620	1580	97	73-125	1.90	(< 20)
Naphthalene	18.1U	1080	1280	118	1080	1220	112	62-129	5.00	(< 20)
n-Butylbenzene	18.1U	1080	1050	97	1080	1070	99	70-128	2.20	(< 20)
n-Propylbenzene	18.1U	1080	1010	93	1080	1060	98	73-125	5.30	(< 20)
o-Xylene	18.1U	1080	1030	95	1080	1030	95	77-123	0.42	(< 20)
P & M -Xylene	36.1U	2170	1950	90	2170	1990	92	77-124	2.00	(< 20)
sec-Butylbenzene	18.1U	1080	1000	93	1080	1040	96	73-126	3.60	(< 20)
Styrene	18.1U	1080	1070	99	1080	1090	101	76-124	1.70	(< 20)
tert-Butylbenzene	18.1U	1080	999	92	1080	1030	96	73-125	3.40	(< 20)
Tetrachloroethene	9.00U	1080	1040	96	1080	1040	96	73-128	0.24	(< 20)
Toluene	18.1U	1080	1010	94	1080	1040	96	77-121	2.30	(< 20)
trans-1,2-Dichloroethene	18.1U	1080	1130	105	1080	1070	99	74-125	5.70	(< 20)
trans-1,3-Dichloropropene	9.00U	1080	1100	102	1080	1100	102	71-130	0.46	(< 20)
Trichloroethene	3.61U	1080	1050	97	1080	1060	98	77-123	0.75	(< 20)
Trichlorofluoromethane	36.1U	1080	1780	165 *	1080	1670	154 *	62-140	6.50	(< 20)
Vinyl acetate	72.0U	1080	1180	109	1080	1150	107	50-151	2.60	(< 20)
Vinyl chloride	0.575U	1080	1030	95	1080	1060	98	56-135	3.40	(< 20)
Xylenes (total)	54.0U	3250	2980	92	3250	3030	93	78-124	1.50	(< 20)
<b>Surrogates</b>										
1,2-Dichloroethane-D4 (surr)		1080	1120	103	1080	1060	98	71-136	4.80	
4-Bromofluorobenzene (surr)		1800	1410	78	1800	1480	82	55-151	4.70	
Toluene-d8 (surr)		1080	1090	101	1080	1100	101	85-116	0.76	

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### Matrix Spike Summary

Original Sample ID: 1620386  
MS Sample ID: 1620389 MS  
MSD Sample ID: 1620390 MSD

Analysis Date:  
Analysis Date: 07/01/2021 18:17  
Analysis Date: 07/01/2021 18:32  
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by SW8260D

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

### Batch Information

Analytical Batch: VMS20876  
Analytical Method: SW8260D  
Instrument: VRA Agilent GC/MS 7890B/5977A  
Analyst: MDT  
Analytical Date/Time: 7/1/2021 6:17:00PM

Prep Batch: VXX37345  
Prep Method: Vol. Extraction SW8260 Field Extracted L  
Prep Date/Time: 7/1/2021 6:00:00AM  
Prep Initial Wt./Vol.: 34.63g  
Prep Extract Vol: 25.00mL

Print Date: 07/27/2021 1:18:43PM



### Method Blank

Blank ID: MB for HBN 1821782 [VXX/37351]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1620919

QC for Samples:

1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	2.00	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.310	ug/L

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### Method Blank

Blank ID: MB for HBN 1821782 [VXX/37351]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1620919

QC for Samples:

1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	5.00U	10.0	3.10	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	0.500U	1.00	0.310	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	97.6	81-118		%
4-Bromofluorobenzene (surr)	102	85-114		%
Toluene-d8 (surr)	99.8	89-112		%

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**Method Blank**

Blank ID: MB for HBN 1821782 [VXX/37351]  
Blank Lab ID: 1620919

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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**Batch Information**

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: JMG  
Analytical Date/Time: 7/2/2021 2:01:00PM

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 7/2/2021 6:00:00AM  
Prep Initial Wt./Vol.: 5 mL  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:44PM



**Blank Spike Summary**

Blank Spike ID: LCS for HBN 1213715 [VXX37351]  
 Blank Spike Lab ID: 1620920  
 Date Analyzed: 07/02/2021 14:15

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37351]  
 Spike Duplicate Lab ID: 1620921  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

**Results by SW8260D**

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	29.9	100	30	29.9	100	( 78-124 )	0.01	(< 20 )
1,1,1-Trichloroethane	30	29.6	99	30	28.7	96	( 74-131 )	3.30	(< 20 )
1,1,2,2-Tetrachloroethane	30	28.9	97	30	29.5	98	( 71-121 )	1.90	(< 20 )
1,1,2-Trichloroethane	30	29.6	99	30	30.0	100	( 80-119 )	1.10	(< 20 )
1,1-Dichloroethane	30	29.6	99	30	28.9	96	( 77-125 )	2.50	(< 20 )
1,1-Dichloroethene	30	29.7	99	30	28.5	95	( 71-131 )	4.20	(< 20 )
1,1-Dichloropropene	30	30.5	102	30	29.4	98	( 79-125 )	3.80	(< 20 )
1,2,3-Trichlorobenzene	30	29.9	100	30	31.1	104	( 69-129 )	4.10	(< 20 )
1,2,3-Trichloropropane	30	28.7	96	30	29.1	97	( 73-122 )	1.60	(< 20 )
1,2,4-Trichlorobenzene	30	30.2	101	30	31.0	103	( 69-130 )	2.60	(< 20 )
1,2,4-Trimethylbenzene	30	29.5	98	30	28.9	96	( 79-124 )	2.00	(< 20 )
1,2-Dibromo-3-chloropropane	30	27.7	92	30	28.9	96	( 62-128 )	4.40	(< 20 )
1,2-Dibromoethane	30	29.3	98	30	30.1	100	( 77-121 )	2.80	(< 20 )
1,2-Dichlorobenzene	30	30.0	100	30	29.8	99	( 80-119 )	0.65	(< 20 )
1,2-Dichloroethane	30	27.0	90	30	26.9	90	( 73-128 )	0.68	(< 20 )
1,2-Dichloropropane	30	30.3	101	30	29.8	100	( 78-122 )	1.50	(< 20 )
1,3,5-Trimethylbenzene	30	30.3	101	30	29.3	98	( 75-124 )	3.30	(< 20 )
1,3-Dichlorobenzene	30	30.4	101	30	29.9	100	( 80-119 )	1.70	(< 20 )
1,3-Dichloropropane	30	29.6	99	30	30.0	100	( 80-119 )	1.30	(< 20 )
1,4-Dichlorobenzene	30	30.4	101	30	30.0	100	( 79-118 )	1.40	(< 20 )
2,2-Dichloropropane	30	29.6	99	30	28.4	95	( 60-139 )	4.30	(< 20 )
2-Butanone (MEK)	90	83.7	93	90	88.9	99	( 56-143 )	6.00	(< 20 )
2-Chlorotoluene	30	29.9	100	30	29.0	97	( 79-122 )	2.90	(< 20 )
2-Hexanone	90	83.6	93	90	88.4	98	( 57-139 )	5.70	(< 20 )
4-Chlorotoluene	30	29.7	99	30	29.1	97	( 78-122 )	1.90	(< 20 )
4-Isopropyltoluene	30	30.9	103	30	30.1	100	( 77-127 )	2.70	(< 20 )
4-Methyl-2-pentanone (MIBK)	90	86.0	96	90	88.9	99	( 67-130 )	3.40	(< 20 )
Benzene	30	30.6	102	30	29.0	97	( 79-120 )	5.50	(< 20 )
Bromobenzene	30	30.1	100	30	29.7	99	( 80-120 )	1.50	(< 20 )
Bromochloromethane	30	29.2	97	30	28.9	96	( 78-123 )	1.10	(< 20 )
Bromodichloromethane	30	29.6	99	30	29.1	97	( 79-125 )	1.80	(< 20 )
Bromoform	30	30.1	100	30	30.3	101	( 66-130 )	0.55	(< 20 )
Bromomethane	30	33.3	111	30	33.1	110	( 53-141 )	0.48	(< 20 )
Carbon disulfide	45	43.2	96	45	41.4	92	( 64-133 )	4.30	(< 20 )

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### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37351]  
 Blank Spike Lab ID: 1620920  
 Date Analyzed: 07/02/2021 14:15

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37351]  
 Spike Duplicate Lab ID: 1620921  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

### Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	30.2	101	30	28.8	96	( 72-136 )	4.80	(< 20 )
Chlorobenzene	30	30.0	100	30	29.4	98	( 82-118 )	2.10	(< 20 )
Chloroethane	30	34.8	116	30	28.6	95	( 60-138 )	19.60	(< 20 )
Chloroform	30	29.0	97	30	28.2	94	( 79-124 )	2.90	(< 20 )
Chloromethane	30	28.8	96	30	27.8	93	( 50-139 )	3.60	(< 20 )
cis-1,2-Dichloroethene	30	29.7	99	30	28.8	96	( 78-123 )	3.00	(< 20 )
cis-1,3-Dichloropropene	30	30.0	100	30	29.7	99	( 75-124 )	1.10	(< 20 )
Dibromochloromethane	30	29.6	99	30	30.0	100	( 74-126 )	1.30	(< 20 )
Dibromomethane	30	28.7	96	30	28.7	96	( 79-123 )	0.21	(< 20 )
Dichlorodifluoromethane	30	27.7	92	30	26.5	88	( 32-152 )	4.20	(< 20 )
Ethylbenzene	30	29.8	99	30	29.1	97	( 79-121 )	2.30	(< 20 )
Freon-113	45	44.9	100	45	43.0	96	( 70-136 )	4.30	(< 20 )
Hexachlorobutadiene	30	31.6	105	30	31.5	105	( 66-134 )	0.34	(< 20 )
Isopropylbenzene (Cumene)	30	30.5	102	30	30.0	100	( 72-131 )	1.70	(< 20 )
Methylene chloride	30	29.4	98	30	28.9	96	( 74-124 )	1.80	(< 20 )
Methyl-t-butyl ether	45	43.9	98	45	43.9	98	( 71-124 )	0.11	(< 20 )
Naphthalene	30	27.6	92	30	29.9	100	( 61-128 )	8.00	(< 20 )
n-Butylbenzene	30	30.6	102	30	29.9	100	( 75-128 )	2.40	(< 20 )
n-Propylbenzene	30	30.3	101	30	29.3	98	( 76-126 )	3.50	(< 20 )
o-Xylene	30	29.9	100	30	29.3	98	( 78-122 )	2.00	(< 20 )
P & M -Xylene	60	59.4	99	60	58.0	97	( 80-121 )	2.30	(< 20 )
sec-Butylbenzene	30	30.8	103	30	29.9	100	( 77-126 )	3.10	(< 20 )
Styrene	30	29.9	100	30	29.7	99	( 78-123 )	0.38	(< 20 )
tert-Butylbenzene	30	30.5	102	30	29.5	98	( 78-124 )	3.40	(< 20 )
Tetrachloroethene	30	30.7	102	30	30.0	100	( 74-129 )	2.40	(< 20 )
Toluene	30	29.1	97	30	28.5	95	( 80-121 )	2.10	(< 20 )
trans-1,2-Dichloroethene	30	29.7	99	30	28.6	95	( 75-124 )	3.70	(< 20 )
trans-1,3-Dichloropropene	30	29.8	99	30	30.0	100	( 73-127 )	0.83	(< 20 )
Trichloroethene	30	30.3	101	30	29.2	97	( 79-123 )	3.80	(< 20 )
Trichlorofluoromethane	30	29.8	99	30	28.1	94	( 65-141 )	5.90	(< 20 )
Vinyl acetate	30	29.7	99	30	30.2	101	( 54-146 )	1.80	(< 20 )
Vinyl chloride	30	29.2	97	30	27.9	93	( 58-137 )	4.30	(< 20 )
Xylenes (total)	90	89.2	99	90	87.3	97	( 79-121 )	2.20	(< 20 )

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### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37351]  
Blank Spike Lab ID: 1620920  
Date Analyzed: 07/02/2021 14:15

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37351]  
Spike Duplicate Lab ID: 1620921  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715017, 1213715018, 1213715026, 1213715029, 1213715032

### Results by SW8260D

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
<b>Surrogates</b>									
1,2-Dichloroethane-D4 (surr)	30		95	30		95	( 81-118 )	0.05	
4-Bromofluorobenzene (surr)	30		99	30		98	( 85-114 )	1.40	
Toluene-d8 (surr)	30		100	30		100	( 89-112 )	0.52	

### Batch Information

Analytical Batch: VMS20880  
Analytical Method: SW8260D  
Instrument: Agilent 7890-75MS  
Analyst: JMG

Prep Batch: VXX37351  
Prep Method: SW5030B  
Prep Date/Time: 07/02/2021 06:00  
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL  
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 07/27/2021 1:18:46PM



### Method Blank

Blank ID: MB for HBN 1821790 [VXX/37354]

Matrix: Soil/Solid (dry weight)

Blank Lab ID: 1620939

QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.400U	0.800	0.250	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	25.0U	50.0	15.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	25.0U	50.0	15.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.500U	1.00	0.400	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	50.0U	100	31.0	ug/kg
4-Chlorotoluene	12.5U	25.0	7.80	ug/kg
4-Isopropyltoluene	50.0U	100	25.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	78.0	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	6.20	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

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### Method Blank

Blank ID: MB for HBN 1821790 [VXX/37354]  
Blank Lab ID: 1620939

Matrix: Soil/Solid (dry weight)

QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloroform	2.00U	4.00	1.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	25.0U	50.0	15.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	2.50U	5.00	1.50	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	111	71-136		%
4-Bromofluorobenzene (surr)	94.8	55-151		%
Toluene-d8 (surr)	99.4	85-116		%

Print Date: 07/27/2021 1:18:47PM



**Method Blank**

Blank ID: MB for HBN 1821790 [VXX/37354]  
Blank Lab ID: 1620939

Matrix: Soil/Solid (dry weight)

QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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**Batch Information**

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Instrument: VQA 7890/5975 GC/MS  
Analyst: S.S  
Analytical Date/Time: 7/2/2021 8:47:00AM

Prep Batch: VXX37354  
Prep Method: SW5035A  
Prep Date/Time: 7/2/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:47PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37354]

Blank Spike Lab ID: 1620940

Date Analyzed: 07/02/2021 09:03

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
1,1,1,2-Tetrachloroethane	750	790	105	( 78-125 )
1,1,1-Trichloroethane	750	731	98	( 73-130 )
1,1,2,2-Tetrachloroethane	750	795	106	( 70-124 )
1,1,2-Trichloroethane	750	762	102	( 78-121 )
1,1-Dichloroethane	750	715	95	( 76-125 )
1,1-Dichloroethene	750	693	92	( 70-131 )
1,1-Dichloropropene	750	770	103	( 76-125 )
1,2,3-Trichlorobenzene	750	720	96	( 66-130 )
1,2,3-Trichloropropane	750	773	103	( 73-125 )
1,2,4-Trichlorobenzene	750	738	98	( 67-129 )
1,2,4-Trimethylbenzene	750	768	102	( 75-123 )
1,2-Dibromo-3-chloropropane	750	768	102	( 61-132 )
1,2-Dibromoethane	750	845	113	( 78-122 )
1,2-Dichlorobenzene	750	758	101	( 78-121 )
1,2-Dichloroethane	750	693	92	( 73-128 )
1,2-Dichloropropane	750	779	104	( 76-123 )
1,3,5-Trimethylbenzene	750	743	99	( 73-124 )
1,3-Dichlorobenzene	750	763	102	( 77-121 )
1,3-Dichloropropane	750	817	109	( 77-121 )
1,4-Dichlorobenzene	750	768	102	( 75-120 )
2,2-Dichloropropane	750	750	100	( 67-133 )
2-Butanone (MEK)	2250	2240	100	( 51-148 )
2-Chlorotoluene	750	766	102	( 75-122 )
2-Hexanone	2250	2450	109	( 53-145 )
4-Chlorotoluene	750	759	101	( 72-124 )
4-Isopropyltoluene	750	749	100	( 73-127 )
4-Methyl-2-pentanone (MIBK)	2250	2270	101	( 65-135 )
Acetone	2250	2220	99	( 36-164 )
Benzene	750	759	101	( 77-121 )
Bromobenzene	750	785	105	( 78-121 )
Bromochloromethane	750	716	96	( 78-125 )
Bromodichloromethane	750	748	100	( 75-127 )
Bromoform	750	794	106	( 67-132 )
Bromomethane	750	714	95	( 53-143 )

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### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37354]

Blank Spike Lab ID: 1620940

Date Analyzed: 07/02/2021 09:03

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
Carbon disulfide	1130	1150	102	( 63-132 )
Carbon tetrachloride	750	740	99	( 70-135 )
Chlorobenzene	750	749	100	( 79-120 )
Chloroethane	750	762	102	( 59-139 )
Chloroform	750	681	91	( 78-123 )
Chloromethane	750	719	96	( 50-136 )
cis-1,2-Dichloroethene	750	706	94	( 77-123 )
cis-1,3-Dichloropropene	750	809	108	( 74-126 )
Dibromochloromethane	750	837	112	( 74-126 )
Dibromomethane	750	743	99	( 78-125 )
Dichlorodifluoromethane	750	652	87	( 29-149 )
Ethylbenzene	750	724	97	( 76-122 )
Freon-113	1130	1040	92	( 66-136 )
Hexachlorobutadiene	750	725	97	( 61-135 )
Isopropylbenzene (Cumene)	750	759	101	( 68-134 )
Methylene chloride	750	749	100	( 70-128 )
Methyl-t-butyl ether	1130	1110	98	( 73-125 )
Naphthalene	750	760	101	( 62-129 )
n-Butylbenzene	750	759	101	( 70-128 )
n-Propylbenzene	750	759	101	( 73-125 )
o-Xylene	750	742	99	( 77-123 )
P & M -Xylene	1500	1460	98	( 77-124 )
sec-Butylbenzene	750	740	99	( 73-126 )
Styrene	750	773	103	( 76-124 )
tert-Butylbenzene	750	744	99	( 73-125 )
Tetrachloroethene	750	782	104	( 73-128 )
Toluene	750	737	98	( 77-121 )
trans-1,2-Dichloroethene	750	717	96	( 74-125 )
trans-1,3-Dichloropropene	750	771	103	( 71-130 )
Trichloroethene	750	790	105	( 77-123 )
Trichlorofluoromethane	750	851	113	( 62-140 )
Vinyl acetate	750	807	108	( 50-151 )
Vinyl chloride	750	719	96	( 56-135 )
Xylenes (total)	2250	2210	98	( 78-124 )

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### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37354]

Blank Spike Lab ID: 1620940

Date Analyzed: 07/02/2021 09:03

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	750		95	( 71-136 )
4-Bromofluorobenzene (surr)	750		91	( 55-151 )
Toluene-d8 (surr)	750		102	( 85-116 )

### Batch Information

Analytical Batch: VMS20881

Analytical Method: SW8260D

Instrument: VQA 7890/5975 GC/MS

Analyst: S.S

Prep Batch: VXX37354

Prep Method: SW5035A

Prep Date/Time: 07/02/2021 06:00

Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:18:50PM



### Matrix Spike Summary

Original Sample ID: 1620941  
 MS Sample ID: 1620942 MS  
 MSD Sample ID: 1620943 MSD

Analysis Date: 07/02/2021 12:18  
 Analysis Date: 07/02/2021 10:39  
 Analysis Date: 07/02/2021 10:56  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	10.9U	814	839	103	814	841	103	78-125	0.16	(< 20)
1,1,1-Trichloroethane	13.6U	814	757	93	814	755	93	73-130	0.36	(< 20)
1,1,2,2-Tetrachloroethane	1.09U	814	878	108	814	859	106	70-124	2.20	(< 20)
1,1,2-Trichloroethane	0.434U	814	809	99	814	820	101	78-121	1.40	(< 20)
1,1-Dichloroethane	13.6U	814	745	92	814	752	92	76-125	0.87	(< 20)
1,1-Dichloroethene	13.6U	814	724	89	814	723	89	70-131	0.19	(< 20)
1,1-Dichloropropene	13.6U	814	789	97	814	784	96	76-125	0.66	(< 20)
1,2,3-Trichlorobenzene	27.1U	814	807	99	814	831	102	66-130	2.90	(< 20)
1,2,3-Trichloropropane	1.09U	814	847	104	814	816	100	73-125	3.80	(< 20)
1,2,4-Trichlorobenzene	13.6U	814	812	100	814	823	101	67-129	1.40	(< 20)
1,2,4-Trimethylbenzene	27.1U	814	804	99	814	785	96	75-123	2.40	(< 20)
1,2-Dibromo-3-chloropropane	54.0U	814	849	104	814	844	104	61-132	0.54	(< 20)
1,2-Dibromoethane	0.540U	814	903	111	814	917	113	78-122	1.50	(< 20)
1,2-Dichlorobenzene	13.6U	814	819	101	814	808	99	78-121	1.40	(< 20)
1,2-Dichloroethane	1.09U	814	734	90	814	745	92	73-128	1.50	(< 20)
1,2-Dichloropropane	5.40U	814	814	100	814	829	102	76-123	1.80	(< 20)
1,3,5-Trimethylbenzene	13.6U	814	790	97	814	754	93	73-124	4.70	(< 20)
1,3-Dichlorobenzene	13.6U	814	815	100	814	794	98	77-121	2.60	(< 20)
1,3-Dichloropropane	5.40U	814	870	107	814	880	108	77-121	1.10	(< 20)
1,4-Dichlorobenzene	13.6U	814	816	100	814	800	98	75-120	1.90	(< 20)
2,2-Dichloropropane	13.6U	814	784	96	814	782	96	67-133	0.31	(< 20)
2-Butanone (MEK)	136U	2440	2400	98	2440	2400	98	51-148	0.24	(< 20)
2-Chlorotoluene	13.6U	814	796	98	814	786	97	75-122	1.30	(< 20)
2-Hexanone	54.0U	2440	2600	106	2440	2650	109	53-145	2.00	(< 20)
4-Chlorotoluene	13.6U	814	815	100	814	788	97	72-124	3.30	(< 20)
4-Isopropyltoluene	54.0U	814	774	95	814	749	92	73-127	3.20	(< 20)
4-Methyl-2-pentanone (MIBK)	136U	2440	2410	99	2440	2480	101	65-135	2.60	(< 20)
Acetone	136U	2440	2410	99	2440	2360	97	36-164	2.20	(< 20)
Benzene	6.80U	814	789	97	814	791	97	77-121	0.27	(< 20)
Bromobenzene	13.6U	814	836	103	814	817	100	78-121	2.30	(< 20)
Bromochloromethane	13.6U	814	761	94	814	778	96	78-125	2.20	(< 20)
Bromodichloromethane	1.09U	814	791	97	814	803	99	75-127	1.60	(< 20)
Bromoform	13.6U	814	853	105	814	868	107	67-132	1.70	(< 20)
Bromomethane	10.9U	814	783	96	814	800	98	53-143	2.20	(< 20)
Carbon disulfide	54.0U	1220	1190	98	1220	1190	97	63-132	0.48	(< 20)
Carbon tetrachloride	6.80U	814	764	94	814	760	93	70-135	0.61	(< 20)
Chlorobenzene	13.6U	814	784	96	814	786	97	79-120	0.35	(< 20)

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### Matrix Spike Summary

Original Sample ID: 1620941  
 MS Sample ID: 1620942 MS  
 MSD Sample ID: 1620943 MSD

Analysis Date: 07/02/2021 12:18  
 Analysis Date: 07/02/2021 10:39  
 Analysis Date: 07/02/2021 10:56  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	109U	814	800	98	814	793	98	59-139	0.82	(< 20)
Chloroform	2.17U	814	713	88	814	724	89	78-123	1.50	(< 20)
Chloromethane	13.6U	814	678	83	814	681	84	50-136	0.44	(< 20)
cis-1,2-Dichloroethene	13.6U	814	757	93	814	754	93	77-123	0.47	(< 20)
cis-1,3-Dichloropropene	6.80U	814	854	105	814	870	107	74-126	2.00	(< 20)
Dibromochloromethane	2.71U	814	890	109	814	901	111	74-126	1.20	(< 20)
Dibromomethane	13.6U	814	787	97	814	805	99	78-125	2.30	(< 20)
Dichlorodifluoromethane	27.1U	814	774	95	814	773	95	29-149	0.07	(< 20)
Ethylbenzene	13.6U	814	749	92	814	746	92	76-122	0.47	(< 20)
Freon-113	54.0U	1220	1070	88	1220	1060	87	66-136	0.38	(< 20)
Hexachlorobutadiene	10.9U	814	770	95	814	789	97	61-135	2.40	(< 20)
Isopropylbenzene (Cumene)	13.6U	814	780	96	814	777	96	68-134	0.38	(< 20)
Methylene chloride	54.0U	814	806	99	814	825	101	70-128	2.40	(< 20)
Methyl-t-butyl ether	54.0U	1220	1180	96	1220	1210	99	73-125	2.90	(< 20)
Naphthalene	13.6U	814	852	105	814	869	107	62-129	2.00	(< 20)
n-Butylbenzene	13.6U	814	780	96	814	756	93	70-128	3.10	(< 20)
n-Propylbenzene	13.6U	814	789	97	814	770	95	73-125	2.50	(< 20)
o-Xylene	13.6U	814	773	95	814	779	96	77-123	0.77	(< 20)
P & M -Xylene	27.1U	1630	1520	93	1630	1500	92	77-124	1.00	(< 20)
sec-Butylbenzene	13.6U	814	764	94	814	738	91	73-126	3.50	(< 20)
Styrene	13.6U	814	809	99	814	808	99	76-124	0.17	(< 20)
tert-Butylbenzene	13.6U	814	781	96	814	753	93	73-125	3.60	(< 20)
Tetrachloroethene	6.80U	814	812	100	814	802	99	73-128	1.20	(< 20)
Toluene	13.6U	814	764	94	814	765	94	77-121	0.11	(< 20)
trans-1,2-Dichloroethene	13.6U	814	749	92	814	732	90	74-125	2.40	(< 20)
trans-1,3-Dichloropropene	6.80U	814	797	98	814	829	102	71-130	3.90	(< 20)
Trichloroethene	2.71U	814	818	101	814	818	101	77-123	0.07	(< 20)
Trichlorofluoromethane	27.1U	814	1040	127	814	1110	136	62-140	6.60	(< 20)
Vinyl acetate	54.0U	814	839	103	814	856	105	50-151	2.00	(< 20)
Vinyl chloride	0.434U	814	743	91	814	745	92	56-135	0.18	(< 20)
Xylenes (total)	40.7U	2440	2290	94	2440	2280	93	78-124	0.40	(< 20)
<b>Surrogates</b>										
1,2-Dichloroethane-D4 (surr)		814	781	96	814	776	95	71-136	0.63	
4-Bromofluorobenzene (surr)		1360	928	68	1360	908	67	55-151	2.20	
Toluene-d8 (surr)		814	822	101	814	817	100	85-116	0.66	

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### Matrix Spike Summary

Original Sample ID: 1620941  
MS Sample ID: 1620942 MS  
MSD Sample ID: 1620943 MSD

Analysis Date:  
Analysis Date: 07/02/2021 10:39  
Analysis Date: 07/02/2021 10:56  
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014, 1213715015

### Results by SW8260D

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

### Batch Information

Analytical Batch: VMS20881  
Analytical Method: SW8260D  
Instrument: VQA 7890/5975 GC/MS  
Analyst: S.S  
Analytical Date/Time: 7/2/2021 10:39:00AM

Prep Batch: VXX37354  
Prep Method: Vol. Extraction SW8260 Field Extracted L  
Prep Date/Time: 7/2/2021 6:00:00AM  
Prep Initial Wt./Vol.: 46.08g  
Prep Extract Vol: 25.00mL

Print Date: 07/27/2021 1:18:51PM



### Method Blank

Blank ID: MB for HBN 1821803 [VXX/37357]  
Blank Lab ID: 1620967

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715005, 1213715006, 1213715016, 1213715033

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.783J	2.50	0.750	mg/kg
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	79.2	50-150		%

### Batch Information

Analytical Batch: VFC15691  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT  
Analytical Date/Time: 7/1/2021 12:35:00PM

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 7/1/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:52PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37357]  
Blank Spike Lab ID: 1620968  
Date Analyzed: 07/01/2021 11:59

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37357]  
Spike Duplicate Lab ID: 1620969  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715005, 1213715006, 1213715016, 1213715033

### Results by AK101

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	14.2	114	12.5	13.7	110	( 60-120 )	3.60	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	1.25		90	1.25		92	( 50-150 )	2.50	
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### Batch Information

Analytical Batch: VFC15691  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT

Prep Batch: VXX37357  
Prep Method: SW5035A  
Prep Date/Time: 07/01/2021 06:00  
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL  
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:55PM



### Method Blank

Blank ID: MB for HBN 1821848 [VXX/37362]

Blank Lab ID: 1621120

QC for Samples:

1213715023

Matrix: Soil/Solid (dry weight)

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.400U	0.800	0.250	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	25.0U	50.0	15.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	25.0U	50.0	15.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.500U	1.00	0.400	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	50.0U	100	31.0	ug/kg
4-Chlorotoluene	12.5U	25.0	7.80	ug/kg
4-Isopropyltoluene	50.0U	100	25.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	78.0	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	6.20	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

Print Date: 07/27/2021 1:18:57PM



### Method Blank

Blank ID: MB for HBN 1821848 [VXX/37362]

Blank Lab ID: 1621120

QC for Samples:

1213715023

Matrix: Soil/Solid (dry weight)

### Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloroform	2.00U	4.00	1.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	25.0U	50.0	15.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	2.50U	5.00	1.50	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	111	71-136		%
4-Bromofluorobenzene (surr)	94.9	55-151		%
Toluene-d8 (surr)	99.4	85-116		%

Print Date: 07/27/2021 1:18:57PM



**Method Blank**

Blank ID: MB for HBN 1821848 [VXX/37362]  
Blank Lab ID: 1621120

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715023

**Results by SW8260D**

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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**Batch Information**

Analytical Batch: VMS20887  
Analytical Method: SW8260D  
Instrument: VQA 7890/5975 GC/MS  
Analyst: S.S  
Analytical Date/Time: 7/6/2021 1:14:00PM

Prep Batch: VXX37362  
Prep Method: SW5035A  
Prep Date/Time: 7/6/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:18:57PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37362]

Blank Spike Lab ID: 1621121

Date Analyzed: 07/06/2021 13:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715023

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
1,1,1,2-Tetrachloroethane	750	783	104	(78-125)
1,1,1-Trichloroethane	750	713	95	(73-130)
1,1,2,2-Tetrachloroethane	750	776	103	(70-124)
1,1,2-Trichloroethane	750	746	100	(78-121)
1,1-Dichloroethane	750	692	92	(76-125)
1,1-Dichloroethene	750	675	90	(70-131)
1,1-Dichloropropene	750	749	100	(76-125)
1,2,3-Trichlorobenzene	750	692	92	(66-130)
1,2,3-Trichloropropane	750	752	100	(73-125)
1,2,4-Trichlorobenzene	750	705	94	(67-129)
1,2,4-Trimethylbenzene	750	730	97	(75-123)
1,2-Dibromo-3-chloropropane	750	740	99	(61-132)
1,2-Dibromoethane	750	840	112	(78-122)
1,2-Dichlorobenzene	750	736	98	(78-121)
1,2-Dichloroethane	750	687	92	(73-128)
1,2-Dichloropropane	750	763	102	(76-123)
1,3,5-Trimethylbenzene	750	712	95	(73-124)
1,3-Dichlorobenzene	750	730	97	(77-121)
1,3-Dichloropropane	750	805	107	(77-121)
1,4-Dichlorobenzene	750	738	98	(75-120)
2,2-Dichloropropane	750	721	96	(67-133)
2-Butanone (MEK)	2250	2200	98	(51-148)
2-Chlorotoluene	750	730	97	(75-122)
2-Hexanone	2250	2380	106	(53-145)
4-Chlorotoluene	750	729	97	(72-124)
4-Isopropyltoluene	750	714	95	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2260	100	(65-135)
Acetone	2250	2170	97	(36-164)
Benzene	750	740	99	(77-121)
Bromobenzene	750	760	101	(78-121)
Bromochloromethane	750	715	95	(78-125)
Bromodichloromethane	750	741	99	(75-127)
Bromoform	750	784	105	(67-132)
Bromomethane	750	735	98	(53-143)

Print Date: 07/27/2021 1:18:59PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37362]

Blank Spike Lab ID: 1621121

Date Analyzed: 07/06/2021 13:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715023

### Results by SW8260D

#### Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1090	97	( 63-132 )
Carbon tetrachloride	750	723	96	( 70-135 )
Chlorobenzene	750	732	98	( 79-120 )
Chloroethane	750	779	104	( 59-139 )
Chloroform	750	670	89	( 78-123 )
Chloromethane	750	750	100	( 50-136 )
cis-1,2-Dichloroethene	750	699	93	( 77-123 )
cis-1,3-Dichloropropene	750	792	106	( 74-126 )
Dibromochloromethane	750	828	110	( 74-126 )
Dibromomethane	750	738	98	( 78-125 )
Dichlorodifluoromethane	750	771	103	( 29-149 )
Ethylbenzene	750	709	95	( 76-122 )
Freon-113	1130	1010	90	( 66-136 )
Hexachlorobutadiene	750	666	89	( 61-135 )
Isopropylbenzene (Cumene)	750	738	98	( 68-134 )
Methylene chloride	750	739	99	( 70-128 )
Methyl-t-butyl ether	1130	1090	97	( 73-125 )
Naphthalene	750	722	96	( 62-129 )
n-Butylbenzene	750	713	95	( 70-128 )
n-Propylbenzene	750	718	96	( 73-125 )
o-Xylene	750	729	97	( 77-123 )
P & M -Xylene	1500	1430	95	( 77-124 )
sec-Butylbenzene	750	707	94	( 73-126 )
Styrene	750	750	100	( 76-124 )
tert-Butylbenzene	750	717	96	( 73-125 )
Tetrachloroethene	750	771	103	( 73-128 )
Toluene	750	716	96	( 77-121 )
trans-1,2-Dichloroethene	750	701	93	( 74-125 )
trans-1,3-Dichloropropene	750	754	100	( 71-130 )
Trichloroethene	750	775	103	( 77-123 )
Trichlorofluoromethane	750	836	111	( 62-140 )
Vinyl acetate	750	802	107	( 50-151 )
Vinyl chloride	750	756	101	( 56-135 )
Xylenes (total)	2250	2160	96	( 78-124 )

Print Date: 07/27/2021 1:18:59PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37362]

Blank Spike Lab ID: 1621121

Date Analyzed: 07/06/2021 13:30

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715023

### Results by SW8260D

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
<b>Surrogates</b>				
1,2-Dichloroethane-D4 (surr)	750	96		( 71-136 )
4-Bromofluorobenzene (surr)	750	89		( 55-151 )
Toluene-d8 (surr)	750	101		( 85-116 )

### Batch Information

Analytical Batch: VMS20887

Analytical Method: SW8260D

Instrument: VQA 7890/5975 GC/MS

Analyst: S.S

Prep Batch: VXX37362

Prep Method: SW5035A

Prep Date/Time: 07/06/2021 06:00

Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:18:59PM



### Matrix Spike Summary

Original Sample ID: 1621122  
 MS Sample ID: 1621123 MS  
 MSD Sample ID: 1621124 MSD

Analysis Date: 07/06/2021 16:37  
 Analysis Date: 07/06/2021 14:59  
 Analysis Date: 07/06/2021 15:15  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715023

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	17.9U	1350	1410	105	1350	1410	105	78-125	0.32	(< 20 )
1,1,1-Trichloroethane	22.4U	1350	1310	97	1350	1300	97	73-130	0.65	(< 20 )
1,1,2,2-Tetrachloroethane	1.79U	1350	1420	106	1350	1490	111	70-124	5.00	(< 20 )
1,1,2-Trichloroethane	0.720U	1350	1390	103	1350	1410	105	78-121	2.00	(< 20 )
1,1-Dichloroethane	22.4U	1350	1270	94	1350	1280	95	76-125	0.74	(< 20 )
1,1-Dichloroethene	22.4U	1350	1280	95	1350	1270	94	70-131	1.30	(< 20 )
1,1-Dichloropropene	22.4U	1350	1370	102	1350	1370	101	76-125	0.69	(< 20 )
1,2,3-Trichlorobenzene	44.9U	1350	1270	94	1350	1360	101	66-130	7.00	(< 20 )
1,2,3-Trichloropropane	1.79U	1350	1460	109	1350	1450	108	73-125	0.86	(< 20 )
1,2,4-Trichlorobenzene	22.4U	1350	1290	96	1350	1350	101	67-129	4.40	(< 20 )
1,2,4-Trimethylbenzene	85.7J	1350	1420	99	1350	1460	102	75-123	2.20	(< 20 )
1,2-Dibromo-3-chloropropane	89.5U	1350	1350	100	1350	1440	107	61-132	6.80	(< 20 )
1,2-Dibromoethane	0.895U	1350	1540	114	1350	1580	118	78-122	2.70	(< 20 )
1,2-Dichlorobenzene	22.4U	1350	1340	99	1350	1360	101	78-121	1.80	(< 20 )
1,2-Dichloroethane	1.79U	1350	1250	93	1350	1280	95	73-128	2.40	(< 20 )
1,2-Dichloropropane	8.95U	1350	1370	102	1350	1390	103	76-123	1.50	(< 20 )
1,3,5-Trimethylbenzene	22.4U	1350	1340	99	1350	1310	97	73-124	2.00	(< 20 )
1,3-Dichlorobenzene	22.4U	1350	1320	98	1350	1340	100	77-121	1.30	(< 20 )
1,3-Dichloropropane	8.95U	1350	1470	110	1350	1510	112	77-121	2.20	(< 20 )
1,4-Dichlorobenzene	22.4U	1350	1330	99	1350	1350	100	75-120	1.50	(< 20 )
2,2-Dichloropropane	22.4U	1350	1330	99	1350	1330	99	67-133	0.13	(< 20 )
2-Butanone (MEK)	225U	4040	4050	100	4040	4290	106	51-148	5.70	(< 20 )
2-Chlorotoluene	22.4U	1350	1320	98	1350	1340	100	75-122	1.30	(< 20 )
2-Hexanone	89.5U	4040	4410	109	4040	4610	114	53-145	4.40	(< 20 )
4-Chlorotoluene	22.4U	1350	1320	98	1350	1310	97	72-124	0.75	(< 20 )
4-Isopropyltoluene	105J	1350	1450	100	1350	1450	100	73-127	0.22	(< 20 )
4-Methyl-2-pentanone (MIBK)	225U	4040	4150	103	4040	4370	108	65-135	5.20	(< 20 )
Acetone	348J	4040	4070	92	4040	4250	97	36-164	4.30	(< 20 )
Benzene	17.5J	1350	1360	100	1350	1380	101	77-121	1.20	(< 20 )
Bromobenzene	22.4U	1350	1380	102	1350	1400	104	78-121	1.40	(< 20 )
Bromochloromethane	22.4U	1350	1300	97	1350	1320	98	78-125	1.30	(< 20 )
Bromodichloromethane	1.79U	1350	1330	99	1350	1350	100	75-127	1.00	(< 20 )
Bromoform	22.4U	1350	1460	108	1350	1480	110	67-132	1.60	(< 20 )
Bromomethane	17.9U	1350	1410	105	1350	1400	104	53-143	0.93	(< 20 )
Carbon disulfide	89.5U	2020	2110	105	2020	2080	103	63-132	1.40	(< 20 )
Carbon tetrachloride	11.2U	1350	1340	100	1350	1320	98	70-135	1.50	(< 20 )
Chlorobenzene	22.4U	1350	1330	99	1350	1330	99	79-120	0.64	(< 20 )

Print Date: 07/27/2021 1:19:00PM



### Matrix Spike Summary

Original Sample ID: 1621122  
 MS Sample ID: 1621123 MS  
 MSD Sample ID: 1621124 MSD

Analysis Date: 07/06/2021 16:37  
 Analysis Date: 07/06/2021 14:59  
 Analysis Date: 07/06/2021 15:15  
 Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715023

### Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	180U	1350	1440	107	1350	1360	101	59-139	5.60	(< 20)
Chloroform	3.59U	1350	1210	90	1350	1220	90	78-123	0.67	(< 20)
Chloromethane	22.4U	1350	1220	90	1350	1210	90	50-136	0.70	(< 20)
cis-1,2-Dichloroethene	22.4U	1350	1300	97	1350	1330	99	77-123	2.30	(< 20)
cis-1,3-Dichloropropene	11.2U	1350	1430	107	1350	1470	109	74-126	2.10	(< 20)
Dibromochloromethane	4.49U	1350	1520	113	1350	1530	114	74-126	1.10	(< 20)
Dibromomethane	22.4U	1350	1340	100	1350	1380	103	78-125	2.70	(< 20)
Dichlorodifluoromethane	44.9U	1350	1440	107	1350	1420	105	29-149	1.60	(< 20)
Ethylbenzene	35.9J	1350	1330	96	1350	1320	95	76-122	1.10	(< 20)
Freon-113	89.5U	2020	1880	93	2020	1850	92	66-136	1.40	(< 20)
Hexachlorobutadiene	17.9U	1350	1610	119	1350	1670	124	61-135	3.90	(< 20)
Isopropylbenzene (Cumene)	22.4U	1350	1350	101	1350	1330	99	68-134	1.50	(< 20)
Methylene chloride	89.5U	1350	1340	100	1350	1360	101	70-128	0.96	(< 20)
Methyl-t-butyl ether	89.5U	2020	1930	96	2020	2040	101	73-125	5.50	(< 20)
Naphthalene	73.1	1350	1400	98	1350	1520	107	62-129	8.30	(< 20)
n-Butylbenzene	22.4U	1350	1350	100	1350	1360	101	70-128	1.30	(< 20)
n-Propylbenzene	22.4U	1350	1320	98	1350	1330	99	73-125	0.51	(< 20)
o-Xylene	114	1350	1450	100	1350	1430	98	77-123	1.80	(< 20)
P & M -Xylene	172	2690	2790	97	2690	2780	97	77-124	0.21	(< 20)
sec-Butylbenzene	22.4U	1350	1300	97	1350	1310	97	73-126	0.48	(< 20)
Styrene	37.7J	1350	1400	101	1350	1410	102	76-124	0.51	(< 20)
tert-Butylbenzene	22.4U	1350	1310	97	1350	1310	98	73-125	0.31	(< 20)
Tetrachloroethene	11.2U	1350	1400	104	1350	1370	102	73-128	2.10	(< 20)
Toluene	119	1350	1430	97	1350	1410	96	77-121	1.10	(< 20)
trans-1,2-Dichloroethene	22.4U	1350	1310	97	1350	1290	96	74-125	1.00	(< 20)
trans-1,3-Dichloropropene	11.2U	1350	1380	102	1350	1390	104	71-130	1.30	(< 20)
Trichloroethene	4.49U	1350	1420	105	1350	1410	105	77-123	0.54	(< 20)
Trichlorofluoromethane	44.9U	1350	1970	146 *	1350	1560	116	62-140	23.20 *	(< 20)
Vinyl acetate	89.5U	1350	1430	106	1350	1470	109	50-151	2.90	(< 20)
Vinyl chloride	0.720U	1350	1370	101	1350	1330	99	56-135	2.80	(< 20)
Xylenes (total)	286	4040	4240	98	4040	4210	97	78-124	0.75	(< 20)
<b>Surrogates</b>										
1,2-Dichloroethane-D4 (surr)		1350	1310	98	1350	1320	98	71-136	0.78	
4-Bromofluorobenzene (surr)		2240	1590	71	2240	1620	72	55-151	1.90	
Toluene-d8 (surr)		1350	1370	102	1350	1350	100	85-116	1.40	

Print Date: 07/27/2021 1:19:00PM



### Matrix Spike Summary

Original Sample ID: 1621122  
MS Sample ID: 1621123 MS  
MSD Sample ID: 1621124 MSD

Analysis Date:  
Analysis Date: 07/06/2021 14:59  
Analysis Date: 07/06/2021 15:15  
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1213715023

### Results by SW8260D

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

### Batch Information

Analytical Batch: VMS20887  
Analytical Method: SW8260D  
Instrument: VQA 7890/5975 GC/MS  
Analyst: S.S  
Analytical Date/Time: 7/6/2021 2:59:00PM

Prep Batch: VXX37362  
Prep Method: Vol. Extraction SW8260 Field Extracted L  
Prep Date/Time: 7/6/2021 6:00:00AM  
Prep Initial Wt./Vol.: 27.86g  
Prep Extract Vol: 25.00mL

Print Date: 07/27/2021 1:19:00PM



### Method Blank

Blank ID: MB for HBN 1822031 [VXX/37385]  
Blank Lab ID: 1622021

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715012, 1213715014, 1213715015, 1213715023

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.26J	2.50	0.750	mg/kg
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	95.2	50-150		%

### Batch Information

Analytical Batch: VFC15700  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT  
Analytical Date/Time: 7/7/2021 7:53:00PM

Prep Batch: VXX37385  
Prep Method: SW5035A  
Prep Date/Time: 7/7/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:01PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37385]  
 Blank Spike Lab ID: 1622022  
 Date Analyzed: 07/07/2021 19:17

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37385]  
 Spike Duplicate Lab ID: 1622023  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715007, 1213715008, 1213715012, 1213715014, 1213715015, 1213715023

### Results by AK101

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	13.5	108	12.5	13.3	107	( 60-120 )	1.70	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	1.25		105	1.25		102	( 50-150 )	3.00	
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### Batch Information

Analytical Batch: VFC15700  
 Analytical Method: AK101  
 Instrument: Agilent 7890 PID/FID  
 Analyst: MDT

Prep Batch: VXX37385  
 Prep Method: SW5035A  
 Prep Date/Time: 07/07/2021 06:00  
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL  
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:03PM



### Method Blank

Blank ID: MB for HBN 1822482 [VXX/37429]  
Blank Lab ID: 1623631

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715011

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.23J	2.50	0.750	mg/kg
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	99.8	50-150		%

### Batch Information

Analytical Batch: VFC15714  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT  
Analytical Date/Time: 7/15/2021 6:03:00PM

Prep Batch: VXX37429  
Prep Method: SW5035A  
Prep Date/Time: 7/15/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:06PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37429]  
Blank Spike Lab ID: 1623632  
Date Analyzed: 07/15/2021 17:27

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37429]  
Spike Duplicate Lab ID: 1623633  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715011

### Results by AK101

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	13.9	111	12.5	13.4	108	( 60-120 )	3.50	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	1.25		114	1.25		115	( 50-150 )	1.10	
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### Batch Information

Analytical Batch: VFC15714  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT

Prep Batch: VXX37429  
Prep Method: SW5035A  
Prep Date/Time: 07/15/2021 06:00  
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL  
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:08PM



### Method Blank

Blank ID: MB for HBN 1822613 [VXX/37449]  
Blank Lab ID: 1624243

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715013

### Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.59J	2.50	0.750	mg/kg
<b>Surrogates</b>				
4-Bromofluorobenzene (surr)	80.3	50-150		%

### Batch Information

Analytical Batch: VFC15719  
Analytical Method: AK101  
Instrument: Agilent 7890 PID/FID  
Analyst: MDT  
Analytical Date/Time: 7/19/2021 9:10:00PM

Prep Batch: VXX37449  
Prep Method: SW5035A  
Prep Date/Time: 7/19/2021 6:00:00AM  
Prep Initial Wt./Vol.: 50 g  
Prep Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:10PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [VXX37449]  
Blank Spike Lab ID: 1624244  
Date Analyzed: 07/19/2021 20:34

Spike Duplicate ID: LCSD for HBN 1213715 [VXX37449]  
Spike Duplicate Lab ID: 1624245  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715013

### Results by AK101

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	13.6	109	12.5	13.2	105	( 60-120 )	3.00	(< 20 )

### Surrogates

4-Bromofluorobenzene (surr)	1.25		91	1.25		87	( 50-150 )	4.50	
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### Batch Information

Analytical Batch: **VFC15719**  
Analytical Method: **AK101**  
Instrument: **Agilent 7890 PID/FID**  
Analyst: **MDT**

Prep Batch: **VXX37449**  
Prep Method: **SW5035A**  
Prep Date/Time: **07/19/2021 06:00**  
Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL  
Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 07/27/2021 1:19:13PM



### Method Blank

Blank ID: MB for HBN 1821392 [XXX/45053]  
Blank Lab ID: 1618950

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1213715009, 1213715010, 1213715017, 1213715018

### Results by 8270D SIM LV (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	66.5	42-86		%
Fluoranthene-d10 (surr)	69.7	50-97		%

### Batch Information

Analytical Batch: XMS12708  
Analytical Method: 8270D SIM LV (PAH)  
Instrument: SVA Agilent 780/5975 GC/MS  
Analyst: LAW  
Analytical Date/Time: 7/1/2021 8:26:00PM

Prep Batch: XXX45053  
Prep Method: SW3535A  
Prep Date/Time: 6/28/2021 1:00:27PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:15PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45053]  
 Blank Spike Lab ID: 1618951  
 Date Analyzed: 07/01/2021 20:47

Spike Duplicate ID: LCSD for HBN 1213715  
 [XXX45053]  
 Spike Duplicate Lab ID: 1618952  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715017, 1213715018

### Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.68	84	2	1.40	70	( 41-115 )	18.10	(< 20 )
2-Methylnaphthalene	2	1.67	84	2	1.39	70	( 39-114 )	18.20	(< 20 )
Acenaphthene	2	1.75	88	2	1.50	75	( 48-114 )	15.40	(< 20 )
Acenaphthylene	2	1.77	89	2	1.59	79	( 35-121 )	11.00	(< 20 )
Anthracene	2	1.70	85	2	1.54	77	( 53-119 )	10.00	(< 20 )
Benzo(a)Anthracene	2	1.58	79	2	1.40	70	( 59-120 )	11.90	(< 20 )
Benzo[a]pyrene	2	1.73	87	2	1.60	80	( 53-120 )	7.70	(< 20 )
Benzo[b]Fluoranthene	2	1.63	82	2	1.42	71	( 53-126 )	13.80	(< 20 )
Benzo[g,h,i]perylene	2	1.92	96	2	1.81	91	( 44-128 )	5.50	(< 20 )
Benzo[k]fluoranthene	2	1.73	86	2	1.63	81	( 54-125 )	6.10	(< 20 )
Chrysene	2	1.63	82	2	1.49	75	( 57-120 )	8.80	(< 20 )
Dibenzo[a,h]anthracene	2	1.95	97	2	1.84	92	( 44-131 )	5.50	(< 20 )
Fluoranthene	2	1.55	78	2	1.39	70	( 58-120 )	10.70	(< 20 )
Fluorene	2	1.78	89	2	1.57	78	( 50-118 )	12.60	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.90	95	2	1.78	89	( 48-130 )	6.60	(< 20 )
Naphthalene	2	1.71	86	2	1.43	72	( 43-114 )	17.70	(< 20 )
Phenanthrene	2	1.73	87	2	1.55	77	( 53-115 )	11.20	(< 20 )
Pyrene	2	1.57	78	2	1.41	70	( 53-121 )	10.80	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2		76	2		68	( 42-86 )	10.80	
Fluoranthene-d10 (surr)	2		76	2		71	( 50-97 )	6.60	

### Batch Information

Analytical Batch: XMS12708  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: LAW

Prep Batch: XXX45053  
 Prep Method: SW3535A  
 Prep Date/Time: 06/28/2021 13:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:17PM



### Matrix Spike Summary

Original Sample ID: 1213714007  
 MS Sample ID: 1618953 MS  
 MSD Sample ID: 1618954 MSD

Analysis Date: 07/01/2021 22:29  
 Analysis Date: 07/01/2021 22:50  
 Analysis Date: 07/01/2021 23:10  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010, 1213715017, 1213715018

### Results by 8270D SIM LV (PAH)

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	7.87	2.04	8.08	10 *	2.04	9.17	64	41-115	12.70	(< 20)
2-Methylnaphthalene	7.03	2.04	7.41	19 *	2.04	8.56	75	39-114	14.40	(< 20)
Acenaphthene	0.0261U	2.04	1.5	74	2.04	1.53	75	48-114	2.00	(< 20)
Acenaphthylene	0.0261U	2.04	1.49	73	2.04	1.47	72	35-121	1.20	(< 20)
Anthracene	0.0261U	2.04	1.61	79	2.04	1.50	74	53-119	6.60	(< 20)
Benzo(a)Anthracene	0.0261U	2.04	1.82	89	2.04	1.67	82	59-120	8.60	(< 20)
Benzo(a)pyrene	0.0104U	2.04	1.87	91	2.04	1.72	84	53-120	8.20	(< 20)
Benzo(b)Fluoranthene	0.0261U	2.04	1.84	90	2.04	1.69	83	53-126	8.70	(< 20)
Benzo(g,h,i)perylene	0.0261U	2.04	1.83	90	2.04	1.70	83	44-128	7.60	(< 20)
Benzo(k)fluoranthene	0.0261U	2.04	1.81	89	2.04	1.67	82	54-125	8.00	(< 20)
Chrysene	0.0261U	2.04	1.87	92	2.04	1.71	84	57-120	8.70	(< 20)
Dibenzo(a,h)anthracene	0.0104U	2.04	1.88	92	2.04	1.76	86	44-131	6.60	(< 20)
Fluoranthene	0.0261U	2.04	1.66	81	2.04	1.50	73	58-120	10.10	(< 20)
Fluorene	0.671	2.04	2.12	71	2.04	2.10	70	50-118	1.20	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0261U	2.04	1.82	89	2.04	1.70	83	48-130	7.30	(< 20)
Naphthalene	3.89	2.04	4.62	36 *	2.04	5.26	67	43-114	12.90	(< 20)
Phenanthrene	0.765	2.04	2.29	75	2.04	2.15	68	53-115	6.60	(< 20)
Pyrene	0.105	2.04	1.71	79	2.04	1.55	71	53-121	9.80	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		2.04	1.25	61	2.04	1.43	70	42-86	12.90	
Fluoranthene-d10 (surr)		2.04	1.61	79	2.04	1.47	72	50-97	9.20	

### Batch Information

Analytical Batch: XMS12708  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: LAW  
 Analytical Date/Time: 7/1/2021 10:50:00PM

Prep Batch: XXX45053  
 Prep Method: 3535 Solid Phase Ext for 8270 PAH SIM LV  
 Prep Date/Time: 6/28/2021 1:00:27PM  
 Prep Initial Wt./Vol.: 245.00mL  
 Prep Extract Vol: 1.00mL

Print Date: 07/27/2021 1:19:18PM



### Method Blank

Blank ID: MB for HBN 1821451 [XXX/45064]

Blank Lab ID: 1619255

QC for Samples:

1213715009, 1213715010

Matrix: Water (Surface, Eff., Ground)

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.181J	0.600	0.180	mg/L
<b>Surrogates</b>				
5a Androstane (surr)	93.4	60-120		%

### Batch Information

Analytical Batch: XFC15977

Analytical Method: AK102

Instrument: Agilent 7890B F

Analyst: IVM

Analytical Date/Time: 6/29/2021 1:57:00PM

Prep Batch: XXX45064

Prep Method: SW3520C

Prep Date/Time: 6/28/2021 4:33:36PM

Prep Initial Wt./Vol.: 250 mL

Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:20PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45064]  
Blank Spike Lab ID: 1619256  
Date Analyzed: 06/29/2021 14:07

Spike Duplicate ID: LCSD for HBN 1213715  
[XXX45064]  
Spike Duplicate Lab ID: 1619257  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010

### Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	20.8	104	20	20.4	102	( 75-125 )	2.20	(< 20 )
<b>Surrogates</b>									
5a Androstane (surr)	0.4		101	0.4		103	( 60-120 )	1.60	

### Batch Information

Analytical Batch: **XFC15977**  
Analytical Method: **AK102**  
Instrument: **Agilent 7890B F**  
Analyst: **IVM**

Prep Batch: **XXX45064**  
Prep Method: **SW3520C**  
Prep Date/Time: **06/28/2021 16:33**  
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL  
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:22PM



### Method Blank

Blank ID: MB for HBN 1821451 [XXX/45064]  
Blank Lab ID: 1619255

Matrix: Water (Surface, Eff., Ground)

QC for Samples:  
1213715009, 1213715010

### Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	0.250U	0.500	0.150	mg/L
<b>Surrogates</b>				
n-Triacontane-d62 (surr)	102	60-120		%

### Batch Information

Analytical Batch: XFC15977  
Analytical Method: AK103  
Instrument: Agilent 7890B F  
Analyst: IVM  
Analytical Date/Time: 6/29/2021 1:57:00PM

Prep Batch: XXX45064  
Prep Method: SW3520C  
Prep Date/Time: 6/28/2021 4:33:36PM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:24PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45064]  
Blank Spike Lab ID: 1619256  
Date Analyzed: 06/29/2021 14:07

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45064]  
Spike Duplicate Lab ID: 1619257  
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715009, 1213715010

### Results by AK103

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	20	20.9	105	20	20.0	100	( 60-120 )	4.50	(< 20 )
<b>Surrogates</b>									
n-Triacontane-d62 (surr)	0.4		92	0.4		93	( 60-120 )	0.49	

### Batch Information

Analytical Batch: **XFC15977**  
Analytical Method: **AK103**  
Instrument: **Agilent 7890B F**  
Analyst: **IVM**

Prep Batch: **XXX45064**  
Prep Method: **SW3520C**  
Prep Date/Time: **06/28/2021 16:33**  
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL  
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:26PM



### Method Blank

Blank ID: MB for HBN 1821494 [XXX/45071]  
Blank Lab ID: 1619434

Matrix: Soil/Solid (dry weight)

QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011

### Results by 8270D SIM (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
2-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
Acenaphthene	12.5U	25.0	6.25	ug/kg
Acenaphthylene	12.5U	25.0	6.25	ug/kg
Anthracene	12.5U	25.0	6.25	ug/kg
Benzo(a)Anthracene	12.5U	25.0	6.25	ug/kg
Benzo[a]pyrene	12.5U	25.0	6.25	ug/kg
Benzo[b]Fluoranthene	12.5U	25.0	6.25	ug/kg
Benzo[g,h,i]perylene	12.5U	25.0	6.25	ug/kg
Benzo[k]fluoranthene	12.5U	25.0	6.25	ug/kg
Chrysene	12.5U	25.0	6.25	ug/kg
Dibenzo[a,h]anthracene	12.5U	25.0	6.25	ug/kg
Fluoranthene	12.5U	25.0	6.25	ug/kg
Fluorene	12.5U	25.0	6.25	ug/kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	6.25	ug/kg
Naphthalene	10.0U	20.0	5.00	ug/kg
Phenanthrene	12.5U	25.0	6.25	ug/kg
Pyrene	12.5U	25.0	6.25	ug/kg
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	76.6	58-103		%
Fluoranthene-d10 (surr)	79.8	54-113		%

### Batch Information

Analytical Batch: XMS12724  
Analytical Method: 8270D SIM (PAH)  
Instrument: SVA Agilent 780/5975 GC/MS  
Analyst: LAW  
Analytical Date/Time: 7/7/2021 7:40:00PM

Prep Batch: XXX45071  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 6:46:16AM  
Prep Initial Wt./Vol.: 22.5 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:28PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45071]

Blank Spike Lab ID: 1619435

Date Analyzed: 07/07/2021 20:00

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011

### Results by 8270D SIM (PAH)

Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	90.2	81	( 43-111 )
2-Methylnaphthalene	111	89.4	81	( 39-114 )
Acenaphthene	111	92.4	83	( 44-111 )
Acenaphthylene	111	91.4	82	( 39-116 )
Anthracene	111	93.0	84	( 50-114 )
Benzo(a)Anthracene	111	93.4	84	( 54-122 )
Benzo[a]pyrene	111	90.9	82	( 50-125 )
Benzo[b]Fluoranthene	111	96.8	87	( 53-128 )
Benzo[g,h,i]perylene	111	89.7	81	( 49-127 )
Benzo[k]fluoranthene	111	96.0	86	( 56-123 )
Chrysene	111	93.7	84	( 57-118 )
Dibenzo[a,h]anthracene	111	96.9	87	( 50-129 )
Fluoranthene	111	93.5	84	( 55-119 )
Fluorene	111	93.4	84	( 47-114 )
Indeno[1,2,3-c,d] pyrene	111	93.9	85	( 49-130 )
Naphthalene	111	88.5	80	( 38-111 )
Phenanthrene	111	92.4	83	( 49-113 )
Pyrene	111	93.4	84	( 55-117 )
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	111		77	( 58-103 )
Fluoranthene-d10 (surr)	111		78	( 54-113 )

### Batch Information

Analytical Batch: XMS12724

Analytical Method: 8270D SIM (PAH)

Instrument: SVA Agilent 780/5975 GC/MS

Analyst: LAW

Prep Batch: XXX45071

Prep Method: SW3550C

Prep Date/Time: 06/30/2021 06:46

Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:19:31PM



### Matrix Spike Summary

Original Sample ID: 1213705007  
 MS Sample ID: 1619436 MS  
 MSD Sample ID: 1619437 MSD

Analysis Date: 07/07/2021 20:20  
 Analysis Date: 07/07/2021 20:41  
 Analysis Date: 07/07/2021 21:02  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011

### Results by 8270D SIM (PAH)

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	12.9U	115	98.1	86	115	98.1	85	43-111	0.02	(< 20)
2-Methylnaphthalene	12.9U	115	105	91	115	105	91	39-114	0.77	(< 20)
Acenaphthene	12.9U	115	99.4	87	115	101	87	44-111	1.20	(< 20)
Acenaphthylene	12.9U	115	99.7	87	115	102	88	39-116	1.90	(< 20)
Anthracene	12.9U	115	103	90	115	104	90	50-114	1.10	(< 20)
Benzo(a)Anthracene	17.0J	115	105	76	115	105	76	54-122	0.02	(< 20)
Benzo(a)pyrene	27.5	115	113	75	115	113	74	50-125	0.12	(< 20)
Benzo(b)Fluoranthene	38.9	115	119	70	115	120	71	53-128	1.30	(< 20)
Benzo(g,h,i)perylene	29.4	115	108	68	115	105	66	49-127	2.50	(< 20)
Benzo(k)fluoranthene	14.4J	115	105	79	115	108	81	56-123	2.40	(< 20)
Chrysene	21.4J	115	108	75	115	108	75	57-118	0.30	(< 20)
Dibenzo(a,h)anthracene	12.9U	115	97.6	85	115	94.2	82	50-129	3.50	(< 20)
Fluoranthene	27.2	115	110	73	115	113	75	55-119	2.80	(< 20)
Fluorene	12.9U	115	98.5	86	115	98.9	86	47-114	0.27	(< 20)
Indeno[1,2,3-c,d] pyrene	23.9J	115	110	75	115	107	72	49-130	2.70	(< 20)
Naphthalene	10.4U	115	98.1	86	115	99.1	86	38-111	0.95	(< 20)
Phenanthrene	9.60J	115	102	81	115	104	82	49-113	2.20	(< 20)
Pyrene	25.5J	115	112	75	115	112	75	55-117	0.13	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		115	85.5	75	115	86.9	76	58-103	1.70	
Fluoranthene-d10 (surr)		115	86.3	75	115	84.2	73	54-113	2.40	

### Batch Information

Analytical Batch: XMS12724  
 Analytical Method: 8270D SIM (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: LAW  
 Analytical Date/Time: 7/7/2021 8:41:00PM

Prep Batch: XXX45071  
 Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml  
 Prep Date/Time: 6/30/2021 6:46:16AM  
 Prep Initial Wt./Vol.: 22.62g  
 Prep Extract Vol: 5.00mL

Print Date: 07/27/2021 1:19:32PM



### Method Blank

Blank ID: MB for HBN 1821506 [XXX/45072]

Blank Lab ID: 1619489

QC for Samples:

1213715026, 1213715029

Matrix: Water (Surface, Eff., Ground)

### Results by 8270D SIM LV (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0235J	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	61.2	42-86		%
Fluoranthene-d10 (surr)	74.9	50-97		%

### Batch Information

Analytical Batch: XMS12734  
Analytical Method: 8270D SIM LV (PAH)  
Instrument: SVA Agilent 780/5975 GC/MS  
Analyst: LAW  
Analytical Date/Time: 7/9/2021 1:58:00PM

Prep Batch: XXX45072  
Prep Method: SW3535A  
Prep Date/Time: 6/29/2021 10:00:03AM  
Prep Initial Wt./Vol.: 250 mL  
Prep Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:33PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45072]  
 Blank Spike Lab ID: 1619490  
 Date Analyzed: 07/09/2021 14:18

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45072]  
 Spike Duplicate Lab ID: 1619491  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715026, 1213715029

### Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	2	1.40	70	2	1.25	63	( 48-114 )	11.10	(< 20 )
Acenaphthylene	2	1.45	72	2	1.31	66	( 35-121 )	9.70	(< 20 )
Anthracene	2	1.46	73	2	1.31	66	( 53-119 )	11.00	(< 20 )
Benzo(a)Anthracene	2	1.37	69	2	1.29	65	( 59-120 )	5.90	(< 20 )
Benzo[a]pyrene	2	1.50	75	2	1.39	70	( 53-120 )	7.60	(< 20 )
Benzo[b]Fluoranthene	2	1.47	73	2	1.35	68	( 53-126 )	7.90	(< 20 )
Benzo[g,h,i]perylene	2	1.71	85	2	1.58	79	( 44-128 )	8.00	(< 20 )
Benzo[k]fluoranthene	2	1.53	77	2	1.41	70	( 54-125 )	8.60	(< 20 )
Chrysene	2	1.44	72	2	1.35	67	( 57-120 )	7.00	(< 20 )
Dibenzo[a,h]anthracene	2	1.74	87	2	1.59	80	( 44-131 )	8.70	(< 20 )
Fluoranthene	2	1.43	71	2	1.29	64	( 58-120 )	10.60	(< 20 )
Fluorene	2	1.46	73	2	1.32	66	( 50-118 )	9.60	(< 20 )
Indeno[1,2,3-c,d] pyrene	2	1.68	84	2	1.55	77	( 48-130 )	8.40	(< 20 )
Naphthalene	2	1.35	68	2	1.20	60	( 43-114 )	12.40	(< 20 )
Phenanthrene	2	1.45	73	2	1.31	66	( 53-115 )	9.70	(< 20 )
Pyrene	2	1.43	71	2	1.31	65	( 53-121 )	8.60	(< 20 )
<b>Surrogates</b>									
2-Methylnaphthalene-d10 (surr)	2		61	2		55	( 42-86 )	10.60	
Fluoranthene-d10 (surr)	2		69	2		65	( 50-97 )	6.10	

### Batch Information

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: LAW

Prep Batch: XXX45072  
 Prep Method: SW3535A  
 Prep Date/Time: 06/29/2021 10:00  
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL  
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 07/27/2021 1:19:36PM



### Matrix Spike Summary

Original Sample ID: 1213737003  
 MS Sample ID: 1619492 MS  
 MSD Sample ID: 1619493 MSD

Analysis Date: 07/09/2021 14:59  
 Analysis Date: 07/09/2021 15:20  
 Analysis Date: 07/09/2021 15:40  
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1213715026, 1213715029

### Results by 8270D SIM LV (PAH)

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	0.0261U	2.04	1.38	68	2.00	1.36	68	48-114	1.90	(< 20)
Acenaphthylene	0.0261U	2.04	1.42	70	2.00	1.38	69	35-121	3.30	(< 20)
Anthracene	0.0261U	2.04	1.36	67	2.00	1.32	66	53-119	3.40	(< 20)
Benzo(a)Anthracene	0.0261U	2.04	1.27	62	2.00	1.18	59	* 59-120	7.70	(< 20)
Benzo[a]pyrene	0.0104U	2.04	1.25	61	2.00	1.14	57	53-120	9.20	(< 20)
Benzo[b]Fluoranthene	0.0261U	2.04	1.25	61	2.00	1.13	57	53-126	9.70	(< 20)
Benzo[g,h,i]perylene	0.0261U	2.04	1.43	70	2.00	1.30	65	44-128	9.20	(< 20)
Benzo[k]fluoranthene	0.0261U	2.04	1.28	63	2.00	1.17	59	54-125	8.80	(< 20)
Chrysene	0.0261U	2.04	1.34	66	2.00	1.24	62	57-120	8.30	(< 20)
Dibenzo[a,h]anthracene	0.0104U	2.04	1.49	73	2.00	1.36	68	44-131	9.00	(< 20)
Fluoranthene	0.0261U	2.04	1.32	65	2.00	1.26	63	58-120	4.60	(< 20)
Fluorene	0.0261U	2.04	1.39	68	2.00	1.34	67	50-118	3.50	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0261U	2.04	1.34	66	2.00	1.22	61	48-130	9.20	(< 20)
Naphthalene	0.0520U	2.04	1.39	68	2.00	1.35	68	43-114	2.40	(< 20)
Phenanthrene	0.0261U	2.04	1.37	67	2.00	1.33	66	53-115	3.10	(< 20)
Pyrene	0.0261U	2.04	1.33	65	2.00	1.26	63	53-121	5.90	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		2.04	1.24	61	2.00	1.20	60	42-86	2.70	
Fluoranthene-d10 (surr)		2.04	1.32	65	2.00	1.26	63	50-97	4.50	

### Batch Information

Analytical Batch: XMS12734  
 Analytical Method: 8270D SIM LV (PAH)  
 Instrument: SVA Agilent 780/5975 GC/MS  
 Analyst: LAW  
 Analytical Date/Time: 7/9/2021 3:20:00PM

Prep Batch: XXX45072  
 Prep Method: 3535 Solid Phase Ext for 8270 PAH SIM LV  
 Prep Date/Time: 6/29/2021 10:00:03AM  
 Prep Initial Wt./Vol.: 245.00mL  
 Prep Extract Vol: 1.00mL

Print Date: 07/27/2021 1:19:37PM



### Method Blank

Blank ID: MB for HBN 1821521 [XXX/45074]  
Blank Lab ID: 1619553

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/kg
<b>Surrogates</b>				
5a Androstane (surr)	87.9	60-120		%

### Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK102  
Instrument: Agilent 7890B R  
Analyst: IVM  
Analytical Date/Time: 6/30/2021 12:02:00PM

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 7:29:28AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:39PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45074]  
 Blank Spike Lab ID: 1619554  
 Date Analyzed: 06/30/2021 12:12

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45074]  
 Spike Duplicate Lab ID: 1619555  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014

### Results by AK102

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	667	622	93	667	688	103	( 75-125 )	10.20	(< 20 )

### Surrogates

5a Androstane (surr)	16.7	96	16.7	107	( 60-120 )	11.20
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### Batch Information

Analytical Batch: **XFC15980**  
 Analytical Method: **AK102**  
 Instrument: **Agilent 7890B R**  
 Analyst: **IVM**

Prep Batch: **XXX45074**  
 Prep Method: **SW3550C**  
 Prep Date/Time: **06/30/2021 07:29**  
 Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:41PM



### Method Blank

Blank ID: MB for HBN 1821521 [XXX/45074]  
Blank Lab ID: 1619553

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014

### Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	50.0U	100	43.0	mg/kg
<b>Surrogates</b>				
n-Triacontane-d62 (surr)	96.1	60-120		%

### Batch Information

Analytical Batch: XFC15980  
Analytical Method: AK103  
Instrument: Agilent 7890B R  
Analyst: IVM  
Analytical Date/Time: 6/30/2021 12:02:00PM

Prep Batch: XXX45074  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 7:29:28AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:44PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45074]  
 Blank Spike Lab ID: 1619554  
 Date Analyzed: 06/30/2021 12:12

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45074]  
 Spike Duplicate Lab ID: 1619555  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715001, 1213715002, 1213715003, 1213715004, 1213715005, 1213715006, 1213715007, 1213715008, 1213715011, 1213715012, 1213715013, 1213715014

### Results by AK103

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	667	614	92	667	691	104	( 60-120 )	11.70	(< 20 )
<b>Surrogates</b>									
n-Triacontane-d62 (surr)	16.7		96	16.7		109	( 60-120 )	12.70	

### Batch Information

Analytical Batch: **XFC15980**  
 Analytical Method: **AK103**  
 Instrument: **Agilent 7890B R**  
 Analyst: **IVM**

Prep Batch: **XXX45074**  
 Prep Method: **SW3550C**  
 Prep Date/Time: **06/30/2021 07:29**  
 Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:46PM



### Method Blank

Blank ID: MB for HBN 1821525 [XXX/45075]  
Blank Lab ID: 1619567

Matrix: Soil/Solid (dry weight)

QC for Samples:

1213715012, 1213715013, 1213715014, 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024

### Results by 8270D SIM (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
2-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
Acenaphthene	12.5U	25.0	6.25	ug/kg
Acenaphthylene	12.5U	25.0	6.25	ug/kg
Anthracene	12.5U	25.0	6.25	ug/kg
Benzo(a)Anthracene	12.5U	25.0	6.25	ug/kg
Benzo[a]pyrene	12.5U	25.0	6.25	ug/kg
Benzo[b]Fluoranthene	12.5U	25.0	6.25	ug/kg
Benzo[g,h,i]perylene	12.5U	25.0	6.25	ug/kg
Benzo[k]fluoranthene	12.5U	25.0	6.25	ug/kg
Chrysene	12.5U	25.0	6.25	ug/kg
Dibenzo[a,h]anthracene	12.5U	25.0	6.25	ug/kg
Fluoranthene	12.5U	25.0	6.25	ug/kg
Fluorene	12.5U	25.0	6.25	ug/kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	6.25	ug/kg
Naphthalene	10.0U	20.0	5.00	ug/kg
Phenanthrene	12.5U	25.0	6.25	ug/kg
Pyrene	12.5U	25.0	6.25	ug/kg
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	82.6	58-103		%
Fluoranthene-d10 (surr)	83.3	54-113		%

### Batch Information

Analytical Batch: XMS12728  
Analytical Method: 8270D SIM (PAH)  
Instrument: Agilent GC 7890B/5977A SWA  
Analyst: LAW  
Analytical Date/Time: 7/8/2021 6:04:00PM

Prep Batch: XXX45075  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 9:21:06AM  
Prep Initial Wt./Vol.: 22.5 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:49PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45075]

Blank Spike Lab ID: 1619568

Date Analyzed: 07/08/2021 18:25

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715012, 1213715013, 1213715014, 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024

### Results by 8270D SIM (PAH)

#### Blank Spike (ug/kg)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	111	101	91	( 43-111 )
2-Methylnaphthalene	111	95.8	86	( 39-114 )
Acenaphthene	111	97.7	88	( 44-111 )
Acenaphthylene	111	99.8	90	( 39-116 )
Anthracene	111	97.0	87	( 50-114 )
Benzo(a)Anthracene	111	94.9	85	( 54-122 )
Benzo[a]pyrene	111	97.3	88	( 50-125 )
Benzo[b]Fluoranthene	111	100	90	( 53-128 )
Benzo[g,h,i]perylene	111	99.6	90	( 49-127 )
Benzo[k]fluoranthene	111	99.8	90	( 56-123 )
Chrysene	111	98.6	89	( 57-118 )
Dibenzo[a,h]anthracene	111	97.8	88	( 50-129 )
Fluoranthene	111	97.5	88	( 55-119 )
Fluorene	111	99.3	89	( 47-114 )
Indeno[1,2,3-c,d] pyrene	111	97.5	88	( 49-130 )
Naphthalene	111	95.7	86	( 38-111 )
Phenanthrene	111	96.6	87	( 49-113 )
Pyrene	111	97.7	88	( 55-117 )

#### Surrogates

2-Methylnaphthalene-d10 (surr)	111		86	( 58-103 )
Fluoranthene-d10 (surr)	111		83	( 54-113 )

### Batch Information

Analytical Batch: XMS12728

Analytical Method: 8270D SIM (PAH)

Instrument: Agilent GC 7890B/5977A SWA

Analyst: LAW

Prep Batch: XXX45075

Prep Method: SW3550C

Prep Date/Time: 06/30/2021 09:21

Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:19:51PM



### Matrix Spike Summary

Original Sample ID: 1213750007  
 MS Sample ID: 1619569 MS  
 MSD Sample ID: 1619570 MSD

Analysis Date: 07/08/2021 18:45  
 Analysis Date: 07/08/2021 19:05  
 Analysis Date: 07/08/2021 19:26  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715012, 1213715013, 1213715014, 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024

### Results by 8270D SIM (PAH)

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	25.8U	115	109	95	114	103	91	43-111	4.90	(< 20)
2-Methylnaphthalene	25.8U	115	108	93	114	98.6	86	39-114	8.40	(< 20)
Acenaphthene	25.8U	115	102	89	114	99.5	87	44-111	2.40	(< 20)
Acenaphthylene	25.8U	115	104	91	114	101	88	39-116	3.60	(< 20)
Anthracene	25.8U	115	101	88	114	95.7	84	50-114	5.80	(< 20)
Benzo(a)Anthracene	25.8U	115	101	88	114	96.6	85	54-122	4.60	(< 20)
Benzo(a)pyrene	25.8U	115	102	89	114	98.0	86	50-125	3.90	(< 20)
Benzo(b)Fluoranthene	25.8U	115	108	94	114	100	88	53-128	7.60	(< 20)
Benzo(g,h,i)perylene	25.8U	115	103	90	114	98.8	87	49-127	4.00	(< 20)
Benzo(k)fluoranthene	25.8U	115	101	88	114	101	89	56-123	0.12	(< 20)
Chrysene	25.8U	115	102	89	114	99.5	87	57-118	2.70	(< 20)
Dibenzo(a,h)anthracene	25.8U	115	103	89	114	98.7	86	50-129	4.10	(< 20)
Fluoranthene	25.8U	115	101	88	114	98.9	87	55-119	2.40	(< 20)
Fluorene	25.8U	115	103	89	114	98.9	87	47-114	3.70	(< 20)
Indeno[1,2,3-c,d] pyrene	25.8U	115	101	88	114	96.6	85	49-130	4.80	(< 20)
Naphthalene	20.7U	115	103	89	114	99.0	87	38-111	3.60	(< 20)
Phenanthrene	25.8U	115	101	88	114	98.8	87	49-113	2.50	(< 20)
Pyrene	25.8U	115	101	88	114	98.7	86	55-117	2.50	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		115	98.4	86	114	93.0	82	58-103	5.70	
Fluoranthene-d10 (surr)		115	95.0	83	114	92.3	81	54-113	2.90	

### Batch Information

Analytical Batch: XMS12728  
 Analytical Method: 8270D SIM (PAH)  
 Instrument: Agilent GC 7890B/5977A SWA  
 Analyst: LAW  
 Analytical Date/Time: 7/8/2021 7:05:00PM

Prep Batch: XXX45075  
 Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml  
 Prep Date/Time: 6/30/2021 9:21:06AM  
 Prep Initial Wt./Vol.: 22.51g  
 Prep Extract Vol: 5.00mL

Print Date: 07/27/2021 1:19:52PM



### Method Blank

Blank ID: MB for HBN 1821534 [XXX/45076]  
Blank Lab ID: 1619601

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027, 1213715028, 1213715030

### Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	6.20	mg/kg
<b>Surrogates</b>				
5a Androstane (surr)	89.8	60-120		%

### Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK102  
Instrument: Agilent 7890B F  
Analyst: IVM  
Analytical Date/Time: 6/30/2021 3:38:00PM

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 10:22:27AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:54PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45076]  
Blank Spike Lab ID: 1619602  
Date Analyzed: 06/30/2021 15:48

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45076]  
Spike Duplicate Lab ID: 1619603  
Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027, 1213715028, 1213715030

### Results by AK102

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	667	635	95	667	660	99	( 75-125 )	3.90	(< 20 )

### Surrogates

5a Androstane (surr)	16.7	93	16.7	97	( 60-120 )	3.80
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### Batch Information

Analytical Batch: **XFC15979**  
Analytical Method: **AK102**  
Instrument: **Agilent 7890B F**  
Analyst: **IVM**

Prep Batch: **XXX45076**  
Prep Method: **SW3550C**  
Prep Date/Time: **06/30/2021 10:22**  
Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL  
Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:56PM



### Method Blank

Blank ID: MB for HBN 1821534 [XXX/45076]  
Blank Lab ID: 1619601

Matrix: Soil/Solid (dry weight)

#### QC for Samples:

1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027, 1213715028, 1213715030

### Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	50.0U	100	43.0	mg/kg
<b>Surrogates</b>				
n-Triacontane-d62 (surr)	94.3	60-120		%

### Batch Information

Analytical Batch: XFC15979  
Analytical Method: AK103  
Instrument: Agilent 7890B F  
Analyst: IVM  
Analytical Date/Time: 6/30/2021 3:38:00PM

Prep Batch: XXX45076  
Prep Method: SW3550C  
Prep Date/Time: 6/30/2021 10:22:27AM  
Prep Initial Wt./Vol.: 30 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:19:59PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45076]  
 Blank Spike Lab ID: 1619602  
 Date Analyzed: 06/30/2021 15:48

Spike Duplicate ID: LCSD for HBN 1213715 [XXX45076]  
 Spike Duplicate Lab ID: 1619603  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715015, 1213715016, 1213715019, 1213715020, 1213715021, 1213715022, 1213715023, 1213715024, 1213715025, 1213715027, 1213715028, 1213715030

### Results by AK103

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	667	632	95	667	650	98	( 60-120 )	2.70	(< 20 )

### Surrogates

n-Triacontane-d62 (surr)	16.7		94	16.7		97	( 60-120 )	3.50	
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### Batch Information

Analytical Batch: **XFC15979**  
 Analytical Method: **AK103**  
 Instrument: **Agilent 7890B F**  
 Analyst: **IVM**

Prep Batch: **XXX45076**  
 Prep Method: **SW3550C**  
 Prep Date/Time: **06/30/2021 10:22**  
 Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL  
 Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 07/27/2021 1:20:01PM



### Method Blank

Blank ID: MB for HBN 1821620 [XXX/45086]  
Blank Lab ID: 1620041

Matrix: Soil/Solid (dry weight)

QC for Samples:  
1213715025, 1213715027, 1213715028, 1213715030

### Results by 8270D SIM (PAH)

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
2-Methylnaphthalene	12.5U	25.0	6.25	ug/kg
Acenaphthene	12.5U	25.0	6.25	ug/kg
Acenaphthylene	12.5U	25.0	6.25	ug/kg
Anthracene	12.5U	25.0	6.25	ug/kg
Benzo(a)Anthracene	12.5U	25.0	6.25	ug/kg
Benzo[a]pyrene	12.5U	25.0	6.25	ug/kg
Benzo[b]Fluoranthene	12.5U	25.0	6.25	ug/kg
Benzo[g,h,i]perylene	12.5U	25.0	6.25	ug/kg
Benzo[k]fluoranthene	12.5U	25.0	6.25	ug/kg
Chrysene	12.5U	25.0	6.25	ug/kg
Dibenzo[a,h]anthracene	12.5U	25.0	6.25	ug/kg
Fluoranthene	12.5U	25.0	6.25	ug/kg
Fluorene	12.5U	25.0	6.25	ug/kg
Indeno[1,2,3-c,d] pyrene	12.5U	25.0	6.25	ug/kg
Naphthalene	10.0U	20.0	5.00	ug/kg
Phenanthrene	12.5U	25.0	6.25	ug/kg
Pyrene	12.5U	25.0	6.25	ug/kg
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	83.2	58-103		%
Fluoranthene-d10 (surr)	83.2	54-113		%

### Batch Information

Analytical Batch: XMS12714  
Analytical Method: 8270D SIM (PAH)  
Instrument: Agilent GC 7890B/5977A SWA  
Analyst: LAW  
Analytical Date/Time: 7/4/2021 6:03:00PM

Prep Batch: XXX45086  
Prep Method: SW3550C  
Prep Date/Time: 7/1/2021 1:39:34PM  
Prep Initial Wt./Vol.: 22.5 g  
Prep Extract Vol: 5 mL

Print Date: 07/27/2021 1:20:03PM



### Blank Spike Summary

Blank Spike ID: LCS for HBN 1213715 [XXX45086]

Blank Spike Lab ID: 1620042

Date Analyzed: 07/04/2021 18:23

Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715025, 1213715027, 1213715028, 1213715030

### Results by 8270D SIM (PAH)

Parameter	Blank Spike (ug/kg)			CL
	Spike	Result	Rec (%)	
1-Methylnaphthalene	111	104	94	( 43-111 )
2-Methylnaphthalene	111	97.6	88	( 39-114 )
Acenaphthene	111	99.1	89	( 44-111 )
Acenaphthylene	111	102	92	( 39-116 )
Anthracene	111	98.9	89	( 50-114 )
Benzo(a)Anthracene	111	101	91	( 54-122 )
Benzo[a]pyrene	111	102	92	( 50-125 )
Benzo[b]Fluoranthene	111	109	98	( 53-128 )
Benzo[g,h,i]perylene	111	105	95	( 49-127 )
Benzo[k]fluoranthene	111	106	96	( 56-123 )
Chrysene	111	105	95	( 57-118 )
Dibenzo[a,h]anthracene	111	106	96	( 50-129 )
Fluoranthene	111	103	93	( 55-119 )
Fluorene	111	103	93	( 47-114 )
Indeno[1,2,3-c,d] pyrene	111	105	95	( 49-130 )
Naphthalene	111	99.2	89	( 38-111 )
Phenanthrene	111	102	92	( 49-113 )
Pyrene	111	99.8	90	( 55-117 )
<b>Surrogates</b>				
2-Methylnaphthalene-d10 (surr)	111		85	( 58-103 )
Fluoranthene-d10 (surr)	111		84	( 54-113 )

### Batch Information

Analytical Batch: XMS12714

Analytical Method: 8270D SIM (PAH)

Instrument: Agilent GC 7890B/5977A SWA

Analyst: LAW

Prep Batch: XXX45086

Prep Method: SW3550C

Prep Date/Time: 07/01/2021 13:39

Spike Init Wt./Vol.: 111 ug/kg Extract Vol: 5 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 07/27/2021 1:20:05PM



### Matrix Spike Summary

Original Sample ID: 1213794004  
 MS Sample ID: 1620043 MS  
 MSD Sample ID: 1620044 MSD

Analysis Date: 07/04/2021 18:44  
 Analysis Date: 07/04/2021 19:04  
 Analysis Date: 07/04/2021 19:25  
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1213715025, 1213715027, 1213715028, 1213715030

### Results by 8270D SIM (PAH)

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	12.9U	114	97.0	85	115	101	88	43-111	4.00	(< 20)
2-Methylnaphthalene	12.9U	114	95.4	84	115	97.9	85	39-114	2.50	(< 20)
Acenaphthene	12.9U	114	93.3	82	115	96.7	84	44-111	3.60	(< 20)
Acenaphthylene	12.9U	114	97.4	85	115	99.8	87	39-116	2.40	(< 20)
Anthracene	12.9U	114	93.9	82	115	98.2	86	50-114	4.50	(< 20)
Benzo(a)Anthracene	12.9U	114	93.8	82	115	96.8	84	54-122	3.10	(< 20)
Benzo(a)pyrene	12.9U	114	94.8	83	115	97.9	85	50-125	3.20	(< 20)
Benzo(b)Fluoranthene	12.9U	114	99.8	87	115	102	89	53-128	2.30	(< 20)
Benzo(g,h,i)perylene	12.9U	114	94.1	82	115	96.6	84	49-127	2.60	(< 20)
Benzo(k)fluoranthene	12.9U	114	97.3	85	115	103	90	56-123	5.60	(< 20)
Chrysene	12.9U	114	96.4	84	115	99.5	87	57-118	3.20	(< 20)
Dibenzo(a,h)anthracene	12.9U	114	95.2	83	115	97.4	85	50-129	2.30	(< 20)
Fluoranthene	12.9U	114	95.1	83	115	99.3	86	55-119	4.30	(< 20)
Fluorene	12.9U	114	98.0	86	115	99.1	86	47-114	1.00	(< 20)
Indeno[1,2,3-c,d] pyrene	12.9U	114	93.8	82	115	94.8	83	49-130	1.10	(< 20)
Naphthalene	10.4U	114	93.0	82	115	98.2	86	38-111	5.40	(< 20)
Phenanthrene	12.9U	114	94.0	82	115	98.8	86	49-113	5.00	(< 20)
Pyrene	12.9U	114	94.6	83	115	98.2	86	55-117	3.80	(< 20)
<b>Surrogates</b>										
2-Methylnaphthalene-d10 (surr)		114	88.7	78	115	90.7	79	58-103	2.30	
Fluoranthene-d10 (surr)		114	87.8	77	115	89.7	78	54-113	2.20	

### Batch Information

Analytical Batch: XMS12714  
 Analytical Method: 8270D SIM (PAH)  
 Instrument: Agilent GC 7890B/5977A SWA  
 Analyst: LAW  
 Analytical Date/Time: 7/4/2021 7:04:00PM

Prep Batch: XXX45086  
 Prep Method: Sonication Extr Soil 8270 PAH SIM 5ml  
 Prep Date/Time: 7/1/2021 1:39:34PM  
 Prep Initial Wt./Vol.: 22.71g  
 Prep Extract Vol: 5.00mL

Print Date: 07/27/2021 1:20:07PM

## Burridge, Shelby (Anchorage)

---

**From:** Ryan Kingsbery <rkingsbery@tpeci.com>  
**Sent:** Thursday, June 24, 2021 1:45 PM  
**To:** Burridge, Shelby (Anchorage)  
**Cc:** Casey Volk  
**Subject:** Re: [EXTERNAL] Quick sample jar question

\*\*\* WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. \*\*\*

---

Awesome  
Thank you!

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---

**From:** Burridge, Shelby (Anchorage) <Shelby.Burridge@sgs.com>  
**Sent:** Wednesday, June 23, 2021 10:36:57 AM  
**To:** Ryan Kingsbery <rkingsbery@tpeci.com>  
**Cc:** Casey Volk <cvolk@tpeci.com>  
**Subject:** RE: [EXTERNAL] Quick sample jar question

Hi Ryan,

Yes, that would be okay!

**Shelby Burridge**  
**Industries & Environment**  
Project Manager  
**SGS North America Inc.**  
200 West Potter Dr  
99518 – Anchorage  
Main: +01 907 562 2343  
Direct: +01 907 550-3208  
E-mail: [Shelby.Burridge@sgs.com](mailto:Shelby.Burridge@sgs.com)

---

**From:** Ryan Kingsbery <rkingsbery@tpeci.com>  
**Sent:** Wednesday, June 23, 2021 10:30 AM  
**To:** Burridge, Shelby (Anchorage) <Shelby.Burridge@sgs.com>  
**Cc:** Casey Volk <cvolk@tpeci.com>  
**Subject:** [EXTERNAL] Quick sample jar question

\*\*\* WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. \*\*\*

---

Good morning Shelby,

We are in the field and had a quick question for you. We are short 8oz amber jars and wondering if it is possible to collect a DRO/RRO soil sample in a 250ml amber bottle as a substitute for 8oz amber jars? We thought this would be ok but figured we would check.

Thank you,  
Ryan

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## **Burridge, Shelby (Anchorage)**

---

**From:** Burridge, Shelby (Anchorage)  
**Sent:** Monday, June 28, 2021 11:35 AM  
**To:** Casey Volk  
**Subject:** Port William WO 1213715

Hi Casey,

This email is in regards to your recent Port William samples. I wanted to let you know that on the COC, sample CD3 was mislabeled as soil when it is a water sample. Also, one of the containers for sample CD4 had a broken lid, so that was replaced. Please let me know if you have any questions.

Thank you,

**Shelby Burridge**  
**Industries & Environment**  
Project Manager  
**SGS North America Inc.**  
200 West Potter Dr  
99518 – Anchorage  
Main: +01 907 562 2343  
Direct: +01 907 550-3208  
E-mail: [Shelby.Burridge@sgs.com](mailto:Shelby.Burridge@sgs.com)



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CLIENT: Travis/Paterson Environmental Consulting  
 CONTACT: Carey Volk PHONE #: 522-4337  
 PROJECT PWSID/ PERMIT#: 522-4337  
 NAME: Port William  
 REPORTS TO: Carey Volk E-MAIL: Cvolk@tpesi.com  
 INVOICE TO: TPEC QUOTE #: 1072-06 P.O. #:  
 SECTION 1

INSTRUCTIONS: Sections 1 - 5 must be filled out.  
 Omissions may delay the onset of

Section 3

Preservat  
 MeOH  
 MeOH  
 Analysis\*

NOTE: \*The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

REMARKS/LOC ID

RESERVED for lab-use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/MATRIX CODE	Comp	Grab	MI (Multi-Incre-mental)	DRO	BRO	PPE	GRO	VOC	REMARKS/LOC ID
<del>LAB</del>	D1-18	6/21/21	1606	S	G			X	X	X	X	X	
<del>LAB</del>	D1-24		1610					X	X	X	X	X	
<del>LAB</del>	D3-12		1716					X	X	X	X	X	
<del>LAB</del>	D2-17		1815					X	X	X	X	X	
<del>LAB</del>	WS1-12	6/22/21	934	S	G			X	X	X	X	X	
<del>LAB</del>	DT1-17		1109					X	X	X	X	X	
<del>LAB</del>	MH1-0		1239					X	X	X	X	X	
<del>LAB</del>	CH1-24		1347					X	X	X	X	X	
<del>LAB</del>	SCW1		1515	W				X	X	X	X	X	
<del>LAB</del>	SCW2		1520	W				X	X	X	X	X	

Section 2

Section 4

Section 5

Relinquished By: (1) [Signature] Date: 6/25/21 Time: 1520 Received By: [Signature]

Relinquished By: (2) [Signature] Date: 6/25/21 Time: 1241 Received By: [Signature]

Relinquished By: (3) [Signature] Date: 6/25/21 Time: 1241 Received By: [Signature]

Relinquished By: (4) [Signature] Date: 6/25/21 Time: 1241 Received For Laboratory By: [Signature] MA

Temp Blank °C: 13.40 DSB  
21.29 DSB  
33.7 DSB  
 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery Commercial Delivery [ ]

Requested Turnaround Time and/or Special Instructions:

Data Deliverable Requirements:

Section 5

http://www.sgs.com/terms-and-conditions



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**CLIENT:** *Travis/Peterman Environmental Consulting*

**CONTACT:** *Carsey Volk* PHONE #: *522-4337*

**PROJECT NAME:** *Port William* PROJECT/ PWSID/ PERMIT#: *MeOH MeOH*

**REPORTS TO:** *Carsey Volk* E-MAIL: *Cvolk@tpaci.com*

**INVOICE TO:** *TPEC* Profile #: *1072-06* QUOTE #: *1072-06* P.O. #:

**Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.**

**Section 3** Preserva: **1213715**

**Section 2**

RESERVED for Lab Use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX CODE	Comp	Grab	MI (Multi-incremental)	PAH	GRO	VOC	TAH	TA8H	BC8H	REMARKS/LOC ID
<del>11</del>	MR1-24	6/23/21	1533	S	G			X	X	X				
<del>12</del>	MR1-30		1552					X	X	X				
<del>13</del>	SLG1		1550					X	X	X				
<del>14</del>	SLG2		1552					X	X	X				
<del>15</del>	MR2-22		1636					X	X	X				
<del>16</del>	MH2-6		1747					X	X	X				
<del>17</del>	CD1	6/23/21	838	W				X	X					
<del>18</del>	CD2		849	W				X	X					
<del>19</del>	TF1-6		1200	S				X	X					
<del>20</del>	TF2-12		1240	↓				X	X					

**NOTE:** \*The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

**Section 4** DOD Project? Yes No

**Section 5** Cooler ID: Requested Turnaround Time and/or Special Instructions:

Temp Blank °C: 1) 4.0 D58 2) 2.9 D60 3) 3.7 D58 or Ambient [ ]

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery [ ] Commerical Delivery [ ]

Received By: (1) *Carsey Volk* Date: 6/25/21 Time: 1241

Received By: (2) *Carsey Volk* Date: 6/25/21 Time: 1241

Received By: (3) *Carsey Volk* Date: 6/25/21 Time: 1241

Received For Laboratory By: *Carsey Volk* Date: 6/25/21 Time: 1241

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**CLIENT:** *Trairie/Peterson Environmental Consulting*

**CONTACT:** *Carsey Volk* 522-4337

**PROJECT NAME:** *Port Williams*

**REPORTS TO:** *Carsey Volk*

**INVOICE TO:** *TPEC*

**PHONE #:** 522-4337

**E-MAIL:** *cvolk@tpec.com*

**PROFILE #:** *1072-06*

**QUOTE #:** *1072-06*

**P.O. #:** *1072-06*

**RESERVED for lab use**

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX CODE
<del>21A</del>	TF3-15	6/23/21	1334	S
<del>22A</del>	TF4-0		1419	
<del>23A</del>	D4-18		1652	
<del>24A</del>	TF5-12		1820	
<del>25A</del>	TF5-24		1830	
<del>26A</del>	CD3		1822	
<del>27A</del>	TF6-12		1924	
<del>28A</del>	TF7-18		2002	
<del>29A</del>	CD4	6/24/21	858	W
<del>30A</del>	MH3-6		856	S

**Relinquished By: (1)** *[Signature]* Date: 6/25/21

**Relinquished By: (2)** *[Signature]* Date: \_\_\_\_\_

**Relinquished By: (3)** *[Signature]* Date: \_\_\_\_\_

**Relinquished By: (4)** *[Signature]* Date: 6/25/21

**Received By:** *[Signature]* Date: \_\_\_\_\_

**Received By:** *[Signature]* Date: \_\_\_\_\_

**Received By:** *[Signature]* Date: \_\_\_\_\_

**Received For Laboratory By:** *[Signature]* Date: 6/25/21

**Section 1:** Instructions: Sections 1 - 5 mu Omissions may delay the ons

**Section 2:** CONTAINERS

#	Comp	Grab	MI (Multi-incre-mental)	RRO	PAH	GRO	VOC	TAH	TA&H	RCRA	REMARKS/LOC ID
1	G			X	X						
1				X	X						
2				X	X	X					
1				X	X						
1				X	X						
5				X	X			X	X		
1				X	X						
1				X	X						
5				X	X			X	X		
1				X	X						

**Section 3:** Section 3

**Section 4:** Section 4

**Section 5:** Section 5

**NOTE:** \*The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

**Temp Blank °C:** 1) 4.0 DSE, 2) 2.9 DSE, 3) 3.7 DSE

**Chain of Custody Seal: (Circle)** 1. INTACT, 2. BROKEN, 3. ABSENT

**Delivery Method:** Hand Delivery [X] Commercial Delivery [ ]

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CHAIN OF CUSTODY RECORD

1213715

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<b>CLIENT:</b> Travis/Peterson Environmental Consulting <b>CONTACT:</b> Casey Volk <b>PHONE #:</b> 522-4337 <b>PROJECT NAME:</b> Port Williams <b>REPORTS TO:</b> Casey Volk <b>PROFILE #:</b> cvolk@tpesi.com <b>QUOTE #:</b> <b>INVOICE TO:</b> TPEC <b>P.O. #:</b> 1072-06		<b>Instructions: Section: Omissions may delete</b> <b>Section 3</b>	
<b>PROJECT PWSID/PERMIT#:</b> <b>E-MAIL:</b> <b>Profile #:</b> <b>QUOTE #:</b> <b>P.O. #:</b>		<b>Preservative</b> <b>Analysis*</b>	
<b>RESERVED for Lab-use</b> 31A 32AC 33A		<b>CONTAINERS</b> # 1 Comp Grab MI (Multi-incremental) C X RCRA Metal	
<b>DATE</b> mm/dd/yy 6/24/21 945 <b>TIME</b> HH:MM <b>MATRIX/MATRIX CODE</b> S		<b>NOTE:</b> *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS <b>REMARKS/LOC ID</b>	
<b>Relinquished By: (1)</b> <i>[Signature]</i>		<b>Section 4</b>	
<b>Relinquished By: (2)</b> <i>[Signature]</i>		<b>DOD Project?</b> Yes No <b>Cooler ID:</b> <b>Requested Turnaround Time and/or Special Instructions:</b>	
<b>Relinquished By: (3)</b> <i>[Signature]</i>		<b>Temp Blank °C:</b> 2) 2.9 0.0 3) 3.7 0.5 or Ambient [ ] <b>Chain of Custody Seal: (Circle)</b> <input checked="" type="checkbox"/> INTACT <input type="checkbox"/> BROKEN <input type="checkbox"/> ABSENT <b>Delivery Method: Hand Delivery</b> <input checked="" type="checkbox"/> <input type="checkbox"/> Commerical Delivery [ ]	
<b>Relinquished By: (4)</b> 6/25/21 1241 <i>[Signature]</i>		<b>Section 5</b>	

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e-Sample Receipt Form

SGS Workorder #:

1213715

1213715

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
<b>Chain of Custody / Temperature Requirements</b>		<b>Yes</b> Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	<b>Yes</b>	1F
COC accompanied samples?	<b>Yes</b>	
DOD: Were samples received in COC corresponding coolers?	<b>N/A</b>	
<b>N/A</b> **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	<b>Yes</b>	Cooler ID: 1 @ 4.0 °C Therm. ID: D58
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	<b>N/A</b>	
If <0°C, were sample containers ice free?	<b>N/A</b>	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
<b>Holding Time / Documentation / Sample Condition Requirements</b>		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	<b>Yes</b>	
Do samples <b>match COC</b> ** (i.e., sample IDs, dates/times collected)?	<b>No</b>	Sample 26 per was Matrix 2, corrected to Matrix 1. PM notified.
**Note: If times differ <1hr, record details & login per COC. ***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	<b>Yes</b>	
Were proper containers (type/mass/volume/preservative***) used?	<b>No</b>	<b>Yes</b> ***Exemption permitted for metals (e.g.200.8/6020B). Sample 29-B had a lid malfunction and was replaced. Improper containers used for samples 19A, 20A, 21A, 22A, 24A, 28A, 27A, 30A, 31A. PM notified.
<b>Volatile / LL-Hg Requirements</b>		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	<b>Yes</b>	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	<b>N/A</b>	
Were all soil VOAs field extracted with MeOH+BFB?	<b>Yes</b>	
<b>Note to Client:</b> Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		



## Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1213715001-A	No Preservative Required	OK	1213715018-C	HCL to pH < 2	OK
1213715001-B	Methanol field pres. 4 C	OK	1213715018-D	HCL to pH < 2	OK
1213715002-A	No Preservative Required	OK	1213715018-E	HCL to pH < 2	OK
1213715002-B	Methanol field pres. 4 C	OK	1213715019-A	No Preservative Required	OK
1213715003-A	No Preservative Required	OK	1213715020-A	No Preservative Required	OK
1213715003-B	Methanol field pres. 4 C	OK	1213715021-A	No Preservative Required	OK
1213715004-A	No Preservative Required	OK	1213715022-A	No Preservative Required	OK
1213715004-B	Methanol field pres. 4 C	OK	1213715023-A	No Preservative Required	OK
1213715005-A	No Preservative Required	OK	1213715023-B	Methanol field pres. 4 C	OK
1213715005-B	Methanol field pres. 4 C	OK	1213715024-A	No Preservative Required	OK
1213715006-A	No Preservative Required	OK	1213715025-A	No Preservative Required	OK
1213715006-B	Methanol field pres. 4 C	OK	1213715026-A	No Preservative Required	OK
1213715007-A	No Preservative Required	OK	1213715026-B	No Preservative Required	OK
1213715007-B	Methanol field pres. 4 C	OK	1213715026-C	No Preservative Required	OK
1213715008-A	No Preservative Required	OK	1213715026-D	No Preservative Required	OK
1213715008-B	Methanol field pres. 4 C	OK	1213715026-E	No Preservative Required	OK
1213715009-A	HCL to pH < 2	OK	1213715027-A	No Preservative Required	OK
1213715009-B	HCL to pH < 2	OK	1213715028-A	No Preservative Required	OK
1213715009-C	No Preservative Required	OK	1213715029-A	No Preservative Required	OK
1213715009-D	No Preservative Required	OK	1213715029-B	No Preservative Required	OK
1213715009-E	HCL to pH < 2	OK	1213715029-C	No Preservative Required	OK
1213715009-F	HCL to pH < 2	OK	1213715029-D	No Preservative Required	OK
1213715009-G	HCL to pH < 2	OK	1213715029-E	No Preservative Required	OK
1213715010-A	HCL to pH < 2	OK	1213715030-A	No Preservative Required	OK
1213715010-B	HCL to pH < 2	OK	1213715031-A	No Preservative Required	OK
1213715010-C	No Preservative Required	OK	1213715032-A	HCL to pH < 2	OK
1213715010-D	No Preservative Required	OK	1213715032-B	HCL to pH < 2	OK
1213715010-E	HCL to pH < 2	OK	1213715032-C	HCL to pH < 2	OK
1213715010-F	HCL to pH < 2	OK	1213715033-A	Methanol field pres. 4 C	OK
1213715010-G	HCL to pH < 2	OK			
1213715011-A	No Preservative Required	OK			
1213715011-B	Methanol field pres. 4 C	OK			
1213715012-A	No Preservative Required	OK			
1213715012-B	Methanol field pres. 4 C	OK			
1213715013-A	No Preservative Required	OK			
1213715013-B	Methanol field pres. 4 C	OK			
1213715014-A	No Preservative Required	OK			
1213715014-B	Methanol field pres. 4 C	OK			
1213715015-A	No Preservative Required	OK			
1213715015-B	Methanol field pres. 4 C	OK			
1213715016-A	No Preservative Required	OK			
1213715016-B	Methanol field pres. 4 C	OK			
1213715017-A	No Preservative Required	OK			
1213715017-B	No Preservative Required	OK			
1213715017-C	HCL to pH < 2	OK			
1213715017-D	HCL to pH < 2	OK			
1213715017-E	HCL to pH < 2	OK			
1213715018-A	No Preservative Required	OK			
1213715018-B	No Preservative Required	OK			

Container Id

Preservative

Container  
Condition

Container Id

Preservative

Container  
Condition

#### Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

**Laboratory Data Review Checklist**

Completed By:

Charlie Hampton

Title:

Staff Environmental Engineer

Date:

11/1/2021

Consultant Firm:

Travis Peterson Environmental Consulting

Laboratory Name:

SGS

Laboratory Report Number:

1213715

Laboratory Report Date:

7/27/2021

CS Site Name:

Port William Former Cannery

ADEC File Number:

2600.38.004

Hazard Identification Number:

26872

1213715

Laboratory Report Date:

7/27/2021

CS Site Name:

Port William Former Cannery

**Note: Any N/A or No box checked must have an explanation in the comments box.**

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes  No  N/A  Comments:

b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes  No  N/A  Comments:

Samples were not transferred to another laboratory.

2. Chain of Custody (CoC)

a. CoC information completed, signed, and dated (including released/received by)?

Yes  No  N/A  Comments:

b. Correct analyses requested?

Yes  No  N/A  Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

Yes  No  N/A  Comments:

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No  N/A  Comments:

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c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No  N/A  Comments:

Sample 29-B had a lid malfunction and was replaced.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No  N/A  Comments:

Improper containers used for samples TF1-6, TF2-12, TF3-15, TF4-0, TF5-12, TF6-12, TF7-18, MH3-6, and IZ1. TPEC ran out of the 8oz amber jars that are generally recommended for DRO, RRO, and PAH analysis and used 250ml amber jars as a substitute. TPEC confirmed with SGS laboratories from the field that using 250ml jars instead of 8oz jars would be ok. Improper containers did not affect data usability.

e. Data quality or usability affected?

Comments:

Data quality and usability are unaffected.

4. Case Narrative

a. Present and understandable?

Yes  No  N/A  Comments:

b. Discrepancies, errors, or QC failures identified by the lab?

Yes  No  N/A  Comments:

Reference Case Narrative.

c. Were all corrective actions documented?

Yes  No  N/A  Comments:

Reference Case Narrative.

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d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality and usability are unaffected. For specific discrepancies, see individual categories below.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No  N/A  Comments:

b. All applicable holding times met?

Yes  No  N/A  Comments:

c. All soils reported on a dry weight basis?

Yes  No  N/A  Comments:

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No  N/A  Comments:

Seven PAH, twenty-nine VOC, one RCRA metal, and five VOC (Water) analytes had LOQs above CL.

e. Data quality or usability affected?

Data quality and usability are unaffected.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

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ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes  No  N/A  Comments:

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Not applicable. No exceedance of LOQ or project specified objectives.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

Method blanks do not have data flags, as there are no impacted samples.

v. Data quality or usability affected?

Comments:

Data quality and usability are unaffected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes  No  N/A  Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No  N/A  Comments:

Percent recovery for Trichlorofluoromethane exceeded limits by 4% for Blank Spike ID 1620388.

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iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No  N/A  Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Samples impacted by high percent recovery for Trichlorofluoromethane are samples WS1-12, DT1-17, MH2-6, and Trip Blank Soil.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

As a result of the percent recovery for Trichlorofluoromethane exceeding the limits by 4%, the reported concentrations of this analyte for the samples described above may represent a slight high bias. The ADEC cleanup level for this analyte is 41 mg/kg, and the highest observed non-detect concentration for the affected samples is 0.272 mg/kg. Because the data may reflect a high bias, and all of the concentrations for the affected samples are far below the ADEC cleanup level, this bias does not impact interpretation of these data. Data usability is not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

**Note: Leave blank if not required for project**

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes  No  N/A  Comments:

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iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes  No  N/A  Comments:

Percent recovery exceeded limits for:

- Chromium (MS Sample ID: 1620834 MS)
- Trichlorofluoromethane (MS Sample IDs: 1620398 MS, 1621123 MS)

Percent recovery failed to meet limits for:

- 1-Methylnaphthalene (MS Sample ID: 1618953 MS)
- 2-Methylnaphthalene (MS Sample ID: 1618953 MS)
- Naphthalene (MS Sample ID: 1618953 MS)
- Benzo(a)Anthracene (MS Sample ID: 1619492 MS)

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes  No  N/A  Comments:

RPD exceeded limits for Trichlorofluoromethane for MS ID 1621123 MS.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

Samples impacted by a low percent recovery:

- 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene
  - SCW1, SCW2

Samples impacted by a high percent recovery:

- Chromium
  - SLG1, SLG2, MH3-6, IZ1
- Trichlorofluoromethane
  - WS1-12, DT1-17, MH2-6, Trip Blank Soil, D4-18

Samples impacted by a high RPD:

- Trichlorofluoromethane
  - D4-18

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

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vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

For samples whose results for 1-Methylnaphthalene, 2-Methylnaphthalene, Naphthalene, and Trichlorofluoromethane may be impacted by noncompliant percent recovery or high RPD, results indicated that the concentrations are lower than the ADEC cleanup level by an order of magnitude. Even substantial error with regard to these results would not indicate that the concentrations of these analytes approached ADEC cleanup levels at these locations. For the samples whose results for Chromium may be impacted, the results indicate that the Chromium concentration exceeds the ADEC cleanup levels by two orders of magnitude. Errors with regard to these results would not indicate that concentrations of Chromium fall beneath ADEC cleanup levels. Data usability is not affected as fluctuation in results for these analytes would not alter data interpretation.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No  N/A  Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes  No  N/A  Comments:

Surrogates whose percent recoveries failed to meet limits:

- N-Triacontane-d62 (RRO) (Sample: TF5-12)
- 4-Bromofluorobenzene (GRO) (Samples: D1-18, D1-24, D3-12, WS1-12, DT1-17, MR1-24, SLG2, MH2-6, D4-18)

Surrogates whose percent recoveries exceeded limits:

- 5a Androstane (DRO) (Samples: D1-18, D1-24, D3-12, SLG1, SLG2, TF5-12, TF5-24)
- N-Triacontane-d62 (RRO) (Sample: D3-12)
- 4-Bromofluorobenzene (GRO) (Sample: MR2-22)

For VOCs, all samples' surrogate (4-Bromofluorobenzene) failed to meet limits with the exception of the following: SCW1, SCW2, MR1-30, Trip Blank Water, and Trip Blank Soil.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes  No  N/A  Comments:

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iv. Data quality or usability affected?

Comments:

Failure to meet percent recovery for surrogates does not impact the quality or usability of associated data.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples?  
(If not, enter explanation below.)

Yes  No  N/A  Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC?  
(If not, a comment explaining why must be entered below)

Yes  No  N/A  Comments:

Cooler ID is not indicated on the CoC.

iii. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Non-detect results are equal to LOQs for both trip blanks.

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

Non-detect results are equal to LOQs for both trip blanks.

v. Data quality or usability affected?

Comments:

Because results are non-detect, concentrations for these analytes are below these values. Data quality and usability are unaffected.

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f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No  N/A  Comments:

D1-24 is a duplicate of D1-18.  
MR1-30 is a duplicate of MR1-24.  
TF5-24 is a duplicate of TF5-12.  
SCW2 is a duplicate of SCW1.  
SLG2 is a duplicate of SLG1.  
CD2 is a duplicate of CD1.

ii. Submitted blind to lab?

Yes  No  N/A  Comments:

iii. Precision – All relative percent differences (RPD) less than specified project objectives?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes  No  N/A  Comments:

The following duplicates exceeded the project objectives for RPD for the following analytes:

- D1-18 & D1-24
  - 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, Benzo[b]fluoranthene
- MR1-24 & MR1-30
  - GRO, RRO, 2-Methylnaphthalene, Acenaphthene, Acenaphthylene, Anthracene, Benzo[g,h,i]perylene, Fluorene, Indeno[1,2,3-c,d]pyrene, Naphthalene, Phenanthrene
- TF5-12 & TF5-24
  - Acenaphthylene, Anthracene, Benzo[b]Fluoranthene, Benzo[g,h,i]perylene, Benzo[k]fluoranthene, Dibenzo[a,h]anthracene, Indeno[1,2,3-c,d]pyrene
- SCW1 & SCW2
  - Acenaphthene, Anthracene, Benzo(a)Anthracene, Benzo[b]Fluoranthene, Chrysene, Fluorene, Phenanthrene, Pyrene
- SLG1 & SLG2
  - Arsenic, Mercury

1213715

Laboratory Report Date:

7/27/2021

CS Site Name:

Port William Former Cannery

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

RPD is a metric that represents precision, measured in this case by comparing the concentrations of an analyte in two samples from the same location. The exceedances outlined above represent that the quality of the data for the given analytes and samples may be affected with regard to their precision. For the majority of the outlined analytes and samples, this does not impact the usability of the data. For many analytes, the results, though imprecise, are both below the cleanup levels by orders of magnitude. It can still be said with certainty that for these analytes, imprecision could not result in misrepresenting a concentration that was, in reality, in excess of the cleanup levels. Likewise, several analytes far exceeded the cleanup levels for both duplicates. The same conclusion can be drawn, that the imprecision revealed by the noncompliant RPD could not result in a misrepresentation of the magnitude required to bring the actual concentrations of the analytes beneath the cleanup levels. For these reasons, for most of the analytes, the usability of the data is not impacted.

For the following analytes and samples, exceedance of project objectives for RPD may impact data usability. This is a result of the reported concentrations' proximity to the cleanup levels for the given contaminants. For these analytes, the reported concentration fell near the cleanup level. Imprecision in these data presents uncertainty regarding whether or not the concentrations of these analytes at the sample locations are in compliance with ADEC cleanup levels:

- D1-18 & D1-24
  - 1,2,4-Trimethylbenzene
- TF5-12 & TF5-24
  - Dibenzo[a,h]anthracene
- SCW1 & SCW2
  - Dibenzo[a,h]anthracene

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes  No  N/A  Comments:

Disposable sampling equipment used. No equipment blank is required.

i. All results less than LOQ and project specified objectives?

Yes  No  N/A  Comments:

Disposable sampling equipment used. No equipment blank is required.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Not applicable. Disposable sampling equipment used. No equipment blank is required.

1213715

Laboratory Report Date:

7/27/2021

CS Site Name:

Port William Former Cannery

iii. Data quality or usability affected?

Comments:

Not applicable. Disposable sampling equipment used. No equipment blank is required.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes  No  N/A  Comments:

Data flags are defined, though no data flags are present beyond those previously discussed.

APPENDIX D:  
Photographic Log

**Ocean Beauty Seafoods, Port William Former Cannery Site Characterization: Photo Log –June, 2021**

<p>Photo of the Port William Tank Farm.</p> 	<p>Hydrocarbon sheen present on surface water within secondary containment of Tank Farm.</p> 
<p>Photo of natural drainage located down-gradient of Tank Farm.</p> 	<p>Solidified Bunker C at base of AST cribbing inside the Tank Farm.</p> 
<p>POL water in base of old AST. Tank is located inside the secondary containment near sample TF1-6.</p> 	<p>Photo showing Bunker C mixed in with subsurface soil adjacent to the natural drainage.</p> 

Photo of the base of the natural drainage prior to discharging from cliff.



Collecting water that discharged from the natural drainage at sample point CD1.



Photo showing the location of the test pit advanced at the woodshed structure (WS1).



Photo showing the day tanks and the test hole location. Tanks were located northwest of the Mess Hall.



Photo showing TPEC personnel collecting a soil sample from the Mess Hall (MH1-0).



Photo showing TPEC personnel digging a test pit at the Caretakers House (CH1)



Photo showing the location of contaminated soils located outside the Main Residence (MR2-22).



Photo showing a layer of ash from the Novarupta volcanic eruption. Ash was observed by TPEC personnel throughout the investigation.



Photo showing a layer of solidified Bunker C located within the intertidal zone.



Discarded/damaged batteries located within the intertidal zone.



Bunker C mixed in with pile of metallic debris. Pile was below a hole in the floor located in the shop above.



Photo showing CD4 located behind the equipment shed.



Photo looking into a door on the Boat Building. Several 55-gallon drums were observed.



Photo showing peeling paint chips within Meat/Shop Building on Dock. Paint chips may contain lead.



Photo showing insulation on boiler located on dock that may contain asbestos.



Photo showing a collapsed building that TPEC believes was an old pulley house.



Drums containing solidified Bunker C. Drums were within the wreckage of the collapsed pulley house.



Bucket containing grease found inside the collapsed pulley house.



APPENDIX E:  
Field Notes

Location Port William, AK Date 6/21/21

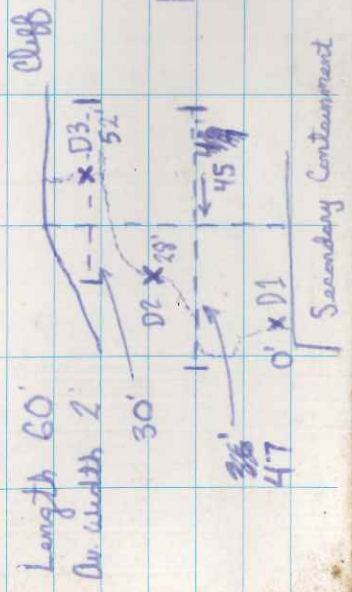
Project / Client Port William Site Characterization

Weather: 62°, overcast

Personnel: Casey Volk (TPEC)  
Ryck Kungobony (TPEC)  
Mike Trava (TPEC)  
Carson Kent (BGES)

Objective: Walk to site to determine potential areas of concern. Located drainage ditch near tank farm & locate discharge from edge of cliff. Began digging test pits & collecting samples from drainage ditch. Samples will be analyzed for DRO, BRO, PAH, GRO, & VOC.

Drainage @ tank farm



Location Port William, AK Date 6/21/21

Project / Client Port William Site Characterization

Sample ID	Time	Depth	PID
D1-0	15:29	0"	14.8
D1-6	15:31	6"	9.7
D1-12	15:37	12"	45.5
D1-18	15:45	18"	63.7 *
D1-22	15:52	22"	40.1

\* sampled for DRO, BRO, GRO, VOC, PAH  
D1-18 sampled @ 1606  
D1-18 sampled @ 1610 (dup of D1-18)  
24

Notes: Observed free product throughout pit w/ strong odor (Bunker C).  
Surface layer w/ organic. Ash layer observed @ 14" bgs. Required @ 22".  
Abundant pads observed below test pit.

Sample ID	Time	bgs"	PID
D3-0	16:56	0	9.7
D3-6	16:59	6	44.0
D3-12	17:01	12	136.6 *

\* Sampled for DRO, BRO, PAH, GRO, & VOC  
D3-12 sampled @ 1716

Return in Run

Location Port William, AK Date 6/21/21  
 Project / Client Port William Site Characterization

Notes: Sample location approx 8' from cliff edge. Free product & odor observed. Surface layer was mucky peat. Obj observed 8" bgs. Absorbent pads observed w/in drainage.

Sample	Time	Depth	PID
D2-0	1756	0	58.3
D2-6	1754	6	61.1
D2-12	1753	12	274.1
D2-17	18750	17	727.7 *

\* Sampled for DRO, BRO, PAH, GRO, & VOC  
 Sample D2-17 sampled @ 1815.  
 Sample location was submerged.

Notes: Observed free product & odor.  
 Surface layer was mucky peat.  
 Refused @ 17". Tent pit dug approx 1' outside drainage ditch, center.  
 Water @ bottom of pit appeared to collect in bowl.

Port William, AK

6/21/21

Port William Site Characterization

Notes from Main drainage:  
 Deviated from workplan on lengths between transects. Due to topography, tent pits were difficult to profile due to water filling holes immediately after digging (Had four days of rain prior to arriving on site). TPEC chose tent pit locations based on natural terraces. Chose locations where water could easily be drained from tent pit. TPEC observed significant ~~at~~ over burden. TPEC also observed brown marks on surrounding trees. TPEC also observed what appeared to be tar paper throughout drainage along w/ absorbent pads. Veg did not appear to be stressed.

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization

Teleather: Upper 50'<sup>s</sup>, lower 60'<sup>s</sup>, overcoat

Personnel: Casey Volk (TPEC)  
 Ryan Kingberry (TPEC)  
 Carson Kent (BGES)

Objective: Continue investigating the property for signs of contamination. Investigated structures & screen area beneath fuel cribs on secondary containment the hold heating oil tanks. Collect surface water & sludge samples from tank four.

Wood Shed

Heating Oil 3'6" Depth (required) 30"  
 Platform

3' X WS-1

Location Port William, AK Date 6/23/21  
 Project / Client Port William Site Characterization

Sample	Time	logs	PID
WS1-0	8 56	0	33.8
WS1-6	8 58	6	19.1
WS1-12	9 00	12	38.4 *
WS1-18	9 13	18	1.4
WS1-24	9 18	24	4.2
WS1-30	9 21	30	0.0

\* Sampled for DBO, BBO, PAH, GRO, & VOC Collected @ 934.

Notes: Dug test pit below platform corner. Platform was slanted & drained to corner where test pit was dug. Surface layer was organic prot. Observed @ approx 12" logs. Request was @ 30" logs. Water collected @ base of test pit. TPEC observed a slight shear in water @ base of hole.

New Bunkhouse

Walked perimeter of building & observed no areas of concern. Observed propane tanks but no heating oil tanks. Has been recently modified, evidence, tank ~~contaminated~~

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization

Day Tanks



Sample	Time	Depth	PID
DT1-0	1045	0	10.9
DT1-6	1047	6	4.7
DT1-12	1050	12	3.8
DT1-17	1052	17	11.3 *

\* Sampled for DRO, RBO, PAH, GRO, & VOC.  
 Collected @ 1109

Notes: Sample collected near front @ base of crib & below tank fuel filter. Test pit was approx 6' from base of spruce tank. Ash layer approx 4" bgs. Refusal @ 17" bgs. Water present @ base of test pit, no steam observed.

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization

Old Bunkhouse

Walked perimeter of old bunkhouse. Building was delapidated w/ several lines running underneath structure. Many lines could not be accessed due to the partial collapse of the structure. Identified one line that appeared to be a fuel line & collected a heated headspace screening sample. PID indicated sample was 8.9 ppm.

Mezz Hall

Sample	Time	Depth	PID
MH1-0	1206	0	45.7 *
MH1-6	1208	6	42.5

\* Sampled for DRO, RBO, PAH, GRO, & VOC.  
 Collected @ 1239

Notes: Encountered refusal (graymuck) @ 6" bgs. Product, steam, & odor (dead) observed. Steady stream of water seen through site & under structure. 55 gal drum located approx 4' from test pit.

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization

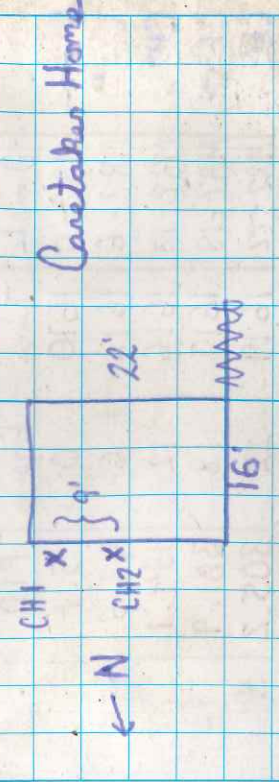
Sample	Time	Depth	PID
CH1-0	1312	0	0.5
CH1-6	1314	6	3.7
CH1-12	1316	12	49.9
CH1-18	1318	18	51.1
CH1-24	1330	24	11.9 *

\* Sampled for DRQ, BRO, PAH, GRO, & VOC  
 Collected @ 1347

Note: Dry test pit below what appeared to be an old attachment on the north side of structure. Potentially gas product but hard to identify. Referred @ 24" due to groundwater. Very light sheen identified. Strong odor (Weathered diesel). Ash 8" bgs.

Sample	Time	Depth	PID
CH2-0	1401	0	2.4
CH2-6	1403	6	0.3
CH2-12	1405	12	0.2
CH2-18	1407	18	0.4

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization



Sample	Time	Depth	PID
MR1-0	144	2	0
MR1-6	144	4	6
MR1-12	150	2	12
MR1-18	151	3	18
MR1-24	152	7	24

\* Sampled for DRQ, BRO, PAH, GRO, & VOC  
 Collected @ 1533. Dup (MR1-30) @ 1552

Note: Collected under a porch that held a 55 gal drum. Insulation was below the porch. Odor present (diesel). Referred @ 24". Ash 3" bgs. No water @ base.

Return to site

Location Port William, AK Date 6/22/21Project / Client Port William Site Characterization

Sample	Time	logs	PID
MR2-0	1610	0	5.1
MR2-6	1612	6	43.3
MR2-12	1616	12	134.1
MR2-18	1617	18	301.9
MR2-22	1619	22	305.2 *

\* Sampled for DRO, BRO, PAH, GRO, & VOC  
Collected @ 1636

Notes: Strong/obvious staining & odor (diesel). Located on N side of main residence. Ash 4" logs. No water @ base. Refusal @ 22". Test pit below what site owner uses a diesel tank mounted to outside wall.

## Mess Hall

Sample	Time	logs	PID
MH2-0	1727	0	3.0
MH2-6	1729	6	35.7 *
MH2-11	1730	11	15.6

\* Sampled for DRO, BRO, PAH, GRO, & VOC.  
Collected @ 1747

Location Port William, AK Date 6/22/21Project / Client Port William Site Characterization

Notes: Discovered plastic and rubber lining material near surface. No ash observed. Refusal @ 11" due to water. Slight steam observed on water w/ faint odor. Gravel observed @ approx 11".

Sample	Time	logs	PID
MH3-0	1758	0	1.1
MH3-6	1800	6	31.8 *
MH3-12	1802	12	26.6

Notes: Dug test pit dug <sup>addition</sup> near ~~main~~ on east end of mess hall. Odd on structure is not historic, evidence look someone used on structure, Heavy staining on surface & subsurface soils. No odor present. Ash @ 4" logs. Refusal due to wood @ 12" logs.

\* Sample collected @ 856 for DRO, BRO, PAH (6/24/21)

GPS 58.491214, -152.583607 (51)

Location Port William Date 6/22/21  
 Project / Client Port William Site Characterization

GPS Coordinates (Soil)

Drainage @ Secondary Containment	Coordinates
1) 58.490919, -152.583003 (53)	
2) 58.490891, -152.583076 (49)	
3) 58.490902, -152.583226 (47)	
DT 58.491473, -152.583950 (61)	
MH1 58.491364, -152.583941 (41?)	
MH2 58.491321, -152.583539 ( )	
WS1 58.491290, -152.584190 (60)	
Old Bunkhouse (No lab sample.)	58.491544, -152.583598 (69)
CH1 58.491209, -152.584812 (43)	
CH2 58.491277, -152.585032 (44)	
MR1 58.49089, -152.583778 (45)	
MR2 58.49100, -152.583843 (47)	
( ) = Mean sea level	

Location Port William, AK Date 6/22/21  
 Project / Client Port William Site Characterization

Water Samples (Secondary Containment)

SCW1 collected @ 1515

SCW#2 collected @ 1520 (dup of SCW1)

Notes: Free product & plenty of sheen observed in containment. Used PAH for the pour water into GRO, VOC, DRO, & BRO bottles.

Sludge Sample  
 SIG1 collected @ 1550  
 SIG2 collected @ 1552 (dup of SIG1)

Notes: Walked perimeter of secondary containment watches for the release of sheen from the sediment along the perimeter. Selected area where the most amount of sheen was observed.

Location Port William AK Date 6/13/21  
 Project / Client Port William Site Characterization

Weather: Mid 50's, high winds & heavy rain.

Personnel: Casey Volk  
 Ryan Kingsberry  
 Carson Kent

Objective: Collect water samples from cliff discharge points. Finish characterizing tank farm. Walk property & look for other areas of environmental concern.

Cliff discharge (tank farm)  
 58.490946, -152.58318 (31)  
 C01 collected @ 838  
 C02 collected @ 849 (dup CG1)

Notes: Pick location base on discharge was observed while collecting soil samples above cliff @ tank farm drainage. Based high due to disturbed soil above. Observed a slight odor & observed

Location Port William Date 6/13/21  
 Project / Client Port William Site Characterization

u/s sample para. Also observed an abundant rock below collection point left over from previous cleanup.

Bunker C (Intertidal Zone)  
 58.490556, -152.5827608 (3.5)

Note: Observed a small piece of hardened bunker C on rock u/s intertidal zone.

Secondary Containment

1	0	58.491116	58.490934
↓	3	152.58278	152.58288
58.49168	58.49113		
152.58299	152.58274		
		58.491034	
		152.58294	
			2
		58.491126	58.490936
		-152.58306	-152.582787

Location Port William Date 6/23/21  
 Project / Client Port William Site Characterization

Additional Tank Farm TP

Sample	Time	depth	PID
TF1-0	1134	0	8.6
TF1-6	1136	6	11.0 *

Notes: Test Pit 14' from Corner #6 of secondary containment. Located @ 58.49 N 156, -152.5826 85. MSL 40'. Ash @ 2" bgs. Refusal @ 6" (Water). ~~Slight stream on test~~ Test pit we cleared area near natural depression w/ surface water. Also stream on nearby surface water. Organic steam observed.

\* Sampler collected for DRO, ARO, & PAH. Collected @ 1200

Sample	Time	bgs	PID
TF2-0	1220	0	3.9
TF2-6	1221	6	6.6
TF2-12	1224	12	8.9 *
TF2-18	1225	18	3.8
TF2-24	1226	24	3.6

\* Sampled @ 1240 for DRO, ARO, & PAH

Location Port William Date 6/23/21  
 Project / Client Port William Site Characterization

TF2 Location

58.490766, -152.582881 (31)
-----------------------------

Notes: Test pit located in natural depression under earth old piping running from TF to dock. Four pipes @ 6" 4" & 2" diameters. Observed black staining underneath one of the 4" pipes. Also observed two ziplock bags that appeared to contain soil. Refusal was not reached. Ash 12" bgs. Test pit 56' from SC.

TF3

Sample	Time	bgs	PID
TF3-0	1310	0	1.9
TF3-6	1311	6	6.8
TF3-12	1312	12	7.6
TF3-15	1313	15	11.4 *

Location

58.490870, -152.582997  
 \* Sampled for DRO, ARO, & PAH @ 1354

Location Port William Date 6/23/21  
 Project / Client P.W. Site Characterization

Notes: Located 28' from SC #2  
 & 20' from D2. Ash 10" bgs.  
 Refusal @ 15" (rock). Water present  
 @ base. Organic sheen observed.  
 No odor.

TF4

GPS 58.49084, -152.582976

Sample	Time	bgs	PID
TF4-0	1354	0	7.4 *
TF4-6	1356	6	2.4
"-12	1358	12	6.5
"-18	1359	18	4.3
"-24	1401	24	2.2
"-30	1403	30	1.3

Notes: Ash 10" bgs. Located 10'  
 south of TF3. No odor or sheen.

\* Sampled @ 1419 for DFO, RFO, & PAH.

Port William Date 6/23/21  
 Project / Client P.W. Site Characterization

Second Drainage (D4)	
Sample	Type
D4-0	0
D4-6	6
D4-12	12
D4-18	18

Location

58.4909468, -152.583099 (47)

\* Sampled for DFO, RFO, PAH, GFO, VOC  
 Collected @ 1652

Notes: Strong odor (diesel) &  
 sheen. Ash 6" bgs. Refusal  
 @ 20" (rock). Water @ base.  
 Second drainage runs somewhat  
 parallel to first drainage. Test  
 pit 21' from SC.

Location Port Williams Date 6/23/21Project / Client P.W. Site Characterization

## Tank Farm 5 (Bunker C)

Sample	Time	hrs	PID
TF5-0	1758	0	24.7
6	1759	6	106.4
12	1800	12	111.3 *
18	1801	18	108.9

\* Sampled for DRO, RRO, & PAH  
Collected @ 1820 (TF5-12.)

Duplicate (TF5-~~12~~24) @ 1830

Location: 58.491007, -152.583153 (64)

Notes: Airt layer 6" bgs. Heavy odor & staining. Fats product observed.

Located 15' from tank discharge valve & 30' from SL. Refused 30". Water present @ base up to 18' bgs.

## Chiff Drainage 2 (Bunker C)

Location: 58.490933, -152.583322 (44)  
CDZ collected @ 1822

Notes: Mild steam & odor. Only location where sample was possible. 6' to east, heavy staining & odor (Bunker C)

Port Williams6/23/21P.W. Site Characterization

## Tank Farm 6

Sample	Time	hrs	PID
TF6-0	1907	0	4.6
TF6-6	1908	6	4.0
TF6-12	1909	12	9.8 *
TF6-18	1911	18	7.0

Sampled for DRO, RRO, PAH  
Collected @ 1924. Mostly ash

Notes: Located 12' from tank.  
Airt 8' bgs. No odor or steam.  
Water present @ base.

GPS: 58.49118, -152.58323 (64)

## Tank Farm 7

Sample	Time	hrs	PID
TF7-0	1943	0	37.4
TF7-6	1944	6	36.4
TF7-12	1945	12	74.7
TF7-18	1946	18	106.4 *

\* Sampled for DRO, RRO, & PAH @ 2002

Location Fort William Date 6/23/21  
 Project / Client P.W. Site Characterization

Notes: Located down gradient of tank. Odor & sheen present (hunkus). Test pit in natural or manmade trench. Located 36' from creek. Located 30' from tank. Ash 2" bgs. Water present. Refusal @ 10".

GPS: 58.49097, -152.583421 (63)

### Tank Farm 8

Sample	Time	Age	PID
TF8-0	2006	0	1.0
TF8-6	2007	6	0.9
TF8-12	2008	12	0.9

GPS: 58.491208, -152.583022 (75)

Notes: Located 2' from tank. Ash 4" bgs. No sheen, odor, or water. Refusal 12" (rock). Located up grade of isolated tank. Located 24' from SC (north and near #17).

Location Fort William Date 6/23/21  
 Project / Client P.W. Site Characterization

Old pulley house  
 58.4925048, -152.582306  
 4

Location Port Williams Date 6/24/21  
 Project / Client P.W. Site Characterization

Weather: Upper 50's, overcast

Personnel: Casey Volk  
 Ryan Kungberg  
 Carson Kent

Objective: Collect water sample from main shell discharge point. Collect composite sample from sand underneath discarded broken batteries.

Drainage 3 (CD4)

GPS 58.490879, -152.584629 (21)

CD4 collected @ 858

Analyzed for TAH & TAGH

Notes: No shov or odor. Collected behind fish house.

MH3-6 collected @ 856. See notes from 6/22/21 for more information.

Location Port Williams Date 6/24/21  
 Project / Client P.W. Site Characterization

Lead Sample (Composite)

Notes: Collected 13 samples from intertidal zone. 11 samples were under discharged batteries & 2 samples were beneath the drip line of the boat building on dock where paint was used along the siding. The remaining buildings & side on the dock were not painted & consisted of metal siding.

TZ1 collected @ 945. Composite sample analyzed for lead from intertidal zone. Sample was sand & beach gravel.

**APPENDIX F:**  
**Conceptuel Site Model**

# Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name:

File Number:

Completed by:

## Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

*General Instructions: Follow the italicized instructions in each section below.*

## 1. General Information:

**Sources** (*check potential sources at the site*)

- |  |  |
|--|--|
| <input type="checkbox"/> USTs                          | <input type="checkbox"/> Vehicles                    |
| <input type="checkbox"/> ASTs                          | <input type="checkbox"/> Landfills                   |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers                |
| <input type="checkbox"/> Drums                         | <input type="checkbox"/> Other: <input type="text"/> |

**Release Mechanisms** (*check potential release mechanisms at the site*)

- |                                 |  |
|---------------------------------|--|
| <input type="checkbox"/> Spills | <input type="checkbox"/> Direct discharge            |
| <input type="checkbox"/> Leaks  | <input type="checkbox"/> Burning                     |
|                                 | <input type="checkbox"/> Other: <input type="text"/> |

**Impacted Media** (*check potentially-impacted media at the site*)

- |  |  |
|--|--|
| <input type="checkbox"/> Surface soil (0-2 feet bgs*)  | <input type="checkbox"/> Groundwater                 |
| <input type="checkbox"/> Subsurface soil (>2 feet bgs) | <input type="checkbox"/> Surface water               |
| <input type="checkbox"/> Air                           | <input type="checkbox"/> Biota                       |
| <input type="checkbox"/> Sediment                      | <input type="checkbox"/> Other: <input type="text"/> |

**Receptors** (*check receptors that could be affected by contamination at the site*)

- |  |  |
|--|--|
| <input type="checkbox"/> Residents (adult or child)                      | <input type="checkbox"/> Site visitor                |
| <input type="checkbox"/> Commercial or industrial worker                 | <input type="checkbox"/> Trespasser                  |
| <input type="checkbox"/> Construction worker                             | <input type="checkbox"/> Recreational user           |
| <input type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer                      |
| <input type="checkbox"/> Subsistence consumer (i.e. eats wild foods)     | <input type="checkbox"/> Other: <input type="text"/> |

\* bgs - below ground surface

**2. Exposure Pathways:** *(The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)*

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site-specific basis.)

*If the box is checked, label this pathway complete:*

Comments:

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Comments:

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater, or are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

*If both boxes are checked, label this pathway complete:*

Comments:

## 2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).

*If both boxes are checked, label this pathway complete:*

Comments:

## 3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods?

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)

*If all of the boxes are checked, label this pathway complete:*

Comments:

### c) Inhalation-

#### 1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)

Are the contaminants in soil volatile (see Appendix D in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Comments:

## 2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminated soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)

Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?

*If both boxes are checked, label this pathway complete:*

Comments:

**3. Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

*Check the box if further evaluation of this pathway is needed:*

Comments:

**Inhalation of Volatile Compounds in Tap Water**

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

*Check the box if further evaluation of this pathway is needed:*

Comments:

## Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM<sub>10</sub>). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

*Check the box if further evaluation of this pathway is needed:*

Comments:

## Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

*Check the box if further evaluation of this pathway is needed:*

Comments:

**4. Other Comments** *(Provide other comments as necessary to support the information provided in this form.)*

# HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: \_\_\_\_\_  
 \_\_\_\_\_

Completed By: \_\_\_\_\_  
 Date Completed: \_\_\_\_\_

**Instructions:** Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Media	(2) Transport Mechanisms
<input type="checkbox"/> Surface Soil (0-2 ft bgs)	<input type="checkbox"/> Direct release to surface soil <i>check soil</i> <input type="checkbox"/> Migration to subsurface <i>check soil</i> <input type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Runoff or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____
<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <i>check soil</i> <input type="checkbox"/> Migration to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____
<input type="checkbox"/> Ground-water	<input type="checkbox"/> Direct release to groundwater <i>check groundwater</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Flow to surface water body <i>check surface water</i> <input type="checkbox"/> Flow to sediment <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i> <input type="checkbox"/> Volatilization <i>check air</i> <input type="checkbox"/> Sedimentation <i>check sediment</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i> <input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i> <input type="checkbox"/> Uptake by plants or animals <i>check biota</i> <input type="checkbox"/> Other (list): _____

(3) Check all exposure media identified in (2).

Exposure Media

soil

groundwater

air

surface water

sediment

biota

(4) Check all pathways that could be complete. The pathways identified in this column **must** agree with Sections 2 and 3 of the Human Health CSM Scoping Form.

Exposure Pathway/Route

Incidental Soil Ingestion

Dermal Absorption of Contaminants from Soil

Inhalation of Fugitive Dust

Ingestion of Groundwater

Dermal Absorption of Contaminants in Groundwater

Inhalation of Volatile Compounds in Tap Water

Inhalation of Outdoor Air

Inhalation of Indoor Air

Inhalation of Fugitive Dust

Ingestion of Surface Water

Dermal Absorption of Contaminants in Surface Water

Inhalation of Volatile Compounds in Tap Water

Direct Contact with Sediment

Ingestion of Wild or Farmed Foods

(5) Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

**Current & Future Receptors**

	Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
<input type="checkbox"/> Incidental Soil Ingestion							
<input type="checkbox"/> Dermal Absorption of Contaminants from Soil							
<input type="checkbox"/> Inhalation of Fugitive Dust							
<input type="checkbox"/> Ingestion of Groundwater							
<input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater							
<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
<input type="checkbox"/> Inhalation of Outdoor Air							
<input type="checkbox"/> Inhalation of Indoor Air							
<input type="checkbox"/> Inhalation of Fugitive Dust							
<input type="checkbox"/> Ingestion of Surface Water							
<input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water							
<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
<input type="checkbox"/> Direct Contact with Sediment							
<input type="checkbox"/> Ingestion of Wild or Farmed Foods							

Appendix G :  
Qualifications of the Environmental Professional

# **Michael D. Travis, P. E.**

## **Environmental Engineer**

Mike has over 38 years of experience in environmental projects in Alaska. He currently is a Principal owner in Travis/Peterson Environmental Consulting, Inc., specializing in site remediation throughout Alaska.

Mike's vast education and expertise with State agencies, Federal laws and statutes, and working with local communities enables him to effectively manage projects throughout Alaska. He is a registered civil engineer in Alaska.

## **Work Experience**

### **Principal, Travis/Peterson Environmental Consulting, Inc. (1997 to present)**

Responsibilities: Co-Owner and Principal of an environmental engineering consulting firm. Provided a wide range of environmental and engineering services for private and governmental agencies. Performed environmental impact analysis for new and expanded highways, airports, mines, and power plants. Impact analysis involved air and noise modeling, storm water planning, public involvement, and social-economic analysis. Designed corrective action plans to respond to hazardous waste spills and assess the area of contamination. Performed Phase I and Phase II environmental site assessments for properties throughout Alaska. Designed soil and groundwater remediation systems.

### **Chief of Professional Services, Alaska Department of Transportation and Public Facilities (DOT&PF) (1996-1997)**

Responsibilities: Supervised the contracting and negotiating of engineering and construction projects within the Central Region of DOT&PF. Assisted in the final design of the Whittier Tunnel Access project. Provided environmental expertise for DOT&PF defense of a lawsuit within the Ninth Circuit Court of Appeals.

### **Vice President, AGRA Earth and Environmental, Inc. (1991 – 1996)**

Responsibilities: Managed geotechnical and environmental engineering offices in Fairbanks and Anchorage, Alaska. Reviewed final work products before submitting them to clients. Designed hazardous waste remediation treatment systems for remote canneries. Headed the Whittier Tunnel Access Environmental Impact Statement project team and lead all public relations. Performed Environmental Assessments to fulfill requirements of the National Environmental Policy Act for construction projects throughout Alaska. Environmental Manager for the Whittier Tunnel EIS. Supervised 30 employees. Developed corrective action plans for spill sites.



## **Education**

University of Alaska Fairbanks

B.S. Fishery Biology -1981

M.S. Environmental Quality Science - 1986

## **Certifications**

Hazardous Waste Operations and Emergency Response Certification, Supervisors Course

Registered Civil Engineer in Alaska. Registration number CE 8048

Certified Fishery Scientist. American Fishery Society

Casey Volk

Staff Environmental Scientist

**3-Tier Alaska Capital, Inc.**  
**Travis/Peterson Environmental Consulting**  
3305 Arctic Boulevard, Suite 102  
Anchorage, Alaska 99503  
Telephone (907) 522-4337  
Fax (907) 522-4313  
cvolk@tpeci.com

### EDUCATION

University of Nevada, Reno  
Reno, Nevada (2010-2014)

BS- Wildlife Ecology & Conservation

### REPRESENTATIVE EXPERIENCE

#### **Staff Scientist - 3-Tier Alaska Capital, Inc. and Travis/Peterson Environmental Consulting, Inc.**

Staff Environmental Scientist for an environmental consulting and engineering firm. General duties include report writing, conducting baseline environmental research, site characterization and remediation, biological assessments and species data collection, and interfacing with regulatory agencies and clients. Other duties include performing environmental records reviews, site assessments, biological analysis, soil sampling, wetlands delineations, and site reconnaissance for Phase I Environmental Site Assessments. Write and implement Stormwater Pollution Prevention Plans (SWPPP). Performs stormwater inspections at construction sites. Maintains SWPPP logs and records.

#### **Fish Technician II - Alaska Department of Fish & Game**

Fish Technician duties included field technician supervision, field logistics, data entry and preliminary data analysis, and collection of biological samples. Additional duties included the installation and usage of telemetry scanning for mortality rates among Alaskan salmon. Employed while attending college.

### CERTIFICATIONS

The Associated General Contractors	<i>Alaska Certified Erosion &amp; Sediment Control Lead, 5/2019</i>
Environmental Management Inc	<i>HAZWOPER 40-hr. Initial Course, 5/2019</i>
Satori Group	<i>HAZWOPER 8-hr. Refresher 2020, 2021</i>
Wetland Training Institute	<i>40-hr Army Corps of Engineers Wetland Delineation Training Program, 6/2021</i>
American Red Cross	<i>Adult First Aid/CPR/AED, 6/2021</i>

### EMPLOYMENT RECORD

1/2021 – present	3-Tier Alaska Capital, Inc. / Travis/Peterson Environmental Consulting
4/2019 – 1/2021	Travis/Peterson Environmental Consulting, Inc.
7/2015 - 4/2019	Spectra Venue Management
5/2012 - 7/2015	Alaska Department of Fish & Game (Seasonal Permanent)



**Charlie Hampton**

**Staff Environmental Engineer**

**3-Tier Alaska Capital, Inc.**  
**Travis/Peterson Environmental Consulting**  
3305 Arctic Boulevard, Suite 102  
Anchorage, Alaska 99503  
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Fax (907) 522-4313  
charlie@3tieralaska.com

**EDUCATION**

Virginia Tech  
Blacksburg, Virginia (2017-2020) BS- Civil Engineering

**REPRESENTATIVE EXPERIENCE**

**Staff Environmental Engineer - 3-Tier Alaska Capital, Inc. and Travis/Peterson Environmental Consulting**

Staff Environmental Engineer for an environmental consulting, engineering, and land surveying firm. General duties include report writing, conducting baseline environmental research, site characterization and remediation, and interfacing with clients. Other duties include performing environmental records reviews, drafting site representations, reviewing water treatment systems, site assessments, wetlands delineations, and site reconnaissance for transaction screens.

**Engineer – McDonough, Bolyard, Peck, Inc.**

Engineer duties included performing environmental site inspections, constructability reviews, cost estimation, contract administration, drafting of visual aids for a legal team, data analysis and configuration, and materials testing. Additional duties included communication and coordination with clients, attorneys, designers, contractors, suppliers, and government agencies, as well as operation of equipment such as pickup trucks, nuclear density gauges, and concrete testing equipment. Key projects included Route 220 Safety Improvements (Eagle Rock, VA), California High Speed Rail (Merced to Bakersfield, CA), and Hirshhorn Sculpture Garden (Smithsonian Institution, Washington, DC).

**CERTIFICATIONS**

Virginia Department of Environmental Quality	<i>Inspector for Stormwater Management, 8/2021</i>
Virginia Department of Environmental Quality	<i>Inspector for Erosion and Sediment Control, 8/2021</i>
American Heart Association	<i>Adult First Aid/CPR/AED, 6/2021</i>

**EMPLOYMENT RECORD**

10/2021 – present	3-Tier Alaska Capital, Inc. / Travis/Peterson Environmental Consulting
1/2021 – 9/2021	McDonough, Bolyard, Peck, Inc.
5/2019 - 1/2020	McDonough, Bolyard, Peck, Inc. (Student Co-op)
5/2018 - 8/2018	W-L Construction (Student Intern/Laborer)