



**Additional Environmental Exploration
Report and Focused Feasibility Study
Former Chevron Truck-Loading Rack and
Fuel-Pipe area
147 Front Street
Hoonah, AK 99829**

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February 9, 2021
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Mr. Doug Brindle
Wards Cove Packing Company
10740 Meridian Avenue N. Suite 210
Seattle, WA 98133

**Subject: Additional Environmental Exploration Report and
Focused Feasibility Study
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147 Front Street
Hoonah, AK 99829**

Dear Mr. Brindle:

Presented in this report are the results of G-Logics recent environmental work performed at the above-referenced property. This report documents the purpose, approach, and results of this exploration. This report also presents a focused evaluation of remedial alternatives for the Site.

During the course of this work, exploration findings indicated ADEC Method Two Soil Cleanup Levels for Direct Contact (Over 40 Inch Zone) were applicable for comparison purposes. The logic and findings for this interpretation are presented in the attached report.

We trust the information presented in this report meets your needs at this time. Should you require additional information or have any questions, please contact us at your convenience. Thank you again for this opportunity to be of service.

Sincerely,
G-Logics, Inc.


Rory L. Galloway, LG, LHG
Principal


Zackary Wall, LG
Project Geologist

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1.0 INTRODUCTION

As the environmental consultant for Wards Cove Packing Company (WCP), G-Logics performed additional environmental-exploration work at the subject property (the “Property”). The Property is located at 147 Front Street in Hoonah, Alaska (Figures 1 and 2) and has been assigned Hazard-Identification Number 26601 by the Alaska Department of Environmental Conservation (ADEC). The Property currently consists of a retail store (grocery and hardware supplies) that is operated by the Hoonah Trading Company, a maintenance/storage building, and a former truck-loading rack Area (now used as a carport).

The scope of this work was based on requests made by the ADEC in their March 28, 2018 comment matrix, May 28, 2019 letter, and subsequent conversations. Specifically, ADEC requested additional sampling in the former “Truck-Loading Rack” and “Fuel-Pipe” Areas (areas indicated on Figure 2) to provide additional information regarding the nature and extent of petroleum contaminants found in these two areas. The exploration work was performed in accordance with G-Logics workplan dated June 7, 2019. Both of these areas are located downgradient of the Tank Farm, which is being assessed by Chevron (separate workscope negotiated with ADEC).

2.0 BACKGROUND

Between 2015 and 2017, G-Logics conducted several environmental explorations and remedial actions on the Property. This work was performed to characterize and address petroleum contaminants at the property, believed to be originating from the former Truck-Loading Rack and fueling features/operations associated with a former bulk-fuel tank farm (the former “Chevron Tank Farm”) located on the east adjacent property (160 Front Street).

The former Truck-Loading Rack on the Property is known to ADEC as the “Former Chevron Truck-Loading Rack” (or Truck-Loading Rack), and the tank farm on the adjacent property is known to ADEC as the “Former Chevron Tank Farm”. The location of the former Tank Farm, upslope with respect to the subject property, is shown on Figure 2. The Truck-Loading Rack Area is shown on Figure 3.

Previous work conducted on the Property by G-Logics is described in further detail in our reports dated January 11, 2017 and March 13, 2019. Locations of borings, test pits, and

remedial excavations previously advanced on the Property are shown on Figures 3, 5, and 6.

2.1 Historical Tank Farm and Property Fueling Operations

G-Logics understands that during its operation, fueling activities on the Property included a truck-loading rack, a small dispensing island for fuel sales to the public, and a dispensing station for fuel sales to marine customers. Types of fuel sold on the Property included Diesel No. 1 and 2, Leaded Gasoline, and Unleaded Gasoline. The truck-loading rack was used to load fuel into trucks, which delivered the fuel to local customers. Fuels distributed at the truck-loading rack came from Chevron's tank farm, located on the east-adjacent property.

Historically, fuel-supply lines (from the tank farm to the truck-loading rack) were located above ground coming downslope from the Tank Farm Area until crossing Front Street, at which point they were routed under the roadway. The fuel lines again day lighted at the shoreline bulkhead (beneath the dock) and entered the Property at the northeast corner of the Hoonah Trading Company's parking lot. These features are shown on Figure 2. This general area, referred to as the "Fuel-Pipe Area", is shown on Figure 4.

In 2011, The City of Hoonah in conjunction with the Alaska Energy Authority constructed a new tank farm and fueling station located approximately one quarter of a mile north of the subject Property that is leased to Hoonah Trading. At this time, the fueling operations ceased on the 147 and 160 Front Street properties. Subsequently, WCP retained Spooner Contracting, LLC (Spooner) in the spring of 2015 to remove and decommission the former Chevron Truck-Loading Rack (located on the subject Property) and Former Chevron Tank Farm (located on the east-adjacent property). The demolition and decommissioning work included the removal of the supply lines associated with the Truck-Loading Rack and fuel-dispensing equipment for marine customers. At the Former Chevron Tank Farm, the tanks and other structures also were decommissioned (cleaned, dismantled, and removed from the 160 Front Street property).

The Chevron Environmental Management Company (Chevron) and their consultants have recently completed additional explorations in the Former Tank Farm Area. This work is documented in their draft report, dated January 31, 2020. Their report indicates that petroleum contaminants are present at elevated concentrations in the former Tank-Farm Area and extend downslope toward the Fuel-Pipe and Truck-Rack Areas.

2.2 On-Property ASTs

G-Logics understands that at least one heating-oil above-ground storage tank (AST) is currently in-use at the Property. At least two additional ASTs previously have existed, but reportedly were decommissioned and removed in 2015 with the fuel-dispensing equipment (see Section 2.1 above). The ASTs were equipped with secondary containment and two of the three were stored under cover. Their approximate locations, and an additional AST located on a neighboring property, are shown on Figure 4.

2.3 On-Property Oil/Water Separators

To G-Logics knowledge, two oil/water separators are located on the Property (Figure 2). Both separators are periodically checked by personnel of the Hoonah Trading Company Store and maintained as necessary. G-Logics understand the separator located near the parking area of the Hoonah Trading Company Store, is used by the Alaska Department of Transportation (ADOT) for surface-water drains in this area. However, G-Logics does not have any further information regarding the inspection and/or cleaning of this separator by ADOT.

2.4 Regulatory Background

The rules that guide the cleanup process at sites within Alaska are known as the Alaska Administrative Code (AAC) Cleanup Regulations, which is administered by the ADEC. Cleanup Levels promulgated under ADEC are often used as standards for deciding when additional investigation or cleanup is appropriate.

2.4.1 Soil Sample Cleanup Levels

In a letter dated May 22, 2019, ADEC stated that analytical results from collected soil samples should be compared to Method 2 Cleanup Levels for migration to groundwater pathway (18AAC 75.341, Table B1 and B2). While this was reflected in the approved workplan, G-Logics exploration found bedrock close to the ground surface. As such, groundwater was not encountered at recoverable amounts and is not considered to be a potential drinking water source. Based on this information, we have concluded that the groundwater pathway is not complete. Therefore, based on the findings of the work completed and documented in this report, analytical laboratory results for soil samples collected at the Site were compared to ADEC Method Two Cleanup Levels for Direct Contact (Over 40 Inch Zone).

2.4.2 Sediment Sample Screening Levels

According to ADEC regulations, samples collected below the mean high-tide mark are considered sediment. For the purposes of this report and because all work was completed on the shoreline, all soil/sediment samples collected in the Fuel-Pipe Area have been compared to Method Two Cleanup Levels for Direct Contact of soil (Over 40 Inch Zone) and the sediment cleanup/screening levels discussed below.

ADEC's *Sediment Quality Guidelines* (or "SQGs", ADEC *Technical Memorandum* dated January, 2013) recommends the use of the Screening Quick Reference Tables (SQuiRTs) developed by the National Oceanic and Atmospheric Administration (NOAA) when developing sediment-screening levels for the protection of benthic invertebrates. EcoUpdate EcoTox Threshold values (also included in the NOAA SQuiRTs database) also are available for reference. However, NOAA's Office of Response and Restoration has stated that, "*EcoTox thresholds are meant to be used for screening purposes only, they are not regulatory criteria, site-specific cleanup standards, or remediation goals*". Accordingly, for this exploration, shoreline soil/sediment analytical results also have been compared to the Probable Effects Level (PEL) for each contaminant (as recommended in the SQGs). The PEL values for marine sediments are generally an order-of-magnitude lower than the most conservative ADEC Method 2 soil-cleanup levels.

When PEL values are not available for a particular contaminant, sediment data were compared to Washington State sediment-quality regulations, as presented in the Department of Ecology *Sediment Cleanup User's Manual* (dated December 2017).

2.4.3 Pore-Water Sample Screening Levels

Water-quality standards, as set forth in 18 AAC 70, have been used for comparing pore-water sample results. Surface water at this site is marine in nature and is not a water supply for aquaculture, seafood processing, or industrial uses. Additionally, surface water adjacent to the Site is not used by humans for recreational or subsistence purposes. Therefore, surface water/pore water data only have been compared to criteria for the growth and propagation of marine aquatic life (i.e., fish, shellfish, other aquatic life, and wildlife) in accordance with (18 AAC 70.020).

3.0 PROPERTY EXPLORATION ACTIVITIES

To address ADEC comments and recommendations, G-Logics completed an additional exploration to collect soil, sediment, and pore-water samples in the Truck-Loading Rack and Fuel-Pipe Areas of the Property. The objective of the completed work was to finalize site characterization and delineate the lateral and vertical distribution of contaminants of potential concern (COPCs) on the Property. Work was performed in accordance with our workplan dated June 7, 2019 and was completed in August 2019. Please refer to Appendix A for more detail regarding site-exploration and sample-equipment cleaning methods. Appendix B includes field notes prepared during the site work.

All sampling work was performed by a “Qualified Environmental Professional” (resume in Appendix C) as required by 18 AAC 75. Environmental-sampling procedures followed ADEC’s *Field Sampling Guidance (August 2017)*. Soil samples were submitted for analysis to a laboratory accredited under the Alaska Contaminated Sites Laboratory Approval Program (CS-LAP) and analyzed for contaminants in accordance with Table B2 of 18 AAC 75 *Oil and Other Hazardous Substances Pollution Control* (revised July 2017).

Tasks completed during this exploration are described in the following sections.

3.1 Former Truck-Loading Rack Area

Previous investigations and remedial work in the Truck-Loading Rack Area found diesel-range organics (DRO) above Method 2 Direct Contact cleanup levels. Based on historical sampling data from this area, ADEC requested that additional samples be collected in this area to further characterize site contaminants.

3.1.1 Soil Sampling

In this area, hand-operated direct-push probe equipment was used to advance borings and collect soil samples. Specifically, eight borings were advanced to depths ranging from 6.5 to 14 feet below the ground surface (locations shown on Figure 3).

Six borings originally were planned for the Truck-Loading Rack Area. However, based on field indications of contaminants in borings TRB-5 and TRB-6, two additional borings (TRB-7 and TRB-8) were advanced in assumed upgradient locations, in an attempt to delineate areas to the east.

Continuous-core soil samples were collected and screened for contaminants following the methods discussed in Appendix A. Field notes and photoionization detector (PID) readings were noted on the boring logs (attached as Appendix D).

Soil samples were collected where field indications of contamination were observed (i.e., petroleum odors or staining) or from where contamination likely would be present (i.e. at the water interface). At least two soil samples were collected from each completed boring and analyzed for gasoline-range organics (GRO), diesel-range organics (DRO), volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). Several contaminants also required analysis by EPA 8260C SIM to achieve sufficiently low laboratory-reporting limits to assess results against the cleanup/screening levels.

Sampling locations, including previously collected samples, are shown on Figure 3. Results of these analyses are presented in Section 4.1.1 of this report.

3.1.2 Pore-Water Sampling

Because of contaminant concentrations remaining in the Truck-Loading Rack Area, the migration-to-groundwater pathway is considered by ADEC to remain complete at this time. However, due to the soil conditions in this area (fill gravels underlain by rip-rap rock and boulders), construction of a groundwater-monitoring well was not feasible in this area. Therefore, temporary sampling ports were advanced along the shoreline to the west of the Truck-Loading Rack Area to collect pore-water samples (surface water within the pore space of shoreline sediments). Pore-water sampling locations, TRPW-1 and TRPW-2, are shown on Figure 3. Installation and sampling methods are discussed in Appendix A.

Pore-water samples were analyzed for GRO, DRO, VOCs, and PAHs. As with soil, several contaminants also required analysis by EPA 8260C SIM to achieve sufficiently low laboratory-reporting limits to assess cleanup/screening levels. Results of these analyses are presented in Section 4.1.2 of this report.

3.2 Fuel-Pipe Area

Previous investigations in the Fuel-Pipe Area found petroleum hydrocarbons and related compounds (PAHs and BTEX compounds) above applicable ADEC Method 2 Direct Contact cleanup levels and/or NOAA SquiRT PELs (see Figures 5 and Figures 6 for previous sampling locations).

To further characterize site contaminants in this area, ADEC requested that additional soil/sediment and pore water samples be collected. Sampling work completed in the Fuel-Pipe Area is further discussed below.

3.2.1 Shoreline Soil/Sediment Sampling

Similar to the Truck-Loading Rack Area, hand-operated direct-push probe equipment was used to collect soil/sediment samples in the Fuel-Pipe Area. Specifically, eleven borings were advanced to depths ranging from 3 to 7 feet below the ground surface for the collection of soil/sediment samples (borings GLB-14 through GLB-24 shown on Figures 5-1 through 5-3). Ten borings were originally planned for the Fuel-Pipe Area. However, based on field indications of contaminants in boring GLB-17, one additional boring (GLB-18) was advanced in attempts to delineate the area to the north.

Again, continuous-core soil samples were collected using a 1.5-inch diameter stainless steel sampler, in lengths of two feet. Soil samples were collected for soil identification/chemical analysis and a PID was used to field screen for VOCs in collected soil samples. PID measurements were noted on the boring logs (attached as Appendix D).

Soil samples were collected where field indications of contamination were observed (i.e., petroleum odors or staining) or from where contamination likely would be present (i.e. at the surface-water interface). At least two soil samples were collected and analyzed from each completed boring and analyzed for GRO, DRO, VOCs and PAHs. Several contaminants also required analysis by EPA 8260C SIM to achieve sufficiently low laboratory-reporting limits to assess cleanup/screening levels.

Sampling locations, including previously collected samples, are shown on Figures 5 and 6. Results of these analyses are presented in Section 4.2.1 of this report.

3.2.2 Pore-Water Sampling

Due to the presence of surface water in the Fuel-Pipe Area, the migration-to-surface water pathway is considered by ADEC to be complete in this area of the Site. Temporary pore-water sampling ports were advanced to assess pore-water conditions in this area. One additional pore-water sample was collected away from known site contaminants, and in close proximity to dock pilings. The purpose of this sample was to assess potential background concentrations of DRO, VOCs, and PAHs associated with treated-wood pilings

located in this area. Again, installation and sampling methods are discussed in Appendix A. Pore-water sampling locations and data are shown on Figures 6-1, 6-2, and 6-3.

Pore-water samples were analyzed for GRO, DRO, VOCs, and PAHs. Several contaminants also required analysis by EPA 8260C SIM to achieve sufficiently low laboratory-reporting limits to assess cleanup/screening levels. Results of these analyses are presented in Section 4.2.2 of this report.

3.3 Investigation Derived Waste Handling and Disposal

For this work, all sampling equipment was cleaned before mobilization and between borings to reduce the potential for cross contamination. In addition, non-dedicated sampling equipment was cleaned between each sampling interval before the collection of the next sample. Decontamination and purge water generated during this work was stored in a 55-gallon open-top steel drum in a secure location on the Property. Soil cuttings and trash/debris generated during this work were placed in a 1-cubic yard “Supersack” and also stored in a secure location on the Property. The required Transportation, Treatment, and Disposal Approval Form for Contaminated Media (TTD) has been submitted to ADEC and subsequently approved for offsite waste disposal. This waste has been disposed at Waste Management’s Columbia Ridge Landfill in Washington State. Disposal documentation is included as Appendix H.

4.0 SITE EXPLORATION OBSERVATIONS AND FINDINGS

The findings of this site exploration are presented below. Analytical results obtained during this exploration are presented on Tables 1 through 4. Boring logs for the completed exploration are attached as Appendix D. The analytical laboratory reports for the analyzed soil and pore-water samples are attached as Appendix E of this report. Chain-of custody forms also are included in Appendix E.

4.1 Former Truck-Loading Rack Area Sample Findings

The borings completed in the Truck-Loading Rack Area, advanced to 6.5 to 14 feet deep, generally encountered brown, moist, medium to coarse grained sand, gravel, and silty sand (fill material) to the explored depths. Very moist to wet soil conditions were encountered in borings TRB-5, 6, 7, and 8 at a depth of 8.5 feet. Boring TRB-6 was able to be advanced to

a depth of 14 feet. From 13 to 14 feet, soil conditions in this boring changed to dry, gray/brown silt and clay.

Petroleum odors and staining were observed in boring TRB-2 from approximate depths of 4 to 8 feet (refusal at 8 feet in this boring). Petroleum odors and staining also were observed in boring TRB-5, 6, 7, and 8 starting at depths of approximately 8.5 to 10.5 feet (where soils turned very moist/wet).

Refer to the site diagram on Figure 3 for sampling locations. Analytical results, compared against the most conservative cleanup levels (ADEC Method 2 migration to groundwater) are discussed below.

4.1.1 Soil-Sample Findings

In soil samples collected during this exploration, Site contaminants were not detected above Method 2 Direct Contact cleanup levels. Soil analytical results from the Truck-Loading Rack Area are presented in Tables 1-1 and 1-2 and detailed below.

Petroleum Hydrocarbons

- Petroleum hydrocarbon contaminants were not detected above Direct Contact cleanup levels in any of the analyzed soil samples. However, DRO and GRO compounds were detected, but below Direct Contact cleanup levels in borings TRB-2, TRB-5, TRB-6, TRB-7, and TRB-8.
- RRO was not detected above laboratory PQLs in any of the analyzed samples collected from borings located in the former Truck-Loading Rack Area.
- BTEX compounds were detected, but below Direct Contact cleanup levels in borings TRB-1, TRB-2, TRB-3, TRB-5, TRB-7, and TRB-8.

Volatile Organic Compounds

- In boring TRB-5, Isopropylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene, 1,2,4-trimethylbenzene, and 4-isopropyltoluene were detected, but below Direct Contact cleanup levels.
- In boring TRB-2, n-propylbenzene, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were detected, but below Direct Contact cleanup levels.

Polycyclic Aromatic Hydrocarbons

- PAHs were detected, but below Direct Contact cleanup levels in analyzed soil samples collected from borings TRB-2, TRB-5, TRB-6, TRB-7, and TRB-8.
- In boring TRB-8, cPAHs were detected in a sample collected from a depth of 6 feet, but not in a sample collected from a depth of 8.5 feet.

4.1.2 Pore-Water Sample Findings

Analytical results from the Truck-Loading Rack Area are presented in Tables 2-1 and 2-2. GRO, DRO, VOCs, and PAHs were not detected above laboratory PQLs in any of the pore-water samples collected from the Truck-Loading Rack Area.

4.2 Fuel-Pipe Area Sample Findings

The borings completed in the Fuel-Pipe Area were advanced to depths ranging from 3 to 7 feet below ground surface. These borings generally encountered brown and gray, moist to wet, fine to coarse-grained sand and gravel with varying amounts of shell fragments to the explored depths. Petroleum odors and discoloration were observed in borings GLB-14, 15, 17, 21, 22, 23, and 24. Refer to the site diagram on Figures 5 and 6 for sampling locations. Analytical results are discussed below.

As discussed in Section 2.4 and per the available ADEC Sediment Quality Guidelines, soil/sediment sample results were compared to NOAA SquiRT Probable Effects Levels (PELs) and/ or EcoTox thresholds. Sample results for analytes with no established sediment screening level were compared to ADEC Method 2 Direct Contact cleanup levels.

4.2.1 Soil/Sediment-Sample Findings

For soil/sediment samples collected in the Fuel-Pipe Area, GRO concentrations are shown on Figure 6-1, DRO concentrations shown on Figure 6-2, and PAH detections are shown on Figure 6-3. Soil analytical results from the Fuel-Pipe Area are presented in Tables 3-1 and 3-2 and are detailed below.

Petroleum Hydrocarbons

- GRO, DRO, RRO, and BTEX compounds were detected in analyzed soil samples collected from 10 of the 11 Fuel-Pipe Area borings (GLB-14, GLB-15, GLB-17, GLB-18, GLB-19, GLB-20, GLB-21, GLB-22, GLB-23, and GLB-24).

- GRO was not detected above the Direct Contact cleanup level in soil/sediment samples collected during this exploration.
- DRO concentrations exceeded the Direct Contact cleanup level in samples collected from a depth of approximately 4 feet in borings GLB-14 and GLB-17.
- BTEX concentrations exceeded SquiRT EcoTox thresholds in samples collected from borings GLB-14, 15, 17, 20, 21, 22, 23, and 24.
- RRO was detected, but below the Direct Contact cleanup level, in one of the analyzed samples collected in the Fuel-Pipe Area (sample GLB-CC, field duplicate of sample GLB-19-2').

Volatile Organic Compounds

- Naphthalene was detected above SquiRT screening levels in analyzed soil samples collected from borings GLB-22 and 23.
- Naphthalene was detected below SquiRT screening levels in samples collected from borings GLB-15, 17, 19, and 24.
- Isopropylbenzene and n-propylbenzene were detected below CULs in analyzed soil samples collected from borings GLB-14, 15, 17, 21, 22, 23, and 24.
- 1,3,5-trimethylbenzene was detected below the Direct Contact cleanup level in samples collected from borings GLB-22 and GLB-23.
- 1,2,4-trimethylbenzene, was detected below the Direct Contact cleanup level in samples collected from borings GLB-14, 15, 17, 19, 20, 21, 23, and 24.
- Sec-butylbenzene was detected below CULs in samples collected from borings GLB-14, 17, and 23.

Polycyclic Aromatic Hydrocarbons

- PAHs were detected, but below SquiRT screening levels, in analyzed soil samples collected from borings GLB-14, 15, 16, 17, 19, 21, 22, 23, and 24.
- 2-Methylnaphthalene were detected above screening levels in samples collected from borings GLB-22 and GLB-23.
- Fluorene and phenanthrene were detected above screening levels in samples collected from borings GLB-14, 17, 22, 23, and 24.
- Acenaphthene was detected above screening levels in samples collected from borings GLB-14, 15, 17, 22, 23, and 24.

- cPAHs were detected, but below screening levels, in samples collected from borings GLB-14, 17, 19, 22, 23, and 24.

4.2.2 Pore-Water Sample Findings

In Fuel-Pipe Area, Site contaminants were found at detectable concentrations in pore-water samples collected throughout the Fuel-Pipe Area. For pore-water samples collected in the Fuel-Pipe Area, GRO concentrations are shown on Figure 6-1, DRO concentrations shown on Figure 6-2, and PAH detections are shown on Figure 6-3. Pore-water analytical results from the Fuel-Pipe Area are presented in Tables 4-1 and 4-2 and are summarized below.

Petroleum Hydrocarbons

- DRO was detected in 7 of the 9 analyzed samples (GPW-1, 3, 4, 5, 6, 7, and 8).
- GRO was detected in samples GPW-1, 5, 6, and 7.
- RRO was detected in samples GPW-1 and GPW-6.
- BTEX compounds were detected in samples GPW-6 and GPW-7.
- ADEC's Total Aqueous Hydrocarbon (TAqH) threshold of 15 µg/L was exceeded in two of the collected pore water samples (GPW-5 and GPW-6).
- ADEC's Total Aromatic Hydrocarbons (TAH) threshold of 10 µg/L also was exceeded in sample GPW-6.

Volatile Organic Compounds

- Ethylene dibromide (EDB), tert-butylbenzene, 1,2,4-trimethylbenzene, and naphthalene were detected in sample GPW-6.
- Isopropylbenzene was detected in samples GPW-5 and GPW-6.
- N-propylbenzene was detected in samples GPW-5, 6, and 7.

Polycyclic Aromatic Hydrocarbons

- PAHs were detected in samples GPW-1, 5, 6, 7, and 8.

4.3 Quality Assurance/Quality Control

Due to laboratory technical issues (limited available sample volume), several of the collected pore-water samples were analyzed for GRO using method NWTPH-Gx. However, data was reported and quantified according to AK101 ranges.

The laboratory validated the analytical procedures by processing laboratory-control samples, method-blank and trip-blank samples. Furthermore, a total of five field-duplicate samples were collected and analyzed. Specifically, duplicates were collected from one soil sample (TRB-5-10'), three sediment samples (GLB-14-4', GLB-15-2', GLB-19-2'), and two pore-water samples (GPW-8, TRPW-2).

In addition, G-Logics completed the ADEC laboratory data review checklists for each analytical laboratory report. The checklists further summarize the QA/QC methods, procedures and results, as well as the quality and usability of the data. Based on the laboratory QA/QC results, the quality and usability of data collected during this exploration were not affected. Laboratory QA/QC information is discussed below. The completed ADEC laboratory review checklists are included with the laboratory reports in Appendix E.

4.3.1 General QA/QC Findings

As presented in the attached laboratory review checklists, an ADEC-approved laboratory received and performed all analyses for this exploration. Chain-of-custody documents were complete, signed, and dated upon receipt by the laboratory. Additional analyses requested by G-Logics were noted by the laboratory on the chain-of-custody documents. The date and initials of the laboratory employee also were noted beside the requested changes.

The analytical laboratory reports include case narratives and descriptions of any errors, discrepancies, and QC failures identified by the laboratory. In addition, data flags were presented on the analytical reports where method blanks, laboratory control samples/duplicates, and/or surrogate recoveries were outside of standard limits. Based on the laboratory's case narrative, any discrepancies with recoveries did not affect sample quality or usability of the data.

4.3.2 Relative Percent Difference Between Parent Samples and Duplicates

Field-duplicate samples were collected and analyzed to assess the repeatability of the field-sampling technique and laboratory analysis. ADEC guidelines suggest that all laboratory results for petroleum hydrocarbons (GRO, DRO, and RRO) have a Relative Percent Difference (RPD) of less than 20%. The RPD for all other analytes are to be compared to the analytical laboratories accepted RPD for each individual analyte listed in ADEC's "*Laboratory Data Review Checklist*". Fremont Analytical's accepted RPD for all other analytes is 30%. Calculated RPD values for the analyzed field-duplicate samples are

summarized in Table 5. RPD values were not calculated for analytes that were not detected at laboratory reporting limits.

RPD values for pore-water samples were within the above-discussed thresholds. However, for sediment/soil samples, several of the field-duplicate RPD values were found to exceed the listed thresholds. This exceedance likely is due to matrix interference (i.e., heterogeneity, particle-size distribution) in the shoreline sediments. As also would be expected, RPD values tended to be higher for analytes detected at low concentrations (less than 1.0 µg/kg).

4.3.3 Sample-Cooler Temperatures

As discussed in Appendix A, samples were placed in laboratory-provided coolers for transport to the laboratory. The coolers arrived at the analytical laboratory with internal temperatures between 4.9 and 7.8 degrees Celsius (several coolers were slightly above the recommended temperature range of 0 to 6 degrees Celsius). Given the minimal temperature exceedances, the analytical data for this exploration should not be impacted and is considered valid/usable.

4.3.4 Holding Times

Hold times for the analysis of two samples pulled from archives to provide additional data were exceeded. Specifically, sample GLB-19-2' exceeded hold times by 5 days and TRB-2-8' by 2 days. Standard hold times have been established to theoretically reduce contaminant degradation and, to a lesser extent, to minimize volatilization (for volatile compounds). However, PAH, BTEX, and EDB/EDC contaminants generally are stable over long periods of time given the absence of oxygen and do not readily degrade. Based on this understanding and given the minimal hold-time exceedances, the analytical data for this exploration should not be impacted and is considered valid/usable.

5.0 CONCEPTUAL SITE MODELS

The following sections describe the conceptual site models for the two explored areas of the Property (former Truck-Loading Rack Area and Fuel-Pipe Area). These sections include discussions of the fate and transport of the hazardous substances, impacted media, potential exposure pathways, and possible receptors. In addition, the ADEC Conceptual Site Model

scoping and graphical forms have been completed for each area and are attached as Appendix F and Appendix G.

5.1 Former Truck-Loading Rack Area, Site Model

In general, one source of contaminants in the Truck-Loading Rack Area appears to be associated with surface spills/leaks related to the dispenser equipment. Because the accessible contaminated soil was removed during the remedial excavation in 2016, the remaining contaminants in this area have been found to be located in inaccessible areas (i.e., under electrical lines and the building's concrete slab) and greater than 2 feet deep.

The recent sampling also has identified a deeper layer of contaminants (8 to 10.5 feet deep) extending to the east and northeast beneath the maintenance building. This deeper layer and upslope location appears to be related to releases from the adjacent Tank Farm property. Additional information regarding this deeper layer is presented in section 5.1.4.

5.1.1 Exposure Pathway Assessment, Truck-Loading Rack Area

Potential pathways of exposure to the petroleum contaminants remaining in the Former Truck-Loading Rack Area are described below.

5.1.1.1 Soil Pathway

No ongoing releases are occurring because the truck-loading rack, associated features, and the former Chevron Tank Farm were removed in 2015. Residual petroleum contaminants remaining in the Truck-Loading Rack Area are greater than two feet below the ground surface. Contaminants in soils typically present a potential impact to human health through incidental ingestion and/or direct contact. Given the current and expected future use of this area, direct contact/ingestion could occur if soil greater than two feet deep is exposed during future construction activities and/or utility work performed.

5.1.1.2 Sediment Pathway

Based on sampling results and observed site conditions, sediment has not been impacted by contaminants related to the former truck-loading rack. Accordingly, the sediment pathway is incomplete in this area of the Site.

5.1.1.3 Groundwater Pathway

The area of potentially-saturated soils (constituting “groundwater”) at the Site consists of a thin strip of regraded fill material, approximately 60 feet wide, between bedrock outcrop to

the east and the shore to the west. Within this strip of unconsolidated soils, a thin, discontinuous layer of perched groundwater collects at the fill/bedrock interface. This perched layer of intermittent saturation is not a current source of drinking water and is unlikely to become so in the future. Additionally, groundwater was not present to the explored depths underneath the Property at producible quality or volumes. Accordingly, the migration to groundwater pathway is incomplete in this area of the Site.

5.1.1.4 Surface Water Pathway

Due to the proximity of the former Truck-Loading Rack to a surface-water body (Port Frederick), contaminants remaining in this area could migrate to surface water. However, based on the recent pore-water sampling conducted downgradient of the former truck-loading rack, petroleum contaminants do not appear to be migrating to surface-water (see Section 4.1.2) at any appreciable concentration. Additionally, impacts have not been observed (i.e., seen) in the surface water relating to the former truck-loading rack. Accordingly, the surface-water pathway is incomplete in this area of the Site.

Furthermore, Port Frederick is considered marine and not a current or potential future source of drinking water.

5.1.1.5 Petroleum-Vapor Intrusion Pathway

As stated in G-Logics *Technical Assistance Report*, dated March 13, 2019, the only enclosed building within 30 lateral feet of known contamination (the “lateral inclusion zone”) is the maintenance and storage building located in the Truck-Loading Rack Area. This building is used for vehicle and equipment storage and is not an occupied space. Specifically, workers generally only occupy the building for short periods of time (15 to 30 minutes) for equipment maintenance. The building currently is not habitable and does not have water or sewer utilities. G-Logics understands there are no future plans to change the use of the building to commercial (i.e., offices) or residential. Because of the current building use, the petroleum-vapor intrusion (PVI) pathway currently is incomplete for the maintenance building. Additionally, the Hoonah Trading Company Store located to the south is constructed on pilings and over the water, and therefore does not present a risk of PVI (i.e., there is no direct contact between the building and the ground surface).

ADEC Sub-Slab Commercial Soil-Gas Screening Levels were not exceeded in soil-gas samples collected during G-Logics initial exploration in 2017. However, future development activities may warrant further assessment and/or mitigation in the area of the

maintenance building. As stated above, there are no plans to develop this area into an occupied building.

5.1.1.6 Outdoor Air Pathway

Volatile contaminants are present in soil within 15 feet of the ground surface. Therefore, the outdoor air-inhalation pathway is complete at the Site. However, inhalation of unacceptable concentrations of petroleum contaminants is not anticipated in the area of residual petroleum contaminants. Specifically, workers generally occupy this space only for short periods of time (15 to 30 minutes) for equipment maintenance.

Dust and soil-vapor inhalation exposures could potentially occur to workers during future redevelopment/maintenance excavations in this area of the Site. However, the magnitude and duration of such exposure would be limited. Specifically, excavations would be open to the atmosphere and/or mechanically-ventilated, thereby reducing potential vapor exposure to workers. Additional protective equipment also could be worn if needed.

5.1.2 Chemicals and Media of Concern, Truck-Loading Rack Area

Based on analytical data gathered at the Property, the understood exposure pathways, and the cleanup/screening levels (as discussed in Section 2.4 above), DRO is the primary contaminant of concern (COC) when comparing results against Direct Contact cleanup levels. Analytical results supporting this understanding are presented in Tables 1 and 2.

5.1.3 Contaminant Fate and Transport, Truck-Loading Rack Area

The primary source of contaminants (equipment located in the Truck-Loading Rack Area and former Chevron Tank Farm) has been removed from the Property. Additionally, a significant volume of contaminated soil in the area (potentially acting as a secondary source to groundwater contaminants) also has been removed. Groundwater was not encountered during the explorations. Additionally, petroleum contaminants were not detected in pore-water samples collected downgradient of the Former Truck-Loading Rack Area.

5.1.4 Nature and Extent of Contamination, Truck-Loading Rack Area

Surface spills in this area appear to have originated from the dispensing equipment. However, the recent sampling has identified a deeper layer of contaminants (8 to 10.5 feet deep) extending to the east and northeast beneath the maintenance building. This deeper

layer could be associated with the surface spills but more likely appears to be related to releases from the adjacent Tank Farm property.

The recent sampling indicates the shallow DRO contaminants are confined to a small area near the former truck-loading rack, which also are located beneath the concrete slab for the maintenance building and parking area. However, as based on the recent sampling which included two additional borings, the upgradient extent of the deeper contaminants remains unbounded.

5.2 Fuel-Pipe Area, Site Model

No ongoing releases are occurring because the fueling-station equipment was emptied and removed in 2015. In addition, fuel storage and transmission equipment located on the former Tank-Farm facility (on the adjacent 160 Front St property) also were removed in 2015. The secondary contaminant source (contaminants in soil/sediment) from previous releases remains on the Site, and in upslope areas related to the former Tank Farm.

Based on the compiled analytical data, the source of contaminants in the Fuel-Pipe area could be partially attributed to the operation of the former fueling station (previously located on the dock structure above the shore, see Figure 2). However, analytical data also now indicates the contaminants more likely originated from the upslope Tank-Farm property (160 Front St) and/or the fuel pipes associated with this tank farm. As previously discussed, Chevron has recently performed additional characterization of the Tank-Farm Area.

The recent explorations also identified a former above-ground storage tank (AST) platform, located on the south-adjacent property (location shown on Figure 4). If releases occurred, this AST could be a potential additional source of petroleum contaminants in sediment/soil and pore-water in this area of the Site.

5.2.1 Exposure Pathway Assessment, Fuel-Pipe Area

Potential pathways of exposure to the petroleum contaminants remaining in the Fuel-Pipe Area are described below.

5.2.1.1 Soil Pathway

Soil contaminants typically present a potential impact to human health through incidental ingestion and direct contact. Direct contact/ingestion could occur during future remedial

activities or to trespassers in the area. Due to the location on the shoreline, utilities are not located in this area and future development is not expected to occur. With this understanding, potential receptors of soil contaminants include future construction workers and/or trespassers onto the Property. In addition, biota could potentially be exposed to near-surface soil contaminants.

5.2.1.2 Sediment Pathway

Similar to soil, sediment contaminants typically present a potential impact to human health through incidental ingestion and direct contact. Direct contact/ingestion could occur during future remedial activities or to trespassers in the area. However, due to the use of this larger area for marine access (marina, harbor, and cruise-ship moorage within a mile of the Site) the collection/ingestion of wild food does not and will not generally occur along this portion of the shoreline. Potential receptors of sediment contaminants include future construction workers and/or trespassers onto the Property. In addition, aquatic life-exposure pathways could potentially be complete.

5.2.1.3 Groundwater Pathway

Due to the location of the Fuel-Pipe Area to a tidally-influenced surface water body, any water encountered within the borings/test pits was due to surface-water infiltration. With these findings, the groundwater pathway currently is incomplete in this area of the Property.

5.2.1.4 Surface Water Pathway

Surface water in this area is saline and is not a current or potential future source of drinking water. The adjacent surface-water body also is not used for recreational or subsistence purposes. Accordingly, surface-water pathway for human health currently is incomplete in this area of the Site. However, the surface-water pathway is complete for protection of aquatic life.

5.2.1.5 Petroleum-Vapor Intrusion Pathway

Because the buildings in this area are constructed on pilings, and the building sits over water, the PVI pathway is incomplete in the Fuel-Pipe Area.

5.2.1.6 Outdoor Air Pathway

Volatile contaminants are present in soil/sediment within 15 feet of the ground surface. Currently, no formal controls are in place to discourage public access at the Site. Therefore, the outdoor air-inhalation pathway is complete at the Site. However, inhalation of unacceptable concentrations of contaminants is not anticipated, as people generally do not

occupy this area for any substantive amount of time. Furthermore, G-Logics understands that Wards Cove will place signage in the Fuel Pipe Area to deter public access.

5.2.2 Chemicals and Media of Concern, Fuel-Pipe Area

Based on analytical data gathered at the Property, the understood exposure pathways, and the comparison cleanup/screening levels (as discussed in Section 2.4 above), GRO, DRO, and several associated fuel-related contaminants have been included as chemicals of concern (COC) in soil, sediment, and pore water. Only GRO and DRO were detected above Direct Contact cleanup levels. Analytical results are presented in Tables 3, 4, and shown on Figures 5 and 6.

5.2.3 Contaminant Fate and Transport, Fuel-Pipe Area

The primary sources of contaminants (tank farm, pipelines associated with the tank farm, and fueling-station equipment) have been removed. Contaminants remain in soil in this area. Contaminants also appear to be migrating onto the Property from the Former Chevron Tank Farm, located upslope, as based on the compiled analytical data. Some of the petroleum-related contaminants also may have originated from the creosote pilings located throughout the Fuel-Pipe Area. The distribution of these pilings is shown on Figures 4 and 5-3.

At the Fuel-Pipe Area, residual contaminants are primarily located within and near a tidally influenced surface-water body. As such, contaminants can be transported through advection with the movement of the tides and currents. Because of tidal action and the presence of oxygen, contaminants below the high-tide water level are decreasing in concentrations toward the low-tidewater level (as seen in Figures 5 and 6). Further natural attenuation and bioremediation is expected to occur in this area.

5.2.4 Nature and Extent of Contamination, Fuel-Pipe Area

As discussed above, primary sources of Site contaminants in the Fuel-Pipe Area were removed in 2015 (fueling-station equipment, tank farm, fuel piping). Based on available analytical data, residual Site contaminants appear to be present in an area approximately 60 feet along the shore in either direction from the fuel-pipes shown on Figure 2, extending approximately 70 feet downslope from the bulkhead into the intertidal zone, to a depth of approximately 7 feet deep. The interpreted lateral extent of Site contaminants is illustrated on Figures 5 and 6.

The impacted areas shown on these figures reflect the compared screening levels/cleanup levels for each contaminant. For instance, screening levels for marine sediments (NOAA SQuiRT PELs) are generally an order-of-magnitude lower than the most conservative ADEC Method 2 soil-cleanup levels. Therefore, when comparing impacted areas, the extent of PAH soil/sediment contaminants appears to be larger and more extensive when compared to the extent of DRO or GRO contaminants.

The contaminants in this area appear to have partially originated from spills or leaking pipes associated with fueling operations on the Property. However, based on the assembled analytical data, contaminants also appear to be originating from the upslope property, due to releases from the former tank farm and distribution piping. As discussed above, Chevron is conducting additional site-characterization efforts that could further clarify the nature and extent of residual Site contaminants, originating from previous tank-farm and fuel-pipe releases.

To assess for PAH contaminants originating from creosote-treated pilings in the Fuel-Pipe area, G-Logics collected “background” samples of sediment and pore water (boring GLB-19, pore-water sample GPW-9). PAH contaminants were not detected in the background pore-water sample. Certain PAH contaminants (specifically, fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, and benz(a)pyrene) were detected in the analyzed background sediment samples. The PAH compounds detected in these samples differ from those associated with the Fuel-Pipe Area.

5.3 CSM Summary

Conceptual site model summaries for the Truck-Loading Rack and Fuel-Pipe Areas of the Property are presented below.

5.3.1 CSM Summary, Truck-Loading Rack Area

Based on exploration findings, contaminants in this area likely originated from surface spills from the fuel-transfer equipment, and possibly the upslope and adjoining former Tank-Farm property to the east. As stated in Section 5.1.1, no ongoing releases are occurring at the Property because the truck-loading rack, associated features, and the former Chevron Tank Farm were removed in 2015. Residual concentrations of petroleum contaminants remain in soil beneath the concrete slab of the maintenance building and covered-parking area.

Groundwater was not encountered during explorations in the area, and the absence of contaminants in pore-water samples indicate impacts are not occurring to surface water. Additionally, ADEC's Sub-Slab Commercial Soil-Gas Screening Levels were not exceeded in soil-gas samples collected during G-Logics initial exploration in 2017.

Based on the current and likely future use of the Property and the on-site buildings (commercial), as well as the distribution and concentrations of Site contaminants, it is G-Logics opinion that the risks to human health and the environment are low for the Truck-Loading Rack Area. Accordingly, ADEC Method 2 Direct Contact cleanup levels have been selected for evaluating needed remedial actions.

5.3.2 CSM Summary, Fuel-Pipe Area

Based on field observations and compiled analytical data, contaminants in the Fuel-Pipe Area apparently have originated from one or more of the following potential sources, listed in order of likelihood:

- Contaminants on the adjacent former tank-farm property (160 Front St) migrating beneath Front Street and onto the Property.
- Leaks/releases from the fuel pipes that distributed fuel from the tank farm.
- Surface spills from the pump island formerly located in the store parking lot.
- Releases of fuel-containing water from the oil/water separator located in this area.
- The former AST on the south-adjointing property (a potential separate source of petroleum contaminants in this area of the Site).

The first three listed sources of contamination (tank farm, fuel pipes, and pump island) were removed in 2015 and are no longer contributing additional contaminant mass. The separator remains in service, but collects water from the adjoining roadway. The AST platform observed during G-Logics 2019 exploration also appeared abandoned and no-longer in use.

Based on the completed explorations, soil/sediments containing elevated concentrations of DRO and GRO remain in the Fuel-Pipe Area. Except for in upslope directions toward the former tank farm, the vertical and lateral extent of contaminants has been delineated and characterized.

Pore-water sampling results indicate Site contaminants in the Fuel-Pipe Area are migrating to surface water. However, the highest contaminant concentrations were found within the

high-tide water line. Contaminant concentrations appear to decrease toward the low-tidewater level, where further natural attenuation and bioremediation are expected to occur. Surface water impacts (i.e., sheen) have not been observed during any of G-Logics visits to the Property and also have not been reported by local residents or officials.

Similar to the Truck-Loading Rack Area, it is G-Logics opinion that the risks to human health and the environment are low for the Fuel-Pipe Area. Accordingly, ADEC Method 2 Direct Contact cleanup levels have been selected for evaluating needed remedial actions.

6.0 REVIEW OF REMEDIAL ALTERNATIVES

Cleanup actions often involve active remedial methods, such as the treatment of soil and groundwater contamination in high-concentration areas. If complete cleanup is impracticable or not cost-effective, the containment of remaining/de minimis contamination can be conducted. Specifically, as stated in ADEC's 2008 guidance document, titled *Site Closure Policy and Procedures*, ADEC expects that the considered cleanup methods will minimize the need for long-term management of contaminated materials and that all hazardous substances will be destroyed, detoxified, and/or removed to concentrations below cleanup levels. However, engineering controls, such as containment, can be implemented at sites where the treatment/cleanup is impracticable.

As described in Sections 5.3.1 and 5.3.2, it is G-Logics opinion that, for this Site, the risks to human health and the environment are low. Additionally, Site contaminants appear to be located at depth beneath concrete/pavement (Truck-Loading Rack Area) or beneath an active pier supported by approximately 100 creosote-treated pilings (Fuel-Pipe Area). Given the identified Site conditions and comparing analytical results to Direct Contact cleanup levels, G-Logics has considered several remedial options for the Site. Our preliminary review of the alternatives is discussed below.

6.1 Containment and Institutional Controls

Institutional Controls assume environmental impairment is low and the risk to the environment is minimal. During this exploration, Site contaminants in the Truck-Loading Rack Area were not detected at concentrations above Method 2 Direct Contact cleanup levels. Considering previously-collected data, Site contaminants above Direct Contact cleanup levels appear to be limited in extent and do not appear to be impacting surface

water (Figure 3). In addition, recoverable groundwater was not encountered during Site explorations. Accordingly, direct contact or the ingestion of contaminated soil and groundwater do not appear to be occurring nor are they likely to occur under current land uses. Furthermore, recent down-gradient sampling indicates contaminants are not migrating, or are diminishing by natural attenuation.

Based on this current understanding of Site conditions, institutional controls likely would meet protectiveness criteria.

6.2 Natural Attenuation

As per Institutional Controls, Natural Attenuation (NA) assumes that environmental impairment is low and the risk to the environment is minimal. Again, based on the current understanding of Site conditions, direct contact or the ingestion of contaminated soil and pore water do not appear to be occurring and likely would not occur under current land uses. Additionally, with the exception of two samples collected during previous sampling efforts (TREX-ESW1-2' and TP-15), contaminants concentrations in the Truck-Loading Rack Area are below established Method 2 Direct Contact cleanup levels.

NA also assumes that contaminants are not migrating and are diminishing by natural processes, such as diffusion, dispersion, and biodegradation. Pore-water samples collected downgradient of the former truck-loading rack indicate that contaminants are not migrating to surface water. Additionally, for the Fuel-Pipe Area, contaminant concentrations in pore water appear to diminish within the intertidal zone, indicating that contaminants are naturally dispersing/attenuating in this area. With this understanding, natural attenuation is occurring at the Site.

6.3 Excavation and Off-Site Disposal

Soil excavation and off-site disposal is superior in permanence, protectiveness, and long-term effectiveness, given that contaminants are physically removed and treated/disposed. Confirmation samples also can be readily collected to evaluate the effectiveness of the excavation.

However, excavation has short-term risks, specifically exposure to contaminants (direct contact and inhalation), disturbances to delicate environments, and safety issues related to this type of construction work. While soil excavation is frequently used to remedy the identified contaminants, several Site conditions also need to be evaluated, specifically

shoreline disturbances, slope stability, excavation-water management, and backfill/compaction.

Contaminants at the Site are located beneath an active pier surrounded by pilings (Fuel-Pipe Area) or are beneath an existing building foundation (former Truck-Loading Rack Area). Also in the Truck-Loading Rack Area, contaminant concentrations are below Direct Contact cleanup levels, are present approximately 8 feet or deeper, and are below clean overburden soils. In both areas, excavation would require the demolition and removal of existing structures and perhaps portions of Front Street.

Accordingly, excavations in these areas would be costly and cause significant disruption and damage to structures and the shore environment. Based on this review, excavation and off-site disposal would not be a cost-effective solution in either the Fuel-Pipe or the Truck-Rack Areas.

6.4 In-situ Aerobic Bioremediation

Bioremediation, using oxygen and trace nutrients, can result in destruction of site contaminants in subsurface soils. However, this method could require five to ten or more years of treatment in order to achieve cleanup levels throughout the Site. This schedule and the rate of success also are driven by the size and scope of the conducted treatment. For example, oxygen can be delivered using simple compressors and perforated-piping systems or can include the use of multiple injections of oxygen-releasing compounds (ORCs). Additionally, the effectiveness of this process is dependent upon a uniform delivery of nutrients/oxygen into contaminated areas. Given that a majority of contaminant mass at the Site is located in vadose soils/shallow sediment, this would be difficult to ensure and would be costly to conduct. Accordingly, bioremediation is not anticipated to be feasible to fully remediate the entire Site.

Additionally, according to an Environmental Protection Agency (EPA) 2001 document, titled *Guidelines for the Bioremediation of Marine Shorelines and Freshwater Wetlands*, while the introduction of nutrients and/or ORC has been shown to accelerate cleanup rates, natural attenuation introduces the least additional disturbance and may be the wisest choice for marine shorelines where no vital natural resources are threatened.

6.5 In-Situ Chemical Oxidation

Like bioremediation, chemical oxidation can result in destruction of petroleum contaminants. This method uses the introduction of oxidizing compounds, such as permanganate, ozone, and peroxides, and could require three to five or more years of treatment in order to achieve cleanup levels throughout the Site. Oxidizers can be delivered by multiple injections into the subsurface or installation of permanent injection points/galleries, using simple pumps and perforated-piping systems. Additionally, the cost, schedule, and the rate of success also are driven by the size and scope of the installed treatment system. The effectiveness of this process also is dependent upon a uniform delivery of treatment compounds into contaminated areas. Chemical oxidation also is not effective for soils located in the vadose zone and the vapor-phase contaminants present in these soils. As per bioremediation, chemical-oxidation treatment is not anticipated to be feasible due to its cost and likely disturbance to marine-shoreline habitats.

7.0 CONCLUSIONS AND REMEDY SELECTION

Based on the findings of our exploration, and work recently conducted on the former Tank Farm property, G-Logics conclusions regarding the subject property are provided below.

- No ongoing releases are occurring because the fueling-station and truck-loading rack equipment was emptied and removed in 2015. In addition, fuel storage and transmission equipment located on the former Tank-Farm facility (on the adjacent 160 Front St property) also were removed in 2015.
- As discussed in previous sections of the report, groundwater was not encountered in the Truck-Loading Rack Area at sufficient volume to sample and bedrock is close to the surface in both of the explored areas. As such, the migration to groundwater pathway is considered to be incomplete. Accordingly, G-Logics has compared soil-analytical data to Direct Contact cleanup levels.
- Contaminant concentrations in soil were found exceed ADEC Method 2 Direct Contact cleanup levels only in limited extent in both the Fuel-Pipe and Truck-Loading Rack Areas.
- Site contaminants in the Truck-Loading Rack Area are not migrating to surface water and in the Fuel-Pipe Area appear to disperse over a short distance within the intertidal zone.
- Site contaminants do not appear to pose a vapor-intrusion risk to buildings on the property.

- At the Truck-Loading Rack area, exposure to contaminants is unlikely, based on the understood Site conditions and current/planned land uses.
- At the Fuel-Pipe Area there is a risk of exposure to contaminants, based on the understood Site conditions and current and planned land uses. However, direct access to the beach is difficult and any visits would be limited in occurrence/duration due to regular tidal inundations. Accordingly, it is G-Logics opinion that the risk of this exposure is unlikely. Again, signage is planned to deter public access.

With these conclusions and our review of remedial options (Section 6.0), G-Logics recommends addressing residual Site contaminants via Institutional Controls and NA. As part of this solution, G-Logics also recommends the following.

- Source control (including removal and/or treatment of hazardous substances on the upslope former Tank-Farm Property) should be conducted to the extent practicable.
- Appropriate monitoring efforts should be conducted to document that the natural-attenuation process is taking place and that human health and the environment remain protected.
- Appropriate signage should be placed to deter the public from entering the Fuel-Pipe Area.

8.0 LIMITATIONS

Our services were non-comprehensive and were not intended to identify all environmental problems or eliminate all risk. Please be aware our scope of work was limited to those items specifically described above. Other activities that are not specifically described are excluded and are therefore not part of our services.

Land use, site conditions (both on-site and off-site), and other factors will change over time. Since site activities and regulations beyond our control could change at any time after the completion of this report, our observations, findings, and opinions can be considered valid only as of the date of the site sampling.

This report is prepared for the sole use of our client. The scope of services performed during this assessment may not be appropriate for the needs of other users. Re-use of this document or the findings, conclusions, or recommendations presented herein, are at the sole risk of said user(s). Our client and regulatory agencies also may make additional copies of

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No warranty, either express or implied, is made.

9.0 REFERENCES

ADEC 2008. *Site Closure Policy and Procedures*. Prepared by ADEC. October 16, 2008.

ADEC 2011. *Guidance on Using Institutional Controls in Oil and Other Hazardous Substance Cleanups*. Prepared by ADEC. February, 2011.

ADEC 2016. *Communication with and Notice of Liability from ADEC*. Prepared for Wards Cove Packing Company. Prepared by ADEC. October 21, 2016.

ADEC 2017. *Field Sampling Guidance for Contaminated Sites and Leaking Underground Storage Tanks*, Division of Spill Prevention and Response Contaminated Sites Program. August 2017.

ADEC 2017. Table B2 of 18 AAC 75: *Oil and Other Hazardous Substances Pollution Control*. (July 1, 2017).

ADEC, 2017. *Vapor Intrusion Guidance for Contaminated Sites*, Division of Spill Prevention and Response Contaminated Sites Program. January 2017.

G-Logics 2015. *Environmental Investigation*, Former Chevron Truck-Loading Rack, 147 Front Street, Hoonah, Alaska. Prepared for Wards Cove Packing Company. Prepared by G-Logics, Inc., Issaquah, Washington. July 17, 2015.

G-Logics 2015. *Environmental Investigation*, Former Chevron Tank Farm, 160 Front Street, Hoonah, Alaska. Prepared for Wards Cove Packing Company. Prepared by G-Logics, Inc., Issaquah, Washington. July 17, 2015.

G-Logics 2016. *Environmental Investigation*, Former Chevron Truck-Loading Rack, Fuel Pipe, and Oil/Water Separator Area, 147 Front Street, Hoonah, Alaska. Prepared for Wards Cove Packing Company. Prepared by G-Logics, Inc., Issaquah, Washington.

G-Logics 2019. *Technical Assistance Report*, Former Chevron Truck-Loading Rack, 147 Front Street, Hoonah, Alaska. Prepared for Wards Cove Packing Company. Prepared by G-Logics, Inc., Issaquah, Washington.

Melber, Christine; Kielhorn, Janet; and Mangelsdorf, Inge 2004. *Coal Tar Creosote, Concise International Chemical Assessment Document 62*. Prepared for World Health Organization, Geneva Switzerland.

US Environmental Protection Agency 1988. *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA*. October, 1988.

US Environmental Protection Agency 2001. *Guidelines for Bioremediation of Marine Shorelines and Freshwater Wetlands*. September, 2001.

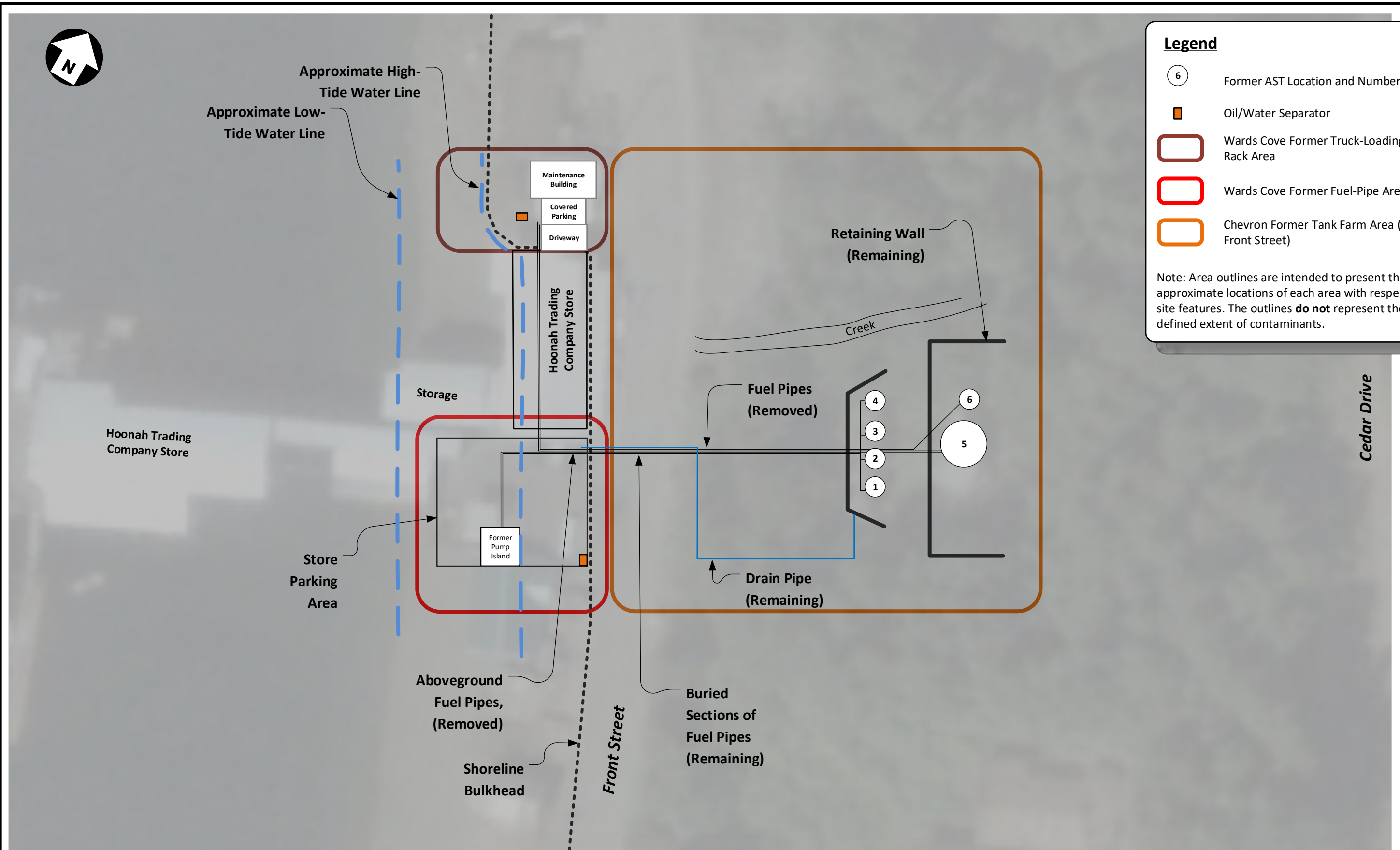
FIGURES



g-logics

Site Location Maps
 Former Chevron Fuel-Pipe and
 Truck-Loading Rack Areas
 147 Front Street
 Hoonah, Alaska

Figure
 1



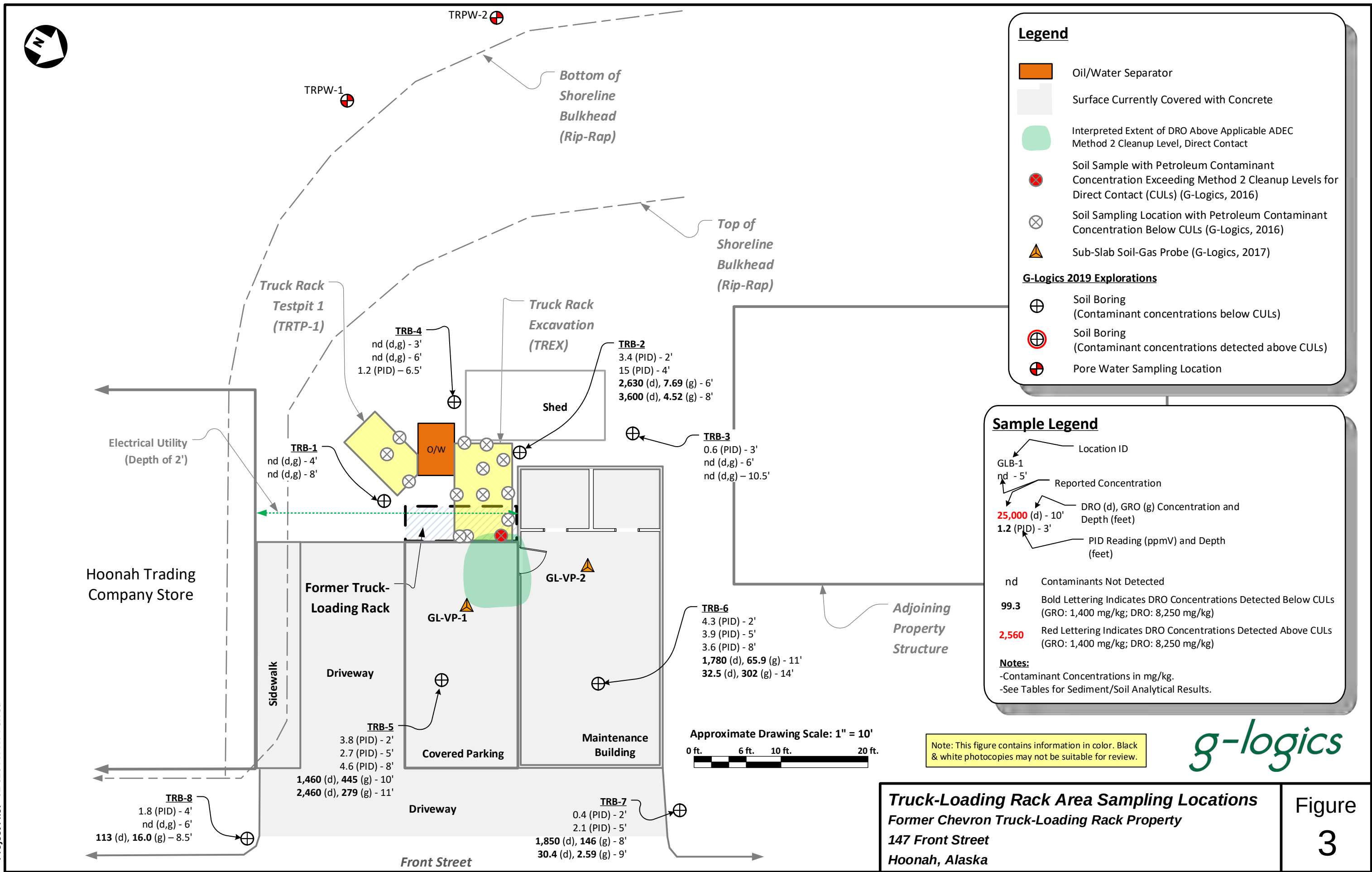
Approximate Drawing Scale: 1" = 50'

0 ft. 30 ft. 50 ft. 100 ft.

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.



Site Diagram, Aerial Photograph
Former Chevron Truck-Loading Rack, Fuel Pipe Area, and Adjacent Tank Farm
147 and 160 Front Street
Hoonah, Alaska





Legend



Fuel Pipe Box



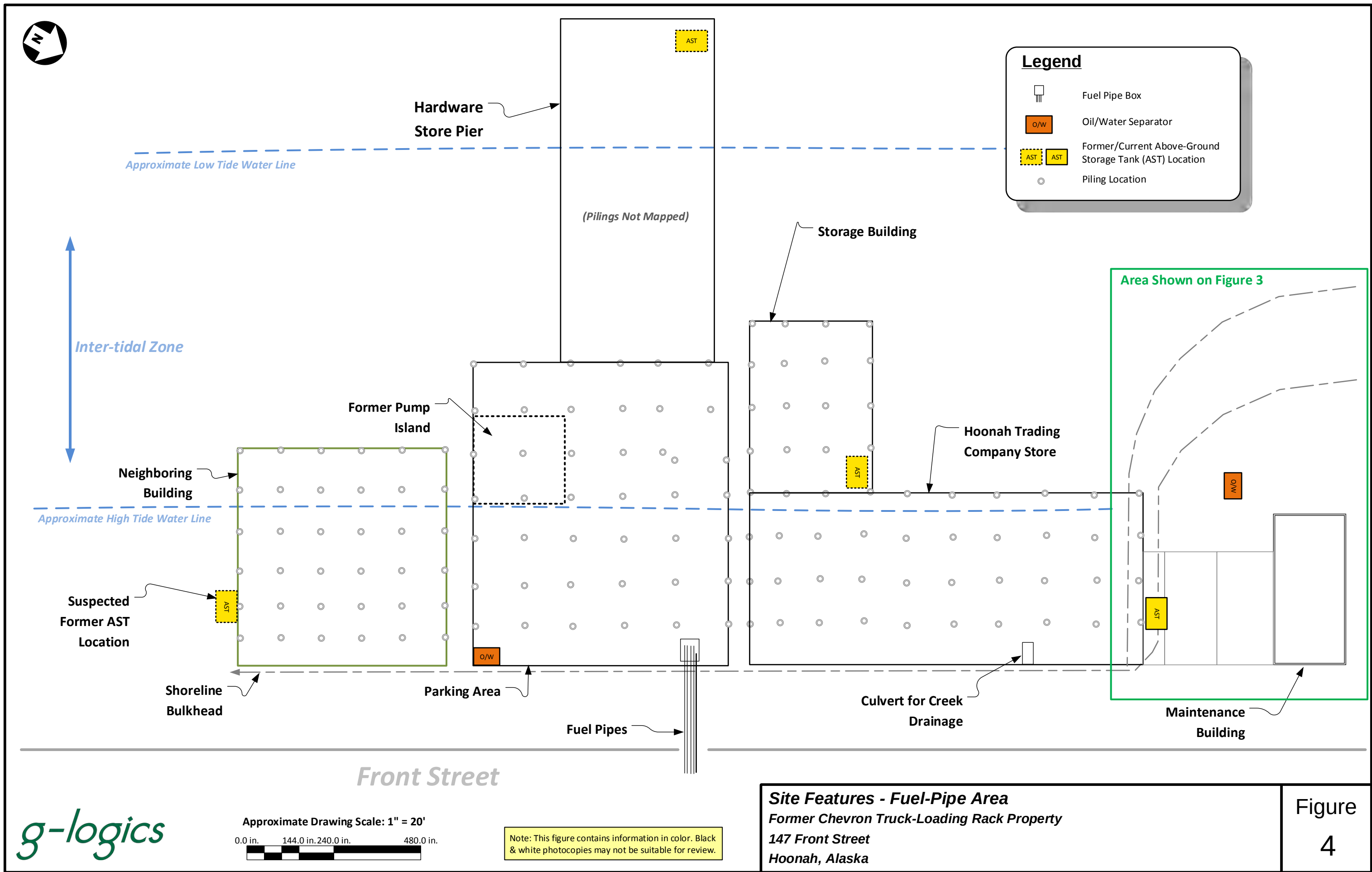
Oil/Water Separator

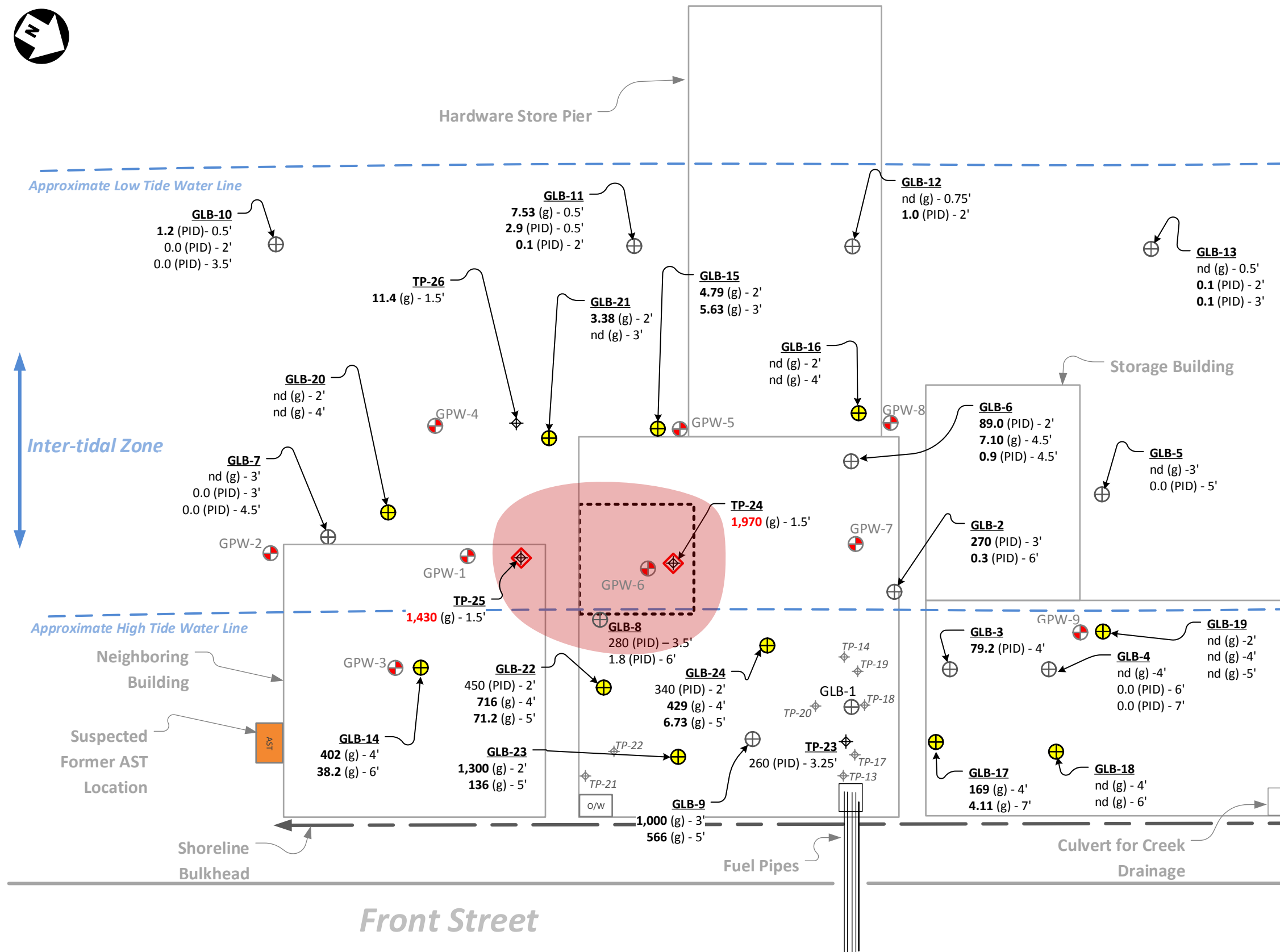


Former/Current Above-Ground Storage Tank (AST) Location



Piling Location





Legend

Pore Water Sampling Location (G-Logics 2019)

Soil/Sediment Boring (G-Logics 2019)

Soil/Sediment Boring (G-Logics 2017)

Shallow Testpit (G-Logics 2015-2017)

Shallow Testpit (G-Logics 2015-2017, data not presented)

Former Pump Island (elevated on pilings, above ground)

Sample Legend

Location ID

Reported Concentration

GRO (g) Concentration and Depth (feet)

PID Reading (ppmV) and Depth (feet)

Red Halo Indicates GRO Concentrations Detected Above ADEC Method 2 Direct Contact Cleanup Level (1,400 mg/kg)

nd
Contaminants Not Detected

99.3
Bold Lettering Indicates GRO Concentrations Detected Below ADEC Method 2 Cleanup Level, Direct Contact

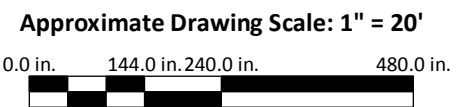
2,560
Bold, Red Lettering Indicates GRO Concentrations Detected Above ADEC Method 2 Cleanup Level, Direct Contact

Interpreted Extent of GRO Concentrations Above ADEC Method 2 Cleanup Level, Direct Contact

Notes:

-GRO Concentrations in mg/kg for Sediment/Soil Samples

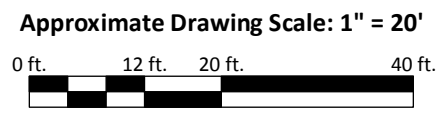
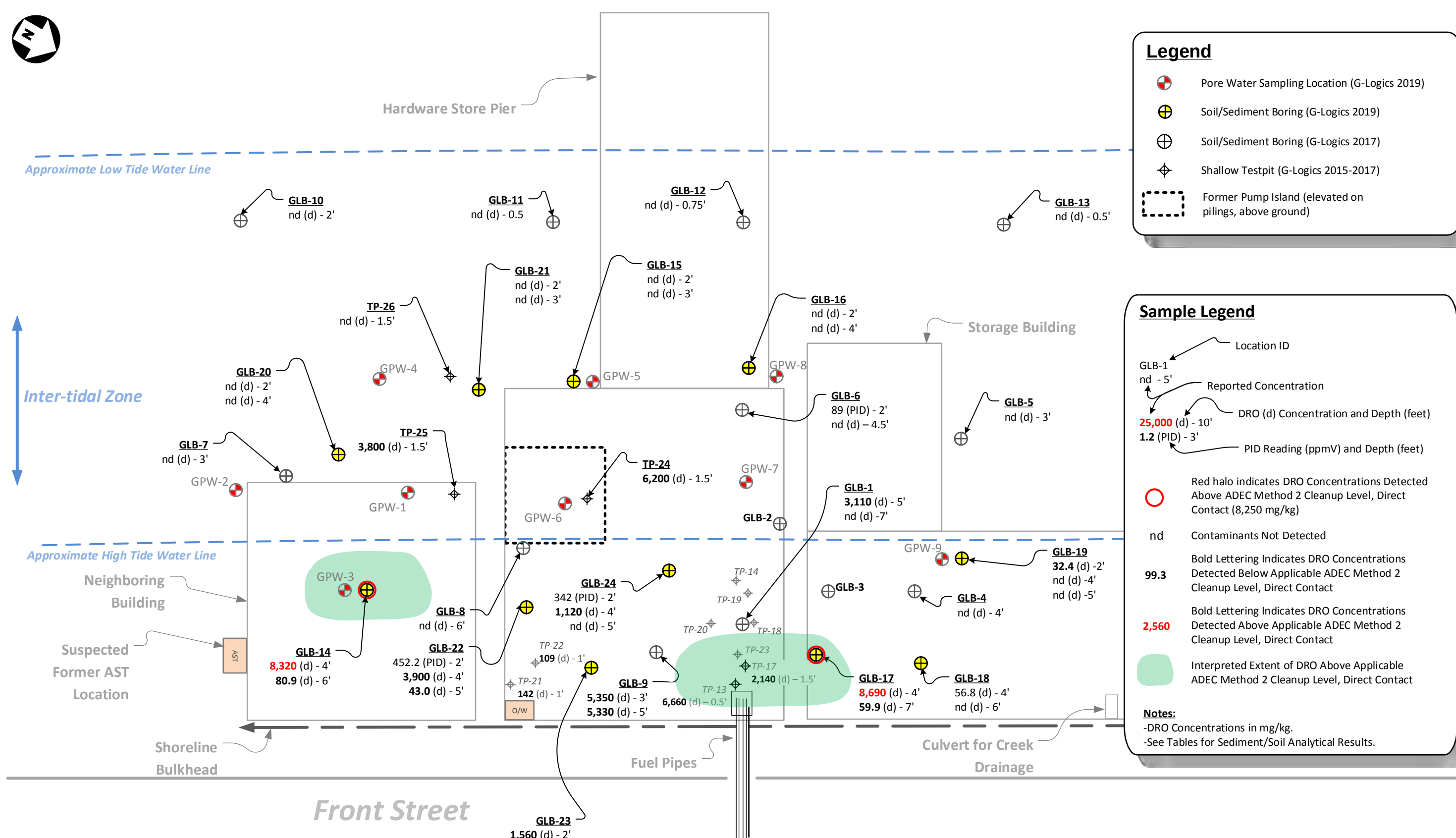
-See Tables 3-1 and 3-2 for Soil/Sediment Analytical Results.



Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

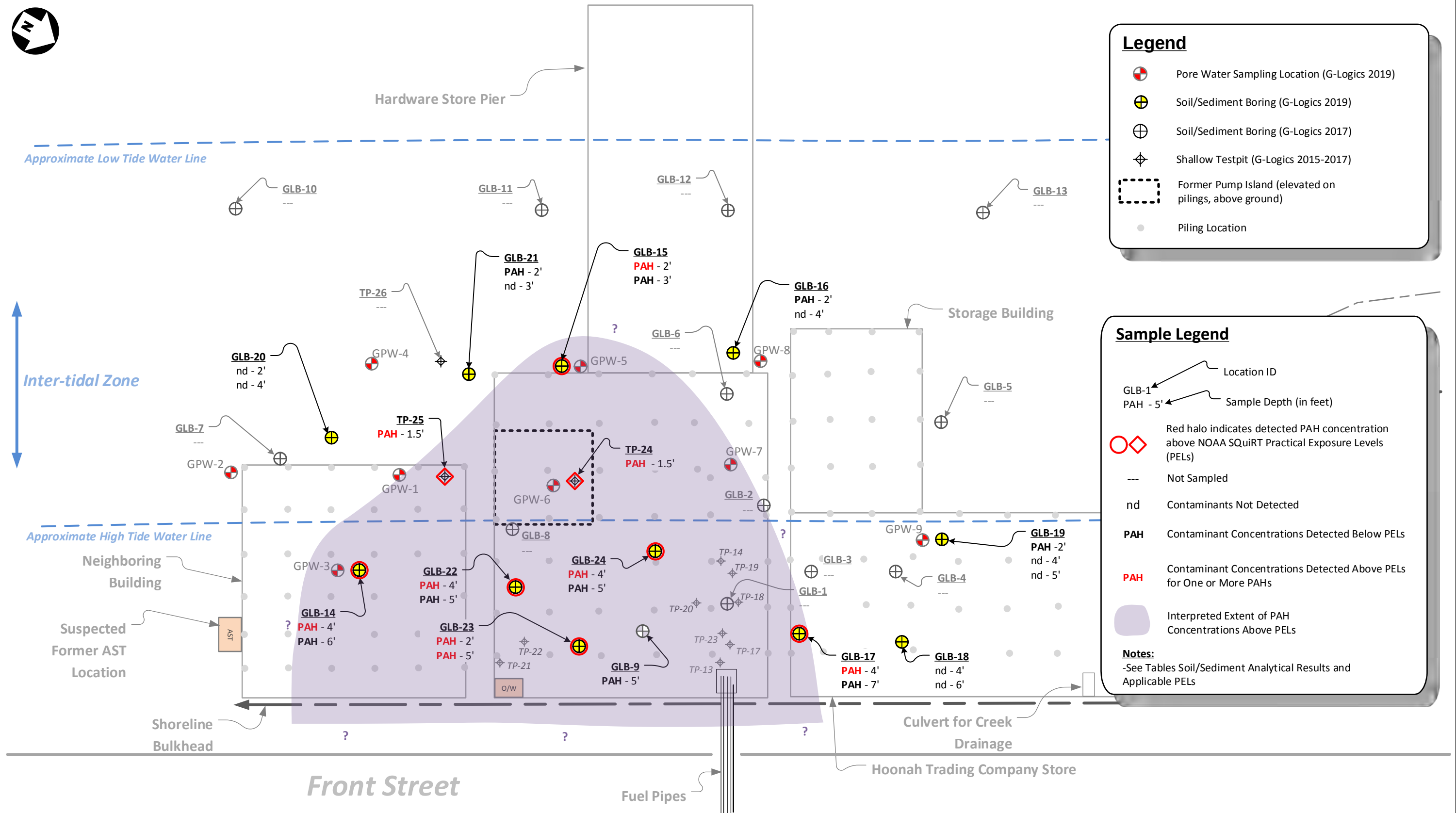
Fuel-Pipe Area, GRO Concentrations in Sediment/Soil
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska

Figure
5-1



Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Fuel-Pipe Area, DRO Concentrations in Sediment/Soil
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska



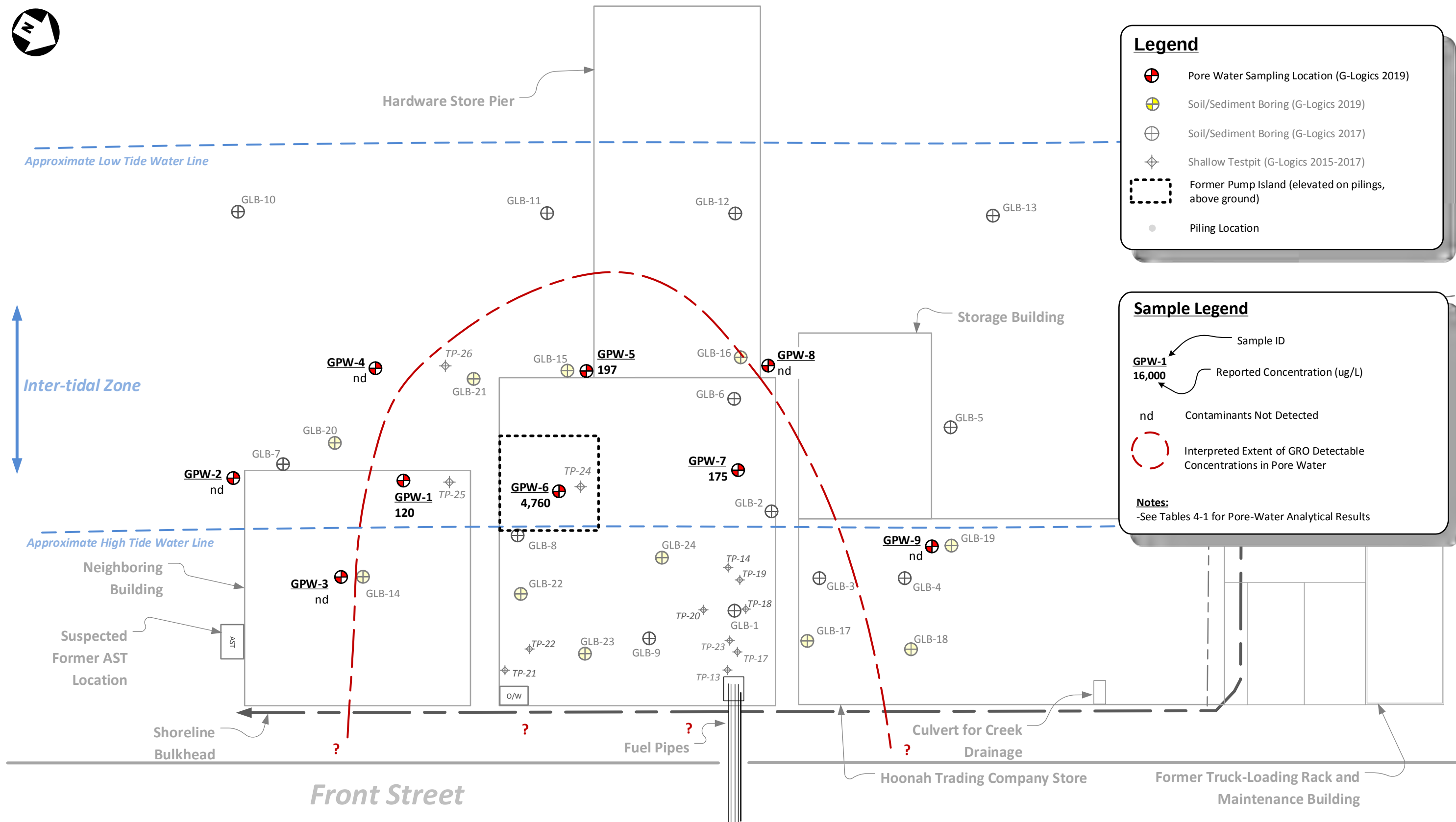
g-logics

Approximate Drawing Scale: 1" = 20'
0.0 in. 144.0 in. 240.0 in. 480.0 in.

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Fuel-Pipe Area, PAH in Sediment/Soil
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska

Figure
5-3

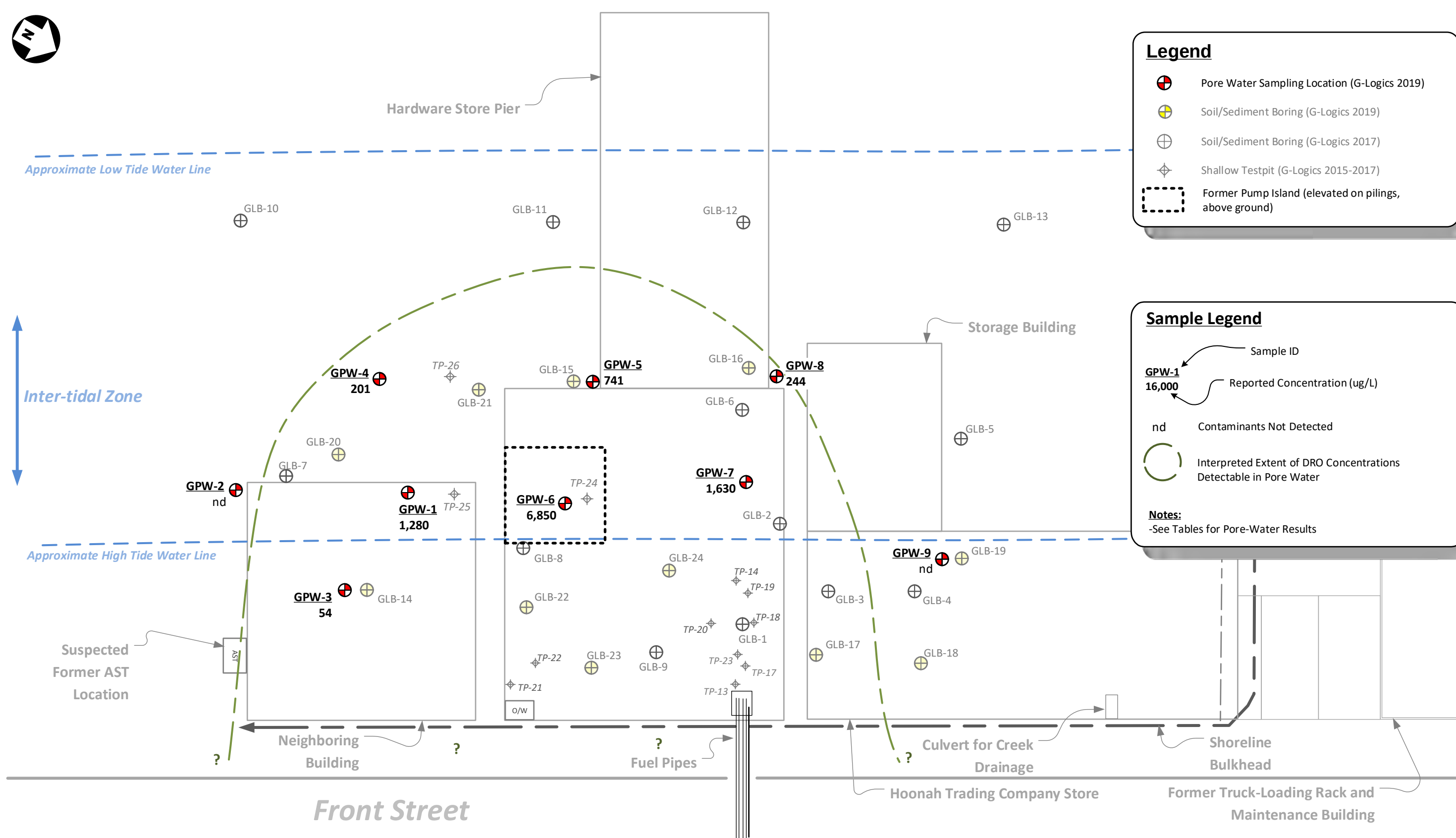


Approximate Drawing Scale: 1" = 20'
0.0 in. 144.0 in. 240.0 in. 480.0 in.

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Fuel-Pipe Area, GRO in Pore-Water Samples
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska

Figure
6-1



Legend

- Pore Water Sampling Location (G-Logics 2019)
- Soil/Sediment Boring (G-Logics 2019)
- Soil/Sediment Boring (G-Logics 2017)
- Shallow Testpit (G-Logics 2015-2017)
- Former Pump Island (elevated on pilings, above ground)

Sample Legend

Sample ID

GPW-1
16,000

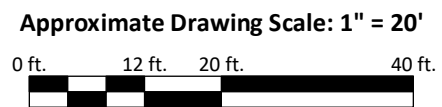
Reported Concentration (ug/L)

nd

Contaminants Not Detected

Interpreted Extent of DRO Concentrations Detectable in Pore Water

Notes:
-See Tables for Pore-Water Results



Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Fuel-Pipe Area, DRO in Pore-Water Samples
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska

Figure
6-2



Legend

Pore Water Sampling Location (G-Logics 2019)

Soil/Sediment Boring (G-Logics 2019)

Soil/Sediment Boring (G-Logics 2017)

Shallow Testpit (G-Logics 2015-2017)

Former Pump Island (elevated on pilings, above ground)

Piling Location

Sample Legend

Sample ID

GPW-1

PAH

nd

PAH Contaminants Not Detected

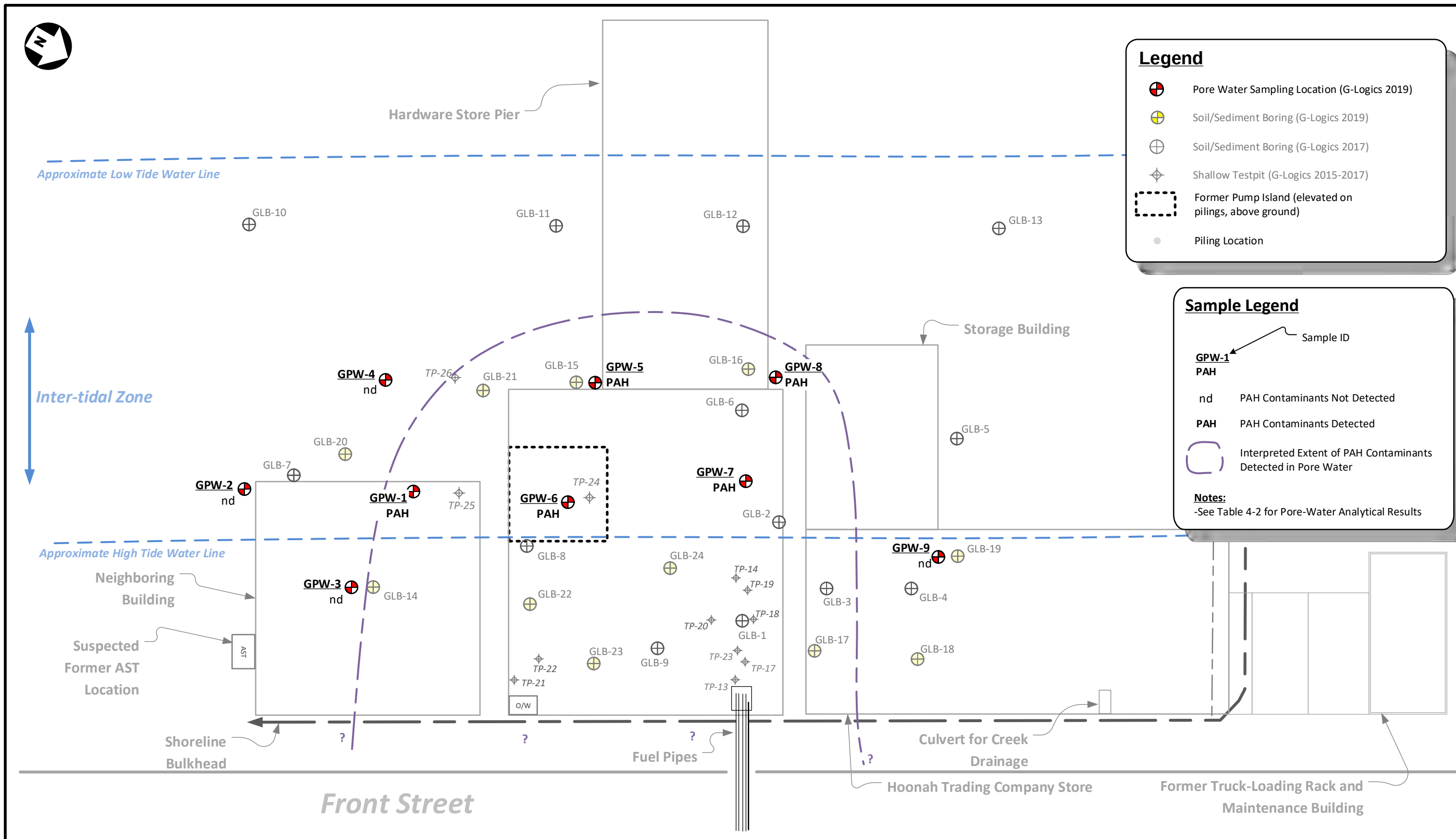
PAH

PAH Contaminants Detected

Interpreted Extent of PAH Contaminants Detected in Pore Water

Notes:

-See Table 4-2 for Pore-Water Analytical Results



TABLES

TABLE 1-1
Soil Sample Analyses, Petroleum and VOCs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)		Pd (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C26 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dichloroethane (EDG)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	1,2,4-Trimethylbenzene	Naphthalene (1)	
ADEC Method Two Cleanup Level, Migration to Groundwater (1)						260	230	9,700	0.0220	6.70	0.130	1.50	0.000240	0.00550	5.60	9.10	1.30	42.0	N/A	0.160	0.0380	
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)						1,400	8,250	8,300	8.10	200	35.0	57.0	0.310	3.90	54.0	52.0	37.0	28.0	N/A	33.0	20.0	
ADEC Method Two Cleanup Level, Maximum Allowable Concentration (3)						1,400	12,500	22,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
(units in mg/kg)																						
G-Logics 2015 Exploration																						
TP-15	5/5/2015	TP-15-0.5'	0.5		---	26.4	13,300 E.J (4)	367	---	---	---	---	---	---	---	---	---	---	---	---	---	
G-Logics 2016 Exploration																						
TRTP-1	11/3/2016	TRTP1-B-3'	3		0.20	---	25.2	<54.5	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TRTP1-ESW-2'	2		0.30	---	<21.8	<54.6	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TRTP1-ESW-3'	3		0.20	---	79.3	<54.5	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TRTP1-NSW-3'	3		0.20	---	<19.9	<49.7	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	FS-3**	3		0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	FS-4**	2		0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
G-Logics 2016 Truck Rack Remedial-Excavation Samples																						
South Sidewall	11/3/2016	TREX1-SSW1-4'	4		---	---	81.9	<46.4	---	---	---	---	---	---	---	---	---	---	---	---	---	
East Sidewall	11/3/2016	TREX1-ESW1-2'	2		---	---	11,300 D	<58.2	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TREX1-ESW2-2'	2		---	---	6,820 D	<49.7	---	---	---	---	---	---	---	---	---	---	---	---	---	
North Sidewall	11/3/2016	TREX1-NSW1-3'	3		---	---	5,350 D	<46.6	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TREX1-NSW2-4'	4		---	---	331	<54.6	---	---	---	---	---	---	---	---	---	---	---	---	---	
West Sidewall	11/3/2016	TREX1-WSW1-3'	3		---	---	<21.5	<53.7	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TREX1-WSW2-4.5'	4.5		---	---	42.8	<46.5	---	---	---	---	---	---	---	---	---	---	---	---	---	
Bottom	11/3/2016	TREX1-B1-4.5'	4.5		---	---	75.4	<53.7	---	---	---	---	---	---	---	---	---	---	---	---	---	
	11/3/2016	TREX1-B2-4.5'	4.5		---	---	152	<51.6	---	---	---	---	---	---	---	---	---	---	---	---	---	
SP1 (Stockpile)	11/3/2016	SP1	N/A		---	---	2,020 D	<47.6	---	---	---	---	---	---	---	---	---	---	---	---	---	
		Dup A (dup)	N/A		---	---	1,700	<53.5	---	---	---	---	---	---	---	---	---	---	---	---	---	
G-Logics 2017 Exploration																						
TRTP2	6/21/2017	TRTP2-2'	2		---	19.0	---	---	<0.0234	0.505	<0.0352	0.921	---	---	---	---	---	---	---	---	---	
	6/21/2017	TRTP-DUPA (dup)	2		---	18.8	---	---	<0.0236	<0.0236	<0.0354	0.0487	---	---	---	---	---	---	---	---	---	
TRTP3	6/21/2017	TRTP3-2'	2		---	46.7	---	---	<0.0311	<0.0311	<0.0467	<0.0311	---	---	---	---	---	---	---	---	---	
G-Logics 2019 Exploration																						
TRB-1	8/19/2019	TRB-1-1.5'	1.5		4.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/19/2019	TRB-1-4'	4		3.4	<2.78	<20.9	<52.2	<0.0111	0.0659	<0.0139	0.0800	<0.00278	<0.0111	<0.0139	<0.0139	<0.0139	<0.0278	<0.0278	0.0333	<0.0278	
	8/19/2019	TRB-1-6'	6		3.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/19/2019	TRB-1-8'	8		3.5	<3.77	<21.3	<53.2	<0.0151	0.0289	<0.0188	<0.0377	<0.00377	<0.0151	<0.0188	<0.0188	<0.0188	<0.0377	<0.0377	<0.0151	<0.0377	
TRB-2	8/19/2019	TRB-2-2'	2		3.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/19/2019	TRB-2-4'	4		15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/19/2019	TRB-2-6'	6		44	7.69	2,630 D	<53.2	0.0183	0.111	0.0430	0.3211	<0.00390	<0.0156	<0.0195	0.0659	0.0512	<0.0390	<0.0390	0.219	0.231	
	8/19/2019	TRB-2-8'	8		79	4.52	3,600 D	<50.0	<0.00939	<0.00939	<0.0117	0.0142	<0.00685 H	<0.00939	<0.0117	<0.0117	<0.0117	<0.0235	<0.0235	0.0124	<0.0235	
TRB-3	8/20/2019	TRB-3-3'	3		0.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/20/2019	TRB-3-6'	6		1.2	<2.57	<17.8	<44.4	<0.0103	<0.0103	<0.0128	<0.0257	<0.00257	<0.0103	<0.0128	<0.0128	<0.0128	<0.0257	<0.0257	<0.0103	<0.0257	
	8/20/2019	TRB-3-9'	9		1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/20/2019	TRB-3-10.5'	10.5		1.3	<3.22	<20.2	<50.5	<0.0129	0.0241	<0.0161	<0.0322	<0.00322	<0.0129	<0.0161	<0.0161	<0.0161	<0.0322	<0.0322	<0.0129	<0.0322	
TRB-4	8/20/2019	TRB-4-3'	3		2.3	<2.94	<21.1	<52.9	<0.0117	<0.0117	<0.0147	<0.0294	<0.00294	<0.0117	<0.0147	<0.0147	<0.0147	<0.0294	<0.0294	<0.0117	<0.0294	
	8/20/2019	TRB-4-6'	6		2.4	<2.33	<19.4	<48.5	<0.00933	<0.00933	<0.0117	<0.0233	<0.00233	<0.00933	<0.0117	<0.0117	<0.0117	<0.0233	<0.0233	<0.00933	<0.0233	
	8/20/2019	TRB-4-6.5**	6.5		1.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

TABLE 1-1
Soil Sample Analyses, Petroleum and VOCs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	PID (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C26 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dichloroethane (EDG)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-Triethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	1,2,4-Triethylbenzene	Naphthalene (L)
ADEC Method Two Cleanup Level, Migration to Groundwater (1)				260	230	9,700	0.0220	6.70	0.130	1.50	0.000240	0.00550	5.60	9.10	1.30	42.0	N/A	0.160	0.0380	
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				1,400	8,250	8,300	8.10	200	35.0	57.0	0.310	3.90	54.0	52.0	37.0	28.0	N/A	33.0	20.0	
ADEC Method Two Cleanup Level, Maximum Allowable Concentration (3)				1,400	12,500	22,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
(units in mg/kg)																				
TRB-5	8/21/2019	TRB-5-2**	2	3.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-5-5**	5	2.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-5-8**	8	4.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-5-10'	10	510	445	1,460	<54.2	<0.0160	<0.0160	0.160	0.114	<0.00399	<0.0160	0.296	0.810	0.0245	<0.0399	0.229	1.35	<0.0399
	8/21/2019	TRB-DD (dup of TRB-5-10')	10	---	408	815	<55.3	<0.146 D	<0.146 D	<0.183 D	<0.366 D	<0.0366 D	<0.146 D	0.277 D	<0.183 D	<0.183 D	<0.366 D	<0.366 D	1.30 D	<0.366 D
	8/21/2019	TRB-5-11'	11	620	279	2,460 D	<50.5	<0.0995 D	<0.0995 D	<0.124 D	<0.249 D	<0.000726	<0.0995 D	0.154 D	0.348 D	<0.124 D	<0.249 D	<0.249 D	1.09 D	<0.249 D
TRB-6	8/21/2019	TRB-6-2**	2	4.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-6-5**	5	3.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-6-8**	8	3.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	TRB-6-11'	11	460	65.9	1,780	<55.9	<0.00944	<0.00944	<0.0118	<0.0236	<0.000689	<0.00944	<0.0118	<0.0118	<0.0118	<0.0236	<0.0236	<0.00944	<0.0236
	8/21/2019	TRB-6-14'	14	50	302	32.5	<48.7	<0.0208	<0.0208	<0.0260	<0.0520	<0.00520	<0.0208	<0.0260	<0.0260	<0.0260	<0.0520	<0.0520	<0.0208	<0.0520
	8/21/2019	TRB-6-14'	14	50	302	32.5	<48.7	<0.0208	<0.0208	<0.0260	<0.0520	<0.00520	<0.0208	<0.0260	<0.0260	<0.0260	<0.0520	<0.0520	<0.0208	<0.0520
TRB-7	8/22/2019	TRB-7-2**	2	0.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/22/2019	TRB-7-5'	5	2.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/22/2019	TRB-7-8'	8	210	146	1,850	<49.1	<0.0169	0.0590	<0.0211	<0.0423	<0.00123	<0.0169	<0.0211	<0.0211	<0.0211	<0.0423	<0.0423	<0.0169	<0.0423
	8/22/2019	TRB-7-9'	9	18	2.59	30.4	<49.5	<0.0103	0.0274	<0.0129	<0.0257	<0.00257	<0.0103	<0.0129	<0.0129	<0.0129	<0.0257	<0.0257	<0.0103	<0.0257
TRB-8	8/22/2019	TRB-8-3**	3	1.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/22/2019	TRB-8-6'	6	2.6	<3.32	<21.4	<53.6	<0.0133	0.0303	<0.0166	0.0170	<0.00332	<0.0133	<0.0166	<0.0166	<0.0166	<0.0332	<0.0332	<0.0133	<0.0332
	8/22/2019	TRB-8-8.5'	8.5	45	16.0	113	<51.9	<0.0130	<0.0130	<0.0162	<0.0325	<0.000948	<0.0130	<0.0162	<0.0162	<0.0162	<0.0325	<0.0325	<0.0130	<0.0325

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.

(1) ADEC Method Two Cleanup Level for Migration to Groundwater Pathway (Table B1, January 2017).

(2) ADEC Method Two Cleanup Level for Direct Contact, Ingestion, and Inhalation Cumulative Exposures (Table B1, January 2017). Over 40 Inch Zone Means a Site That Receives Mean Annual Precipitation of Greater Than 40 Inches Per Year.

(3) ADEC Method Two Cleanup Level, Maximum Allowable Concentration (Table B1, January 2017).

(4) Soil In This Area Was Subsequently Removed During the 2016 Remedial Excavation

--- Not Analyzed

* PID Not Functioning Correctly During Sampling

** Field Screening Measurement. No Sample Collected

<53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.

152 Bold Number(s) Indicates Contaminant Detected.

560 Bold Number(s) and Yellow Shading Indicates Concentration Exceeds Method 2 Direct Contact Cleanup Level.

11,300 Bold Number(s) and Orange Shading Indicates Concentration Exceeds Method 2 Maximum Allowable Concentration.

<0.0311 Laboratory Practical Quantitation Limit Exceeds the Applicable ADEC Cleanup Level.

dup Duplicate Sample for QA/QC.

D Dilution Was Required

E Value Above Quantitation Range

J The Result is an Estimated Quantity and the Value is an Approximate Concentration

H Holding times for preparation or analysis exceeded

N/A Non-applicable

TABLE 1-2
Soil Sample Analyses, PAHs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	PI0 (ppmV)	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benz(b)fluoranthene	Benz(k)fluoranthene	Benz(a)pyrene	Indeno (1,2,3-c-d)pyrene	Dibenz(a,h)anthracene	Benz(a,i)perylene
ADEC Method Two Cleanup Level, Migration to Groundwater (1)				0.0380	1.30	0.410	18	37	36	39	390	590	87	0.70	600	20	190	1.9	65	6.3	15,000	
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				20.0	250	68.0	1,900	3,800	2,500	1,900	19,000	2,500	1,900	12	1,200	12	120	1.2	12	1.2	1,900	
(units in mg/kg)																						
G-Logics 2015 Exploration																						
TP-15	5/5/2015	TP-15-0.5'	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2016 Exploration																						
TRTP-1	11/3/2016	TRTP1-B-3'	3	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TRTP1-ESW-2'	2	0.30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TRTP1-ESW-3'	3	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TRTP1-NSW-3'	3	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	FS-3**	3	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	FS-4**	2	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2016 Truck Rack Remedial-Excavation Samples																						
South Sidewall	11/3/2016	TREX1-SSW1-4'	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
East Sidewall	11/3/2016	TREX1-ESW1-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TREX1-ESW2-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
North Sidewall	11/3/2016	TREX1-NSW1-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TREX1-NSW2-4'	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
West Sidewall	11/3/2016	TREX1-WSW1-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TREX1-WSW2-4.5'	4.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Bottom	11/3/2016	TREX1-B1-4.5'	4.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	11/3/2016	TREX1-B2-4.5'	4.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SP1 (Stockpile)	11/3/2016	SP1 Dup A (dup)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2017 Exploration																						
TRTP2	6/21/2017	TRTP2-2'	2	---	0.0451	0.146	0.0740	0.0615	0.0440	<0.0430	<0.0430	<0.0430	0.546	1.70	0.117	0.247	0.380	0.101	0.124	0.0518	<0.0430	0.0597
	6/21/2017	TRTP-DUPA (dup)	2	---	<0.0385	0.144	0.0695	0.0817	0.0799	<0.0385	0.0455	<0.0385	0.652	1.87	0.142	0.275	0.341	0.106	0.133	0.0514	<0.0385	0.0590
TRTP3	6/21/2017	TRTP3-2'	2	---	0.0885	0.195	0.0897	0.129	0.087	<0.0441	<0.0441	<0.0441	<0.0441	0.227	<0.0441	<0.0441	<0.0441	<0.0441	<0.0441	<0.0441	<0.0441	<0.0441
G-Logics 2019 Exploration																						
TRB-1	8/19/2019	TRB-1-1.5'	1.5	4.1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/19/2019	TRB-1-4'	4	3.4	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413
	8/19/2019	TRB-1-6'	6	3.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/19/2019	TRB-1-8'	8	3.5	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409
TRB-2	8/19/2019	TRB-2-2'	2	3.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/19/2019	TRB-2-4'	4	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/19/2019	TRB-2-6'	6	44	0.204	0.405	0.157	<0.0413	<0.0413	<0.0413	0.0449	<0.0413	<0.0413	0.163	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413
	8/19/2019	TRB-2-8'	8	80	0.101	0.199	0.0742	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	0.141	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421
TRB-3	8/20/2019	TRB-3-3'	3	0.6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/20/2019	TRB-3-6'	6	1.2	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368	<0.0368
	8/20/2019	TRB-3-9'	9	1.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/20/2019	TRB-3-10.5'	10.5	1.3	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395	<0.0395

TABLE 1-2
Soil Sample Analyses, PAHs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)																				
				PID (ppmV)	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno (1,2,3-c-d)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)pyrene	
ADEC Method Two Cleanup Level, Migration to Groundwater (1)				0.0380	1.30	0.410	18	37	36	39	390	590	87	0.70	600	20	190	1.9	65	6.3	15,000		
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				20.0	250	68.0	1,900	3,800	2,500	1,900	19,000	2,500	1,900	12	1,200	12	120	1.2	12	1.2	1,900		
(units in mg/kg)																							
TRB-4	8/20/2019	TRB-4-3'	3	2.3	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372	<0.0372		
	8/20/2019	TRB-4-6'	6	2.4	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394	<0.0394		
	8/20/2019	TRB-4-6.5**	6.5	1.2																			
TRB-5	8/21/2019	TRB-5-2**	2	3.8																			
	8/21/2019	TRB-5-5**	5	2.7																			
	8/21/2019	TRB-5-8**	8	4.6																			
	8/21/2019	TRB-5-10'	10	510	0.212	0.0853	1.39	<0.0422	<0.0422	0.446	0.396	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422		
	8/21/2019	TRB-DD (dup of TRB-5-10')	10	---	0.263	0.309	1.45	<0.0447	<0.0447	0.422	0.339	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447		
	8/21/2019	TRB-5-11'	11	620	0.878	1.17	4.34	<0.0426	<0.0426	0.946	0.773	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426	<0.0426		
TRB-6	8/21/2019	TRB-6-2**	2	4.3																			
	8/21/2019	TRB-6-5**	5	3.9																			
	8/21/2019	TRB-6-8**	8	3.6																			
	8/21/2019	TRB-6-11'	11	460	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	1.07	0.769	<0.0428	0.0607	0.106	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428	<0.0428		
	8/21/2019	TRB-6-14'	14	50	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	0.0487		<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423		
TRB-7	8/22/2019	TRB-7-2**	2	0.4																			
	8/22/2019	TRB-7-5'	5	2.1																			
	8/22/2019	TRB-7-8'	8	210	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	0.553	<0.0436	<0.0436	<0.0436	0.0969	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436		
	8/22/2019	TRB-7-9'	9	18	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427	<0.0427		
TRB-8	8/22/2019	TRB-8-3**	3	1.8																			
	8/22/2019	TRB-8-6'	6	2.6	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	<0.0409	0.118	0.0500	0.332	0.334	0.161	0.155	0.109	0.0991	0.180	0.0798	<0.0409	0.0936	
	8/22/2019	TRB-8-8.5'	8.5	45	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436		

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.

(1) ADEC Method Two Cleanup Level for Migration to Groundwater Pathway (Table B1, January 2017).

(2) ADEC Method Two Cleanup Level for Direct Contact, Ingestion, and Inhalation Cumulative Exposures (Table B1, January 2017). Over 40 Inch Zone Means a Site That Receives Mean Annual Precipitation of Greater Than 40 Inches Per Year.

--- Not Analyzed

* PID Not Functioning Correctly During Sampling

** Field Screening Measurement, No Sample Collected

<53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.

152 Bold Number(s) Indicates Contaminant Detected.

560 Bold Number(s) and Yellow Shading Indicates Concentration Exceeds Method 2 Direct Contact Cleanup Level.

<0.0511 Laboratory Practical Quantitation Limit Exceeds the Applicable ADEC Cleanup Level.

dup Duplicate Sample for QA/QC.

TABLE 2-1
Pore-Water Sample Analyses, Petroleum and VOCs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	C6-C10 Gasoline Range Organics (GR0)	C10-C28 Diesel Range Organics (DR0)	C25-C36 Residual Range Organics (RR0)	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-Dibromethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	4-Isopropyltoluene	1,2,4-Trimethylbenzene	Naphthalene (1)	TAH	TAH
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Acute (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Chronic (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.0	10.0
ADEC Surface Water Cleanup Level for Human Health - Consumption of Aquatic Organisms Only (2)			N/A	N/A	N/A	N/A	200,000	29,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(units in µg/L)																				
G-Logics 2019 Exploration																				
TRPW-1	8/20/2019	TRPW-1	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000
TRPW-2	8/20/2019	TRPW-2	<50.0	<49.9	<99.7	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000
	8/20/2019	TRPW-A (dup)	<50.0	<50.4	<101	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.
 (1) Naphthalene analyzed by methods 8270D SIM and 8260C
 (2) ADEC Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances (dated December 12, 2008)
 N/A Cleanup/Screening Level Not Available
 --- Not Analyzed
 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.
 Q Indicates an Analyte with Continuing Calibration that Does Not Meet Established Acceptance Criteria

TABLE 2-2
Pore-Water Sample Analyses, PAHs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Naphthalene (1)	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benztolanthracene	Chrysene	Benztolfluoranthene	Benztolylfluoranthene	Benztolpyrene	Indene (1,2,3-c,4)pyrene	Otherztolanthracene	Benztol(4,5)pyrene
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Acute (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Chronic (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Surface Water Cleanup Level for Human Health - Consumption of Aquatic Organisms Only (2)			N/A	N/A	N/A	N/A	2,700	N/A	N/A	110,000	370	11,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(units in µg/L)																				
G-Logics 2019 Exploration																				
TRPW-1	8/20/2019	TRPW-1	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
TRPW-2	8/20/2019	TRPW-2	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	8/20/2019	TRPW-A (dup)	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.
 (1) Naphthalene analyzed by methods 8270D SIM and 8260C
 (2) ADEC Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances (dated December 12, 2008)
 N/A Cleanup/Screening Level Not Available
 <53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.
 dup Duplicate Sample for QA/QC.

TABLE 3-1

Soil/Sediment Sample Analyses, Petroleum, and VOCs
 Fuel-Pipe Area
 Former Chevron Truck-Loading Rack
 147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	PID (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C25 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dibromomethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	1,2,4-Trimethylbenzene	Naphthalene (1)
NOAA SQUIRT Probable Effects Threshold (PEL) (1)					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.391
NOAA SQUIRT Eco Tox EqP (1)					N/A	N/A	N/A	0.057	0.670	3.60	0.0250	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.480
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)					1,400	8,250	8,300	8.1	200	35	57	0.310	3.9	54	52	37	28	43(a)/210(b)	20
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)					N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10
(units in mg/kg)																			
G-Logics 2015 Exploration																			
TP-13	5/5/2015	TP-13-0.5'	0.5	---	1,000 D	6,660 EJ	386	<0.0261	0.071	0.150	1.27	---	---	---	---	---	---	---	---
TP-14	5/5/2015	TP-14-0.5'	0.5	---	<8.10	27.5	96.5	<0.0324	<0.0324	0.081	0.075	---	---	---	---	---	---	---	---
G-Logics 2016 Exploration																			
TP-17	11/4/2016	TP17-1.5'	1.5	5.0	36.3	2,140	<55.5	---	---	---	---	<0.000388 HR	<0.0145 HR	---	---	---	---	---	---
TP-18	11/4/2016	TP18-1.5'	1.5	3.9	<2.49	23.4	57.6	---	---	---	---	---	---	---	---	---	---	---	---
TP-19	11/4/2016	TP19-1.5'	1.5	0.0	<2.13	<20.6	<51.4	---	---	---	---	---	---	---	---	---	---	---	---
TP-20	11/4/2016	TP20-1'	1	0.0	<2.97	22.6	<48.5	---	---	---	---	---	---	---	---	---	---	---	---
TP-21	11/4/2016	TP21-1'	1	0.0	27.4	142	98.6	---	---	---	---	---	---	---	---	---	---	---	---
		TPX-1' (dup)	1	0.0	5.67	148	61.4	---	---	---	---	---	---	---	---	---	---	---	---
TP-22	11/4/2016	TP22-1'	1	0.0	<1.94	109	<54.2	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2017 Exploration																			
TP-23	6/16/2017	TP-23-3.25'	3.25	260	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-24	6/17/2017	TP-24-1.5'	1.5	1,000	1,970 D	6,200 D	<568 D	<0.0306	<0.0306	<0.0459	<0.0306	<0.000612 H	<0.00438 H	---	---	---	---	---	0.183
TP-25	6/17/2017	TP-25-1.5'	1.5	470	1,430 D	3,800 D	<532 D	---	---	---	---	---	---	---	---	---	---	---	<0.0400
TP-26	6/17/2017	TP-26-1.5'	1.5	0.8	11.4	<21.8	<54.6	<0.0220	<0.0220	<0.0331	0.0390	---	---	---	---	---	---	---	---
GLB-1	6/16/2017	GLB-1-5'	5	250	1,080 D	3,110 D	<50.3	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-1-7'	7	2.7	13.2	<19.1	<47.9	---	---	---	---	---	---	---	---	---	---	---	---
GLB-2	6/16/2017	GLB-2-3**	3	270	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-2-6'	6	0.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-3	6/16/2017	GLB-3-4**	4	79	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3-1

Soil/Sediment Sample Analyses, Petroleum, and VOCs
 Fuel-Pipe Area
 Former Chevron Truck-Loading Rack
 147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	PID (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C25 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dibromethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	1,2,4-Trimethylbenzene	Naphthalene (1)
NOAA SQUIRT Probable Effects Threshold (PEL) (1)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.391
NOAA SQUIRT Eco Tox EqP (1)				N/A	N/A	N/A	N/A	0.057	0.670	3.60	0.0250	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.480
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				1,400	8,250	8,300	8.1	200	35	57	0.310	3.9	54	52	37	28	43(a)/210(b)	20	
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10
(units in mg/kg)																			
GLB-4	6/17/2017	GLB-4-4'	4	0.0	<7.35	<19.9	<49.7	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-4-6**	6	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-4-7'	7	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-5	6/17/2017	GLB-5-3'	3	0.0	<6.77	<21.8	<54.5	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-5-5'	5	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-6	6/17/2017	GLB-6-2**	2	89	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-6-4.5'	4.5	0.90	7.10	<21.8	<54.4	<0.0222 HR	0.0294 HJ	0.0280 HJ	<0.0554 HR	---	---	---	---	---	---	---	---
GLB-7	6/18/2017	GLB-7-3'	3	0.0	<7.59	<20.2	<50.4	<0.0323 HR	<0.0323 HR	<0.0484 HR	<0.0323 HR	---	---	---	---	---	---	---	---
		GLB-7-4.5'	4.5	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-8	6/18/2017	GLB-8-3.5**	3.5	280	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-8-6'	6	1.6	<5.23 HR	<19.7 H	<49.3 H	---	---	---	---	---	---	---	---	---	---	---	---
GLB-9	6/18/2017	GLB-9-3'	3	630	1,000 D	5,350 D	<57.7	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-9-5'	5	550	566 DH	5,330 D	<52.6	<0.0205 HR	0.0365 HJ	1.90 HJ	5.22 DHJ	<0.000361 HR	<0.00259 HR	---	---	---	---	---	---
GLB-10	6/18/2017	GLB-10-0.5**	0.5	1.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-10-2'	2	0.0	<5.56 HR	<22.7 H	<56.8 H	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-10-3.5**	3.5	0.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-11	6/18/2017	GLB-11-0.5'	0.5	2.9	7.53	<27.2	<68.1	<0.0200	<0.0200	<0.0300	<0.0200	---	---	---	---	---	---	---	---
		GLB-DUPA (dup of GLB-11-0.5')	0.5	---	<4.77	<25.5	<63.7	0.0473 HJ	<0.0197 HR	<0.0295 HR	<0.0197 HR	---	---	---	---	---	---	---	---
		GLB-11-2'	2	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-12	6/18/2017	GLB-12-0.75'	0.75	1.2	<3.25	<25.3	<63.2	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-DUPB (dup of GLB-12-0.75')	0.75	---	<4.50	<24.1	<60.2	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-12-2'	2	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3-1

Soil/Sediment Sample Analyses, Petroleum, and VOCs
 Fuel-Pipe Area
 Former Chevron Truck-Loading Rack
 147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)		PID (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C25 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dibromethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	sec-Butylbenzene	1,2,4-Trimethylbenzene	Naphthalene (1)	
NOAA SquiRT Probable Effects Threshold (PEL) (1)						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.391	
NOAA SquiRT Eco Tox EqP (1)						N/A	N/A	N/A	0.057	0.670	3.60	0.0250	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.480	
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)						1,400	8,250	8,300	8.1	200	35	57	0.310	3.9	54	52	37	28	43(a)/210(b)	20	
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10	
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)						N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10	
(units in mg/kg)																					
GLB-13	6/18/2017	GLB-13-0.5'	0.5	0.10	<3.13	<24.0	<60.1	---	---	---	---	---	---	---	---	---	---	---	---	---	
		GLB-DUPC (dup of GLB-13-0.5')	0.5	---	<6.19	<20.9	<52.4	---	---	---	---	---	---	---	---	---	---	---	---	---	
		GLB-13-2'	2	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
		GLB-13-3'	3	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Trip Blank	5/31/2017	Trip Blank	---	---	---	<5.00 H	---	<0.0200 HR	<0.0200 HR	<0.0300 HR	<0.0200 HR	<0.000356 HR	<0.00255 HR	---	---	---	---	---	---		
Trip Blank 2	5/31/2017	Trip Blank 2	---	---	---	<5.00	---	<0.0200	<0.0200	<0.0300	<0.0200	---	---	---	---	---	---	---	---		
<u>G-Logics 2019 Exploration</u>																					
GLB-14	8/20/2019	GLB-14-4'	4	1,100	402 D	8,320 D	<56.0	<0.0920 D	<0.0920 D	<0.115 D	<0.230 D	<0.000671	<0.0920 D	1.56 D	1.41 D	<0.115 D	1.62 D	0.399 D	<0.230 D		
	8/20/2019	GLB-AA (dup of GLB-14-4')	4	---	430 D	6,800 D	<52.4	<0.0974 D	<0.0974 D	<0.122 D	<0.243 D	<0.0243 D	<0.0974 D	1.11 D	0.865 D	<0.122 D	1.29 D	0.245 D	<0.245 D		
	8/20/2019	GLB-14-6'	6	70	38.2	80.9	<52.1	0.0222	0.0281	0.0401	0.0751	<0.00238	<0.00952	0.0322	0.0924	<0.0119	<0.0238	<0.0119	<0.0238		
GLB-15	8/20/2019	GLB-15-2'	2	15	4.79	<21.7	<54.2	0.0260	<0.0135	0.0228	<0.0337	<0.000984	<0.0135	0.0361	0.178	<0.0168	<0.0337	0.0174	<0.0337		
	8/20/2019	GLB-BB (dup of GLB-15-2')	2	---	3.70	<24.8	<62.0	0.0275	<0.0124	0.0232	<0.0311	<0.00311	<0.0124	0.0342	0.187	<0.0156	<0.0311	<0.0156	<0.0311		
	8/20/2019	GLB-15-3'	3	5.6	5.63	<21.7	<54.2	0.265	0.0783	0.233	0.0805	<0.00309	<0.0124	0.0271	0.105	<0.0155	<0.0309	<0.0155	0.132 Q		
GLB-16	8/20/2019	GLB-16-2'	2	2.3	<2.56	<22.1	<55.2	<0.0103	<0.0103	<0.0128	<0.0256	<0.00256	<0.0103	<0.0128	<0.0128	<0.0128	<0.0256	<0.0128	<0.0256		
	8/20/2019	GLB-16-4'	4	1.3	<2.35	<22.0	<54.9	<0.00939	<0.00939	<0.0117	<0.0235	<0.00235	<0.00939	<0.0117	<0.0117	<0.0117	<0.0235	<0.00939	<0.0235		
GLB-17	8/20/2019	GLB-17-2**	2	0.40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/20/2019	GLB-17-4'	4	110	169 D	8,690 D	<52.0	<0.0108	<0.0108	0.114	0.0815	<0.000788	<0.0108	0.261	0.549	<0.0135	0.686	0.373	<0.0270		
	8/20/2019	GLB-17-7'	7	59	4.11	59.9	<53.4	0.0183	<0.00986	0.0251	0.0263	<0.00246	<0.00986	<0.0123	0.0441	<0.0123	<0.0246	0.0175	0.0602		
GLB-18	8/20/2019	GLB-18-2'	2	1.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
	8/20/2019	GLB-18-4'	4	2.0	<2.95	56.8	<58.2	<0.0118	<0.0118	<0.0148	<0.0295	<0.00295	<0.0118	<0.0148	<0.0148	<0.0148	<0.0295	<0.0118	<0.0295		
	8/20/2019	GLB-18-6'	6	1.2	<1.76	<23.2	<58.1	<0.00704	<0.00704	<0.00880	<0.0176	<0.00176	<0.00704	<0.00880	<0.00880	<0.00880	<0.0176	<0.00880	<0.0176		
GLB-19	8/21/2019	GLB-19-2'	2	0.4	<2.55	32.4	<52.0	<0.0102	0.03	<0.0127	<0.0255	<0.00255	<0.0102	<0.0127	<0.0127	<0.0127	<0.0255	<0.0127	<0.0255		
	8/21/2019	GLB-CC (dup of GLB-19-2')	2	---	<3.21	27.2	53.6	<0.0129	0.02	<0.0161	<0.0321	<0.00321	<0.0129	<0.0161	<0.0161	<0.0161	<0.0321	0.0131	0.1380		
	8/21/2019	GLB-19-4'	4	1.2	<2.90	<21.1	<52.7	<0.0116	<0.0116	<0.0145	<0.0290	<0.00290	<0.0116	<0.0145	<0.0145	<0.0145	<0.0290	0.0118	<0.0290		
	8/21/2019	GLB-19-5'	5	0.9	<3.21	<20.7	<51.6	<0.0128	<0.0128	<0.0161	<0.0321	<0.00321	<0.0128	<0.0161	<0.0161	<0.0161	<0.0321	<0.0128	<0.0321		
GLB-20	8/21/2019	GLB-20-2'	2	1.0	<2.50	<23.7	<59.4	<0.00999	<0.00999	<0.0125	<0.0250	<0.00250	<0.00999	<0.0125	<0.0125	<0.0125	<0.0250	0.0113	<0.0250		
	8/21/2019	GLB-20-4'	4	0.6	<2.29	<20.2	<50.5	0.0200	0.0525	<0.0115	0.0585	<0.00229	<0.00916	<0.0115	<0.0115	<0.0115	<0.0229	0.0295	<0.0229		

TABLE 3-1
Soil/Sediment Sample Analyses, Petroleum, and VOCs
Fuel-Pipe Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)																	
				PID (ppmV)	C6-C10 Gasoline Range Organics (GRO)	C10-C25 Diesel Range Organics (DRO)	C25-C36 Residual Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dibromethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-trimethylbenzene	sec-Butylbenzene	1,2,4-trimethylbenzene	Naphthalene (1)	
NOAA SquiRT Probable Effects Threshold (PEL) (1)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.391	
NOAA SquiRT Eco Tox EqP (1)				N/A	N/A	N/A	0.057	0.670	3.60	0.0250	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.480	
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				1,400	8,250	8,300	8.1	200	35	57	0.310	3.9	54	52	37	28	43(a)/210(b)	20		
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10	
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)				N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.10	
(units in mg/kg)																				
GLB-21	8/21/2019	GLB-21-2"	2	14	3.38	<23.0	<57.5	<0.0119	<0.0119	0.0609	<0.0298	<0.000869	<0.0119	0.0425	0.233	<0.0149	<0.0298	0.0365	<0.0298	
	8/21/2019	GLB-21-3"	3	2.4	<2.63	<19.3	<48.3	0.0481	0.0208	0.0901	0.0444	<0.00263	<0.0105	<0.0132	0.0404	<0.0132	<0.0263	0.0197	<0.0263	
GLB-22	8/21/2019	GLB-22-2"	2	450	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/21/2019	GLB-22-4'	4	730	716 D	3,900 D	<60.7	0.0186	1.38 D	25.4 D	41.9 D	<0.000747	<0.0102	2.74 D	7.66 D	10.7 D	<0.0256	48.7 D	13.4 D	
	8/21/2019	GLB-22-5'	5	140	71.2 D	43.0	<55.6	0.350	0.0875	1.24	1.92	<0.00363	<0.0145	0.160	0.470	0.521	<0.0363	3.28 D	0.564	
GLB-23	8/21/2019	GLB-23-2"	2	990	1,300 D	1,560	<56.6	<0.0488 D	<0.0488 D	2.25 D	25.3 D	<0.000890	<0.0488 D	0.488 D	1.71 D	3.11 D	0.320 D	32.3 D	2.51 DQ	
	8/21/2019	GLB-23-4'	4	680	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/21/2019	GLB-23-5'	5	250	136 D	377	<54.5	0.189	0.0342	0.831	1.38	<0.00373	<0.0149	0.157	0.514	0.400	<0.0373	3.27 D	0.642 Q	
GLB-24	8/21/2019	GLB-24-2"	2	340	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
	8/21/2019	GLB-24-4'	4	900	429 D	1,120	<57.8	<0.124 D	<0.124 D	<0.155 D	<0.311 D	<0.000907	<0.124 D	1.41 D	5.15 D	<0.155 D	1.98 D	<0.124 D	<0.311 D	
	8/21/2019	GLB-24-5'	5	19	6.73	<21.8	<54.4	0.0850	0.114	0.368	0.124	<0.00408	<0.0163	0.0470	0.404	<0.0204	<0.0408	0.104	0.217 Q	
Trip Blank 1	8/15/2019	Trip Blank 1	---	---	<5.00	---	---	<0.0200	<0.0200	<0.0250	<0.0500	<0.00500	<0.0200	<0.0250	<0.0250	<0.0250	<0.0500	<0.0200	<0.0500	
Trip Blank 2	7/3/2019	Trip Blank 2	---	---	<5.00	---	---	<0.0200 H	<0.0200 H	<0.0250 H	<0.0500 H	<0.00500 H	<0.0200 H	<0.0250 H	<0.0250 H	<0.0250 H	<0.0500 H	<0.0200 H	<0.0500 H	

- Notes:** Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.
- (1) Available Sediment Quality Guidelines as Outlined in ADEC Technical Memorandum *Sediment Quality Guidelines (SQG)*, Dated January, 2013
- (2) ADEC Method Two Cleanup Level for Direct Contact, Ingestion, and Inhalation Cumulative Exposures (Table B1, January 2017). Over 40 Inch Zone Means a Site That Receives Mean Annual Precipitation of Greater Than 40 Inches Per Year.
- (3) Washington State Department of Ecology *Sediment Cleanup User's Manual II (SCUM II)* dated March 2015, revised 2017
- (a) Direct Contact Csat Cleanup Level, Accounts for Free Product in Sample (results exceeding Csat level trigger the need to assess practicability of product recovery).
- (b) Direct Contact Human Health Risk-Based Cleanup Level (assumes free product not present).
- Not Analyzed
- Field Screening Measurement, No Sample Collected
- <5.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit
- 26 Bold Number(s) Indicates Contaminant Detected
- 0.039 Bold Number(s) and Yellow Shading Indicates Concentration Exceeds the NOAA SquiRT PEL, Eco Tox threshold, or ADEC Method 2 Direct Contact Cleanup Level.
- dup Duplicate Sample for QA/QC
- N/A Not Applicable
- D Dilution Was Required
- E Value Above Quantitation Limit
- H Holding Times for Preparation or Analysis Exceeded
- J The Result is an Estimated Quantity and the Value is an Approximate Concentration
- Q Indicates an Analyte with Continuing Calibration that Does Not Meet Established Acceptance Criteria.
- R The Data has been Rejected due to Deficiencies in Meeting QA/QC Criteria

TABLE 3-2
Soil/Sediment Sample Analyses, PAHs
Fuel-Pipe Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(e)pyrene	Indeno (1,2,3-c-d)pyrene	Dibenz(a,h)anthracene	Benzo(h)perylene
NOAA SQUIRT Probable Effects Threshold (PEL) (1)				0.391	0.201	N/A	0.128	0.0889	0.144	0.544	0.245	1.49	1.40	0.693	0.846	N/A	N/A	0.763	N/A	0.135	N/A
NOAA SQUIRT Eco Tox EqP (1)				0.480	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				20	250	68	1,900	3,800	2,500	1,900	19,000	2,500	1,900	12	1,200	12	120	1.2	12	1.2	1,900
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	1.70	2.60	1.30	1.40	N/A	N/A	1.60	0.600	0.230	0.670
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	2.50	3.30	1.60	2.80	N/A	N/A	1.60	0.690	0.230	0.720
(units in mg/kg)																					
G-Logics 2015 Exploration																					
TP-13	5/5/2015	TP-13-0.5'	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-14	5/5/2015	TP-14-0.5'	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2016 Exploration																					
TP-17	11/4/2016	TP17-1.5'	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-18	11/4/2016	TP18-1.5'	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-19	11/4/2016	TP19-1.5'	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-20	11/4/2016	TP20-1'	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-21	11/4/2016	TP21-1'	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		TPX-1' (dup)	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-22	11/4/2016	TP22-1'	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2017 Exploration																					
TP-23	6/16/2017	TP-23-3.25'	3.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TP-24	6/17/2017	TP-24-1.5'	1.5	0.183	<0.0438	0.100	0.101	0.186	0.263	0.782	<0.0438	0.456	0.454	0.165	0.176	0.178	0.0656	0.138	0.0521	<0.0438	0.0623
TP-25	6/17/2017	TP-25-1.5'	1.5	<0.0400	<0.0400	<0.0400	0.0810	0.0997	<0.0400	<0.0400	<0.0400	0.215	0.242	0.0869	0.100	0.130	0.0547	0.110	0.0513	<0.0400	0.0644
TP-26	6/17/2017	TP-26-1.5'	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-1	6/16/2017	GLB-1-5'	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/16/2017	GLB-1-7'	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-2	6/16/2017	GLB-2-3**	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-2-6'	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-3	6/16/2017	GLB-3-4**	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-4	6/17/2017	GLB-4-4'	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-4-6**	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-4-7'	7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-5	6/17/2017	GLB-5-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-5-5'	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-6	6/17/2017	GLB-6-4.5'	4.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-7	6/18/2017	GLB-7-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-7-4.5'	4.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-8	6/18/2017	GLB-8-3.5**	3.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-8-6'	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 3-2

Soil/Sediment Sample Analyses, PAHs
 Fuel-Pipe Area
 Former Chevron Truck-Loading Rack
 147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno (1,2,3-c-d)pyrene	Dibenz(a,h)anthracene	Benzo(g,h)perylene
NOAA SQUIRT Probable Effects Threshold (PEL) (1)				0.391	0.201	N/A	0.128	0.0889	0.144	0.544	0.245	1.49	1.40	0.693	0.846	N/A	N/A	0.763	N/A	0.135	N/A
NOAA SQUIRT Eco Tox EqP (1)				0.480	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				20	250	68	1,900	3,800	2,500	1,900	19,000	2,500	1,900	12	1,200	12	120	1.2	12	1.2	1,900
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	1.70	2.60	1.30	1.40	N/A	N/A	1.60	0.600	0.230	0.670
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	2.50	3.30	1.60	2.80	N/A	N/A	1.60	0.690	0.230	0.720
(units in mg/kg)																					
GLB-9	6/18/2017	GLB-9-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	6/18/2017	GLB-9-5'	5	1.67 H	10.2 DH	8.770 DH	0.314 H	5.240 H	2.130 H	5.19 DH	0.389 H	2.540 H	1.75 H	0.467 H	0.210 H	0.192 H	0.0751 H	0.123 H	<0.0422 Q3H	<0.0422 Q3H	<0.0422 Q3H
GLB-10	6/18/2017	GLB-10-0.5''	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-10-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-10-3.5''	3.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-11	6/18/2017	GLB-11-0.5'	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-DUPA (dup of GLB-11-0.5')	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-11-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-12	6/18/2017	GLB-12-0.75'	0.75	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-DUPB (dup of GLB-12-0.75')	0.75	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-12-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
GLB-13	6/18/2017	GLB-13-0.5'	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-DUPC (dup of GLB-13-0.5')	0.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-13-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
		GLB-13-3'	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
G-Logics 2019 Exploration																					
GLB-14	8/20/2019	GLB-14-4'	4	0.598	<0.0473	4.95	<0.0473	0.306	0.277	0.638	<0.0473	0.234	0.224	0.0576	0.0649	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473
	8/20/2019	GLB-AA (dup of GLB-14-4')	4	0.076	<0.0454	5.22 D	<0.0454	0.207	0.350	0.863	<0.0454	0.228	0.230	0.0651	0.0689	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454
	8/20/2019	GLB-14-6'	6	<0.0406	<0.0406	0.0517	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406	<0.0406
GLB-15	8/20/2019	GLB-15-2'	2	<0.0437	<0.0437	<0.0437	<0.0437	0.172	0.0618	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437
	8/20/2019	GLB-BB (dup of GLB-15-2')	2	<0.0475	<0.0475	<0.0475	<0.0475	0.204	0.0644	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475
	8/20/2019	GLB-15-3'	3	0.0459	<0.0424	<0.0424	<0.0424	0.0540	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424	<0.0424
GLB-16	8/20/2019	GLB-16-2'	2	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	0.0716	0.0669	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477	<0.0477
	8/20/2019	GLB-16-4'	4	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447
GLB-17	8/20/2019	GLB-17-2''	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/20/2019	GLB-17-4'	4	<0.0436	<0.0436	6.580 D	<0.0436	0.276	1.57	2.33	<0.0436	0.190	0.150	<0.0436	0.0531	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436	<0.0436
	8/20/2019	GLB-17-7'	7	0.0662	<0.0413	0.110	<0.0413	<0.0413	0.0707	0.103	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413	<0.0413
GLB-18	8/20/2019	GLB-18-2'	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/20/2019	GLB-18-4'	4	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414	<0.0414
	8/20/2019	GLB-18-6'	6	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479	<0.0479
GLB-19	8/21/2019	GLB-19-2'	2	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	0.104	<0.0411	0.142	0.128	0.0675	0.0648	0.0712	0.0420	0.0739	<0.0411	<0.0411	<0.0411
	8/21/2019	GLB-CC (dup of GLB-19-2')	2	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	0.0465	<0.0423	0.0754	0.0652	<0.0423	0.0441	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423
	8/21/2019	GLB-19-4'	4	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411
	8/21/2019	GLB-19-5'	5	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421	<0.0421
GLB-20	8/21/2019	GLB-20-2'	2	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416	<0.0416
	8/21/2019	GLB-20-4'	4	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398	<0.0398

TABLE 3-2
Soil/Sediment Sample Analyses, PAHs
Fuel-Pipe Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Sample Depth (ft)	Naphthalene	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(e)pyrene	Indeno (1,2,3-c-d)pyrene	Dibenz(a,h)anthracene	Benzo(h)perylene
NOAA SQUIRT Probable Effects Threshold (PEL) (1)				0.391	0.201	N/A	0.128	0.0889	0.144	0.544	0.245	1.49	1.40	0.693	0.846	N/A	N/A	0.763	N/A	0.135	N/A
NOAA SQUIRT Eco Tox EqP (1)				0.480	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Method Two Cleanup Level, Direct Contact, Over 40 Inch Zone (2)				20	250	68	1,900	3,800	2,500	1,900	19,000	2,500	1,900	12	1,200	12	120	1.2	12	1.2	1,900
Washington State Apparent Effects Threshold (AET), Sediment Cleanup Objective (SCO)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	1.70	2.60	1.30	1.40	N/A	N/A	1.60	0.600	0.230	0.670
Washington State Apparent Effects Threshold (AET), Cleanup Screening Level (CSL)(3)				2.10	0.670	N/A	1.30	0.500	0.540	1.50	0.960	2.50	3.30	1.60	2.80	N/A	N/A	1.60	0.690	0.230	0.720
(units in mg/kg)																					
GLB-21	8/21/2019	GLB-21-2"	2	<0.0502	<0.0502	0.0557	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502	<0.0502
	8/21/2019	GLB-21-3"	3	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410	<0.0410
GLB-22	8/21/2019	GLB-22-2"	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	GLB-22-4'	4	19.7 D	21.5 D	16.5 D	<0.0496	0.459	1.14	1.91	0.183	0.337	0.255	0.0649	0.0613	<0.0496	<0.0496	<0.0496	<0.0496	<0.0496	<0.0496
	8/21/2019	GLB-22-5'	5	0.128	0.113	0.136	<0.0450	<0.0450	<0.0450	0.0686	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450	<0.0450
GLB-23	8/21/2019	GLB-23-2"	2	9.61 D	16.9 D	14.2 D	<0.0484	0.777	1.24	1.72	0.176	0.524	0.421	0.102	0.0839	<0.0484	<0.0484	<0.0484	<0.0484	<0.0484	<0.0484
	8/21/2019	GLB-23-4'	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	GLB-23-5'	5	0.143	0.254	0.430	<0.0445	0.0455	0.0701	0.145	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445	<0.0445
GLB-24	8/21/2019	GLB-24-2"	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	8/21/2019	GLB-24-4'	4	0.196	0.0546	5.02	<0.0447	0.483	0.791	1.25	0.113	0.432	0.326	0.0846	0.0735	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447
	8/21/2019	GLB-24-5'	5	0.0967	<0.0423	0.137	<0.0423	<0.0423	0.0587	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.

(1) Available Sediment Quality Guidelines as Outlined in ADEC Technical Memorandum Sediment Quality Guidelines (SQG), Dated January, 2013

(2) ADEC Method Two Cleanup Level for Direct Contact, Ingestion, and Inhalation Cumulative Exposures (Table B1, October 2018). Over 40 Inch Zone Means a Site That Receives Mean Annual Precipitation of Greater Than 40 Inches Per Year.

(3) Washington State Department of Ecology Sediment Cleanup User's Manual II (SCUM II) dated March 2015, revised 2017

--- Not Analyzed

** Field Screening Measurement, No Sample Collected

<53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.

152 Bold Number(s) Indicates Contaminant Detected.

0.483 Bold Number(s) and Orange Shading Indicates Concentration Exceeds the Most Conservative/Available Sediment Screening Level

dup Duplicate Sample for QA/QC.

N/A Not Applicable

TABLE 4-1
Pore-Water Sample Analyses, Petroleum and VOCs
Fuel-Pipe Area
Former Chevron Truck-Loading Rack Property
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	C6-C10 Gasoline Range Organics (GRO)*	C10-C25 Diesel Range Organics (DRO)	C25-C38 Residue Range Organics (RRO)	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-Dibromochloroethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	N-Propylbenzene	1,3,5-Trimethylbenzene	tert-Butylbenzene	sec-Butylbenzene	1,2,4-Trimethylbenzene	Naphthalene (1)	TAH (3)	TAH (4)
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Acute (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Chronic (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	15.0	10.0
ADEC Surface Water Cleanup Level for Human Health - Consumption of Aquatic Organisms Only (2)			N/A	N/A	N/A	N/A	200,000	29,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(units in µg/L)																				
G-Logics 2019 Exploration																				
GPW-1	8/19/2019	GPW-1	120	1,280	135	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.165	0.330
GPW-2	8/19/2019	GPW-2	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000
GPW-3	8/19/2019	GPW-3	<50.0	54	<101	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000
GPW-4	8/19/2019	GPW-4	<50.0*	201	<101	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	0.000	0.000
GPW-5	8/19/2019	GPW-5	197	741	<100	6.40	<1.00	<1.00	<1.00	<0.250	<1.00	2.07	2.11	<1.00	<1.00	<1.00	<1.00	<1.00	16.1	6.40
GPW-6	8/19/2019	GPW-6	4,760 D	6,850 D	138	13.2	15.1	171	14.2	0.246	<1.00	35.9	69.3	<1.00	1.65	<1.00	58.3	68.4	223	214
GPW-7	8/20/2019	GPW-7	175	1,630	<101	<1.00	<1.00	<1.00	<1.00	<0.0100 I	<1.00	<1.00	1.61	<1.00	<1.00	<1.00	<1.00	<1.00 Q	1.31	0.000
GPW-8	8/20/2019	GPW-8	<50.0	244	<99.9	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.396	0.000
	8/20/2019	GPW-A (dup)	<50.0	249	<100	<1.00	<1.00	<1.00	<1.00	<0.0100 I	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.380	0.000
GPW-9	8/21/2019	GPW-9	<50.0	<49.6	<99.2	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00 Q	0.000	0.000

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.

(1) Naphthalene analyzed by methods 8270D SIM and 8260C

(2) ADEC Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances, dated December 12, 2008.

(3) Total Aqueous Hydrocarbons as Defined in Paragraph (17)(A)(i) of 18 AAC 70, ADEC Water Quality Standards, Amended February 5, 2017.

(4) Total Aromatic Hydrocarbons as Defined in Paragraph (17)(A)(ii) of 18 AAC 70, ADEC Water Quality Standards, Amended February 5, 2017.

N/A Cleanup/Screening Level Not Available

* GRO analyzed by method NWTPH-Gx.

--- Not Analyzed

<53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.

152 Bold Number(s) Indicates Contaminant Detected.

560 Bold Number(s) and Yellow Shading Indicates Concentration Exceeds Method 2 Migration to Groundwater Cleanup Level.

11,300 Bold Number(s) and Orange Shading Indicates Concentration Exceeds Method 2 Direct Contact/Ingestion Cleanup Level.

<0.0311 Laboratory Practical Quantitation Limit Exceeds the Applicable ADEC Cleanup Level.

dup Duplicate Sample for QA/QC.

D Dilution Was Required

E Value Above Quantitation Range

I Indicates an Analyte with an Internal Standard that Does Not Meet Established Acceptance Criteria

J The Result is an Estimated Quantity and the Value is an Approximate Concentration

Q Indicates an Analyte with Continuing Calibration that Does Not Meet Established Acceptance Criteria

TABLE 4-2
Pore-Water Sample Analyses, PAHs
Truck-Loading Rack Area
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

Exploration Location	Sample Date	Sample Number	Naphthalene (1)	2-Methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo[a]anthracene	Chrysene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[a]pyrene	Indeno (1,2,3-c,d)pyrene	Dibenz[a,h]anthracene	Benzo[ghi]perylene
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Acute (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Marine Surface Water Cleanup Level for Aquatic Life - Chronic (2)			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ADEC Surface Water Cleanup Level for Human Health - Consumption of Aquatic Organisms Only (2)			N/A	N/A	N/A	N/A	2,700	N/A	N/A	110,000	370	11,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
(units in µg/L)																				
G-Logics 2019 Exploration																				
GPW-1	8/19/2019	GPW-1	<0.100	<0.100	<0.100	<0.100	0.165	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
GPW-2	8/19/2019	GPW-2	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
GPW-3	8/19/2019	GPW-3	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996	<0.0996
GPW-4	8/19/2019	GPW-4	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
GPW-5	8/19/2019	GPW-5	<0.0994	<0.0994	<0.0994	0.108	8.30	<0.0994	<0.0994	0.171	0.781	0.372	<0.0994	<0.0994	<0.0994	<0.0994	<0.0994	<0.0994	<0.0994	<0.0994
GPW-6	8/19/2019	GPW-6	29.6 D	<0.0989	37.1 D	0.746	13.1 D	4.88	2.77	0.289	0.461	0.377	<0.0989	<0.0989	<0.0989	<0.0989	<0.0989	<0.0989	<0.0989	<0.0989
GPW-7	8/20/2019	GPW-7	0.129	<0.0998	0.132	<0.0998	0.939	0.122	<0.0998	<0.0998	0.116	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998	<0.0998
GPW-8	8/20/2019	GPW-8	<0.100	<0.100	<0.100	<0.100	0.396	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	8/20/2019	GPW-A (dup)	<0.100	<0.100	<0.100	<0.100	0.380	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
GPW-9	8/21/2019	GPW-9	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993	<0.0993

Notes: Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.
(1) Naphthalene analyzed by methods 8270D SIM and 8260C
(2) ADEC Alaska Water Quality Criteria Manual for Toxic and Other Deleterious Organic and Inorganic Substances (dated December 12, 2008)
N/A Cleanup/Screening Level Not Available
<53.5 The Analyte Was Not Detected at a Concentration Above the Indicated Reporting Limit.
152 Bold Number(s) Indicates Contaminant Detected.
dup Duplicate Sample for QA/QC.
D Dilution Was Required

TABLE 5
Relative Percent Difference Calculations*
Truck-Loading Rack and Fuel-Pipe Areas
Former Chevron Truck-Loading Rack
147 Front Street, Hoonah, AK 99829

		Soil/Sediment Samples																				Results in µg/kg																			
		CHL0 Gasoline Range Organics (BOD)	C10-C16 Diesel Range Organics (BOD)	C12-C18 Diesel Range Organics (BOD)	Benzene	Toluene	Ethylbenzene	Xylenes (total)	1,2-Dichlorobenzene (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	n-Propylbenzene	1,3,5-Triethylbenzene	tert-Butylbenzene	sec-Butylbenzene	n-Propyltoluene	1,2,4-Triethylbenzene	Naphthalene (1)	Naphthalene	2-Methyl-naphthalene	1-Methyl-naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz[a]anthracene	Chrysene	Benz[b]fluoranthene	Benz[k]fluoranthene	Benz[a]pyrene	Indene [1,2,3-c]fluorene	Dibenz[a,h]anthracene	Benz[e]fluoranthene					
Results in mg/kg																																									
Sample	TR8-5-10	445	1,460	<54.2	<0.0160	<0.0160	0.160	0.114	<0.00399	<0.0160	0.296	0.810	0.0245	<0.0200	<0.0399	0.229	1.35	<0.0399	0.212	0.0853	1.39	<0.0422	<0.0422	0.446	0.396	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422	<0.0422			
Duplicate	TR8-DD	408	815	<55.3	<0.146	<0.146	0.183	0.366	<0.0366	<0.146	0.277	0.183	0.183	<0.183	<0.366	0.366	1.30	<0.366	0.263	0.309	1.45	<0.0447	<0.0447	0.422	0.339	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447	<0.0447		
RPD		9%	57%	---	---	---	---	---	---	7%	---	---	---	---	---	---	4%	---	21%	113%	4%	---	---	6%	16%	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Results in µg/L																																									
Sample	GLB-14-4	402	8,320	<56.0	<0.0920	<0.0920	<0.115	<0.230	<0.000671	<0.0920	1.56	1.41	<0.115	<0.115	1.62	<0.230	0.399	<0.230	0.598	<0.0473	4.95	<0.0473	0.306	0.277	0.638	<0.0473	0.234	0.224	0.0576	0.0649	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473	<0.0473			
Duplicate	GLB-AA	430	6,800	<52.4	<0.0974	<0.0974	<0.122	<0.243	<0.0243	<0.0974	1.11	0.865	<0.122	<0.122	1.29	<0.243	0.245	<0.243	0.076	<0.0454	5.22	<0.0454	0.207	0.350	0.863	<0.0454	0.228	0.230	0.0651	0.0689	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454	<0.0454			
RPD		7%	20%	---	---	---	---	---	---	34%	48%	---	---	---	23%	---	48%	---	155%	---	5%	---	39%	23%	30%	---	3%	3%	12%	6%	---	---	---	---	---	---	---	---	---		
Results in µg/L																																									
Sample	GLB-15-2	4.79	<21.7	<54.2	0.0260	<0.0135	0.0228	<0.0337	<0.000984	<0.0135	0.0361	0.178	<0.0168	<0.0168	<0.0337	<0.0337	0.0174	<0.0337	<0.0437	<0.0437	<0.0437	<0.0437	0.172	0.0618	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437	<0.0437			
Duplicate	GLB-BB	3.70	<24.8	<62.0	0.0275	<0.0124	0.0232	<0.0311	<0.00311	<0.0124	0.0342	0.187	<0.0156	<0.0156	<0.0311	<0.0311	<0.0156	<0.0311	<0.0475	<0.0475	<0.0475	<0.0475	0.204	0.0644	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475	<0.0475			
RPD		26%	---	---	6%	---	2%	---	---	---	5%	5%	---	---	---	---	---	---	---	---	---	---	17%	4%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Results in µg/L																																									
Sample	GLB-19-2	<2.55	32.4	<52.0	<0.0102	0.03	<0.0127	<0.0255	<0.00255	<0.0102	<0.0127	<0.0127	<0.0127	<0.0127	<0.0255	<0.0255	<0.0127	<0.0255	<0.0411	<0.0411	<0.0411	<0.0411	<0.0411	0.104	<0.0411	0.142	0.128	0.0675	0.0648	0.0712	0.0420	0.0739	<0.0411	<0.0411	<0.0411	<0.0411					
Duplicate	GLB-CC	<3.21	27.2	53.6	<0.0129	0.02	<0.0161	<0.0321	<0.00321	<0.0129	<0.0161	<0.0161	<0.0161	<0.0161	<0.0321	<0.0321	0.0131	0.1380	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	0.0465	<0.0423	0.0754	0.0652	<0.0423	0.0441	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423	<0.0423			
RPD		---	17%	---	---	31%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	76%	---	61%	65%	---	38%	---	---	---	---	---	---	---	---	---	---		
Results in µg/L																																									
Pore-Water Samples																																									
Results in µg/L																																									
Sample	GPW-8	<50.0	244	<99.9	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	0.396	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100				
Duplicate	GPW-A	<50.0	249	<100	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	0.380	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100				
RPD		---	2%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4%	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
Results in µg/L																																									
Sample	TRPW-2	<49.9	<99.7	<1.00	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100				
Duplicate	TRPW-A	<50.4	<101	<1.00	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100				
RPD		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		

Notes:
* Relative percent difference calculations were based on guidance provided in ADEC's Laboratory Data Review Checklist. See Tables 1 through 4 and laboratory reports (Appendix E) for complete analytical results and chain-of-custody documentation.
55% Yellow shading indicates relative percent difference exceeds maximum ADEC recommended value (30% water, 50% soil), per the Laboratory Data Review Checklist.

APPENDIX A

APPENDIX A

FIELD EXPLORATION METHODS

G-Logics coordinated a subsurface soil exploration of petroleum-contaminated soils located on the subject property. Soil sampling of the borings, as well as several shallow testpits, also was conducted during the exploration. All sampling work was performed by a “Qualified Person” as required by 18 AAC 75. The sampling activities were conducted in general accordance with ADEC’s guidelines and regulations.

Underground Utility Clearance

Onsite personnel performed all necessary utility locates for the project.

Hand-Operated Push-Probe Soil Sampling

Hand-operated push-probe equipment consisted of a 1.5-inch stainless steel sampler in lengths of 2 and four feet. Continuous-core soil samples were obtained by pushing the sampler, containing an acrylic liner, to the sampling depth. After reaching the required depth, the probe was retrieved and opened. The collected soils contained within the acrylic liner were removed and placed into laboratory-provided glass jars. Samples were collected from the soil core using an Easy Draw Syringe and Powerstop Handle. The soil plug was then extruded into a laboratory-supplied 40-ml VOA Vial containing methanol preservative, a 4-oz methanol preserved jar, and unpreserved and 8oz jars. The extracted sampler was washed and new liners were used for each sampling attempt.

Collected soil samples were evaluated for evidence of contamination by visible discoloration of the soil sample or VOCs detected by the PID. A portion of each soil sample was placed into a plastic zip-lock bag and allowed to develop for 15 minutes. PID samples did not require heating because the ambient temperature was above 40 degrees Fahrenheit. After 15 minutes, the vapors were drawn through the PID for qualitative screening of VOCs. The vapor readings were documented as the field screening results. A new plastic bag was used each time a sample was screened.

The soils were then observed and categorized for grain-size, color, presence of artifacts, moisture, odor, staining, sheen, and any other indications of contamination. This information was recorded on field boring logs (attached). Samples were collected where indications of contamination were observed or from where contamination would likely be present (i.e. at the groundwater interface).

Pore-Water Sampling, Direct-Push Method

The direct-push probe used for this work consisted of 2-inch diameter hollow steel pipe shafts, each 4 feet long that connect together. A hardened steel tip and a 24-inch-long disposable temporary well screen were attached as the lead section of the probe. The probe was hydraulically pushed (or pneumatically driven into the ground) to the desired sampling depth. At this point, the probe rod was withdrawn to allow the well screen to be exposed to the water bearing strata, in this case near-surface pore water. Flexible polyethylene tubing was lowered into the well screen for the collection of the groundwater sample. A peristaltic pump was used to purge and sample each well. Purging was performed to remove suspended sediments and to stabilize well-screen materials.

Pore water was pumped directly into laboratory-provided containers. The collected samples were placed into laboratory-provided sample containers prepared by the contract laboratory to conform to EPA-recommended preservation techniques for the analytes of concern. Sample containers were open only as long as necessary to collect the samples. Collected samples were labeled with a sample number, date, time, and sampler's name and stored in an ice chest containing frozen "blue ice". Chain-of-custody procedures were followed to document sample handling.

Upon completion of the pore-water sampling, the well material and probe equipment was extracted from the boring and the ground surface restored. The extracted probe equipment was washed between boring locations. To avoid cross-contamination, new well casing material and dedicated tubing were used at each location.

Quality Assurance Quality Control

Quality Assurance/Quality Control (QA/QC) included generally accepted procedures for sample collection, storage, tracking, documentation, and analysis. All sampling equipment was washed with an “Alconox” wash and distilled water rinse before the collection of the samples. All soil samples were labeled with a sample number, date, time, and sampler name, and were stored in an ice chest containing frozen blue ice. Soil-gas samples (collected in Summa canisters) were placed into a cooler without blue ice. Appropriate chain-of-custody documentation was completed.

Several blind-field duplicate samples were collected for laboratory QA/QC purposes. One trip blank also was included in each cooler containing samples for volatile-organic analyses. Trip blanks were analyzed with results included with the laboratory-analytical reports.

APPENDIX B

Daily Field Notes**Project Name:** Hoonah**Project Number:** 01-0294-H**Page** _____ **of** _____**Date:** 8/19/19**Weather:** Partly Cloudy, Mild**Started:** 0630**Other Information:****Completed:****Diary**

- Unpacked first thing this morning and organized sampling gear. Mapped the site and proposed boring locations
- Started work w/ pore water sampling @ 0900. Used disposable PVC well screens to minimize potential cross contamination between borings. Deconed sampling rod prior to starting and between pore-water sample locations
- GPW-1 through GPW-5 advanced and w/ no indications of petroleum contaminants (no sheen or odors)
- GPW-6 had petroleum odor and slight sheen in purge water
- GPW-3 had very little water and took a while to purge + sample
- Waiting until tomorrow to finish pore-water sampling due to high tide
- Soil sampler is too small diameter to collect sufficient volume for a blind-field duplicate
- TRB-2 refusal during 3 attempts in locations around boring

Approved: _____**Signed:** _____**g-logics**

Daily Field Notes		Project Name: Hoanch	
Project Number: 01-0294-H		Page _____ of _____	
Date: 8/20/19		Weather:	
Started:		Other Information:	
Completed:			

Diary

- GPW-7: Strong petroleum odor on rod after advancing screen
- Added location (GPW-8) because of petroleum indications in GPW-7
- May add another location ^{porowater} underneath ditch due to field indications of contamination in GPW-7

Sample

GPW-8 - 1230

GPW-7 - 1250

Moved boring GLB-16 further offshore due to past results of GLB-6

- Met shallow refusal @ GLB-15 + GLB-16. Attempted multiple nearby locations w/ similar results
- Advanced TRB-3 + TRB-4 in truck-rack area w/ no field indications of contamination to explore depths
- Contamination in TRB-2 in location where (I think from old platypus photos) the truck rack used to be unpaved ~~and~~ ^{is} contaminated likely from time prior to building of the most recent truck rack and installation of concrete, ear park, and garage

Approved: _____

Signed: _____

g-logics

Daily Field Notes		Project Name: Hoonah	
Project Number: 01-0294-H		Page _____ of _____	
Date: 8/21/19		Weather:	
Started:		Other Information:	
Completed:			

Diary

- Advanced GIPW-9 First thing to ^{set well for} collect water, ~~have~~ to wait until for background sample
- Advanced GLB-19 as background sample
- ↳ Background samples moved south due to creek runoff directed in original proposed locations
- ~~Added boring GLB-20 due to contamination - found i-~~
GLB-14
- Planning to add ~~at~~ boring on south side of neighboring property but there is an old stand for AST and fuel lines. Did not want to further confound the data w/ possible different source of contamination
- Finished remaining borings in Fuel-pipe creek and moved equipment to truck rack
- Advanced borings TRIB-5 + 6 in truck rack. Soil clean between ground surface and approx. 9-10 ft where pe thin layer of perched water appears over a clayey soil and/or bedrock
- No enough water in borings to collect water sample

Approved: _____

Signed: _____

g-logics

Daily Field Notes		Project Name: <u>Hoonah</u>	
Project Number: <u>01-0294-H</u>		Page _____ of _____	
Date: <u>8/22/19</u>		Weather:	
Started:		Other Information:	
Completed:			

Diary

- Mapped truck-rack area this morning and boring locations
- Advanced 2 additional borings ^{TRB-718} stepping out from TRB-516 in attempts to bound potential contamination
- Due to roadway and water/sewer utilities, could not step out further to east
- Cleaned and packed equipment. Started packaging samples and preparing notes, chains, figures, etc.
- Spoke w/ AMU regarding pallet and obtained bill of lading

Approved: _____

Signed: _____

g-logics



g-logics

Mapping Reference: G-Logics Site Measurements

Approximate Drawing Scale: 1" = 5'

0 ft. 3 ft. 5 ft. 10 ft.

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Site Diagram, Maintenance Building Survey

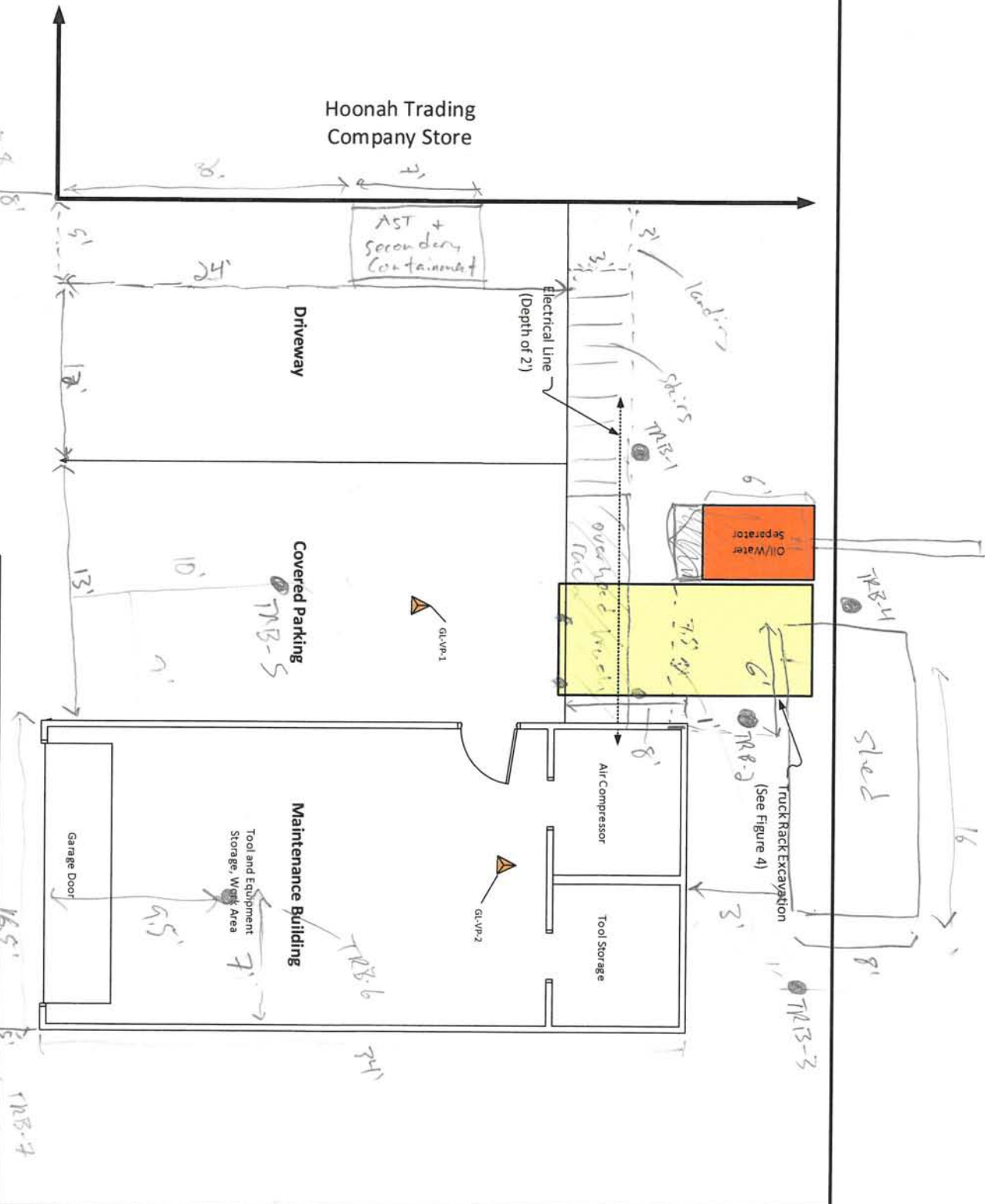
Former Chevron Truck-Loading Rack Property

147 Front Street

Hoonah, Alaska

Figure

6a





SOIL

Legend

- PID Field Screening Locations
- Fuel Pipe Box
- O/W Oil/Water Separator
- Piling
- ⊕ Boring Locations, 2017 Exploration
- ⊕ Testpit Locations, 2017 and Previous Explorations
- ⬢ Interpreted Extent of Contaminant Concentrations Above Applicable ADEC Cleanup/Screening Levels
- Proposed Testpit/Soil Sampling Location
- ⊕ Proposed Pore Water Sampling Location

Approximate Low Tide Water Line

Approximate High Tide Water Line

GLB-10
clean

GLB-11
clean

GLB-12
clean

GLB-13
clean

14' E of Parking Edge
35' S of Parking Edge
GLB-7
clean

Former Pump Island

GLB-21

GLB-15

GLB-16

GLB-5
clean

GLB-19

Parking Area

Hoonah Trading Company Store

Samples to be collected near pilings to assess "background" concentrations

Shoreline Bulkhead

Fuel Pipes

Creek Culvert Drainage

g-logics

Approximate Drawing Scale: 1" = 20'
0 ft. 12 ft. 20 ft. 40 ft.

Note: This figure contains information in color. Black & white photocopies may not be suitable for review.

Proposed Fuel-Pipe Area Boring Sampling Locations
Former Chevron Truck-Loading Rack Property
147 Front Street
Hoonah, Alaska

Figure
4



WATER

Approximate Low Tide Water Line

Approximate High Tide Water Line

Shoreline Bulkhead

Fuel Pipes

Hoonah Trading Company Store

Samples to be collected near pilings to assess "background" concentrations

Legend

- PID Field Screening Locations
- Fuel Pipe Box
- Oil/Water Separator
- Piling
- Boring Locations, 2017 Exploration
- Testpit Locations, 2017 and Previous Explorations
- Interpreted Extent of Contaminant Concentrations Above Applicable ADEC Cleanup/Screening Levels
- Proposed Testpit/Soil Sampling Location
- Proposed Pore Water Sampling Location

Parking Area

GLB-10

GLB-11

GLB-12

GLB-13

GLB-20

GLB-21

Former Pump Island

GLB-7

GLB-8

GLB-6

GLB-5

GLB-14

GLB-15

GLB-9

GLB-1

GLB-3

GLB-4

GLB-17

GLB-18

GLB-19

GLB-20

GLB-21

GLB-22

GLB-23

GLB-24

GLB-25

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GLB-288

GLB-289

GLB-290

GLB-291

GLB-292

APPENDIX C



**Zackary S. Wall, LG
Project Geologist**

Zak Wall graduated from West Virginia University with undergraduate degrees in geology and philosophy. He then went on to earn his master's degree at the University of Montana, specializing in structural geology and geochemistry. Mr. Wall has experience with every aspect of site investigation including client/attorney relations, workscope development, site characterization, data interpretation, remedial investigation and feasibility study report development, remediation design and implementation, and formal reporting in the states of Washington and Alaska. He has managed a wide variety of sites, including home heating-oil releases, chlorinated-solvent groundwater plumes, brownfields redevelopment projects, and gas station clean-ups, among others. Mr. Wall also has experience working with the Washington State Department of Ecology and the Alaska Department of Environmental Conservation on behalf of his clients to achieve site cleanup goals and, ultimately, site closures.

Zak has five years of consulting experience in the mining and petroleum industries. He has safely completed numerous mineral-exploration projects in remote areas across North America and logged hundreds of thousands of feet of bore holes in search of industrial and precious minerals. Mr. Wall has been an Alaska Qualified Environmental Professional since 2015 and is 40-hour HAZWOPER certified, an ICC Washington State Site Assessor, and CPR/First Aid certified.

Education

MS, Geology, University of Montana, Missoula, Montana, 2012

BS, Geology, West Virginia University, Morgantown, West Virginia, 2009

BA, Philosophy, West Virginia University, Morgantown, West Virginia, 2009

Registrations

Geologist, 3325, Washington, 2018

Qualified Environmental Professional, Alaska, 2015

Washington State Site Assessor, International Code Council-Certified

OSHA 40-Hour HAZWOPER

CPR/First Aid Certificate

Select Project Experience

Presented below is a representative selection of Mr. Wall's experience on projects that included site characterization, site cleanups, excavation, and IDW-disposal coordination from remote regions, and cost estimating.

Naknek, Alaska, Baseline Site Characterization for Bulk Fuel Facility and Truck-Loading Rack

Field manager and project geologist for site-characterization work conducted at a bulk-fuel facility in Naknek, Alaska. Field work required subcontractor coordination and mobilization of a hollow-stem auger drilling rig to Naknek. Mr. Wall directed site characterization work in areas of an active truck-loading rack, tank farm, and above-ground fuel piping.

Tukwila, Washington, Site Characterization, Remedial Investigation/Feasibility Study for active Gas Station

Project manager for the characterization and cleanup of petroleum hydrocarbon contamination in soil, groundwater, and soil gas associated with an active gas station. The Site is currently managed under an Agreed Order with the Washington State Department of Ecology (Ecology). The hydrogeology at the Site is complex, consisting of two groundwater-bearing units, the lower of which is tidally influenced and contains light non-aqueous phase liquid (LNAPL). A Remedial Investigation / Feasibility Study report currently is being prepared.

Seattle, Washington, Contaminated Media Management, PCE, Lead, and Petroleum-Impacted Site

Project manager for the characterization and management of tetrachloroethylene (PCE), lead, and petroleum-hydrocarbon impacted soil at a former gas station property slated for redevelopment in Seattle, Washington. A Contaminated Media Management Plan (CMMP) was prepared for the site, in which G-Logics helped establish a site-specific protocol for the handling, disposal, and documentation of impacted media. The prepared CMMP also included contingency procedures for the decommissioning and removal of underground storage tanks. G-Logics then provided on-site technical assistance, ultimately helping to manage impacted soils as they were encountered during the course of the excavation.

Toutle, Washington, Site Characterization, Focused Feasibility Study, and Cleanup Action Plan for Active Gas Station

Project geologist for the characterization and cleanup-planning of petroleum hydrocarbon contamination in soil, groundwater, and soil gas associated with an active gas station near Mt. St. Helens, Washington. The Site is currently managed under the Washington State Pollution Liability Insurance Agency (PLIA) Loan and Grant Program. Based on our site-characterization findings, G-Logics reviewed available cleanup alternatives, obtained property appraisals, and coordinated with local architects, engineers, and subcontractors to prepare remediation cost-estimates, cleanup contingency plans, and an engineering design report.

APPENDIX D

Unified Soil Classification System (USCS)

PRIMARY DIVISIONS			SYMBOL	DESCRIPTIONS
COARSE GRAINED SOILS Sands & Gravels, Over 50% retained on #200 sieve	GRAVELS Over 50% of coarse material retained on #4 sieve	CLEAN GRAVEL	GW	Well graded gravel, many different particle sizes, little or no fines
		Less than 5% passing #200 sieve	GP	Poorly graded, few different particle sizes, little or no fines
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SAND Over 50% of coarse material passed #4 sieve	CLEAN SANDS	SW	Well graded gravel, many different particle sizes, little or no fines
		Less than 5% passing #200 sieve	SP	Poorly graded, few different particle sizes, little or no fines
		SAND WITH FINES	SM	Silty gravels, gravel-sand-silt mixtures
			SC	Clayey gravels, gravel-sand-clay mixtures
FINE GRAINED SOILS Silts & Clays, Over 50% passing the #200 sieve	SILTS AND CLAYS Liquid limit is less than 50 %		ML	Inorganic silts, slight to no plasticity
			CL	Inorganic clays, low to moderate plasticity
			OL	Organic silts and clays of low plasticity
	SILTS AND CLAYS Liquid limit is more than 50 %		MH	Inorganic silts, moderate to high plasticity
			CH	Inorganic clays, high plasticity, fat clays
			OH	Organic silts and clays of high plasticity
			Highly Organic Soils	

Soil Samples



Disturbed, bag, bulk, or grab sample



Standard penetration split spoon sample



Cuttings



Continuous-Core Sample

Field Measurements



Water Level Observed During Drilling

PID

Photoionization Detector

ppmv

Parts Per Million by Volume



End of Boring (E.O.B)

Note: Blows per foot is the number of blows used to drive a split-spoon (2" OD) sampler through the last 12 inches of an 18-inch sampling attempt. One blow is a 30-inch fall of a 140-pound hammer.

Note: The line separating strata on the logs represents approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of the strata between exploration locations. Logs represent the soil section observed at the exploration location on the date of exploration only.

ExplorationLogLegend.pub

g-logics

Exploration Log Legend

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-14	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 6'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-5': SAND, coarse grained with fine gravel and shells, brown to gray with strong petroleum odor and staining at 1 foot, very moist to wet at 3 feet. Odor and staining diminishes at 5 feet.	SW	50		386	GLB-14-4'	0
			50				
5			70		1114		
	5-6': SILTY SAND and GRAVEL, gray brown, wet, slight petroleum odor. Refusal at 6 feet.	GW			69.8	GLB-14-6'	
10							
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-15	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 3'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-3': SAND medium to coarse grained with gravel and shell fragments, dark gray, wetm strong petroleum odor and sheen from 1 to 2 feet. Refusl at 3 feet.	SW	50		14.9	GLB-15-2'	
			10		5.6	GLB-15-3'	
5							
10							
15							

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-16	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 4'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-2': SAND, medium to coarse grained with gravel, brown, wet, no odor or sheen. Refusal at 4 feet.	SW	50		2.3	GLB-16-2'	
			70		1.3	GLB-16-4'	
5							
10							
15							

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-17	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 7'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-2': SAND/GRAVEL, medium to coarse grained sand and fine gravel, gray, moist, no odor or sheen.	SW/GW	50				0
					0.4		
			40				
	2-7': SAND, medium to coarse grained with few clay/silt, gray, wet, strong petroleum odor and sheen at 4 feet diminishing to 7 feet. Refusal at 7 feet.	SM	30		111.6	GLB-17-4'	
5			40		449.1		
					59.4	GLB-17-7'	
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-19	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction	
0	0-5': SAND, fine to coarse grained with gravel, brown, moist to wet at 4 feet, no odor or sheen. Refusal at 5 feet.	SP	75		0.4	GLB-19-2'		0
			50					
			100		1.2	GLB-19-4'		
5					0.9	GLB-19-5'		5
10								10
15								15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-20	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 4'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-3': SAND, fine to coarse grained with few gravel and shell fragments, brown, wet, no odor or sheen.	SP	40		1	GLB-20-2'	0
	3-4': SAND/GRAVEL medium to coarse grained sand and fine gravel, brown, wet, no odor or sheen. Refusal at 4 feet.	SW/GW	75		0.6	GLB-20-4'	
5							5
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-21	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 3'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-2': SAND, fine to coarse grained with fine gravel, dark gray, very moist, strong petroleum odor.	SP	60				0
	2-3': SAND/GRAVEL, medium to coarse grained sand and fine gravel, light gray, very moist, slight to no petroleum odor or staining. Refusal at 3 feet.	SW/GW	75		14.4	GLB-21-2'	
					2.4	GLB-21-3'	
5							5
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-23	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-5': SAND, fine to coarse grained with gravel and shell fragments (to 1 foot), brown from 0 to 1 foot, strong odor and staining from 1 to 4.5 feet and diminishes. Refusal at 5 feet.	SW	40		985.4	GLB-23-2'	0
			40		679.1		
5			100		247.8	GLB-23-5'	
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: GLB-24	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-5': SAND fine to coarse grained sand with gravel and shell fragments (to 1 foot), brown to 1.5 feet, strong petroleum odor and staining from 1.5 to 4.5 feet diminishing from 4.5 to 5 feet. Refusal at 5 feet.	SW	50		341.5	GLB-24-4'	0
			50		902.8		
5			30		19	GLB-24-5'	5
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/19/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Partly Cloudy, Mild
BORING/WELL ID: TRB-1	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 8'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES: Empty bag PID in sun = 3.3

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-8': SILTY SAND with gravel (to 2"), brown, moist, no odor or staining. Refusal at 8 feet.	SM	40		4.1	TRB-1-1.5'	0
			40				
					3.4	TRB-1-4'	
5			30		3.7	TRB-1-6'	
			50		3.5	TRB-1-8'	
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/19/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Partly Cloudy, Mild
BORING/WELL ID: TRB-2	DRILLING METHOD: Direct Push	TOTAL DEPTH: 8'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction				
0	0-4': SILTY SAND with gravel (to 1"), brown, moist, no odor or staining.	SM	100		3.4	TRB-2-4'		0			
			100						15.4		
5			4-8': SILTY SAND, brown/gray, moist, slight odor and staining. Refusal at 8 feet.		100				44.3	TRB-2-6'	5
					100				78.8	TRB-2-8'	
10								10			
15								15			

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-3	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 10.5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-9': SAND, fine to coarse grained with gravel and little silt, brown, dry, no odor or sheen.	SW	100		0.6	TRB-3-3'	
5			100			TRB-3-6'	
			100		1.2	TRB-3-9'	
10	9-10.5': GRAVEL with little silt, gray, dry, no odor or sheen. Refusal at 10.5 feet.	GW	100		1.4	TRB-3-9'	
					1.3	TRB-3-10.5'	
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/20/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-4	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 6.5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction		
0	0-6.5': SAND, fine to medium grained with gravel, brown, moist, no odor or sheen. Refusal at 6.5 feet.	SW			2.3	TRB-4-3'		0	
			75						
5			75			2.4		TRB-4-6'	5
			10		1.2				10
15								15	

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-5	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 11'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-0.5': Concrete						0
	0.5-3': SAND, fine to coarse with gravel, dark gray, moist, no odor or sheen.	SW	70		3.8		
	3-6': SAND, medium grained with little gravel, well sorted, brown, moist, no odor or sheen.		100		2.7		
5		SP	80		4.6		
	6-10': SAND, coaese grained, well sorted, brown, moist to very moist, strong odor and staining beginning at 9 feet.		70		505.7	TRB-5-10'	
10	10-11': SAND/GRAVEL, light gray, very moist to wet at 10.5-11 feet, odor and staining diminishing. Refusal at 11 feet.	SW/GW	100		624.9	TRB-5-11'	
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/21/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-6	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 14'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0
			50				
					4.3		
	0-7': SAND, medium to coarse grained with few gravel, brown, moist, no odor or sheen.		75				
5					3.9		5
		SP	75				
					3.6		
10	7-13': SAND, coarse grained with gravel, dark gray stained, moist, strong petroleum odor at 10.5-13 feet.		75				10
					455.1	TRB-6-11'	
			100				
	13-14': SILT/CLAY, gray/brown, dry, diminished odor and staining.	ML/CL					
					50	TRB-6-14'	
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/22/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-7	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 9'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0							0
	0-3': SAND, medium to coarse grained with gravel, brown, slightly moist, no odor or sheen.		50		0.4		
5	3-7.5': SILTY SAND, fine grained with gravel and shell fragments,		50		2.1	TRB-7-5'	5
			50				
	GRAVEL with sand, dark gray, very moist, strong petroleum odor and staining from 8.5-9 feet. Refusal at 9 feet.		100		214.3	TRB-7-8'	
					18	TRB-7-9'	
10							10
15							15

	PROJECT/PROJECT NO: Wards Cove: 01-0294-H	DRILLING DATE: 8/22/2019	LOGGED BY: STH, ZW
	DRILLING CONTRACTOR: G-Logics	BORING DIAMETER: 2"	WEATHER: Cloudy
BORING/WELL ID: TRB-8	DRILLING METHOD: Dirct Push	TOTAL DEPTH: 8.5'	DEPTH TO WATER: ---
	LOCATION: Hoonah, Alaska		

NOTES:

Depth (feet)	Description	USCS	Interval and % Recovery	# Blows	PID	Sample ID	Well Construction
0	0-8.5': SAND, medium to coarse grained with few gravel and shell fragments, brown, moist, no odor or sheen. Refusal at 8.5 feet.	SP	60		1.8	TRB-8-6'	
5			50				
			50		2.6		
10					44.9	TRB-8-8.5'	
15							

APPENDIX E



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
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info@fremontanalytical.com

G-Logics

Zackary Wall
40 Second Ave. SE
Issaquah, WA 98027

RE: Hoonah

Work Order Number: 1908349

September 09, 2019

Attention Zackary Wall:

Fremont Analytical, Inc. received 27 sample(s) on 8/26/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by AK102-AK103

Gasoline Range Organics by AK101

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260D

Volatile Organic Compounds by EPA Method 8260D SIM

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: G-Logics
Project: Hoonah
Work Order: 1908349

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908349-001	GLB-14-4'	08/20/2019 9:15 AM	08/26/2019 12:30 PM
1908349-002	GLB-14-6'	08/20/2019 9:45 AM	08/26/2019 12:30 PM
1908349-003	Trip Blank 1	08/15/2019 10:00 AM	08/26/2019 12:30 PM
1908349-004	GLB-AA	08/20/2019 9:20 AM	08/26/2019 12:30 PM
1908349-005	GLB-15-2'	08/20/2019 10:15 AM	08/26/2019 12:30 PM
1908349-006	GLB-15-3'	08/20/2019 10:40 AM	08/26/2019 12:30 PM
1908349-007	GLB-BB	08/20/2019 10:20 AM	08/26/2019 12:30 PM
1908349-008	GLB-16-2'	08/20/2019 11:00 AM	08/26/2019 12:30 PM
1908349-009	GLB-16-4'	08/20/2019 11:20 AM	08/26/2019 12:30 PM
1908349-010	GLB-17-4'	08/20/2019 12:30 PM	08/26/2019 12:30 PM
1908349-011	GLB-17-7'	08/20/2019 1:30 PM	08/26/2019 12:30 PM
1908349-012	GLB-18-2'	08/20/2019 1:50 PM	08/26/2019 12:30 PM
1908349-013	GLB-18-4'	08/20/2019 2:00 PM	08/26/2019 12:30 PM
1908349-014	GLB-18-6'	08/20/2019 2:20 PM	08/26/2019 12:30 PM
1908349-015	TRB-1-1.5'	08/19/2019 4:00 PM	08/26/2019 12:30 PM
1908349-016	TRB-1-4'	08/19/2019 4:10 PM	08/26/2019 12:30 PM
1908349-017	TRB-1-6'	08/19/2019 4:20 PM	08/26/2019 12:30 PM
1908349-018	TRB-1-8'	08/19/2019 4:25 PM	08/26/2019 12:30 PM
1908349-019	TRB-2-4'	08/19/2019 4:35 PM	08/26/2019 12:30 PM
1908349-020	TRB-2-6'	08/19/2019 4:55 PM	08/26/2019 12:30 PM
1908349-021	TRB-2-8'	08/19/2019 5:15 PM	08/26/2019 12:30 PM
1908349-022	TRB-3-3'	08/20/2019 3:50 PM	08/26/2019 12:30 PM
1908349-023	TRB-3-6'	08/20/2019 4:00 PM	08/26/2019 12:30 PM
1908349-024	TRB-3-9'	08/20/2019 4:20 PM	08/26/2019 12:30 PM
1908349-025	TRB-3-10.5'	08/20/2019 4:45 PM	08/26/2019 12:30 PM
1908349-026	TRB-4-3'	08/20/2019 5:00 PM	08/26/2019 12:30 PM
1908349-027	TRB-4-6'	08/20/2019 5:20 PM	08/26/2019 12:30 PM

CLIENT: G-Logics**Project:** Hoonah

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908349-001

Matrix: Soil

Client Sample ID: GLB-14-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	8,320	224	D	mg/Kg-dry	10	8/30/2019 10:08:25 AM
Residual Range Organics (C25-C36)	ND	56.0		mg/Kg-dry	1	8/29/2019 9:40:35 PM
Surr: 2-Fluorobiphenyl	92.9	50 - 150		%Rec	1	8/29/2019 9:40:35 PM
Surr: o-Terphenyl	82.7	50 - 150		%Rec	1	8/29/2019 9:40:35 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25641		Analyst: SB
Naphthalene	598	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
2-Methylnaphthalene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
1-Methylnaphthalene	4,950	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Acenaphthylene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Acenaphthene	306	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Fluorene	277	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Phenanthrene	638	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Anthracene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Fluoranthene	234	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Pyrene	224	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Benz(a)anthracene	57.6	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Chrysene	64.9	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Benzo(b)fluoranthene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Benzo(k)fluoranthene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Benzo(a)pyrene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Indeno(1,2,3-cd)pyrene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Dibenz(a,h)anthracene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Benzo(g,h,i)perylene	ND	47.3		µg/Kg-dry	1	8/29/2019 9:50:34 PM
Surr: 2-Fluorobiphenyl	105	24.4 - 151		%Rec	1	8/29/2019 9:50:34 PM
Surr: Terphenyl-d14 (surr)	74.5	31.4 - 162		%Rec	1	8/29/2019 9:50:34 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25719		Analyst: CR
Gasoline Range Organics (C6-C10)	402	230	D	mg/Kg-dry	100	9/6/2019 3:50:43 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/6/2019 3:50:43 AM
Surr: 4-Bromofluorobenzene	105	50 - 150	D	%Rec	100	9/6/2019 3:50:43 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Chloromethane	ND	0.230	DQ	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Bromomethane	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908349-001

Matrix: Soil

Client Sample ID: GLB-14-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Chloroethane	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1-Dichloroethene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Methylene chloride	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
trans-1,2-Dichloroethene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Methyl tert-butyl ether (MTBE)	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1-Dichloroethane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
cis-1,2-Dichloroethene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Chloroform	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1,1-Trichloroethane (TCA)	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1-Dichloropropene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Carbon tetrachloride	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2-Dichloroethane (EDC)	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Benzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2-Dichloropropane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Bromodichloromethane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Dibromomethane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
cis-1,3-Dichloropropene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Toluene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
trans-1,3-Dichloropropylene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1,2-Trichloroethane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,3-Dichloropropane	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Tetrachloroethene (PCE)	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Dibromochloromethane	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Chlorobenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1,1,2-Tetrachloroethane	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Ethylbenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
m,p-Xylene	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
o-Xylene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Styrene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Isopropylbenzene	1.56	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Bromoform	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,1,2,2-Tetrachloroethane	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
n-Propylbenzene	1.41	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Bromobenzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,3,5-Trimethylbenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
2-Chlorotoluene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
4-Chlorotoluene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
tert-Butylbenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908349-001

Matrix: Soil

Client Sample ID: GLB-14-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2,4-Trichlorobenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
sec-Butylbenzene	1.62	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
4-Isopropyltoluene	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,3-Dichlorobenzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,4-Dichlorobenzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
n-Butylbenzene	ND	0.115	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2-Dichlorobenzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2-Dibromo-3-chloropropane	ND	2.30	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2,4-Trimethylbenzene	0.399	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Naphthalene	ND	0.230	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
1,2,3-Trichlorobenzene	ND	0.0920	D	mg/Kg-dry	10	8/29/2019 11:33:18 PM
Surr: Dibromofluoromethane	96.2	56.5 - 129	D	%Rec	10	8/29/2019 11:33:18 PM
Surr: Toluene-d8	95.4	64.5 - 151	D	%Rec	10	8/29/2019 11:33:18 PM
Surr: 1-Bromo-4-fluorobenzene	94.6	54.8 - 168	D	%Rec	10	8/29/2019 11:33:18 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00274	Q	mg/Kg-dry	1	9/3/2019 10:50:38 PM
Trichloroethene (TCE)	ND	0.00668		mg/Kg-dry	1	9/3/2019 10:50:38 PM
1,2-Dibromoethane (EDB)	ND	0.000671		mg/Kg-dry	1	9/3/2019 10:50:38 PM
Hexachloro-1,3-butadiene	ND	0.00365		mg/Kg-dry	1	9/3/2019 10:50:38 PM
Surr: Dibromofluoromethane	95.7	54.7 - 128		%Rec	1	9/3/2019 10:50:38 PM
Surr: Toluene-d8	135	74.2 - 139		%Rec	1	9/3/2019 10:50:38 PM
Surr: 1-Bromo-4-fluorobenzene	77.6	73.5 - 127		%Rec	1	9/3/2019 10:50:38 PM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	16.8	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:45:00 AM

Project: Hoonah

Lab ID: 1908349-002

Matrix: Soil

Client Sample ID: GLB-14-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	80.9	20.8		mg/Kg-dry	1	8/29/2019 10:10:29 PM
Residual Range Organics (C25-C36)	ND	52.1		mg/Kg-dry	1	8/29/2019 10:10:29 PM
Surr: 2-Fluorobiphenyl	77.1	50 - 150		%Rec	1	8/29/2019 10:10:29 PM
Surr: o-Terphenyl	83.0	50 - 150		%Rec	1	8/29/2019 10:10:29 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641 Analyst: SB

Naphthalene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
2-Methylnaphthalene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
1-Methylnaphthalene	51.7	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Acenaphthylene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Acenaphthene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Fluorene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Phenanthrene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Anthracene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Fluoranthene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Pyrene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Benz(a)anthracene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Chrysene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Benzo(b)fluoranthene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Benzo(k)fluoranthene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Benzo(a)pyrene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Indeno(1,2,3-cd)pyrene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Dibenz(a,h)anthracene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Benzo(g,h,i)perylene	ND	40.6		µg/Kg-dry	1	8/29/2019 10:11:13 PM
Surr: 2-Fluorobiphenyl	94.7	24.4 - 151		%Rec	1	8/29/2019 10:11:13 PM
Surr: Terphenyl-d14 (surr)	111	31.4 - 162		%Rec	1	8/29/2019 10:11:13 PM

Gasoline Range Organics by AK101

Batch ID: 25719 Analyst: CR

Gasoline Range Organics (C6-C10)	38.2	2.38		mg/Kg-dry	1	9/5/2019 9:40:01 PM
Surr: 1,4-Difluorobenzene	117	50 - 150		%Rec	1	9/5/2019 9:40:01 PM
Surr: 4-Bromofluorobenzene	110	50 - 150		%Rec	1	9/5/2019 9:40:01 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Chloromethane	ND	0.0238	Q	mg/Kg-dry	1	8/29/2019 6:31:28 PM
Vinyl chloride	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:45:00 AM

Project: Hoonah

Lab ID: 1908349-002

Matrix: Soil

Client Sample ID: GLB-14-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Trichlorofluoromethane (CFC-11)	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Chloroethane	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1-Dichloroethene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Methylene chloride	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
trans-1,2-Dichloroethene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Methyl tert-butyl ether (MTBE)	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1-Dichloroethane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
cis-1,2-Dichloroethene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Chloroform	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1,1-Trichloroethane (TCA)	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1-Dichloropropene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Carbon tetrachloride	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2-Dichloroethane (EDC)	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Benzene	0.0222	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Trichloroethene (TCE)	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2-Dichloropropane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Bromodichloromethane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Dibromomethane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
cis-1,3-Dichloropropene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Toluene	0.0281	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
trans-1,3-Dichloropropylene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1,2-Trichloroethane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,3-Dichloropropane	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Tetrachloroethene (PCE)	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Dibromochloromethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2-Dibromoethane (EDB)	ND	0.00238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Chlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1,1,2-Tetrachloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Ethylbenzene	0.0401	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
m,p-Xylene	0.0608	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
o-Xylene	0.0143	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Styrene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Isopropylbenzene	0.0322	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Bromoform	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,1,2,2-Tetrachloroethane	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
n-Propylbenzene	0.0924	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Bromobenzene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,3,5-Trimethylbenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:45:00 AM

Project: Hoonah

Lab ID: 1908349-002

Matrix: Soil

Client Sample ID: GLB-14-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
4-Chlorotoluene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
tert-Butylbenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2,3-Trichloropropane	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2,4-Trichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
sec-Butylbenzene	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
4-Isopropyltoluene	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,3-Dichlorobenzene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,4-Dichlorobenzene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
n-Butylbenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2-Dichlorobenzene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2-Dibromo-3-chloropropane	ND	0.238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2,4-Trimethylbenzene	0.0959	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Hexachloro-1,3-butadiene	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Naphthalene	ND	0.0238		mg/Kg-dry	1	8/29/2019 6:31:28 PM
1,2,3-Trichlorobenzene	ND	0.00952		mg/Kg-dry	1	8/29/2019 6:31:28 PM
Surr: Dibromofluoromethane	95.3	56.5 - 129		%Rec	1	8/29/2019 6:31:28 PM
Surr: Toluene-d8	93.2	64.5 - 151		%Rec	1	8/29/2019 6:31:28 PM
Surr: 1-Bromo-4-fluorobenzene	93.3	54.8 - 168		%Rec	1	8/29/2019 6:31:28 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	11.3	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908349-003

Matrix: Soil

Client Sample ID: Trip Blank 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	5.00		mg/Kg	1	9/5/2019 5:30:23 PM
Surr: 1,4-Difluorobenzene	120	50 - 150		%Rec	1	9/5/2019 5:30:23 PM
Surr: 4-Bromofluorobenzene	109	50 - 150		%Rec	1	9/5/2019 5:30:23 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Chloromethane	ND	0.0500	Q	mg/Kg	1	8/29/2019 12:23:51 PM
Vinyl chloride	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Bromomethane	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
Trichlorofluoromethane (CFC-11)	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Chloroethane	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
1,1-Dichloroethene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Methylene chloride	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
trans-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
1,1-Dichloroethane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
cis-1,2-Dichloroethene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Chloroform	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,1,1-Trichloroethane (TCA)	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,1-Dichloropropene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Carbon tetrachloride	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,2-Dichloroethane (EDC)	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Benzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Trichloroethene (TCE)	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,2-Dichloropropane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Bromodichloromethane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Dibromomethane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
cis-1,3-Dichloropropene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Toluene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
trans-1,3-Dichloropropylene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,1,2-Trichloroethane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,3-Dichloropropane	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Tetrachloroethene (PCE)	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Dibromochloromethane	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,2-Dibromoethane (EDB)	ND	0.00500		mg/Kg	1	8/29/2019 12:23:51 PM
Chlorobenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,1,1,2-Tetrachloroethane	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Ethylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908349-003

Matrix: Soil

Client Sample ID: Trip Blank 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

m,p-Xylene	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
o-Xylene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Styrene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Isopropylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Bromoform	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
1,1,2,2-Tetrachloroethane	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
n-Propylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
Bromobenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,3,5-Trimethylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
2-Chlorotoluene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
4-Chlorotoluene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
tert-Butylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,2,3-Trichloropropane	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,2,4-Trichlorobenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
sec-Butylbenzene	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
4-Isopropyltoluene	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
1,3-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,4-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
n-Butylbenzene	ND	0.0250		mg/Kg	1	8/29/2019 12:23:51 PM
1,2-Dichlorobenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
1,2-Dibromo-3-chloropropane	ND	0.500		mg/Kg	1	8/29/2019 12:23:51 PM
1,2,4-Trimethylbenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Hexachloro-1,3-butadiene	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
Naphthalene	ND	0.0500		mg/Kg	1	8/29/2019 12:23:51 PM
1,2,3-Trichlorobenzene	ND	0.0200		mg/Kg	1	8/29/2019 12:23:51 PM
Surr: Dibromofluoromethane	104	56.5 - 129		%Rec	1	8/29/2019 12:23:51 PM
Surr: Toluene-d8	98.2	64.5 - 151		%Rec	1	8/29/2019 12:23:51 PM
Surr: 1-Bromo-4-fluorobenzene	108	54.8 - 168		%Rec	1	8/29/2019 12:23:51 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:20:00 AM

Project: Hoonah

Lab ID: 1908349-004

Matrix: Soil

Client Sample ID: GLB-AA

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	6,800	210	D	mg/Kg-dry	10	8/30/2019 10:38:33 AM
Residual Range Organics (C25-C36)	ND	52.4		mg/Kg-dry	1	8/29/2019 10:40:22 PM
Surr: 2-Fluorobiphenyl	70.1	50 - 150		%Rec	1	8/29/2019 10:40:22 PM
Surr: o-Terphenyl	82.8	50 - 150		%Rec	1	8/29/2019 10:40:22 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641 Analyst: SB

Naphthalene	759	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
2-Methylnaphthalene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
1-Methylnaphthalene	5,220	454	D	µg/Kg-dry	10	8/30/2019 10:49:25 AM
Acenaphthylene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Acenaphthene	207	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Fluorene	350	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Phenanthrene	863	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Anthracene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Fluoranthene	228	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Pyrene	230	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Benz(a)anthracene	65.1	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Chrysene	68.9	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Benzo(b)fluoranthene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Benzo(k)fluoranthene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Benzo(a)pyrene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Indeno(1,2,3-cd)pyrene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Dibenz(a,h)anthracene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Benzo(g,h,i)perylene	ND	45.4		µg/Kg-dry	1	8/29/2019 10:31:50 PM
Surr: 2-Fluorobiphenyl	113	24.4 - 151		%Rec	1	8/29/2019 10:31:50 PM
Surr: Terphenyl-d14 (surr)	57.5	31.4 - 162		%Rec	1	8/29/2019 10:31:50 PM

Gasoline Range Organics by AK101

Batch ID: 25719 Analyst: CR

Gasoline Range Organics (C6-C10)	430	243	D	mg/Kg-dry	100	9/6/2019 4:31:55 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/6/2019 4:31:55 AM
Surr: 4-Bromofluorobenzene	112	50 - 150	D	%Rec	100	9/6/2019 4:31:55 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Chloromethane	ND	0.243	DQ	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Vinyl chloride	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:20:00 AM

Project: Hoonah

Lab ID: 1908349-004

Matrix: Soil

Client Sample ID: GLB-AA

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Trichlorofluoromethane (CFC-11)	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Chloroethane	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1-Dichloroethene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Methylene chloride	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
trans-1,2-Dichloroethene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Methyl tert-butyl ether (MTBE)	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1-Dichloroethane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
cis-1,2-Dichloroethene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Chloroform	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1,1-Trichloroethane (TCA)	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1-Dichloropropene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Carbon tetrachloride	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2-Dichloroethane (EDC)	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Benzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Trichloroethene (TCE)	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2-Dichloropropane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Bromodichloromethane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Dibromomethane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
cis-1,3-Dichloropropene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Toluene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
trans-1,3-Dichloropropylene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1,2-Trichloroethane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,3-Dichloropropane	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Tetrachloroethene (PCE)	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Dibromochloromethane	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2-Dibromoethane (EDB)	ND	0.0243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Chlorobenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1,1,2-Tetrachloroethane	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Ethylbenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
m,p-Xylene	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
o-Xylene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Styrene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Isopropylbenzene	1.11	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Bromoform	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,1,2,2-Tetrachloroethane	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
n-Propylbenzene	0.865	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Bromobenzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,3,5-Trimethylbenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 9:20:00 AM

Project: Hoonah

Lab ID: 1908349-004

Matrix: Soil

Client Sample ID: GLB-AA

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
4-Chlorotoluene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
tert-Butylbenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2,3-Trichloropropane	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2,4-Trichlorobenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
sec-Butylbenzene	1.29	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
4-Isopropyltoluene	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,3-Dichlorobenzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,4-Dichlorobenzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
n-Butylbenzene	ND	0.122	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2-Dichlorobenzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2-Dibromo-3-chloropropane	ND	2.43	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2,4-Trimethylbenzene	0.245	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Hexachloro-1,3-butadiene	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Naphthalene	ND	0.243	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
1,2,3-Trichlorobenzene	ND	0.0974	D	mg/Kg-dry	10	8/30/2019 12:33:27 AM
Surr: Dibromofluoromethane	96.9	56.5 - 129	D	%Rec	10	8/30/2019 12:33:27 AM
Surr: Toluene-d8	94.3	64.5 - 151	D	%Rec	10	8/30/2019 12:33:27 AM
Surr: 1-Bromo-4-fluorobenzene	99.9	54.8 - 168	D	%Rec	10	8/30/2019 12:33:27 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	17.3	0.500	wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908349-005

Matrix: Soil

Client Sample ID: GLB-15-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.7		mg/Kg-dry	1	8/30/2019 1:39:42 AM
Residual Range Organics (C25-C36)	ND	54.2		mg/Kg-dry	1	8/30/2019 1:39:42 AM
Surr: 2-Fluorobiphenyl	75.5	50 - 150		%Rec	1	8/30/2019 1:39:42 AM
Surr: o-Terphenyl	82.8	50 - 150		%Rec	1	8/30/2019 1:39:42 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
2-Methylnaphthalene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
1-Methylnaphthalene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Acenaphthylene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Acenaphthene	172	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Fluorene	61.8	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Phenanthrene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Anthracene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Fluoranthene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Pyrene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Benz(a)anthracene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Chrysene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Benzo(b)fluoranthene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Benzo(k)fluoranthene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Benzo(a)pyrene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Indeno(1,2,3-cd)pyrene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Dibenz(a,h)anthracene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Benzo(g,h,i)perylene	ND	43.7		µg/Kg-dry	1	8/29/2019 10:52:30 PM
Surr: 2-Fluorobiphenyl	66.0	24.4 - 151		%Rec	1	8/29/2019 10:52:30 PM
Surr: Terphenyl-d14 (surr)	46.8	31.4 - 162		%Rec	1	8/29/2019 10:52:30 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	4.79	3.37		mg/Kg-dry	1	9/5/2019 10:21:21 PM
Surr: 1,4-Difluorobenzene	111	50 - 150		%Rec	1	9/5/2019 10:21:21 PM
Surr: 4-Bromofluorobenzene	89.9	50 - 150		%Rec	1	9/5/2019 10:21:21 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Chloromethane	ND	0.0337	Q	mg/Kg-dry	1	8/29/2019 7:01:44 PM
Bromomethane	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908349-005

Matrix: Soil

Client Sample ID: GLB-15-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Chloroethane	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1-Dichloroethene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Methylene chloride	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
trans-1,2-Dichloroethene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1-Dichloroethane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
cis-1,2-Dichloroethene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Chloroform	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1-Dichloropropene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Carbon tetrachloride	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2-Dichloroethane (EDC)	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Benzene	0.0260	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2-Dichloropropane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Bromodichloromethane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Dibromomethane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
cis-1,3-Dichloropropene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Toluene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
trans-1,3-Dichloropropylene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1,2-Trichloroethane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,3-Dichloropropane	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Tetrachloroethene (PCE)	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Dibromochloromethane	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Chlorobenzene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Ethylbenzene	0.0228	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
m,p-Xylene	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
o-Xylene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Styrene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Isopropylbenzene	0.0361	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Bromoform	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,1,2,2-Tetrachloroethane	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
n-Propylbenzene	0.178	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Bromobenzene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,3,5-Trimethylbenzene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
2-Chlorotoluene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
4-Chlorotoluene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
tert-Butylbenzene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908349-005

Matrix: Soil

Client Sample ID: GLB-15-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2,4-Trichlorobenzene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
sec-Butylbenzene	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
4-Isopropyltoluene	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,3-Dichlorobenzene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,4-Dichlorobenzene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
n-Butylbenzene	ND	0.0168		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2-Dichlorobenzene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2-Dibromo-3-chloropropane	ND	0.337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2,4-Trimethylbenzene	0.0174	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Naphthalene	ND	0.0337		mg/Kg-dry	1	8/29/2019 7:01:44 PM
1,2,3-Trichlorobenzene	ND	0.0135		mg/Kg-dry	1	8/29/2019 7:01:44 PM
Surr: Dibromofluoromethane	96.1	56.5 - 129		%Rec	1	8/29/2019 7:01:44 PM
Surr: Toluene-d8	91.8	64.5 - 151		%Rec	1	8/29/2019 7:01:44 PM
Surr: 1-Bromo-4-fluorobenzene	83.0	54.8 - 168		%Rec	1	8/29/2019 7:01:44 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00402	Q	mg/Kg-dry	1	9/3/2019 11:24:09 PM
Trichloroethene (TCE)	ND	0.00979		mg/Kg-dry	1	9/3/2019 11:24:09 PM
1,2-Dibromoethane (EDB)	ND	0.000984		mg/Kg-dry	1	9/3/2019 11:24:09 PM
Hexachloro-1,3-butadiene	ND	0.00535		mg/Kg-dry	1	9/3/2019 11:24:09 PM
Surr: Dibromofluoromethane	98.8	54.7 - 128		%Rec	1	9/3/2019 11:24:09 PM
Surr: Toluene-d8	96.5	74.2 - 139		%Rec	1	9/3/2019 11:24:09 PM
Surr: 1-Bromo-4-fluorobenzene	68.7	73.5 - 127	S	%Rec	1	9/3/2019 11:24:09 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	19.5	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:40:00 AM

Project: Hoonah

Lab ID: 1908349-006

Matrix: Soil

Client Sample ID: GLB-15-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.7		mg/Kg-dry	1	8/30/2019 2:09:39 AM
Residual Range Organics (C25-C36)	ND	54.2		mg/Kg-dry	1	8/30/2019 2:09:39 AM
Surr: 2-Fluorobiphenyl	66.4	50 - 150		%Rec	1	8/30/2019 2:09:39 AM
Surr: o-Terphenyl	75.0	50 - 150		%Rec	1	8/30/2019 2:09:39 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	45.9	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
2-Methylnaphthalene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
1-Methylnaphthalene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Acenaphthylene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Acenaphthene	54.0	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Fluorene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Phenanthrene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Anthracene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Fluoranthene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Pyrene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Benz(a)anthracene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Chrysene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Benzo(b)fluoranthene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Benzo(k)fluoranthene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Benzo(a)pyrene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Indeno(1,2,3-cd)pyrene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Dibenz(a,h)anthracene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Benzo(g,h,i)perylene	ND	42.4		µg/Kg-dry	1	8/29/2019 11:13:11 PM
Surr: 2-Fluorobiphenyl	89.1	24.4 - 151		%Rec	1	8/29/2019 11:13:11 PM
Surr: Terphenyl-d14 (surr)	113	31.4 - 162		%Rec	1	8/29/2019 11:13:11 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	5.63	3.09		mg/Kg-dry	1	9/5/2019 11:43:45 PM
Surr: 1,4-Difluorobenzene	109	50 - 150		%Rec	1	9/5/2019 11:43:45 PM
Surr: 4-Bromofluorobenzene	98.6	50 - 150		%Rec	1	9/5/2019 11:43:45 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Chloromethane	ND	0.0309	Q	mg/Kg-dry	1	8/29/2019 7:31:59 PM
Vinyl chloride	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:40:00 AM

Project: Hoonah

Lab ID: 1908349-006

Matrix: Soil

Client Sample ID: GLB-15-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Chloroethane	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Methylene chloride	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
trans-1,2-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1-Dichloroethane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
cis-1,2-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Chloroform	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1-Dichloropropene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Carbon tetrachloride	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2-Dichloroethane (EDC)	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Benzene	0.265	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Trichloroethene (TCE)	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2-Dichloropropane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Bromodichloromethane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Dibromomethane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
cis-1,3-Dichloropropene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Toluene	0.0783	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
trans-1,3-Dichloropropylene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1,2-Trichloroethane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,3-Dichloropropane	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Tetrachloroethene (PCE)	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Dibromochloromethane	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2-Dibromoethane (EDB)	ND	0.00309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Chlorobenzene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1,1,2-Tetrachloroethane	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Ethylbenzene	0.233	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
m,p-Xylene	0.0805	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
o-Xylene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Styrene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Isopropylbenzene	0.0271	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Bromoform	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,1,2,2-Tetrachloroethane	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
n-Propylbenzene	0.105	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Bromobenzene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,3,5-Trimethylbenzene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:40:00 AM

Project: Hoonah

Lab ID: 1908349-006

Matrix: Soil

Client Sample ID: GLB-15-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
4-Chlorotoluene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
tert-Butylbenzene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2,3-Trichloropropane	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2,4-Trichlorobenzene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
sec-Butylbenzene	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
4-Isopropyltoluene	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,3-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,4-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
n-Butylbenzene	ND	0.0155		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2-Dibromo-3-chloropropane	ND	0.309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2,4-Trimethylbenzene	0.0409	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Hexachloro-1,3-butadiene	ND	0.0309		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Naphthalene	0.132	0.0309	Q	mg/Kg-dry	1	8/29/2019 7:31:59 PM
1,2,3-Trichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/29/2019 7:31:59 PM
Surr: Dibromofluoromethane	94.8	56.5 - 129		%Rec	1	8/29/2019 7:31:59 PM
Surr: Toluene-d8	90.5	64.5 - 151		%Rec	1	8/29/2019 7:31:59 PM
Surr: 1-Bromo-4-fluorobenzene	95.0	54.8 - 168		%Rec	1	8/29/2019 7:31:59 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	16.7	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:20:00 AM

Project: Hoonah

Lab ID: 1908349-007

Matrix: Soil

Client Sample ID: GLB-BB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	24.8		mg/Kg-dry	1	8/30/2019 2:39:30 AM
Residual Range Organics (C25-C36)	ND	62.0		mg/Kg-dry	1	8/30/2019 2:39:30 AM
Surr: 2-Fluorobiphenyl	49.1	50 - 150	S	%Rec	1	8/30/2019 2:39:30 AM
Surr: o-Terphenyl	55.2	50 - 150		%Rec	1	8/30/2019 2:39:30 AM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
2-Methylnaphthalene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
1-Methylnaphthalene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Acenaphthylene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Acenaphthene	204	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Fluorene	64.4	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Phenanthrene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Anthracene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Fluoranthene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Pyrene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Benz(a)anthracene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Chrysene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Benzo(b)fluoranthene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Benzo(k)fluoranthene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Benzo(a)pyrene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Indeno(1,2,3-cd)pyrene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Dibenz(a,h)anthracene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Benzo(g,h,i)perylene	ND	47.5		µg/Kg-dry	1	8/29/2019 11:33:44 PM
Surr: 2-Fluorobiphenyl	79.9	24.4 - 151		%Rec	1	8/29/2019 11:33:44 PM
Surr: Terphenyl-d14 (surr)	60.8	31.4 - 162		%Rec	1	8/29/2019 11:33:44 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	3.70	3.11		mg/Kg-dry	1	9/6/2019 12:25:00 AM
Surr: 1,4-Difluorobenzene	106	50 - 150		%Rec	1	9/6/2019 12:25:00 AM
Surr: 4-Bromofluorobenzene	90.5	50 - 150		%Rec	1	9/6/2019 12:25:00 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:20:00 AM

Project: Hoonah

Lab ID: 1908349-007

Matrix: Soil

Client Sample ID: GLB-BB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Chloromethane	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Vinyl chloride	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Bromomethane	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Trichlorofluoromethane (CFC-11)	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Chloroethane	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Methylene chloride	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
trans-1,2-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Methyl tert-butyl ether (MTBE)	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1-Dichloroethane	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
cis-1,2-Dichloroethene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Chloroform	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1,1-Trichloroethane (TCA)	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1-Dichloropropene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Carbon tetrachloride	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2-Dichloroethane (EDC)	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Benzene	0.0275	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Trichloroethene (TCE)	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2-Dichloropropane	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Bromodichloromethane	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Dibromomethane	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
cis-1,3-Dichloropropene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Toluene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
trans-1,3-Dichloropropylene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1,2-Trichloroethane	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,3-Dichloropropane	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Tetrachloroethene (PCE)	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Dibromochloromethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2-Dibromoethane (EDB)	ND	0.00311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Chlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1,1,2-Tetrachloroethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Ethylbenzene	0.0232	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
m,p-Xylene	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
o-Xylene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Styrene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Isopropylbenzene	0.0342	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Bromoform	ND	0.0311	Q	mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,1,2,2-Tetrachloroethane	ND	0.0124	Q	mg/Kg-dry	1	8/30/2019 12:15:41 PM
n-Propylbenzene	0.187	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 10:20:00 AM

Project: Hoonah

Lab ID: 1908349-007

Matrix: Soil

Client Sample ID: GLB-BB

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromobenzene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,3,5-Trimethylbenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
2-Chlorotoluene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
4-Chlorotoluene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
tert-Butylbenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2,3-Trichloropropane	ND	0.0156	Q	mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2,4-Trichlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
sec-Butylbenzene	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
4-Isopropyltoluene	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,3-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,4-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
n-Butylbenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2-Dichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2-Dibromo-3-chloropropane	ND	0.311	Q	mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2,4-Trimethylbenzene	0.0138	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Hexachloro-1,3-butadiene	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Naphthalene	ND	0.0311		mg/Kg-dry	1	8/30/2019 12:15:41 PM
1,2,3-Trichlorobenzene	ND	0.0124		mg/Kg-dry	1	8/30/2019 12:15:41 PM
Surr: Dibromofluoromethane	96.3	56.5 - 129		%Rec	1	8/30/2019 12:15:41 PM
Surr: Toluene-d8	99.2	64.5 - 151		%Rec	1	8/30/2019 12:15:41 PM
Surr: 1-Bromo-4-fluorobenzene	76.3	54.8 - 168		%Rec	1	8/30/2019 12:15:41 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	21.8	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:00:00 AM

Project: Hoonah

Lab ID: 1908349-008

Matrix: Soil

Client Sample ID: GLB-16-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	22.1		mg/Kg-dry	1	8/30/2019 3:09:27 AM
Residual Range Organics (C25-C36)	ND	55.2		mg/Kg-dry	1	8/30/2019 3:09:27 AM
Surr: 2-Fluorobiphenyl	64.1	50 - 150		%Rec	1	8/30/2019 3:09:27 AM
Surr: o-Terphenyl	74.7	50 - 150		%Rec	1	8/30/2019 3:09:27 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
2-Methylnaphthalene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
1-Methylnaphthalene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Acenaphthylene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Acenaphthene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Fluorene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Phenanthrene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Anthracene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Fluoranthene	71.6	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Pyrene	66.9	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Benz(a)anthracene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Chrysene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Benzo(b)fluoranthene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Benzo(k)fluoranthene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Benzo(a)pyrene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Indeno(1,2,3-cd)pyrene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Dibenz(a,h)anthracene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Benzo(g,h,i)perylene	ND	47.7		µg/Kg-dry	1	8/29/2019 11:54:17 PM
Surr: 2-Fluorobiphenyl	80.1	24.4 - 151		%Rec	1	8/29/2019 11:54:17 PM
Surr: Terphenyl-d14 (surr)	119	31.4 - 162		%Rec	1	8/29/2019 11:54:17 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.56		mg/Kg-dry	1	9/6/2019 1:06:18 AM
Surr: 1,4-Difluorobenzene	103	50 - 150		%Rec	1	9/6/2019 1:06:18 AM
Surr: 4-Bromofluorobenzene	90.7	50 - 150		%Rec	1	9/6/2019 1:06:18 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Chloromethane	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Vinyl chloride	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:00:00 AM

Project: Hoonah

Lab ID: 1908349-008

Matrix: Soil

Client Sample ID: GLB-16-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Trichlorofluoromethane (CFC-11)	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Chloroethane	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Methylene chloride	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
trans-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Methyl tert-butyl ether (MTBE)	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1-Dichloroethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
cis-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Chloroform	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1,1-Trichloroethane (TCA)	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Carbon tetrachloride	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2-Dichloroethane (EDC)	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Benzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Trichloroethene (TCE)	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2-Dichloropropane	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Bromodichloromethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Dibromomethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
cis-1,3-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Toluene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
trans-1,3-Dichloropropylene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1,2-Trichloroethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,3-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Tetrachloroethene (PCE)	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Dibromochloromethane	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2-Dibromoethane (EDB)	ND	0.00256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Chlorobenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1,1,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Ethylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
m,p-Xylene	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
o-Xylene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Styrene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Isopropylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Bromoform	ND	0.0256	Q	mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,1,2,2-Tetrachloroethane	ND	0.0103	Q	mg/Kg-dry	1	8/30/2019 1:16:01 PM
n-Propylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Bromobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,3,5-Trimethylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:00:00 AM

Project: Hoonah

Lab ID: 1908349-008

Matrix: Soil

Client Sample ID: GLB-16-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
4-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
tert-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2,3-Trichloropropane	ND	0.0128	Q	mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2,4-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
sec-Butylbenzene	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
4-Isopropyltoluene	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,3-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,4-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
n-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2-Dibromo-3-chloropropane	ND	0.256	Q	mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2,4-Trimethylbenzene	0.0127	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Hexachloro-1,3-butadiene	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Naphthalene	ND	0.0256		mg/Kg-dry	1	8/30/2019 1:16:01 PM
1,2,3-Trichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 1:16:01 PM
Surr: Dibromofluoromethane	95.3	56.5 - 129		%Rec	1	8/30/2019 1:16:01 PM
Surr: Toluene-d8	98.6	64.5 - 151		%Rec	1	8/30/2019 1:16:01 PM
Surr: 1-Bromo-4-fluorobenzene	80.6	54.8 - 168		%Rec	1	8/30/2019 1:16:01 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	19.5	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:20:00 AM

Project: Hoonah

Lab ID: 1908349-009

Matrix: Soil

Client Sample ID: GLB-16-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	22.0		mg/Kg-dry	1	8/29/2019 8:40:46 PM
Residual Range Organics (C25-C36)	ND	54.9		mg/Kg-dry	1	8/29/2019 8:40:46 PM
Surr: 2-Fluorobiphenyl	61.5	50 - 150		%Rec	1	8/29/2019 8:40:46 PM
Surr: o-Terphenyl	68.3	50 - 150		%Rec	1	8/29/2019 8:40:46 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
2-Methylnaphthalene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
1-Methylnaphthalene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Acenaphthylene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Acenaphthene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Fluorene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Phenanthrene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Anthracene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Fluoranthene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Pyrene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Benz(a)anthracene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Chrysene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Benzo(b)fluoranthene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Benzo(k)fluoranthene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Benzo(a)pyrene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Benzo(g,h,i)perylene	ND	44.7		µg/Kg-dry	1	8/30/2019 12:14:55 AM
Surr: 2-Fluorobiphenyl	75.5	24.4 - 151		%Rec	1	8/30/2019 12:14:55 AM
Surr: Terphenyl-d14 (surr)	106	31.4 - 162		%Rec	1	8/30/2019 12:14:55 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.35		mg/Kg-dry	1	9/6/2019 1:47:29 AM
Surr: 1,4-Difluorobenzene	109	50 - 150		%Rec	1	9/6/2019 1:47:29 AM
Surr: 4-Bromofluorobenzene	83.6	50 - 150		%Rec	1	9/6/2019 1:47:29 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Chloromethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Vinyl chloride	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:20:00 AM

Project: Hoonah

Lab ID: 1908349-009

Matrix: Soil

Client Sample ID: GLB-16-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Trichlorofluoromethane (CFC-11)	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Chloroethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Methylene chloride	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
trans-1,2-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Methyl tert-butyl ether (MTBE)	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1-Dichloroethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
cis-1,2-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Chloroform	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1,1-Trichloroethane (TCA)	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1-Dichloropropene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Carbon tetrachloride	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2-Dichloroethane (EDC)	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Benzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Trichloroethene (TCE)	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2-Dichloropropane	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Bromodichloromethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Dibromomethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
cis-1,3-Dichloropropene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Toluene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
trans-1,3-Dichloropropylene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1,2-Trichloroethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,3-Dichloropropane	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Tetrachloroethene (PCE)	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Dibromochloromethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2-Dibromoethane (EDB)	ND	0.00235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Chlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1,1,2-Tetrachloroethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Ethylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
m,p-Xylene	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
o-Xylene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Styrene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Isopropylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Bromoform	ND	0.0235	Q	mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,1,2,2-Tetrachloroethane	ND	0.00939	Q	mg/Kg-dry	1	8/30/2019 1:46:10 PM
n-Propylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Bromobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,3,5-Trimethylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 11:20:00 AM

Project: Hoonah

Lab ID: 1908349-009

Matrix: Soil

Client Sample ID: GLB-16-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
4-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
tert-Butylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2,3-Trichloropropane	ND	0.0117	Q	mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2,4-Trichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
sec-Butylbenzene	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
4-Isopropyltoluene	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,3-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,4-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
n-Butylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2-Dibromo-3-chloropropane	ND	0.235	Q	mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2,4-Trimethylbenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Hexachloro-1,3-butadiene	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Naphthalene	ND	0.0235		mg/Kg-dry	1	8/30/2019 1:46:10 PM
1,2,3-Trichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 1:46:10 PM
Surr: Dibromofluoromethane	95.4	56.5 - 129		%Rec	1	8/30/2019 1:46:10 PM
Surr: Toluene-d8	98.3	64.5 - 151		%Rec	1	8/30/2019 1:46:10 PM
Surr: 1-Bromo-4-fluorobenzene	74.0	54.8 - 168		%Rec	1	8/30/2019 1:46:10 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	20.2	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908349-010

Matrix: Soil

Client Sample ID: GLB-17-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	8,690	208	D	mg/Kg-dry	10	8/30/2019 11:08:33 AM
Residual Range Organics (C25-C36)	ND	52.0		mg/Kg-dry	1	8/30/2019 3:39:19 AM
Surr: 2-Fluorobiphenyl	63.3	50 - 150		%Rec	1	8/30/2019 3:39:19 AM
Surr: o-Terphenyl	106	50 - 150		%Rec	1	8/30/2019 3:39:19 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
2-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
1-Methylnaphthalene	6,580	443	D	µg/Kg-dry	10	8/30/2019 11:10:06 AM
Acenaphthylene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Acenaphthene	276	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Fluorene	1,570	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Phenanthrene	2,330	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Anthracene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Fluoranthene	190	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Pyrene	150	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Benz(a)anthracene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Chrysene	53.1	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Benzo(b)fluoranthene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Benzo(k)fluoranthene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Benzo(a)pyrene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Indeno(1,2,3-cd)pyrene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Dibenz(a,h)anthracene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Benzo(g,h,i)perylene	ND	43.6		µg/Kg-dry	1	8/30/2019 12:35:28 AM
Surr: 2-Fluorobiphenyl	107	24.4 - 151		%Rec	1	8/30/2019 12:35:28 AM
Surr: Terphenyl-d14 (surr)	80.3	31.4 - 162		%Rec	1	8/30/2019 12:35:28 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	169	27.4	D	mg/Kg-dry	10	9/6/2019 5:23:58 PM
Surr: 1,4-Difluorobenzene	115	50 - 150	D	%Rec	10	9/6/2019 5:23:58 PM
Surr: 4-Bromofluorobenzene	109	50 - 150	D	%Rec	10	9/6/2019 5:23:58 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Chloromethane	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Bromomethane	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908349-010

Matrix: Soil

Client Sample ID: GLB-17-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Chloroethane	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1-Dichloroethene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Methylene chloride	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
trans-1,2-Dichloroethene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Methyl tert-butyl ether (MTBE)	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1-Dichloroethane	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
cis-1,2-Dichloroethene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Chloroform	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1,1-Trichloroethane (TCA)	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1-Dichloropropene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Carbon tetrachloride	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2-Dichloroethane (EDC)	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Benzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2-Dichloropropane	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Bromodichloromethane	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Dibromomethane	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
cis-1,3-Dichloropropene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Toluene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
trans-1,3-Dichloropropylene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1,2-Trichloroethane	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,3-Dichloropropane	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Tetrachloroethene (PCE)	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Dibromochloromethane	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Chlorobenzene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1,1,2-Tetrachloroethane	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Ethylbenzene	0.114	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
m,p-Xylene	0.0667	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
o-Xylene	0.0148	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Styrene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Isopropylbenzene	0.261	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Bromoform	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,1,2,2-Tetrachloroethane	ND	0.0108	Q	mg/Kg-dry	1	9/3/2019 8:28:54 AM
n-Propylbenzene	0.549	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Bromobenzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,3,5-Trimethylbenzene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
2-Chlorotoluene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
4-Chlorotoluene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
tert-Butylbenzene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908349-010

Matrix: Soil

Client Sample ID: GLB-17-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

1,2,3-Trichloropropane	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2,4-Trichlorobenzene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
sec-Butylbenzene	0.686	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
4-Isopropyltoluene	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,3-Dichlorobenzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,4-Dichlorobenzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
n-Butylbenzene	ND	0.0135		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2-Dichlorobenzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2-Dibromo-3-chloropropane	ND	0.270	Q	mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2,4-Trimethylbenzene	0.373	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Naphthalene	ND	0.0270		mg/Kg-dry	1	9/3/2019 8:28:54 AM
1,2,3-Trichlorobenzene	ND	0.0108		mg/Kg-dry	1	9/3/2019 8:28:54 AM
Surr: Dibromofluoromethane	98.1	56.5 - 129		%Rec	1	9/3/2019 8:28:54 AM
Surr: Toluene-d8	105	64.5 - 151		%Rec	1	9/3/2019 8:28:54 AM
Surr: 1-Bromo-4-fluorobenzene	78.9	54.8 - 168		%Rec	1	9/3/2019 8:28:54 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00322	Q	mg/Kg-dry	1	9/3/2019 11:57:40 PM
Trichloroethene (TCE)	ND	0.00783		mg/Kg-dry	1	9/3/2019 11:57:40 PM
1,2-Dibromoethane (EDB)	ND	0.000788		mg/Kg-dry	1	9/3/2019 11:57:40 PM
Hexachloro-1,3-butadiene	ND	0.00429	I	mg/Kg-dry	1	9/3/2019 11:57:40 PM
Surr: Dibromofluoromethane	96.8	54.7 - 128		%Rec	1	9/3/2019 11:57:40 PM
Surr: Toluene-d8	93.7	74.2 - 139		%Rec	1	9/3/2019 11:57:40 PM
Surr: 1-Bromo-4-fluorobenzene	42.0	73.5 - 127	S	%Rec	1	9/3/2019 11:57:40 PM

NOTES:

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	17.7	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908349-011

Matrix: Soil

Client Sample ID: GLB-17-7'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	59.9	21.4		mg/Kg-dry	1	8/30/2019 4:09:10 AM
Residual Range Organics (C25-C36)	ND	53.4		mg/Kg-dry	1	8/30/2019 4:09:10 AM
Surr: 2-Fluorobiphenyl	73.6	50 - 150		%Rec	1	8/30/2019 4:09:10 AM
Surr: o-Terphenyl	79.7	50 - 150		%Rec	1	8/30/2019 4:09:10 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	66.2	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
2-Methylnaphthalene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
1-Methylnaphthalene	110	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Acenaphthylene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Acenaphthene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Fluorene	70.7	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Phenanthrene	103	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Benz(a)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Chrysene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Benzo(b)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Benzo(k)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Benzo(a)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Indeno(1,2,3-cd)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Dibenz(a,h)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Benzo(g,h,i)perylene	ND	41.3		µg/Kg-dry	1	8/30/2019 12:56:02 AM
Surr: 2-Fluorobiphenyl	93.4	24.4 - 151		%Rec	1	8/30/2019 12:56:02 AM
Surr: Terphenyl-d14 (surr)	114	31.4 - 162		%Rec	1	8/30/2019 12:56:02 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	4.11	2.46		mg/Kg-dry	1	9/6/2019 5:54:15 AM
Surr: 1,4-Difluorobenzene	105	50 - 150		%Rec	1	9/6/2019 5:54:15 AM
Surr: 4-Bromofluorobenzene	92.3	50 - 150		%Rec	1	9/6/2019 5:54:15 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Chloromethane	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Vinyl chloride	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908349-011

Matrix: Soil

Client Sample ID: GLB-17-7'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Trichlorofluoromethane (CFC-11)	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Chloroethane	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1-Dichloroethene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Methylene chloride	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
trans-1,2-Dichloroethene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1-Dichloroethane	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
cis-1,2-Dichloroethene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Chloroform	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1,1-Trichloroethane (TCA)	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1-Dichloropropene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Carbon tetrachloride	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2-Dichloroethane (EDC)	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Benzene	0.0183	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Trichloroethene (TCE)	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2-Dichloropropane	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Bromodichloromethane	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Dibromomethane	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
cis-1,3-Dichloropropene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Toluene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
trans-1,3-Dichloropropylene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1,2-Trichloroethane	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,3-Dichloropropane	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Tetrachloroethene (PCE)	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Dibromochloromethane	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2-Dibromoethane (EDB)	ND	0.00246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Chlorobenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1,1,2-Tetrachloroethane	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Ethylbenzene	0.0251	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
m,p-Xylene	0.0263	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
o-Xylene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Styrene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Isopropylbenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Bromoform	ND	0.0246	Q	mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,1,2,2-Tetrachloroethane	ND	0.00986	Q	mg/Kg-dry	1	8/30/2019 3:16:39 PM
n-Propylbenzene	0.0441	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Bromobenzene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,3,5-Trimethylbenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908349-011

Matrix: Soil

Client Sample ID: GLB-17-7'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
4-Chlorotoluene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
tert-Butylbenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2,3-Trichloropropane	ND	0.0123	Q	mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2,4-Trichlorobenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
sec-Butylbenzene	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
4-Isopropyltoluene	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,3-Dichlorobenzene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,4-Dichlorobenzene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
n-Butylbenzene	ND	0.0123		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2-Dichlorobenzene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2-Dibromo-3-chloropropane	ND	0.246	Q	mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2,4-Trimethylbenzene	0.0175	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Hexachloro-1,3-butadiene	ND	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Naphthalene	0.0602	0.0246		mg/Kg-dry	1	8/30/2019 3:16:39 PM
1,2,3-Trichlorobenzene	ND	0.00986		mg/Kg-dry	1	8/30/2019 3:16:39 PM
Surr: Dibromofluoromethane	96.2	56.5 - 129		%Rec	1	8/30/2019 3:16:39 PM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	8/30/2019 3:16:39 PM
Surr: 1-Bromo-4-fluorobenzene	80.9	54.8 - 168		%Rec	1	8/30/2019 3:16:39 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	15.2	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908349-013

Matrix: Soil

Client Sample ID: GLB-18-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	56.8	23.3		mg/Kg-dry	1	8/30/2019 4:39:01 AM
Residual Range Organics (C25-C36)	ND	58.2		mg/Kg-dry	1	8/30/2019 4:39:01 AM
Surr: 2-Fluorobiphenyl	66.7	50 - 150		%Rec	1	8/30/2019 4:39:01 AM
Surr: o-Terphenyl	73.6	50 - 150		%Rec	1	8/30/2019 4:39:01 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
2-Methylnaphthalene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
1-Methylnaphthalene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Acenaphthylene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Acenaphthene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Fluorene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Phenanthrene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Anthracene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Fluoranthene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Pyrene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Benz(a)anthracene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Chrysene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Benzo(b)fluoranthene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Benzo(k)fluoranthene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Benzo(a)pyrene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Indeno(1,2,3-cd)pyrene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Dibenz(a,h)anthracene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Benzo(g,h,i)perylene	ND	41.4		µg/Kg-dry	1	8/30/2019 1:16:39 AM
Surr: 2-Fluorobiphenyl	90.4	24.4 - 151		%Rec	1	8/30/2019 1:16:39 AM
Surr: Terphenyl-d14 (surr)	114	31.4 - 162		%Rec	1	8/30/2019 1:16:39 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.95		mg/Kg-dry	1	9/6/2019 6:35:22 AM
Surr: 1,4-Difluorobenzene	112	50 - 150		%Rec	1	9/6/2019 6:35:22 AM
Surr: 4-Bromofluorobenzene	89.3	50 - 150		%Rec	1	9/6/2019 6:35:22 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Chloromethane	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Vinyl chloride	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908349-013

Matrix: Soil

Client Sample ID: GLB-18-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Trichlorofluoromethane (CFC-11)	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Chloroethane	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1-Dichloroethene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Methylene chloride	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
trans-1,2-Dichloroethene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Methyl tert-butyl ether (MTBE)	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1-Dichloroethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
cis-1,2-Dichloroethene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Chloroform	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1,1-Trichloroethane (TCA)	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1-Dichloropropene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Carbon tetrachloride	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2-Dichloroethane (EDC)	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Benzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Trichloroethene (TCE)	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2-Dichloropropane	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Bromodichloromethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Dibromomethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
cis-1,3-Dichloropropene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Toluene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
trans-1,3-Dichloropropylene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1,2-Trichloroethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,3-Dichloropropane	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Tetrachloroethene (PCE)	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Dibromochloromethane	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2-Dibromoethane (EDB)	ND	0.00295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Chlorobenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1,1,2-Tetrachloroethane	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Ethylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
m,p-Xylene	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
o-Xylene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Styrene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Isopropylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Bromoform	ND	0.0295	Q	mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,1,2,2-Tetrachloroethane	ND	0.0118	Q	mg/Kg-dry	1	8/30/2019 3:46:48 PM
n-Propylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Bromobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,3,5-Trimethylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908349-013

Matrix: Soil

Client Sample ID: GLB-18-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
4-Chlorotoluene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
tert-Butylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2,3-Trichloropropane	ND	0.0148	Q	mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2,4-Trichlorobenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
sec-Butylbenzene	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
4-Isopropyltoluene	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,3-Dichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,4-Dichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
n-Butylbenzene	ND	0.0148		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2-Dichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2-Dibromo-3-chloropropane	ND	0.295	Q	mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2,4-Trimethylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Hexachloro-1,3-butadiene	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Naphthalene	ND	0.0295		mg/Kg-dry	1	8/30/2019 3:46:48 PM
1,2,3-Trichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 3:46:48 PM
Surr: Dibromofluoromethane	94.9	56.5 - 129		%Rec	1	8/30/2019 3:46:48 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	8/30/2019 3:46:48 PM
Surr: 1-Bromo-4-fluorobenzene	76.9	54.8 - 168		%Rec	1	8/30/2019 3:46:48 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	14.9	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:20:00 PM

Project: Hoonah

Lab ID: 1908349-014

Matrix: Soil

Client Sample ID: GLB-18-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	23.2		mg/Kg-dry	1	8/30/2019 5:08:52 AM
Residual Range Organics (C25-C36)	ND	58.1		mg/Kg-dry	1	8/30/2019 5:08:52 AM
Surr: 2-Fluorobiphenyl	70.2	50 - 150		%Rec	1	8/30/2019 5:08:52 AM
Surr: o-Terphenyl	77.4	50 - 150		%Rec	1	8/30/2019 5:08:52 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
2-Methylnaphthalene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
1-Methylnaphthalene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Acenaphthylene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Acenaphthene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Fluorene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Phenanthrene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Anthracene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Fluoranthene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Pyrene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Benz(a)anthracene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Chrysene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Benzo(b)fluoranthene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Benzo(k)fluoranthene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Benzo(a)pyrene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Indeno(1,2,3-cd)pyrene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Dibenz(a,h)anthracene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Benzo(g,h,i)perylene	ND	47.9		µg/Kg-dry	1	8/30/2019 1:37:12 AM
Surr: 2-Fluorobiphenyl	81.6	24.4 - 151		%Rec	1	8/30/2019 1:37:12 AM
Surr: Terphenyl-d14 (surr)	120	31.4 - 162		%Rec	1	8/30/2019 1:37:12 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	1.76		mg/Kg-dry	1	9/6/2019 7:16:28 AM
Surr: 1,4-Difluorobenzene	111	50 - 150		%Rec	1	9/6/2019 7:16:28 AM
Surr: 4-Bromofluorobenzene	85.3	50 - 150		%Rec	1	9/6/2019 7:16:28 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Chloromethane	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Vinyl chloride	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:20:00 PM

Project: Hoonah

Lab ID: 1908349-014

Matrix: Soil

Client Sample ID: GLB-18-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Chloroethane	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1-Dichloroethene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Methylene chloride	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
trans-1,2-Dichloroethene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1-Dichloroethane	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
cis-1,2-Dichloroethene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Chloroform	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1-Dichloropropene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Carbon tetrachloride	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2-Dichloroethane (EDC)	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Benzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Trichloroethene (TCE)	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2-Dichloropropane	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Bromodichloromethane	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Dibromomethane	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
cis-1,3-Dichloropropene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Toluene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
trans-1,3-Dichloropropylene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1,2-Trichloroethane	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,3-Dichloropropane	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Tetrachloroethene (PCE)	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Dibromochloromethane	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2-Dibromoethane (EDB)	ND	0.00176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Chlorobenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1,1,2-Tetrachloroethane	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Ethylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
m,p-Xylene	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
o-Xylene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Styrene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Isopropylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Bromoform	ND	0.0176	Q	mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,1,2,2-Tetrachloroethane	ND	0.00704	Q	mg/Kg-dry	1	8/30/2019 4:16:59 PM
n-Propylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Bromobenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,3,5-Trimethylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 2:20:00 PM

Project: Hoonah

Lab ID: 1908349-014

Matrix: Soil

Client Sample ID: GLB-18-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
4-Chlorotoluene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
tert-Butylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2,3-Trichloropropane	ND	0.00880	Q	mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2,4-Trichlorobenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
sec-Butylbenzene	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
4-Isopropyltoluene	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,3-Dichlorobenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,4-Dichlorobenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
n-Butylbenzene	ND	0.00880		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2-Dichlorobenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2-Dibromo-3-chloropropane	ND	0.176	Q	mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2,4-Trimethylbenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Hexachloro-1,3-butadiene	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Naphthalene	ND	0.0176		mg/Kg-dry	1	8/30/2019 4:16:59 PM
1,2,3-Trichlorobenzene	ND	0.00704		mg/Kg-dry	1	8/30/2019 4:16:59 PM
Surr: Dibromofluoromethane	95.6	56.5 - 129		%Rec	1	8/30/2019 4:16:59 PM
Surr: Toluene-d8	98.9	64.5 - 151		%Rec	1	8/30/2019 4:16:59 PM
Surr: 1-Bromo-4-fluorobenzene	69.7	54.8 - 168		%Rec	1	8/30/2019 4:16:59 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	17.1	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:10:00 PM

Project: Hoonah

Lab ID: 1908349-016

Matrix: Soil

Client Sample ID: TRB-1-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	20.9		mg/Kg-dry	1	8/30/2019 5:38:43 AM
Residual Range Organics (C25-C36)	ND	52.2		mg/Kg-dry	1	8/30/2019 5:38:43 AM
Surr: 2-Fluorobiphenyl	70.1	50 - 150		%Rec	1	8/30/2019 5:38:43 AM
Surr: o-Terphenyl	77.4	50 - 150		%Rec	1	8/30/2019 5:38:43 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
2-Methylnaphthalene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
1-Methylnaphthalene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Acenaphthylene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Acenaphthene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Fluorene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Phenanthrene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Benz(a)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Chrysene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Benzo(b)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Benzo(k)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Benzo(a)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Indeno(1,2,3-cd)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Dibenz(a,h)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Benzo(g,h,i)perylene	ND	41.3		µg/Kg-dry	1	8/30/2019 1:57:45 AM
Surr: 2-Fluorobiphenyl	103	24.4 - 151		%Rec	1	8/30/2019 1:57:45 AM
Surr: Terphenyl-d14 (surr)	152	31.4 - 162		%Rec	1	8/30/2019 1:57:45 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.78		mg/Kg-dry	1	9/6/2019 7:57:32 AM
Surr: 1,4-Difluorobenzene	108	50 - 150		%Rec	1	9/6/2019 7:57:32 AM
Surr: 4-Bromofluorobenzene	108	50 - 150		%Rec	1	9/6/2019 7:57:32 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Chloromethane	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Vinyl chloride	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:10:00 PM

Project: Hoonah

Lab ID: 1908349-016

Matrix: Soil

Client Sample ID: TRB-1-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Trichlorofluoromethane (CFC-11)	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Chloroethane	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1-Dichloroethene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Methylene chloride	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
trans-1,2-Dichloroethene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Methyl tert-butyl ether (MTBE)	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1-Dichloroethane	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
cis-1,2-Dichloroethene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Chloroform	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1,1-Trichloroethane (TCA)	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1-Dichloropropene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Carbon tetrachloride	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2-Dichloroethane (EDC)	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Benzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Trichloroethene (TCE)	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2-Dichloropropane	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Bromodichloromethane	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Dibromomethane	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
cis-1,3-Dichloropropene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Toluene	0.0659	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
trans-1,3-Dichloropropylene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1,2-Trichloroethane	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,3-Dichloropropane	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Tetrachloroethene (PCE)	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Dibromochloromethane	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2-Dibromoethane (EDB)	ND	0.00278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Chlorobenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1,1,2-Tetrachloroethane	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Ethylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
m,p-Xylene	0.0596	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
o-Xylene	0.0204	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Styrene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Isopropylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Bromoform	ND	0.0278	Q	mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,1,2,2-Tetrachloroethane	ND	0.0111	Q	mg/Kg-dry	1	8/30/2019 4:47:07 PM
n-Propylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Bromobenzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,3,5-Trimethylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:10:00 PM

Project: Hoonah

Lab ID: 1908349-016

Matrix: Soil

Client Sample ID: TRB-1-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
4-Chlorotoluene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
tert-Butylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2,3-Trichloropropane	ND	0.0139	Q	mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2,4-Trichlorobenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
sec-Butylbenzene	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
4-Isopropyltoluene	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,3-Dichlorobenzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,4-Dichlorobenzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
n-Butylbenzene	ND	0.0139		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2-Dichlorobenzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2-Dibromo-3-chloropropane	ND	0.278	Q	mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2,4-Trimethylbenzene	0.0333	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Hexachloro-1,3-butadiene	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Naphthalene	ND	0.0278		mg/Kg-dry	1	8/30/2019 4:47:07 PM
1,2,3-Trichlorobenzene	ND	0.0111		mg/Kg-dry	1	8/30/2019 4:47:07 PM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/30/2019 4:47:07 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	8/30/2019 4:47:07 PM
Surr: 1-Bromo-4-fluorobenzene	93.5	54.8 - 168		%Rec	1	8/30/2019 4:47:07 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	5.37	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908349-018

Matrix: Soil

Client Sample ID: TRB-1-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.3		mg/Kg-dry	1	8/30/2019 6:08:35 AM
Residual Range Organics (C25-C36)	ND	53.2		mg/Kg-dry	1	8/30/2019 6:08:35 AM
Surr: 2-Fluorobiphenyl	68.0	50 - 150		%Rec	1	8/30/2019 6:08:35 AM
Surr: o-Terphenyl	76.2	50 - 150		%Rec	1	8/30/2019 6:08:35 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
2-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
1-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Acenaphthylene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Acenaphthene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Fluorene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Phenanthrene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Anthracene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Fluoranthene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Pyrene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Benz(a)anthracene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Chrysene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Benzo(b)fluoranthene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Benzo(k)fluoranthene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Benzo(a)pyrene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Indeno(1,2,3-cd)pyrene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Dibenz(a,h)anthracene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Benzo(g,h,i)perylene	ND	40.9		µg/Kg-dry	1	8/30/2019 2:18:23 AM
Surr: 2-Fluorobiphenyl	93.1	24.4 - 151		%Rec	1	8/30/2019 2:18:23 AM
Surr: Terphenyl-d14 (surr)	129	31.4 - 162		%Rec	1	8/30/2019 2:18:23 AM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	3.77		mg/Kg-dry	1	9/6/2019 8:38:39 AM
Surr: 1,4-Difluorobenzene	128	50 - 150		%Rec	1	9/6/2019 8:38:39 AM
Surr: 4-Bromofluorobenzene	107	50 - 150		%Rec	1	9/6/2019 8:38:39 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Chloromethane	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Vinyl chloride	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908349-018

Matrix: Soil

Client Sample ID: TRB-1-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Trichlorofluoromethane (CFC-11)	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Chloroethane	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1-Dichloroethene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Methylene chloride	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
trans-1,2-Dichloroethene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Methyl tert-butyl ether (MTBE)	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1-Dichloroethane	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
cis-1,2-Dichloroethene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Chloroform	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1,1-Trichloroethane (TCA)	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1-Dichloropropene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Carbon tetrachloride	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2-Dichloroethane (EDC)	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Benzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Trichloroethene (TCE)	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2-Dichloropropane	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Bromodichloromethane	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Dibromomethane	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
cis-1,3-Dichloropropene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Toluene	0.0289	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
trans-1,3-Dichloropropylene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1,2-Trichloroethane	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,3-Dichloropropane	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Tetrachloroethene (PCE)	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Dibromochloromethane	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2-Dibromoethane (EDB)	ND	0.00377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Chlorobenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1,1,2-Tetrachloroethane	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Ethylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
m,p-Xylene	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
o-Xylene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Styrene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Isopropylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Bromoform	ND	0.0377	Q	mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,1,2,2-Tetrachloroethane	ND	0.0151	Q	mg/Kg-dry	1	8/30/2019 5:17:15 PM
n-Propylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Bromobenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,3,5-Trimethylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908349-018

Matrix: Soil

Client Sample ID: TRB-1-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
4-Chlorotoluene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
tert-Butylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2,3-Trichloropropane	ND	0.0188	Q	mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2,4-Trichlorobenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
sec-Butylbenzene	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
4-Isopropyltoluene	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,3-Dichlorobenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,4-Dichlorobenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
n-Butylbenzene	ND	0.0188		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2-Dichlorobenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2-Dibromo-3-chloropropane	ND	0.377	Q	mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2,4-Trimethylbenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Hexachloro-1,3-butadiene	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Naphthalene	ND	0.0377		mg/Kg-dry	1	8/30/2019 5:17:15 PM
1,2,3-Trichlorobenzene	ND	0.0151		mg/Kg-dry	1	8/30/2019 5:17:15 PM
Surr: Dibromofluoromethane	94.6	56.5 - 129		%Rec	1	8/30/2019 5:17:15 PM
Surr: Toluene-d8	97.8	64.5 - 151		%Rec	1	8/30/2019 5:17:15 PM
Surr: 1-Bromo-4-fluorobenzene	86.3	54.8 - 168		%Rec	1	8/30/2019 5:17:15 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	9.26	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:55:00 PM

Project: Hoonah

Lab ID: 1908349-020

Matrix: Soil

Client Sample ID: TRB-2-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	2,630	213	D	mg/Kg-dry	10	8/30/2019 11:38:41 AM
Residual Range Organics (C25-C36)	ND	53.2		mg/Kg-dry	1	8/30/2019 6:38:26 AM
Surr: 2-Fluorobiphenyl	81.7	50 - 150		%Rec	1	8/30/2019 6:38:26 AM
Surr: o-Terphenyl	79.0	50 - 150		%Rec	1	8/30/2019 6:38:26 AM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25641		Analyst: SB
Naphthalene	204	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
2-Methylnaphthalene	405	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
1-Methylnaphthalene	157	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Acenaphthylene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Acenaphthene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Fluorene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Phenanthrene	44.9	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Pyrene	163	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Benz(a)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Chrysene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Benzo(b)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Benzo(k)fluoranthene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Benzo(a)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Indeno(1,2,3-cd)pyrene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Dibenz(a,h)anthracene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Benzo(g,h,i)perylene	ND	41.3		µg/Kg-dry	1	8/30/2019 2:38:58 AM
Surr: 2-Fluorobiphenyl	131	24.4 - 151		%Rec	1	8/30/2019 2:38:58 AM
Surr: Terphenyl-d14 (surr)	158	31.4 - 162		%Rec	1	8/30/2019 2:38:58 AM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25719		Analyst: CR
Gasoline Range Organics (C6-C10)	7.69	3.90		mg/Kg-dry	1	9/6/2019 9:19:45 AM
Surr: 1,4-Difluorobenzene	137	50 - 150		%Rec	1	9/6/2019 9:19:45 AM
Surr: 4-Bromofluorobenzene	104	50 - 150		%Rec	1	9/6/2019 9:19:45 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25679		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Chloromethane	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Vinyl chloride	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:55:00 PM

Project: Hoonah

Lab ID: 1908349-020

Matrix: Soil

Client Sample ID: TRB-2-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Trichlorofluoromethane (CFC-11)	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Chloroethane	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1-Dichloroethene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Methylene chloride	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
trans-1,2-Dichloroethene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Methyl tert-butyl ether (MTBE)	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1-Dichloroethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
cis-1,2-Dichloroethene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Chloroform	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1,1-Trichloroethane (TCA)	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1-Dichloropropene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Carbon tetrachloride	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2-Dichloroethane (EDC)	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Benzene	0.0183	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Trichloroethene (TCE)	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2-Dichloropropane	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Bromodichloromethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Dibromomethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
cis-1,3-Dichloropropene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Toluene	0.111	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
trans-1,3-Dichloropropylene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1,2-Trichloroethane	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,3-Dichloropropane	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Tetrachloroethene (PCE)	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Dibromochloromethane	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2-Dibromoethane (EDB)	ND	0.00390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Chlorobenzene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1,1,2-Tetrachloroethane	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Ethylbenzene	0.0430	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
m,p-Xylene	0.225	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
o-Xylene	0.0961	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Styrene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Isopropylbenzene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Bromoform	ND	0.0390	Q	mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,1,2,2-Tetrachloroethane	ND	0.0156	Q	mg/Kg-dry	1	8/30/2019 5:47:25 PM
n-Propylbenzene	0.0659	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Bromobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,3,5-Trimethylbenzene	0.0512	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 4:55:00 PM

Project: Hoonah

Lab ID: 1908349-020

Matrix: Soil

Client Sample ID: TRB-2-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
4-Chlorotoluene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
tert-Butylbenzene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2,3-Trichloropropane	ND	0.0195	Q	mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2,4-Trichlorobenzene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
sec-Butylbenzene	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
4-Isopropyltoluene	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,3-Dichlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,4-Dichlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
n-Butylbenzene	ND	0.0195		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2-Dichlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2-Dibromo-3-chloropropane	ND	0.390	Q	mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2,4-Trimethylbenzene	0.219	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Hexachloro-1,3-butadiene	ND	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Naphthalene	0.231	0.0390		mg/Kg-dry	1	8/30/2019 5:47:25 PM
1,2,3-Trichlorobenzene	ND	0.0156		mg/Kg-dry	1	8/30/2019 5:47:25 PM
Surr: Dibromofluoromethane	98.3	56.5 - 129		%Rec	1	8/30/2019 5:47:25 PM
Surr: Toluene-d8	98.6	64.5 - 151		%Rec	1	8/30/2019 5:47:25 PM
Surr: 1-Bromo-4-fluorobenzene	88.0	54.8 - 168		%Rec	1	8/30/2019 5:47:25 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	8.32	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 5:15:00 PM

Project: Hoonah

Lab ID: 1908349-021

Matrix: Soil

Client Sample ID: TRB-2-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	3,600	200	D	mg/Kg-dry	10	8/30/2019 12:08:40 PM
Residual Range Organics (C25-C36)	ND	50.0		mg/Kg-dry	1	8/30/2019 7:08:17 AM
Surr: 2-Fluorobiphenyl	86.6	50 - 150		%Rec	1	8/30/2019 7:08:17 AM
Surr: o-Terphenyl	84.5	50 - 150		%Rec	1	8/30/2019 7:08:17 AM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25641		Analyst: SB
Naphthalene	101	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
2-Methylnaphthalene	199	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
1-Methylnaphthalene	74.2	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Acenaphthylene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Acenaphthene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Fluorene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Phenanthrene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Anthracene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Fluoranthene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Pyrene	141	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Benz(a)anthracene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Chrysene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Benzo(b)fluoranthene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Benzo(k)fluoranthene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Benzo(a)pyrene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Indeno(1,2,3-cd)pyrene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Dibenz(a,h)anthracene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Benzo(g,h,i)perylene	ND	42.1		µg/Kg-dry	1	8/30/2019 2:59:31 AM
Surr: 2-Fluorobiphenyl	117	24.4 - 151		%Rec	1	8/30/2019 2:59:31 AM
Surr: Terphenyl-d14 (surr)	117	31.4 - 162		%Rec	1	8/30/2019 2:59:31 AM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25733		Analyst: CR
Gasoline Range Organics (C6-C10)	4.52	2.35		mg/Kg-dry	1	9/6/2019 6:47:17 PM
Surr: 1,4-Difluorobenzene	110	50 - 150		%Rec	1	9/6/2019 6:47:17 PM
Surr: 4-Bromofluorobenzene	103	50 - 150		%Rec	1	9/6/2019 6:47:17 PM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25679		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Chloromethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Bromomethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 5:15:00 PM

Project: Hoonah

Lab ID: 1908349-021

Matrix: Soil

Client Sample ID: TRB-2-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Chloroethane	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Methylene chloride	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
trans-1,2-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1-Dichloroethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
cis-1,2-Dichloroethene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Chloroform	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1,1-Trichloroethane (TCA)	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1-Dichloropropene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Carbon tetrachloride	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2-Dichloroethane (EDC)	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Benzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2-Dichloropropane	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Bromodichloromethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Dibromomethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
cis-1,3-Dichloropropene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Toluene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
trans-1,3-Dichloropropylene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1,2-Trichloroethane	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,3-Dichloropropane	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Tetrachloroethene (PCE)	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Dibromochloromethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Chlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1,1,2-Tetrachloroethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Ethylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
m,p-Xylene	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
o-Xylene	0.0142	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Styrene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Isopropylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Bromoform	ND	0.0235	Q	mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,1,2,2-Tetrachloroethane	ND	0.00939	Q	mg/Kg-dry	1	8/30/2019 6:17:36 PM
n-Propylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Bromobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,3,5-Trimethylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
2-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
4-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
tert-Butylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/19/2019 5:15:00 PM

Project: Hoonah

Lab ID: 1908349-021

Matrix: Soil

Client Sample ID: TRB-2-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

1,2,3-Trichloropropane	ND	0.0117	Q	mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2,4-Trichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
sec-Butylbenzene	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
4-Isopropyltoluene	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,3-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,4-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
n-Butylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2-Dichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2-Dibromo-3-chloropropane	ND	0.235	Q	mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2,4-Trimethylbenzene	0.0124	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Naphthalene	ND	0.0235		mg/Kg-dry	1	8/30/2019 6:17:36 PM
1,2,3-Trichlorobenzene	ND	0.00939		mg/Kg-dry	1	8/30/2019 6:17:36 PM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/30/2019 6:17:36 PM
Surr: Toluene-d8	97.3	64.5 - 151		%Rec	1	8/30/2019 6:17:36 PM
Surr: 1-Bromo-4-fluorobenzene	96.5	54.8 - 168		%Rec	1	8/30/2019 6:17:36 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00280	QH	mg/Kg-dry	1	9/4/2019 12:31:10 AM
Trichloroethene (TCE)	ND	0.00682	H	mg/Kg-dry	1	9/4/2019 12:31:10 AM
1,2-Dibromoethane (EDB)	ND	0.000685	H	mg/Kg-dry	1	9/4/2019 12:31:10 AM
Hexachloro-1,3-butadiene	ND	0.00373	H	mg/Kg-dry	1	9/4/2019 12:31:10 AM
Surr: Dibromofluoromethane	99.5	54.7 - 128	H	%Rec	1	9/4/2019 12:31:10 AM
Surr: Toluene-d8	97.5	74.2 - 139	H	%Rec	1	9/4/2019 12:31:10 AM
Surr: 1-Bromo-4-fluorobenzene	83.0	73.5 - 127	H	%Rec	1	9/4/2019 12:31:10 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	7.58	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:00:00 PM

Project: Hoonah

Lab ID: 1908349-023

Matrix: Soil

Client Sample ID: TRB-3-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	ND	17.8		mg/Kg-dry	1	8/30/2019 7:38:19 AM
Residual Range Organics (C25-C36)	ND	44.4		mg/Kg-dry	1	8/30/2019 7:38:19 AM
Surr: 2-Fluorobiphenyl	69.9	50 - 150		%Rec	1	8/30/2019 7:38:19 AM
Surr: o-Terphenyl	77.3	50 - 150		%Rec	1	8/30/2019 7:38:19 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
2-Methylnaphthalene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
1-Methylnaphthalene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Acenaphthylene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Acenaphthene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Fluorene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Phenanthrene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Anthracene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Fluoranthene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Pyrene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Benz(a)anthracene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Chrysene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Benzo(b)fluoranthene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Benzo(k)fluoranthene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Benzo(a)pyrene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Indeno(1,2,3-cd)pyrene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Dibenz(a,h)anthracene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Benzo(g,h,i)perylene	ND	36.8		µg/Kg-dry	1	8/30/2019 3:20:09 AM
Surr: 2-Fluorobiphenyl	111	24.4 - 151		%Rec	1	8/30/2019 3:20:09 AM
Surr: Terphenyl-d14 (surr)	154	31.4 - 162		%Rec	1	8/30/2019 3:20:09 AM

Gasoline Range Organics by AK101

Batch ID: 25733

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.57		mg/Kg-dry	1	9/6/2019 8:10:21 PM
Surr: 1,4-Difluorobenzene	113	50 - 150		%Rec	1	9/6/2019 8:10:21 PM
Surr: 4-Bromofluorobenzene	97.8	50 - 150		%Rec	1	9/6/2019 8:10:21 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Chloromethane	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Vinyl chloride	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:00:00 PM

Project: Hoonah

Lab ID: 1908349-023

Matrix: Soil

Client Sample ID: TRB-3-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Trichlorofluoromethane (CFC-11)	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Chloroethane	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Methylene chloride	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
trans-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Methyl tert-butyl ether (MTBE)	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1-Dichloroethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
cis-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Chloroform	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1,1-Trichloroethane (TCA)	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Carbon tetrachloride	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2-Dichloroethane (EDC)	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Benzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Trichloroethene (TCE)	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2-Dichloropropane	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Bromodichloromethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Dibromomethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
cis-1,3-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Toluene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
trans-1,3-Dichloropropylene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1,2-Trichloroethane	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,3-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Tetrachloroethene (PCE)	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Dibromochloromethane	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2-Dibromoethane (EDB)	ND	0.00257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Chlorobenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1,1,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Ethylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
m,p-Xylene	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
o-Xylene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Styrene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Isopropylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Bromoform	ND	0.0257	Q	mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,1,2,2-Tetrachloroethane	ND	0.0103	Q	mg/Kg-dry	1	8/30/2019 6:47:44 PM
n-Propylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Bromobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,3,5-Trimethylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:00:00 PM

Project: Hoonah

Lab ID: 1908349-023

Matrix: Soil

Client Sample ID: TRB-3-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
4-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
tert-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2,3-Trichloropropane	ND	0.0128	Q	mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2,4-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
sec-Butylbenzene	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
4-Isopropyltoluene	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,3-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,4-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
n-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2-Dibromo-3-chloropropane	ND	0.257	Q	mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2,4-Trimethylbenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Hexachloro-1,3-butadiene	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Naphthalene	ND	0.0257		mg/Kg-dry	1	8/30/2019 6:47:44 PM
1,2,3-Trichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/30/2019 6:47:44 PM
Surr: Dibromofluoromethane	92.7	56.5 - 129		%Rec	1	8/30/2019 6:47:44 PM
Surr: Toluene-d8	96.6	64.5 - 151		%Rec	1	8/30/2019 6:47:44 PM
Surr: 1-Bromo-4-fluorobenzene	93.3	54.8 - 168		%Rec	1	8/30/2019 6:47:44 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	3.53	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:45:00 PM

Project: Hoonah

Lab ID: 1908349-025

Matrix: Soil

Client Sample ID: TRB-3-10.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25660		Analyst: DW
Diesel Range Organics (C10-C25)	ND	20.2		mg/Kg-dry	1	8/30/2019 8:08:13 AM
Residual Range Organics (C25-C36)	ND	50.5		mg/Kg-dry	1	8/30/2019 8:08:13 AM
Surr: 2-Fluorobiphenyl	67.3	50 - 150		%Rec	1	8/30/2019 8:08:13 AM
Surr: o-Terphenyl	75.7	50 - 150		%Rec	1	8/30/2019 8:08:13 AM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25659		Analyst: SB
Naphthalene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
2-Methylnaphthalene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
1-Methylnaphthalene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Acenaphthylene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Acenaphthene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Fluorene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Phenanthrene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Anthracene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Fluoranthene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Pyrene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Benz(a)anthracene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Chrysene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Benzo(b)fluoranthene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Benzo(k)fluoranthene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Benzo(a)pyrene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Indeno(1,2,3-cd)pyrene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Dibenz(a,h)anthracene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Benzo(g,h,i)perylene	ND	39.5		µg/Kg-dry	1	9/3/2019 3:09:19 PM
Surr: 2-Fluorobiphenyl	79.7	24.4 - 151		%Rec	1	9/3/2019 3:09:19 PM
Surr: Terphenyl-d14 (surr)	70.7	31.4 - 162		%Rec	1	9/3/2019 3:09:19 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25733		Analyst: CR
Gasoline Range Organics (C6-C10)	ND	3.22		mg/Kg-dry	1	9/6/2019 8:51:50 PM
Surr: 1,4-Difluorobenzene	109	50 - 150		%Rec	1	9/6/2019 8:51:50 PM
Surr: 4-Bromofluorobenzene	95.2	50 - 150		%Rec	1	9/6/2019 8:51:50 PM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25679		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Chloromethane	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Vinyl chloride	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:45:00 PM

Project: Hoonah

Lab ID: 1908349-025

Matrix: Soil

Client Sample ID: TRB-3-10.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Chloroethane	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Methylene chloride	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
trans-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1-Dichloroethane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
cis-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Chloroform	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Carbon tetrachloride	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2-Dichloroethane (EDC)	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Benzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Trichloroethene (TCE)	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2-Dichloropropane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Bromodichloromethane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Dibromomethane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
cis-1,3-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Toluene	0.0241	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
trans-1,3-Dichloropropylene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1,2-Trichloroethane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,3-Dichloropropane	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Tetrachloroethene (PCE)	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Dibromochloromethane	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2-Dibromoethane (EDB)	ND	0.00322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Chlorobenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
m,p-Xylene	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
o-Xylene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Styrene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Isopropylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Bromoform	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,1,2,2-Tetrachloroethane	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
n-Propylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Bromobenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,3,5-Trimethylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 4:45:00 PM

Project: Hoonah

Lab ID: 1908349-025

Matrix: Soil

Client Sample ID: TRB-3-10.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
4-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
tert-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2,3-Trichloropropane	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2,4-Trichlorobenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
sec-Butylbenzene	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
4-Isopropyltoluene	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,3-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,4-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
n-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2-Dibromo-3-chloropropane	ND	0.322	Q	mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2,4-Trimethylbenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Hexachloro-1,3-butadiene	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Naphthalene	ND	0.0322		mg/Kg-dry	1	8/30/2019 9:18:29 PM
1,2,3-Trichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/30/2019 9:18:29 PM
Surr: Dibromofluoromethane	96.3	56.5 - 129		%Rec	1	8/30/2019 9:18:29 PM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	8/30/2019 9:18:29 PM
Surr: 1-Bromo-4-fluorobenzene	88.7	54.8 - 168		%Rec	1	8/30/2019 9:18:29 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	2.87	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908349-026

Matrix: Soil

Client Sample ID: TRB-4-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25682

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.1		mg/Kg-dry	1	9/3/2019 11:54:42 AM
Residual Range Organics (C25-C36)	ND	52.9		mg/Kg-dry	1	9/3/2019 11:54:42 AM
Surr: 2-Fluorobiphenyl	61.8	50 - 150		%Rec	1	9/3/2019 11:54:42 AM
Surr: o-Terphenyl	69.5	50 - 150		%Rec	1	9/3/2019 11:54:42 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25659

Analyst: SB

Naphthalene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
2-Methylnaphthalene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
1-Methylnaphthalene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Acenaphthylene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Acenaphthene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Fluorene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Phenanthrene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Anthracene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Fluoranthene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Pyrene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Benz(a)anthracene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Chrysene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Benzo(b)fluoranthene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Benzo(k)fluoranthene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Benzo(a)pyrene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Indeno(1,2,3-cd)pyrene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Dibenz(a,h)anthracene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Benzo(g,h,i)perylene	ND	37.2		µg/Kg-dry	1	9/3/2019 12:16:00 PM
Surr: 2-Fluorobiphenyl	64.6	24.4 - 151		%Rec	1	9/3/2019 12:16:00 PM
Surr: Terphenyl-d14 (surr)	62.5	31.4 - 162		%Rec	1	9/3/2019 12:16:00 PM

Gasoline Range Organics by AK101

Batch ID: 25733

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.94		mg/Kg-dry	1	9/6/2019 9:33:21 PM
Surr: 1,4-Difluorobenzene	107	50 - 150		%Rec	1	9/6/2019 9:33:21 PM
Surr: 4-Bromofluorobenzene	98.3	50 - 150		%Rec	1	9/6/2019 9:33:21 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Chloromethane	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Vinyl chloride	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908349-026

Matrix: Soil

Client Sample ID: TRB-4-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Trichlorofluoromethane (CFC-11)	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Chloroethane	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1-Dichloroethene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Methylene chloride	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
trans-1,2-Dichloroethene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1-Dichloroethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
cis-1,2-Dichloroethene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Chloroform	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1,1-Trichloroethane (TCA)	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1-Dichloropropene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Carbon tetrachloride	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2-Dichloroethane (EDC)	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Benzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Trichloroethene (TCE)	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2-Dichloropropane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Bromodichloromethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Dibromomethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
cis-1,3-Dichloropropene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Toluene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
trans-1,3-Dichloropropylene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1,2-Trichloroethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,3-Dichloropropane	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Tetrachloroethene (PCE)	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Dibromochloromethane	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2-Dibromoethane (EDB)	ND	0.00294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Chlorobenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1,1,2-Tetrachloroethane	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Ethylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
m,p-Xylene	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
o-Xylene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Styrene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Isopropylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Bromoform	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,1,2,2-Tetrachloroethane	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
n-Propylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Bromobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,3,5-Trimethylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908349-026

Matrix: Soil

Client Sample ID: TRB-4-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
4-Chlorotoluene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
tert-Butylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2,3-Trichloropropane	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2,4-Trichlorobenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
sec-Butylbenzene	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
4-Isopropyltoluene	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,3-Dichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,4-Dichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
n-Butylbenzene	ND	0.0147		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2-Dichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2-Dibromo-3-chloropropane	ND	0.294	Q	mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2,4-Trimethylbenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Hexachloro-1,3-butadiene	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Naphthalene	ND	0.0294		mg/Kg-dry	1	8/30/2019 9:48:39 PM
1,2,3-Trichlorobenzene	ND	0.0117		mg/Kg-dry	1	8/30/2019 9:48:39 PM
Surr: Dibromofluoromethane	95.5	56.5 - 129		%Rec	1	8/30/2019 9:48:39 PM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	8/30/2019 9:48:39 PM
Surr: 1-Bromo-4-fluorobenzene	86.5	54.8 - 168		%Rec	1	8/30/2019 9:48:39 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	5.59	0.500		wt%	1	8/29/2019 9:03:12 AM



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:20:00 PM

Project: Hoonah

Lab ID: 1908349-027

Matrix: Soil

Client Sample ID: TRB-4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25682		Analyst: DW
Diesel Range Organics (C10-C25)	ND	19.4		mg/Kg-dry	1	9/3/2019 12:24:42 PM
Residual Range Organics (C25-C36)	ND	48.5		mg/Kg-dry	1	9/3/2019 12:24:42 PM
Surr: 2-Fluorobiphenyl	64.9	50 - 150		%Rec	1	9/3/2019 12:24:42 PM
Surr: o-Terphenyl	73.3	50 - 150		%Rec	1	9/3/2019 12:24:42 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25659 Analyst: SB

Naphthalene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
2-Methylnaphthalene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
1-Methylnaphthalene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Acenaphthylene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Acenaphthene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Fluorene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Phenanthrene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Anthracene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Fluoranthene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Pyrene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Benz(a)anthracene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Chrysene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Benzo(b)fluoranthene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Benzo(k)fluoranthene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Benzo(a)pyrene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Indeno(1,2,3-cd)pyrene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Dibenz(a,h)anthracene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Benzo(g,h,i)perylene	ND	39.4		µg/Kg-dry	1	9/3/2019 12:36:43 PM
Surr: 2-Fluorobiphenyl	79.1	24.4 - 151		%Rec	1	9/3/2019 12:36:43 PM
Surr: Terphenyl-d14 (surr)	78.8	31.4 - 162		%Rec	1	9/3/2019 12:36:43 PM

Gasoline Range Organics by AK101

Batch ID: 25733 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.33		mg/Kg-dry	1	9/6/2019 10:14:49 PM
Surr: 1,4-Difluorobenzene	111	50 - 150		%Rec	1	9/6/2019 10:14:49 PM
Surr: 4-Bromofluorobenzene	96.7	50 - 150		%Rec	1	9/6/2019 10:14:49 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Chloromethane	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Vinyl chloride	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:20:00 PM

Project: Hoonah

Lab ID: 1908349-027

Matrix: Soil

Client Sample ID: TRB-4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

Bromomethane	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Trichlorofluoromethane (CFC-11)	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Chloroethane	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1-Dichloroethene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Methylene chloride	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
trans-1,2-Dichloroethene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Methyl tert-butyl ether (MTBE)	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1-Dichloroethane	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
cis-1,2-Dichloroethene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Chloroform	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1,1-Trichloroethane (TCA)	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1-Dichloropropene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Carbon tetrachloride	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2-Dichloroethane (EDC)	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Benzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Trichloroethene (TCE)	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2-Dichloropropane	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Bromodichloromethane	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Dibromomethane	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
cis-1,3-Dichloropropene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Toluene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
trans-1,3-Dichloropropylene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1,2-Trichloroethane	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,3-Dichloropropane	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Tetrachloroethene (PCE)	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Dibromochloromethane	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2-Dibromoethane (EDB)	ND	0.00233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Chlorobenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1,1,2-Tetrachloroethane	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Ethylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
m,p-Xylene	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
o-Xylene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Styrene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Isopropylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Bromoform	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,1,2,2-Tetrachloroethane	ND	0.00933	Q	mg/Kg-dry	1	9/3/2019 9:29:07 AM
n-Propylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Bromobenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,3,5-Trimethylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM

Original



Analytical Report

Work Order: 1908349
Date Reported: 9/9/2019

Client: G-Logics

Collection Date: 8/20/2019 5:20:00 PM

Project: Hoonah

Lab ID: 1908349-027

Matrix: Soil

Client Sample ID: TRB-4-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25679

Analyst: KT

2-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
4-Chlorotoluene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
tert-Butylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2,3-Trichloropropane	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2,4-Trichlorobenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
sec-Butylbenzene	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
4-Isopropyltoluene	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,3-Dichlorobenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,4-Dichlorobenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
n-Butylbenzene	ND	0.0117		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2-Dichlorobenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2-Dibromo-3-chloropropane	ND	0.233	Q	mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2,4-Trimethylbenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Hexachloro-1,3-butadiene	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Naphthalene	ND	0.0233		mg/Kg-dry	1	9/3/2019 9:29:07 AM
1,2,3-Trichlorobenzene	ND	0.00933		mg/Kg-dry	1	9/3/2019 9:29:07 AM
Surr: Dibromofluoromethane	95.9	56.5 - 129		%Rec	1	9/3/2019 9:29:07 AM
Surr: Toluene-d8	99.7	64.5 - 151		%Rec	1	9/3/2019 9:29:07 AM
Surr: 1-Bromo-4-fluorobenzene	90.3	54.8 - 168		%Rec	1	9/3/2019 9:29:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53554

Analyst: SBM

Percent Moisture	5.24	0.500		wt%	1	8/29/2019 9:03:12 AM

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25660		SampType: MBLK		Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588			
Client ID: MBLKS		Batch ID: 25660					Analysis Date: 8/29/2019			SeqNo: 1060875		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	14.4		20.00		71.8	60	120				
Surr: o-Terphenyl	16.2		20.00		80.8	60	120				

Sample ID: LCS-25660		SampType: LCS			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: LCSS		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060876				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	489	20.0	500.0	0	97.7	75	125				
Surr: 2-Fluorobiphenyl	14.7		20.00		73.7	60	120				
Surr: o-Terphenyl	16.5		20.00		82.5	60	120				

Sample ID: 1908382-001ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019					SeqNo: 1060878		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	19.7						0		30	
Residual Range Organics (C25-C36)	ND	49.1						0		30	
Surr: 2-Fluorobiphenyl	13.5		19.66		68.8	50	150		0		
Surr: o-Terphenyl	15.2		19.66		77.4	50	150		0		

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019				SeqNo: 1060879		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	475	19.5	488.7	8.611	95.4	75	125				
Surr: 2-Fluorobiphenyl	15.9		19.55		81.2	50	150				
Surr: o-Terphenyl	16.1		19.55		82.1	50	150				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060879				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: 1908382-001AMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53588			
Client ID: BATCH	Batch ID: 25660				Analysis Date: 8/29/2019			SeqNo: 1060880			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	512	19.6	490.0	8.611	103	75	125	474.7	7.55	30	
Surr: 2-Fluorobiphenyl	14.9		19.60		76.1	50	150		0		
Surr: o-Terphenyl	16.2		19.60		82.7	50	150		0		

Sample ID: 1908349-009ADUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53588			
Client ID: GLB-16-4'	Batch ID: 25660				Analysis Date: 8/29/2019			SeqNo: 1060883			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	22.6						0		30	
Residual Range Organics (C25-C36)	ND	56.4						0		30	
Surr: 2-Fluorobiphenyl	21.5		22.55		95.3	50	150		0		
Surr: o-Terphenyl	23.9		22.55		106	50	150		0		

Sample ID: MB-25682	SampType: MBLK	Units: mg/Kg			Prep Date: 9/3/2019			RunNo: 53623			
Client ID: MBLKS	Batch ID: 25682				Analysis Date: 9/3/2019			SeqNo: 1061623			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	12.8		20.00		64.2	60	120				
Surr: o-Terphenyl	14.4		20.00		72.0	60	120				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: LCS-25682		SampType: LCS			Units: mg/Kg		Prep Date: 9/3/2019			RunNo: 53623		
Client ID: LCSS		Batch ID: 25682			Analysis Date: 9/3/2019			SeqNo: 1061632				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

463

20.0

500.0

0

92.5

75

125

Surr: 2-Fluorobiphenyl

15.5

20.00

77.4

60

120

Surr: o-Terphenyl

16.1

20.00

80.7

60

120

Sample ID: 1908349-026ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53623		
Client ID: TRB-4-3'		Batch ID: 25682					Analysis Date: 9/3/2019			SeqNo: 1061627	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

ND

20.4

0

30

Residual Range Organics (C25-C36)

ND

51.0

0

30

Surr: 2-Fluorobiphenyl

12.7

20.39

62.3

50

150

0

Surr: o-Terphenyl

14.4

20.39

70.4

50

150

0

Sample ID: 1908349-026AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53623		
Client ID: TRB-4-3'		Batch ID: 25682			Analysis Date: 9/3/2019			SeqNo: 1061628				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

455

20.3

506.3

8.383

88.2

75

125

Surr: 2-Fluorobiphenyl

14.1

20.25

69.5

50

150

Surr: o-Terphenyl

15.1

20.25

74.6

50

150

Sample ID: 1908349-026AMSD		SampType: MSD			Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53623		
Client ID: TRB-4-3'		Batch ID: 25682			Analysis Date: 9/3/2019					SeqNo: 1061629		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

424

19.2

479.3

8.383

86.7

75

125

455.1

7.09

30

Surr: 2-Fluorobiphenyl

14.1

19.17

73.7

50

150

0

Surr: o-Terphenyl

14.3

19.17

74.9

50

150

0

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: LCS-25719		SampType: LCS			Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: LCSS		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063235				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

28.2

5.00

25.00

0

113

60

120

Surr: 1,4-Difluorobenzene

2.66

2.500

106

60

120

Surr: 4-Bromofluorobenzene

2.56

2.500

102

60

120

Sample ID: MB-25719		SampType: MBLK		Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713			
Client ID: MBLKS		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063236		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

ND

5.00

Surr: 1,4-Difluorobenzene

2.90

2.500

116

60

120

Surr: 4-Bromofluorobenzene

2.78

2.500

111

60

120

Sample ID: 1908347-002BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/5/2019		RunNo: 53713		
Client ID: BATCH		Batch ID: 25719			Analysis Date: 9/5/2019				SeqNo: 1063210		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)

ND

2.55

Surr: 1,4-Difluorobenzene

1.47

1.274

115

50

150

Surr: 4-Bromofluorobenzene

3.68

3.822

96.4

50

150

0

0

20

0

0

Sample ID: 1908349-005BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: GLB-15-2'		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

4.18

3.37

Surr: 1,4-Difluorobenzene

1.82

1.685

108

50

150

Surr: 4-Bromofluorobenzene

4.53

5.055

89.5

50

150

4.786

13.5

20

0

0

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: 1908349-020BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: TRB-2-6'		Batch ID: 25719					Analysis Date: 9/6/2019			SeqNo: 1063231	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	31.4	3.90	19.48	7.691	122	60	120				S
Surr: 1,4-Difluorobenzene	2.45		1.948		126	60	120				S
Surr: 4-Bromofluorobenzene	6.56		5.845		112	60	120				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908349-020BMSD		SampType: MSD			Units: mg/Kg-dry		Prep Date: 9/5/2019		RunNo: 53713		
Client ID: TRB-2-6'		Batch ID: 25719			Analysis Date: 9/6/2019				SeqNo: 1063232		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	29.6	3.90	19.48	7.691	112	60	120	31.44	6.06	20	
Surr: 1,4-Difluorobenzene	2.67		1.948		137	60	120		0		S
Surr: 4-Bromofluorobenzene	6.20		5.845		106	60	120		0		

NOTES:

S - Outlying surrogate recovery(ies) observed.

Sample ID: LCS-25733		SampType: LCS			Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53743		
Client ID: LCSS		Batch ID: 25733			Analysis Date: 9/6/2019					SeqNo: 1063771		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)	25.3	5.00	25.00	0	101	60	120				
Surr: 1,4-Difluorobenzene	2.70		2.500		108	60	120				
Surr: 4-Bromofluorobenzene	2.60		2.500		104	60	120				

Sample ID: MB-25733	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53743			
Client ID: MBLKS	Batch ID: 25733	Analysis Date: 9/6/2019						SeqNo: 1063772			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	ND	5.00									
Surr: 1,4-Difluorobenzene	2.74		2.500		109	60	120				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: MB-25733		SampType: MBLK		Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53743			
Client ID: MBLKS		Batch ID: 25733					Analysis Date: 9/6/2019			SeqNo: 1063772		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Surr: 4-Bromofluorobenzene 2.63 2.500 105 60 120

Sample ID: 1908349-021BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53743		
Client ID: TRB-2-8'		Batch ID: 25733					Analysis Date: 9/6/2019			SeqNo: 1063762	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10) 4.33 2.35 4.523 4.43 20

Surr: 1,4-Difluorobenzene 1.24 1.173 106 50 150 0

Surr: 4-Bromofluorobenzene 3.73 3.520 106 50 150 0

Sample ID: 1908349-027BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53743			
Client ID: TRB-4-6'		Batch ID: 25733					Analysis Date: 9/6/2019			SeqNo: 1063767		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 11.8 2.33 11.66 0 102 60 120

Surr: 1,4-Difluorobenzene 1.27 1.166 109 60 120

Surr: 4-Bromofluorobenzene 3.59 3.497 103 60 120

Sample ID: 1908349-027BMSD		SampType: MSD			Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53743		
Client ID: TRB-4-6'		Batch ID: 25733			Analysis Date: 9/6/2019			SeqNo: 1063768				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 12.1 2.33 11.66 0 104 60 120 11.85 2.15 20

Surr: 1,4-Difluorobenzene 1.31 1.166 113 60 120 0

Surr: 4-Bromofluorobenzene 3.50 3.497 100 60 120 0

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25641	SampType: MBLK	Units: µg/Kg				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: MBLKS	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060814		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	567		500.0		113	24.4	151				
Surr: Terphenyl-d14 (surr)	630		500.0		126	31.4	162				

Sample ID: LCS-25641	SampType: LCS	Units: µg/Kg			Prep Date: 8/28/2019			RunNo: 53586			
Client ID: LCSS	Batch ID: 25641				Analysis Date: 8/29/2019			SeqNo: 1060815			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	826	40.0	1,000	0	82.6	63.6	135				
2-Methylnaphthalene	827	40.0	1,000	0	82.7	61.5	140				
1-Methylnaphthalene	792	40.0	1,000	0	79.2	59.6	140				
Acenaphthylene	830	40.0	1,000	0	83.0	61.2	141				
Acenaphthene	809	40.0	1,000	0	80.9	62.3	134				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25641	SampType: LCS	Units: µg/Kg				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: LCSS	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060815		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	860	40.0	1,000	0	86.0	64.1	134				
Phenanthrene	800	40.0	1,000	0	80.0	63.2	132				
Anthracene	846	40.0	1,000	0	84.6	61.5	136				
Fluoranthene	879	40.0	1,000	0	87.9	63.1	140				
Pyrene	867	40.0	1,000	0	86.7	63.4	140				
Benz(a)anthracene	819	40.0	1,000	0	81.9	62.7	148				
Chrysene	865	40.0	1,000	0	86.5	60.5	142				
Benzo(b)fluoranthene	877	40.0	1,000	0	87.7	55.8	158				
Benzo(k)fluoranthene	820	40.0	1,000	0	82.0	64	136				
Benzo(a)pyrene	900	40.0	1,000	0	90.0	61.9	151				
Indeno(1,2,3-cd)pyrene	820	40.0	1,000	0	82.0	48.3	147				
Dibenz(a,h)anthracene	806	40.0	1,000	0	80.6	47.9	150				
Benzo(g,h,i)perylene	782	40.0	1,000	0	78.2	44.4	144				
Surr: 2-Fluorobiphenyl	610		500.0		122	24.4	151				
Surr: Terphenyl-d14 (surr)	699		500.0		140	31.4	162				

Sample ID: 1908347-023ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: BATCH		Batch ID: 25641		Analysis Date: 8/29/2019						SeqNo: 1060817	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	44.4						0		30	
2-Methylnaphthalene	ND	44.4						0		30	
1-Methylnaphthalene	ND	44.4						0		30	
Acenaphthylene	ND	44.4						0		30	
Acenaphthene	ND	44.4						0		30	
Fluorene	ND	44.4						0		30	
Phenanthrene	ND	44.4						0		30	
Anthracene	ND	44.4						0		30	
Fluoranthene	ND	44.4						0		30	
Pyrene	ND	44.4						0		30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: BATCH		Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060817	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	44.4						0		30	
Chrysene	ND	44.4						0		30	
Benzo(b)fluoranthene	ND	44.4						0		30	
Benzo(k)fluoranthene	ND	44.4						0		30	
Benzo(a)pyrene	ND	44.4						0		30	
Indeno(1,2,3-cd)pyrene	ND	44.4						0		30	
Dibenz(a,h)anthracene	ND	44.4						0		30	
Benzo(g,h,i)perylene	ND	44.4						0		30	
Surr: 2-Fluorobiphenyl	559		555.2		101	24.4	151		0		
Surr: Terphenyl-d14 (surr)	711		555.2		128	31.4	162		0		

Sample ID: 1908347-023AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: BATCH		Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060818	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	839	44.5	1,111	10.92	74.5	37	127				
2-Methylnaphthalene	770	44.5	1,111	3.841	69.0	38.9	128				
1-Methylnaphthalene	794	44.5	1,111	0	71.5	36.2	129				
Acenaphthylene	833	44.5	1,111	0	74.9	39	132				
Acenaphthene	825	44.5	1,111	0	74.3	39.5	124				
Fluorene	904	44.5	1,111	6.373	80.8	38.3	128				
Phenanthrene	852	44.5	1,111	25.14	74.4	29.2	132				
Anthracene	877	44.5	1,111	7.251	78.3	38.8	128				
Fluoranthene	935	44.5	1,111	0	84.1	38.4	135				
Pyrene	898	44.5	1,111	0	80.8	37.8	134				
Benz(a)anthracene	865	44.5	1,111	5.310	77.4	39.2	143				
Chrysene	888	44.5	1,111	6.013	79.3	35.9	131				
Benzo(b)fluoranthene	905	44.5	1,111	0	81.4	36.3	148				
Benzo(k)fluoranthene	780	44.5	1,111	10.16	69.3	31.2	133				
Benzo(a)pyrene	874	44.5	1,111	0	78.6	35.9	144				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMS	SampType: MS	Units: µg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53586			
Client ID: BATCH	Batch ID: 25641				Analysis Date: 8/29/2019			SeqNo: 1060818			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	834	44.5	1,111	0	75.1	25.3	131				
Dibenz(a,h)anthracene	829	44.5	1,111	0	74.6	27.4	132				
Benzo(g,h,i)perylene	792	44.5	1,111	0	71.3	20.1	128				
Surr: 2-Fluorobiphenyl	592		555.7		106	24.4	151				
Surr: Terphenyl-d14 (surr)	720		555.7		130	31.4	162				

Sample ID: 1908347-023AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: BATCH		Batch ID: 25641		Analysis Date: 8/29/2019					SeqNo: 1060819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	615	38.8	969.6	10.92	62.3	37	127	839.4	30.9	30	R
2-Methylnaphthalene	626	38.8	969.6	3.841	64.2	38.9	128	770.4	20.7	30	
1-Methylnaphthalene	611	38.8	969.6	0	63.0	36.2	129	794.2	26.0	30	
Acenaphthylene	646	38.8	969.6	0	66.6	39	132	832.9	25.3	30	
Acenaphthene	616	38.8	969.6	0	63.5	39.5	124	825.4	29.1	30	
Fluorene	656	38.8	969.6	6.373	67.0	38.3	128	904.4	31.8	30	R
Phenanthrene	616	38.8	969.6	25.14	60.9	29.2	132	851.6	32.2	30	R
Anthracene	668	38.8	969.6	7.251	68.2	38.8	128	877.2	27.0	30	
Fluoranthene	682	38.8	969.6	0	70.3	38.4	135	934.7	31.2	30	R
Pyrene	660	38.8	969.6	0	68.0	37.8	134	898.1	30.6	30	R
Benz(a)anthracene	623	38.8	969.6	5.310	63.7	39.2	143	865.4	32.6	30	R
Chrysene	678	38.8	969.6	6.013	69.3	35.9	131	887.9	26.8	30	
Benzo(b)fluoranthene	624	38.8	969.6	0	64.3	36.3	148	904.9	36.8	30	R
Benzo(k)fluoranthene	711	38.8	969.6	10.16	72.3	31.2	133	780.5	9.31	30	
Benzo(a)pyrene	704	38.8	969.6	0	72.6	35.9	144	873.8	21.5	30	
Indeno(1,2,3-cd)pyrene	563	38.8	969.6	0	58.0	25.3	131	834.4	38.9	30	R
Dibenz(a,h)anthracene	564	38.8	969.6	0	58.1	27.4	132	829.2	38.1	30	R
Benzo(g,h,i)perylene	530	38.8	969.6	0	54.6	20.1	128	792.0	39.7	30	R
Surr: 2-Fluorobiphenyl	449		484.8		92.5	24.4	151		0		
Surr: Terphenyl-d14 (surr)	533		484.8		110	31.4	162		0		

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: BATCH		Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060819	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

R - High RPD observed, spike recovery is within range.

Sample ID: MB-25659		SampType: MBLK		Units: µg/Kg		Prep Date: 8/29/2019			RunNo: 53617		
Client ID: MBLKS		Batch ID: 25659		Analysis Date: 9/3/2019						SeqNo: 1061523	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	402		500.0		80.3	24.4	151				
Surr: Terphenyl-d14 (surr)	389		500.0		77.8	31.4	162				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25659	SampType: LCS	Units: µg/Kg			Prep Date: 8/29/2019			RunNo: 53617			
Client ID: LCSS	Batch ID: 25659	Analysis Date: 9/3/2019						SeqNo: 1061524			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	849	40.0	1,000	0	84.9	63.6	135				
2-Methylnaphthalene	834	40.0	1,000	0	83.4	61.5	140				
1-Methylnaphthalene	835	40.0	1,000	0	83.5	59.6	140				
Acenaphthylene	839	40.0	1,000	0	83.9	61.2	141				
Acenaphthene	818	40.0	1,000	0	81.8	62.3	134				
Fluorene	813	40.0	1,000	0	81.3	64.1	134				
Phenanthrene	821	40.0	1,000	0	82.1	63.2	132				
Anthracene	818	40.0	1,000	0	81.8	61.5	136				
Fluoranthene	777	40.0	1,000	0	77.7	63.1	140				
Pyrene	791	40.0	1,000	0	79.1	63.4	140				
Benz(a)anthracene	880	40.0	1,000	0	88.0	62.7	148				
Chrysene	803	40.0	1,000	0	80.3	60.5	142				
Benzo(b)fluoranthene	854	40.0	1,000	0	85.4	55.8	158				
Benzo(k)fluoranthene	814	40.0	1,000	0	81.4	64	136				
Benzo(a)pyrene	819	40.0	1,000	0	81.9	61.9	151				
Indeno(1,2,3-cd)pyrene	831	40.0	1,000	0	83.1	48.3	147				
Dibenz(a,h)anthracene	833	40.0	1,000	0	83.3	47.9	150				
Benzo(g,h,i)perylene	831	40.0	1,000	0	83.1	44.4	144				
Surr: 2-Fluorobiphenyl	421		500.0		84.2	24.4	151				
Surr: Terphenyl-d14 (surr)	404		500.0		80.8	31.4	162				

Sample ID: 1908383-001ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53617		
Client ID: BATCH		Batch ID: 25659					Analysis Date: 9/3/2019			SeqNo: 1061526	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.2						0		30	
2-Methylnaphthalene	ND	40.2						0		30	
1-Methylnaphthalene	ND	40.2						0		30	
Acenaphthylene	ND	40.2						0		30	
Acenaphthene	ND	40.2						0		30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908383-001ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53617		
Client ID: BATCH		Batch ID: 25659		Analysis Date: 9/3/2019					SeqNo: 1061526		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	ND	40.2						0		30	
Phenanthrene	ND	40.2						57.93	103	30	
Anthracene	ND	40.2						0		30	
Fluoranthene	ND	40.2						73.39	101	30	R
Pyrene	60.0	40.2						109.1	58.1	30	R
Benz(a)anthracene	ND	40.2						54.05	77.4	30	
Chrysene	93.2	40.2						106.5	13.3	30	
Benzo(b)fluoranthene	ND	40.2						0		30	
Benzo(k)fluoranthene	ND	40.2						0		30	
Benzo(a)pyrene	ND	40.2						0		30	
Indeno(1,2,3-cd)pyrene	ND	40.2						0		30	
Dibenz(a,h)anthracene	ND	40.2						0		30	
Benzo(g,h,i)perylene	69.7	40.2						70.13	0.578	30	
Surr: 2-Fluorobiphenyl	365		502.7		72.6	24.4	151		0		
Surr: Terphenyl-d14 (surr)	359		502.7		71.4	31.4	162		0		

NOTES:

R - High RPD due to suspected sample inhomogeneity.

Sample ID: 1908383-001AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53617		
Client ID: BATCH		Batch ID: 25659					Analysis Date: 9/3/2019			SeqNo: 1061527	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	719	39.2	980.6	0	73.3	37	127				
2-Methylnaphthalene	758	39.2	980.6	4.768	76.8	38.9	128				
1-Methylnaphthalene	719	39.2	980.6	0	73.3	36.2	129				
Acenaphthylene	746	39.2	980.6	2.434	75.8	39	132				
Acenaphthene	709	39.2	980.6	6.378	71.7	39.5	124				
Fluorene	712	39.2	980.6	6.166	72.0	38.3	128				
Phenanthrene	713	39.2	980.6	57.93	66.8	29.2	132				
Anthracene	761	39.2	980.6	12.25	76.4	38.8	128				
Fluoranthene	762	39.2	980.6	73.39	70.2	38.4	135				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908383-001AMS	SampType: MS	Units: µg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53617			
Client ID: BATCH	Batch ID: 25659				Analysis Date: 9/3/2019			SeqNo: 1061527			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Pyrene	780	39.2	980.6	109.1	68.4	37.8	134				
Benz(a)anthracene	782	39.2	980.6	54.05	74.2	39.2	143				
Chrysene	768	39.2	980.6	106.5	67.5	35.9	131				
Benzo(b)fluoranthene	619	39.2	980.6	0	63.1	36.3	148				
Benzo(k)fluoranthene	472	39.2	980.6	0	48.2	31.2	133				
Benzo(a)pyrene	541	39.2	980.6	0	55.1	35.9	144				
Indeno(1,2,3-cd)pyrene	425	39.2	980.6	0	43.4	25.3	131				
Dibenz(a,h)anthracene	437	39.2	980.6	0	44.6	27.4	132				
Benzo(g,h,i)perylene	403	39.2	980.6	70.13	34.0	20.1	128				
Surr: 2-Fluorobiphenyl	359		490.3		73.3	24.4	151				
Surr: Terphenyl-d14 (surr)	356		490.3		72.6	31.4	162				

Sample ID: 1908383-001AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 8/29/2019			RunNo: 53617		
Client ID: BATCH	Batch ID: 25659	Analysis Date: 9/3/2019							SeqNo: 1061528		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	796	41.2	1,029	0	77.4	37	127	719.3	10.2	30	
2-Methylnaphthalene	855	41.2	1,029	4.768	82.6	38.9	128	757.8	12.0	30	
1-Methylnaphthalene	808	41.2	1,029	0	78.5	36.2	129	718.6	11.7	30	
Acenaphthylene	798	41.2	1,029	2.434	77.3	39	132	745.6	6.77	30	
Acenaphthene	763	41.2	1,029	6.378	73.5	39.5	124	709.2	7.30	30	
Fluorene	745	41.2	1,029	6.166	71.8	38.3	128	712.5	4.47	30	
Phenanthrene	790	41.2	1,029	57.93	71.2	29.2	132	712.5	10.4	30	
Anthracene	830	41.2	1,029	12.25	79.5	38.8	128	761.1	8.69	30	
Fluoranthene	784	41.2	1,029	73.39	69.1	38.4	135	761.9	2.90	30	
Pyrene	811	41.2	1,029	109.1	68.2	37.8	134	780.0	3.88	30	
Benz(a)anthracene	798	41.2	1,029	54.05	72.2	39.2	143	782.0	1.97	30	
Chrysene	816	41.2	1,029	106.5	69.0	35.9	131	768.2	6.07	30	
Benzo(b)fluoranthene	685	41.2	1,029	0	66.5	36.3	148	618.6	10.2	30	
Benzo(k)fluoranthene	457	41.2	1,029	0	44.4	31.2	133	472.2	3.28	30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908383-001AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53617		
Client ID: BATCH		Batch ID: 25659				Analysis Date: 9/3/2019			SeqNo: 1061528		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzo(a)pyrene	576	41.2	1,029	0	56.0	35.9	144	540.6	6.35	30	
Indeno(1,2,3-cd)pyrene	494	41.2	1,029	0	48.0	25.3	131	425.4	14.9	30	
Dibenz(a,h)anthracene	510	41.2	1,029	0	49.5	27.4	132	437.4	15.3	30	
Benzo(g,h,i)perylene	478	41.2	1,029	70.13	39.6	20.1	128	403.2	16.9	30	
Surr: 2-Fluorobiphenyl	404		514.6		78.5	24.4	151		0		
Surr: Terphenyl-d14 (surr)	372		514.6		72.4	31.4	162		0		

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.19	0.0200	1.000	0	119	14.3	167				
Chloromethane	1.05	0.0500	1.000	0	105	32	156				
Vinyl chloride	1.08	0.0250	1.000	0	108	43.4	151				
Bromomethane	1.82	0.0500	1.000	0	182	35	155				S
Trichlorofluoromethane (CFC-11)	1.45	0.0200	1.000	0	145	33.8	156				
Chloroethane	1.31	0.0500	1.000	0	131	33.1	147				
1,1-Dichloroethene	1.09	0.0200	1.000	0	109	30.9	145				
Methylene chloride	1.09	0.0200	1.000	0	109	46.3	140				
trans-1,2-Dichloroethene	1.08	0.0200	1.000	0	108	68	130				
Methyl tert-butyl ether (MTBE)	1.10	0.0500	1.000	0	110	44.1	152				
1,1-Dichloroethane	1.10	0.0200	1.000	0	110	61.9	137				
cis-1,2-Dichloroethene	1.06	0.0200	1.000	0	106	71.3	135				
Chloroform	1.08	0.0200	1.000	0	108	69	145				
1,1,1-Trichloroethane (TCA)	1.06	0.0250	1.000	0	106	69	132				
1,1-Dichloropropene	1.06	0.0200	1.000	0	106	72.7	131				
Carbon tetrachloride	1.04	0.0250	1.000	0	104	63.4	137				
1,2-Dichloroethane (EDC)	1.07	0.0200	1.000	0	107	50.9	162				
Benzene	1.08	0.0200	1.000	0	108	64.3	133				
Trichloroethene (TCE)	1.08	0.0200	1.000	0	108	65.5	137				
1,2-Dichloropropane	1.05	0.0200	1.000	0	105	63.2	142				
Bromodichloromethane	1.03	0.0200	1.000	0	103	53.4	131				
Dibromomethane	1.09	0.0200	1.000	0	109	60.1	146				
cis-1,3-Dichloropropene	1.03	0.0200	1.000	0	103	59.1	143				
Toluene	1.02	0.0200	1.000	0	102	67	144				
trans-1,3-Dichloropropylene	1.02	0.0200	1.000	0	102	49.2	149				
1,1,2-Trichloroethane	1.10	0.0200	1.000	0	110	56.9	147				
1,3-Dichloropropane	1.04	0.0250	1.000	0	104	56.1	153				
Tetrachloroethene (PCE)	1.02	0.0250	1.000	0	102	52.7	150				
Dibromochloromethane	1.01	0.0250	1.000	0	101	70.6	144				
1,2-Dibromoethane (EDB)	0.961	0.00500	1.000	0	96.1	50.5	154				
Chlorobenzene	1.04	0.0250	1.000	0	104	84.9	125				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	1.03	0.0250	1.000	0	103	65.9	141				
Ethylbenzene	1.00	0.0250	1.000	0	100	74	129				
m,p-Xylene	2.05	0.0500	2.000	0	103	70	124				
o-Xylene	0.995	0.0250	1.000	0	99.5	68.1	139				
Styrene	1.04	0.0250	1.000	0	104	73.3	146				
Isopropylbenzene	0.992	0.0250	1.000	0	99.2	70	130				
Bromoform	1.02	0.0500	1.000	0	102	44.3	130				
1,1,2,2-Tetrachloroethane	1.15	0.0200	1.000	0	115	44.8	165				
n-Propylbenzene	1.05	0.0250	1.000	0	105	75.8	139				
Bromobenzene	1.05	0.0200	1.000	0	105	49.2	144				
1,3,5-Trimethylbenzene	1.05	0.0250	1.000	0	105	76.5	135				
2-Chlorotoluene	1.05	0.0250	1.000	0	105	76.7	129				
4-Chlorotoluene	1.08	0.0250	1.000	0	108	77.5	125				
tert-Butylbenzene	1.00	0.0250	1.000	0	100	66.2	130				
1,2,3-Trichloropropane	1.09	0.0250	1.000	0	109	67.9	136				
1,2,4-Trichlorobenzene	0.978	0.0250	1.000	0	97.8	65.5	150				
sec-Butylbenzene	1.03	0.0500	1.000	0	103	75.6	133				
4-Isopropyltoluene	1.03	0.0500	1.000	0	103	76.8	131				
1,3-Dichlorobenzene	1.02	0.0200	1.000	0	102	48.6	144				
1,4-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.6	126				
n-Butylbenzene	0.979	0.0250	1.000	0	97.9	78.4	140				
1,2-Dichlorobenzene	1.04	0.0200	1.000	0	104	72.8	126				
1,2-Dibromo-3-chloropropane	1.03	0.500	1.000	0	103	40.2	155				
1,2,4-Trimethylbenzene	1.06	0.0200	1.000	0	106	77.5	129				
Hexachloro-1,3-butadiene	1.05	0.0500	1.000	0	105	42	151				
Naphthalene	1.03	0.0500	1.000	0	103	46.5	167				
1,2,3-Trichlorobenzene	1.09	0.0200	1.000	0	109	64.5	149				
Surr: Dibromofluoromethane	1.33		1.250		107	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	54.8	168				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019				RunNo: 53612		
Client ID: LCSS	Batch ID: 25656				Analysis Date: 8/29/2019				SeqNo: 1061447		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: MB-25656		SampType: MBLK			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: MBLKS		Batch ID: 25656			Analysis Date: 8/29/2019			SeqNo: 1061448				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									Q
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: MBLKS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									

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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: MBLKS	Batch ID: 25656				Analysis Date: 8/29/2019			SeqNo: 1061448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.29		1.250		103	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.13		1.250		90.6	54.8	168				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656		Analysis Date: 8/29/2019						SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0488						0		30	D
Chloromethane	ND	0.122						0		30	DQ
Vinyl chloride	ND	0.0610						0		30	D
Bromomethane	ND	0.122						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0488						0		30	D
Chloroethane	ND	0.122						0		30	D
1,1-Dichloroethene	ND	0.0488						0		30	D
Methylene chloride	ND	0.0488						0		30	D
trans-1,2-Dichloroethene	ND	0.0488						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.122						0		30	D
1,1-Dichloroethane	ND	0.0488						0		30	D
cis-1,2-Dichloroethene	ND	0.0488						0		30	D
Chloroform	ND	0.0488						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.0610						0		30	D
1,1-Dichloropropene	ND	0.0488						0		30	D
Carbon tetrachloride	ND	0.0610						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0488						0		30	D
Benzene	ND	0.0488						0		30	D

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656		Analysis Date: 8/29/2019						SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0488						0		30	D
1,2-Dichloropropane	ND	0.0488						0		30	D
Bromodichloromethane	ND	0.0488						0		30	D
Dibromomethane	ND	0.0488						0		30	D
cis-1,3-Dichloropropene	ND	0.0488						0		30	D
Toluene	ND	0.0488						0		30	D
trans-1,3-Dichloropropylene	ND	0.0488						0		30	D
1,1,2-Trichloroethane	ND	0.0488						0		30	D
1,3-Dichloropropane	ND	0.0610						0		30	D
Tetrachloroethene (PCE)	ND	0.0610						0		30	D
Dibromochloromethane	ND	0.0610						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0122						0		30	D
Chlorobenzene	ND	0.0610						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.0610						0		30	D
Ethylbenzene	1.80	0.0610						2.248	22.4	30	D
m,p-Xylene	6.72	0.122						8.559	24.0	30	DE
o-Xylene	0.677	0.0610						0.8378	21.3	30	D
Styrene	ND	0.0610						0		30	D
Isopropylbenzene	0.394	0.0610						0.4877	21.4	30	D
Bromoform	ND	0.122						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0488						0		30	D
n-Propylbenzene	1.35	0.0610						1.709	23.5	30	D
Bromobenzene	ND	0.0488						0		30	D
1,3,5-Trimethylbenzene	2.43	0.0610						3.113	24.7	30	D
2-Chlorotoluene	ND	0.0610						0		30	D
4-Chlorotoluene	ND	0.0610						0		30	D
tert-Butylbenzene	ND	0.0610						0		30	D
1,2,3-Trichloropropane	ND	0.0610						0		30	D
1,2,4-Trichlorobenzene	ND	0.0610						0		30	D
sec-Butylbenzene	0.248	0.122						0.3202	25.5	30	D
4-Isopropyltoluene	0.173	0.122						0	200	30	D

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/29/2019			SeqNo: 1061422			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0488						0		30	D
1,4-Dichlorobenzene	ND	0.0488						0		30	D
n-Butylbenzene	ND	0.0610						0		30	D
1,2-Dichlorobenzene	ND	0.0488						0		30	D
1,2-Dibromo-3-chloropropane	ND	1.22						0		30	D
1,2,4-Trimethylbenzene	8.37	0.0488						9.823	16.0	30	DE
Hexachloro-1,3-butadiene	ND	0.122						0		30	D
Naphthalene	2.19	0.122						2.510	13.6	30	DQ
1,2,3-Trichlorobenzene	ND	0.0488						0		30	D
Surr: Dibromofluoromethane	3.07		3.049		101	56.5	129		0		D
Surr: Toluene-d8	3.05		3.049		100	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	3.50		3.659		95.6	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-14-4'	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0920						0		30	D
Chloromethane	ND	0.230						0		30	DQ
Vinyl chloride	ND	0.115						0		30	D
Bromomethane	ND	0.230						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0920						0		30	D
Chloroethane	ND	0.230						0		30	D
1,1-Dichloroethene	ND	0.0920						0		30	D
Methylene chloride	ND	0.0920						0		30	D
trans-1,2-Dichloroethene	ND	0.0920						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.230						0		30	D
1,1-Dichloroethane	ND	0.0920						0		30	D



Date: 9/9/2019

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-14-4'		Batch ID: 25656		Analysis Date: 8/30/2019						SeqNo: 1061437	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	ND	0.0920						0		30	D
Chloroform	ND	0.0920						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.115						0		30	D
1,1-Dichloropropene	ND	0.0920						0		30	D
Carbon tetrachloride	ND	0.115						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0920						0		30	D
Benzene	ND	0.0920						0		30	D
Trichloroethene (TCE)	ND	0.0920						0		30	D
1,2-Dichloropropane	ND	0.0920						0		30	D
Bromodichloromethane	ND	0.0920						0		30	D
Dibromomethane	ND	0.0920						0		30	D
cis-1,3-Dichloropropene	ND	0.0920						0		30	D
Toluene	ND	0.0920						0		30	D
trans-1,3-Dichloropropylene	ND	0.0920						0		30	D
1,1,2-Trichloroethane	ND	0.0920						0		30	D
1,3-Dichloropropane	ND	0.115						0		30	D
Tetrachloroethene (PCE)	ND	0.115						0		30	D
Dibromochloromethane	ND	0.115						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0230						0		30	D
Chlorobenzene	ND	0.115						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.115						0		30	D
Ethylbenzene	ND	0.115						0		30	D
m,p-Xylene	ND	0.230						0		30	D
o-Xylene	ND	0.115						0		30	D
Styrene	ND	0.115						0		30	D
Isopropylbenzene	1.53	0.115						1.562	1.77	30	D
Bromoform	ND	0.230						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0920						0		30	D
n-Propylbenzene	1.39	0.115						1.412	1.27	30	D
Bromobenzene	ND	0.0920						0		30	D
1,3,5-Trimethylbenzene	ND	0.115						0		30	D

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-14-4'	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	0.115						0		30	D
4-Chlorotoluene	ND	0.115						0		30	D
tert-Butylbenzene	ND	0.115						0		30	D
1,2,3-Trichloropropane	ND	0.115						0		30	D
1,2,4-Trichlorobenzene	ND	0.115						0		30	D
sec-Butylbenzene	1.60	0.230						1.620	0.997	30	D
4-Isopropyltoluene	ND	0.230						0		30	D
1,3-Dichlorobenzene	ND	0.0920						0		30	D
1,4-Dichlorobenzene	ND	0.0920						0		30	D
n-Butylbenzene	ND	0.115						0		30	D
1,2-Dichlorobenzene	ND	0.0920						0		30	D
1,2-Dibromo-3-chloropropane	ND	2.30						0		30	D
1,2,4-Trimethylbenzene	0.395	0.0920						0.3993	1.07	30	D
Hexachloro-1,3-butadiene	ND	0.230						0		30	D
Naphthalene	ND	0.230						0		30	D
1,2,3-Trichlorobenzene	ND	0.0920						0		30	D
Surr: Dibromofluoromethane	5.54		5.749		96.3	56.5	129		0		D
Surr: Toluene-d8	5.43		5.749		94.5	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	7.69		8.048		95.5	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Diluted due to matrix.

Sample ID: 1908347-013BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.736	0.0149	0.7465	0	98.5	43.5	121				
Chloromethane	0.625	0.0373	0.7465	0	83.7	45	130				
Vinyl chloride	0.689	0.0187	0.7465	0	92.3	43.6	150				
Bromomethane	1.01	0.0373	0.7465	0	136	21.3	120				S

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656	Analysis Date: 8/30/2019						SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	0.904	0.0149	0.7465	0	121	35	131				S
Chloroethane	0.965	0.0373	0.7465	0	129	31.9	123				
1,1-Dichloroethene	0.727	0.0149	0.7465	0	97.4	47.3	147				
Methylene chloride	0.798	0.0149	0.7465	0	107	54.7	142				
trans-1,2-Dichloroethene	0.741	0.0149	0.7465	0	99.3	52	136				
Methyl tert-butyl ether (MTBE)	0.763	0.0373	0.7465	0	102	58.5	167				
1,1-Dichloroethane	0.701	0.0149	0.7465	0	93.9	51.8	141				
cis-1,2-Dichloroethene	0.731	0.0149	0.7465	0	98.0	58.6	136				
Chloroform	0.760	0.0149	0.7465	0	102	53.2	129				
1,1,1-Trichloroethane (TCA)	0.729	0.0187	0.7465	0	97.7	58.3	145				
1,1-Dichloropropene	0.773	0.0149	0.7465	0	104	55.1	138				
Carbon tetrachloride	0.734	0.0187	0.7465	0	98.3	53.3	144				
1,2-Dichloroethane (EDC)	0.751	0.0149	0.7465	0	101	51.3	139				
Benzene	0.908	0.0149	0.7465	0.1888	96.3	63.5	133				
Trichloroethene (TCE)	0.881	0.0149	0.7465	0	118	61.6	147				
1,2-Dichloropropane	0.720	0.0149	0.7465	0	96.5	59	136				
Bromodichloromethane	0.760	0.0149	0.7465	0	102	50.7	141				
Dibromomethane	0.773	0.0149	0.7465	0	104	50.6	137				
cis-1,3-Dichloropropene	0.699	0.0149	0.7465	0	93.7	50.4	138				
Toluene	0.783	0.0149	0.7465	0.03415	100	63.4	132				
trans-1,3-Dichloropropylene	0.681	0.0149	0.7465	0	91.2	44.1	147				
1,1,2-Trichloroethane	0.811	0.0149	0.7465	0	109	51.6	137				
1,3-Dichloropropane	0.726	0.0187	0.7465	0	97.3	53.1	134				
Tetrachloroethene (PCE)	0.777	0.0187	0.7465	0	104	35.6	158				
Dibromochloromethane	0.720	0.0187	0.7465	0	96.5	55.3	140				
1,2-Dibromoethane (EDB)	0.762	0.00373	0.7465	0	102	50.4	136				
Chlorobenzene	0.765	0.0187	0.7465	0	102	60	133				
1,1,1,2-Tetrachloroethane	0.749	0.0187	0.7465	0	100	53.1	142				
Ethylbenzene	1.51	0.0187	0.7465	0.8306	90.4	54.5	134				
m,p-Xylene	2.74	0.0373	1.493	1.322	95.2	53.1	132				
o-Xylene	0.835	0.0187	0.7465	0.06496	103	53.3	139				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656	Analysis Date: 8/30/2019						SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	0.785	0.0187	0.7465	0	105	51.1	132				
Isopropylbenzene	0.932	0.0187	0.7465	0.1574	104	58.9	138				
Bromoform	0.742	0.0373	0.7465	0	99.4	57.9	130				
1,1,2,2-Tetrachloroethane	1.31	0.0149	0.7465	0	176	51.9	131				S
n-Propylbenzene	1.25	0.0187	0.7465	0.5136	99.1	53.6	140				
Bromobenzene	0.823	0.0149	0.7465	0	110	54.2	140				
1,3,5-Trimethylbenzene	1.19	0.0187	0.7465	0.3997	106	51.8	136				
2-Chlorotoluene	0.997	0.0187	0.7465	0	134	51.6	136				
4-Chlorotoluene	0.780	0.0187	0.7465	0	105	50.1	139				
tert-Butylbenzene	0.829	0.0187	0.7465	0	111	50.5	135				
1,2,3-Trichloropropane	0.762	0.0187	0.7465	0	102	50.5	131				
1,2,4-Trichlorobenzene	0.930	0.0187	0.7465	0	125	50.8	130				
sec-Butylbenzene	0.998	0.0373	0.7465	0	134	52.6	141				
4-Isopropyltoluene	0.957	0.0373	0.7465	0	128	52.9	134				
1,3-Dichlorobenzene	0.806	0.0149	0.7465	0	108	52.6	131				
1,4-Dichlorobenzene	0.801	0.0149	0.7465	0	107	52.9	129				
n-Butylbenzene	1.27	0.0187	0.7465	0	170	52.6	130				S
1,2-Dichlorobenzene	0.813	0.0149	0.7465	0	109	55.8	129				
1,2-Dibromo-3-chloropropane	1.12	0.373	0.7465	0	150	40.5	131				S
1,2,4-Trimethylbenzene	2.86	0.0149	0.7465	2.693	21.7	50.6	137				S
Hexachloro-1,3-butadiene	1.03	0.0373	0.7465	0	138	40.6	158				
Naphthalene	1.57	0.0373	0.7465	0.6422	124	52.3	124				S
1,2,3-Trichlorobenzene	0.997	0.0149	0.7465	0	134	54.4	124				S
Surr: Dibromofluoromethane	0.913		0.9331		97.8	56.5	129				
Surr: Toluene-d8	0.893		0.9331		95.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	4.29		4.665		91.9	54.8	168				

NOTES:

S - Outlying spike recovery(ies) observed.

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.679	0.0149	0.7465	0	91.0	43.5	121	0.7356	7.97	30	
Chloromethane	0.634	0.0373	0.7465	0	84.9	45	130	0.6248	1.47	30	
Vinyl chloride	0.671	0.0187	0.7465	0	89.9	43.6	150	0.6887	2.59	30	
Bromomethane	1.08	0.0373	0.7465	0	144	21.3	120	1.014	5.85	30	S
Trichlorofluoromethane (CFC-11)	0.866	0.0149	0.7465	0	116	35	131	0.9037	4.27	30	
Chloroethane	0.944	0.0373	0.7465	0	126	31.9	123	0.9654	2.24	30	S
1,1-Dichloroethene	0.698	0.0149	0.7465	0	93.6	47.3	147	0.7268	3.99	30	
Methylene chloride	0.767	0.0149	0.7465	0	103	54.7	142	0.7983	3.99	30	
trans-1,2-Dichloroethene	0.719	0.0149	0.7465	0	96.4	52	136	0.7411	2.99	30	
Methyl tert-butyl ether (MTBE)	0.758	0.0373	0.7465	0	102	58.5	167	0.7627	0.624	30	
1,1-Dichloroethane	0.683	0.0149	0.7465	0	91.5	51.8	141	0.7013	2.64	30	
cis-1,2-Dichloroethene	0.716	0.0149	0.7465	0	95.9	58.6	136	0.7312	2.14	30	
Chloroform	0.735	0.0149	0.7465	0	98.4	53.2	129	0.7598	3.36	30	
1,1,1-Trichloroethane (TCA)	0.701	0.0187	0.7465	0	93.9	58.3	145	0.7293	3.93	30	
1,1-Dichloropropene	0.732	0.0149	0.7465	0	98.1	55.1	138	0.7729	5.41	30	
Carbon tetrachloride	0.702	0.0187	0.7465	0	94.1	53.3	144	0.7341	4.43	30	
1,2-Dichloroethane (EDC)	0.740	0.0149	0.7465	0	99.2	51.3	139	0.7512	1.48	30	
Benzene	0.870	0.0149	0.7465	0.1888	91.3	63.5	133	0.9078	4.20	30	
Trichloroethene (TCE)	0.845	0.0149	0.7465	0	113	61.6	147	0.8815	4.20	30	
1,2-Dichloropropane	0.704	0.0149	0.7465	0	94.3	59	136	0.7204	2.36	30	
Bromodichloromethane	0.732	0.0149	0.7465	0	98.1	50.7	141	0.7604	3.82	30	
Dibromomethane	0.749	0.0149	0.7465	0	100	50.6	137	0.7731	3.17	30	
cis-1,3-Dichloropropene	0.684	0.0149	0.7465	0	91.6	50.4	138	0.6992	2.28	30	
Toluene	0.753	0.0149	0.7465	0.03415	96.3	63.4	132	0.7834	3.96	30	
trans-1,3-Dichloropropylene	0.669	0.0149	0.7465	0	89.6	44.1	147	0.6811	1.82	30	
1,1,2-Trichloroethane	0.782	0.0149	0.7465	0	105	51.6	137	0.8112	3.66	30	
1,3-Dichloropropane	0.716	0.0187	0.7465	0	96.0	53.1	134	0.7260	1.33	30	
Tetrachloroethene (PCE)	0.735	0.0187	0.7465	0	98.5	35.6	158	0.7770	5.52	30	
Dibromochloromethane	0.702	0.0187	0.7465	0	94.0	55.3	140	0.7201	2.60	30	
1,2-Dibromoethane (EDB)	0.734	0.00373	0.7465	0	98.4	50.4	136	0.7624	3.77	30	
Chlorobenzene	0.741	0.0187	0.7465	0	99.3	60	133	0.7650	3.13	30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656		Analysis Date: 8/30/2019					SeqNo: 1061425		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.721	0.0187	0.7465	0	96.6	53.1	142	0.7490	3.81	30	
Ethylbenzene	1.41	0.0187	0.7465	0.8306	77.1	54.5	134	1.506	6.82	30	
m,p-Xylene	2.56	0.0373	1.493	1.322	82.6	53.1	132	2.744	7.09	30	
o-Xylene	0.805	0.0187	0.7465	0.06496	99.1	53.3	139	0.8354	3.74	30	
Styrene	0.779	0.0187	0.7465	0	104	51.1	132	0.7851	0.780	30	
Isopropylbenzene	0.885	0.0187	0.7465	0.1574	97.5	58.9	138	0.9318	5.13	30	
Bromoform	0.738	0.0373	0.7465	0	98.8	57.9	130	0.7423	0.595	30	
1,1,2,2-Tetrachloroethane	1.18	0.0149	0.7465	0	158	51.9	131	1.311	10.6	30	S
n-Propylbenzene	1.17	0.0187	0.7465	0.5136	88.4	53.6	140	1.253	6.53	30	
Bromobenzene	0.803	0.0149	0.7465	0	108	54.2	140	0.8230	2.44	30	
1,3,5-Trimethylbenzene	1.13	0.0187	0.7465	0.3997	97.4	51.8	136	1.195	5.85	30	
2-Chlorotoluene	0.942	0.0187	0.7465	0	126	51.6	136	0.9973	5.66	30	
4-Chlorotoluene	0.738	0.0187	0.7465	0	98.9	50.1	139	0.7803	5.57	30	
tert-Butylbenzene	0.792	0.0187	0.7465	0	106	50.5	135	0.8292	4.63	30	
1,2,3-Trichloropropane	0.753	0.0187	0.7465	0	101	50.5	131	0.7624	1.22	30	
1,2,4-Trichlorobenzene	0.912	0.0187	0.7465	0	122	50.8	130	0.9301	2.01	30	
sec-Butylbenzene	0.946	0.0373	0.7465	0	127	52.6	141	0.9975	5.27	30	
4-Isopropyltoluene	0.911	0.0373	0.7465	0	122	52.9	134	0.9573	4.91	30	
1,3-Dichlorobenzene	0.793	0.0149	0.7465	0	106	52.6	131	0.8060	1.67	30	
1,4-Dichlorobenzene	0.797	0.0149	0.7465	0	107	52.9	129	0.8012	0.545	30	
n-Butylbenzene	1.21	0.0187	0.7465	0	163	52.6	130	1.273	4.74	30	S
1,2-Dichlorobenzene	0.802	0.0149	0.7465	0	107	55.8	129	0.8127	1.33	30	
1,2-Dibromo-3-chloropropane	1.11	0.373	0.7465	0	149	40.5	131	1.121	0.955	30	S
1,2,4-Trimethylbenzene	2.71	0.0149	0.7465	2.693	2.25	50.6	137	2.855	5.23	30	S
Hexachloro-1,3-butadiene	1.01	0.0373	0.7465	0	136	40.6	158	1.032	1.97	30	
Naphthalene	1.58	0.0373	0.7465	0.6422	125	52.3	124	1.569	0.556	30	S
1,2,3-Trichlorobenzene	1.01	0.0149	0.7465	0	136	54.4	124	0.9973	1.45	30	S
Surr: Dibromofluoromethane	0.919		0.9331		98.5	56.5	129		0		
Surr: Toluene-d8	0.886		0.9331		95.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	4.05		4.665		86.9	54.8	168		0		

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID: LCS-25679		SampType: LCS			Units: mg/Kg		Prep Date: 8/30/2019			RunNo: 53598		
Client ID: LCSS		Batch ID: 25679			Analysis Date: 8/30/2019			SeqNo: 1061222				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Dichlorodifluoromethane (CFC-12)	1.08	0.0200	1.000	0	108	14.3	167				
Chloromethane	1.08	0.0500	1.000	0	108	32	156				
Vinyl chloride	1.01	0.0250	1.000	0	101	43.4	151				
Bromomethane	1.90	0.0500	1.000	0	190	35	155				S
Trichlorofluoromethane (CFC-11)	1.05	0.0200	1.000	0	105	33.8	156				
Chloroethane	1.39	0.0500	1.000	0	139	33.1	147				
1,1-Dichloroethene	1.04	0.0200	1.000	0	104	30.9	145				
Methylene chloride	1.03	0.0200	1.000	0	103	46.3	140				
trans-1,2-Dichloroethene	1.07	0.0200	1.000	0	107	68	130				
Methyl tert-butyl ether (MTBE)	0.855	0.0500	1.000	0	85.5	44.1	152				
1,1-Dichloroethane	1.01	0.0200	1.000	0	101	61.9	137				
cis-1,2-Dichloroethene	1.05	0.0200	1.000	0	105	71.3	135				
Chloroform	1.04	0.0200	1.000	0	104	69	145				
1,1,1-Trichloroethane (TCA)	1.00	0.0250	1.000	0	100	69	132				
1,1-Dichloropropene	1.03	0.0200	1.000	0	103	72.7	131				
Carbon tetrachloride	0.996	0.0250	1.000	0	99.6	63.4	137				
1,2-Dichloroethane (EDC)	0.955	0.0200	1.000	0	95.5	50.9	162				
Benzene	1.05	0.0200	1.000	0	105	64.3	133				
Trichloroethene (TCE)	1.08	0.0200	1.000	0	108	65.5	137				
1,2-Dichloropropane	1.01	0.0200	1.000	0	101	63.2	142				
Bromodichloromethane	0.961	0.0200	1.000	0	96.1	53.4	131				
Dibromomethane	0.997	0.0200	1.000	0	99.7	60.1	146				
cis-1,3-Dichloropropene	0.928	0.0200	1.000	0	92.8	59.1	143				
Toluene	1.06	0.0200	1.000	0	106	67	144				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25679	SampType: LCS	Units: mg/Kg			Prep Date: 8/30/2019			RunNo: 53598			
Client ID: LCSS	Batch ID: 25679	Analysis Date: 8/30/2019						SeqNo: 1061222			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	0.869	0.0200	1.000	0	86.9	49.2	149				
1,1,2-Trichloroethane	0.988	0.0200	1.000	0	98.8	56.9	147				
1,3-Dichloropropane	0.976	0.0250	1.000	0	97.6	56.1	153				
Tetrachloroethene (PCE)	1.09	0.0250	1.000	0	109	52.7	150				
Dibromochloromethane	0.934	0.0250	1.000	0	93.4	70.6	144				
1,2-Dibromoethane (EDB)	0.969	0.00500	1.000	0	96.9	50.5	154				
Chlorobenzene	0.998	0.0250	1.000	0	99.8	84.9	125				
1,1,1,2-Tetrachloroethane	0.916	0.0250	1.000	0	91.6	65.9	141				
Ethylbenzene	1.01	0.0250	1.000	0	101	74	129				
m,p-Xylene	2.00	0.0500	2.000	0	100	70	124				
o-Xylene	0.989	0.0250	1.000	0	98.9	68.1	139				
Styrene	0.971	0.0250	1.000	0	97.1	73.3	146				
Isopropylbenzene	1.01	0.0250	1.000	0	101	70	130				
Bromoform	0.763	0.0500	1.000	0	76.3	44.3	130				
1,1,2,2-Tetrachloroethane	0.761	0.0200	1.000	0	76.1	44.8	165				
n-Propylbenzene	1.01	0.0250	1.000	0	101	75.8	139				
Bromobenzene	0.983	0.0200	1.000	0	98.3	49.2	144				
1,3,5-Trimethylbenzene	1.00	0.0250	1.000	0	100	76.5	135				
2-Chlorotoluene	0.975	0.0250	1.000	0	97.5	76.7	129				
4-Chlorotoluene	0.968	0.0250	1.000	0	96.8	77.5	125				
tert-Butylbenzene	0.977	0.0250	1.000	0	97.7	66.2	130				
1,2,3-Trichloropropane	0.782	0.0250	1.000	0	78.2	67.9	136				
1,2,4-Trichlorobenzene	0.950	0.0250	1.000	0	95.0	65.5	150				
sec-Butylbenzene	0.996	0.0500	1.000	0	99.6	75.6	133				
4-Isopropyltoluene	1.00	0.0500	1.000	0	100	76.8	131				
1,3-Dichlorobenzene	1.02	0.0200	1.000	0	102	48.6	144				
1,4-Dichlorobenzene	1.02	0.0200	1.000	0	102	72.6	126				
n-Butylbenzene	1.02	0.0250	1.000	0	102	78.4	140				
1,2-Dichlorobenzene	0.996	0.0200	1.000	0	99.6	72.8	126				
1,2-Dibromo-3-chloropropane	0.640	0.500	1.000	0	64.0	40.2	155				
1,2,4-Trimethylbenzene	1.01	0.0200	1.000	0	101	77.5	129				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25679	SampType: LCS	Units: mg/Kg				Prep Date: 8/30/2019			RunNo: 53598		
Client ID: LCSS	Batch ID: 25679	Analysis Date: 8/30/2019							SeqNo: 1061222		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.954	0.0500	1.000	0	95.4	42	151				
Naphthalene	0.839	0.0500	1.000	0	83.9	46.5	167				
1,2,3-Trichlorobenzene	0.901	0.0200	1.000	0	90.1	64.5	149				
Surr: Dibromofluoromethane	1.33		1.250		106	56.5	129				
Surr: Toluene-d8	1.34		1.250		108	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.17		1.250		93.4	54.8	168				

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: MB-25679	SampType: MBLK	Units: mg/Kg			Prep Date: 8/30/2019			RunNo: 53598			
Client ID: MBLKS	Batch ID: 25679	Analysis Date: 8/30/2019						SeqNo: 1061223			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25679	SampType: MBLK	Units: mg/Kg			Prep Date: 8/30/2019			RunNo: 53598			
Client ID: MBLKS	Batch ID: 25679	Analysis Date: 8/30/2019						SeqNo: 1061223			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									Q
1,1,1,2-Tetrachloroethane	ND	0.0200									Q
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									Q
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25679	SampType: MBLK	Units: mg/Kg			Prep Date: 8/30/2019			RunNo: 53598			
Client ID: MBLKS	Batch ID: 25679				Analysis Date: 8/30/2019			SeqNo: 1061223			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									Q
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.17		1.250		93.7	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.17		1.250		93.4	54.8	168				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908349-007BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598		
Client ID: GLB-BB		Batch ID: 25679					Analysis Date: 8/30/2019			SeqNo: 1061193	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0124						0		30	
Chloromethane	ND	0.0311						0		30	
Vinyl chloride	ND	0.0156						0		30	
Bromomethane	ND	0.0311						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0124						0		30	
Chloroethane	ND	0.0311						0		30	
1,1-Dichloroethene	ND	0.0124						0		30	
Methylene chloride	ND	0.0124						0		30	
trans-1,2-Dichloroethene	ND	0.0124						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0311						0		30	
1,1-Dichloroethane	ND	0.0124						0		30	
cis-1,2-Dichloroethene	ND	0.0124						0		30	



Date: 9/9/2019

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-007BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 8/30/2019			RunNo: 53598		
Client ID: GLB-BB	Batch ID: 25679	Analysis Date: 8/30/2019							SeqNo: 1061193		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	ND	0.0124						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0156						0		30	
1,1-Dichloropropene	ND	0.0124						0		30	
Carbon tetrachloride	ND	0.0156						0		30	
1,2-Dichloroethane (EDC)	ND	0.0124						0		30	
Benzene	0.0263	0.0124						0.02754	4.67	30	
Trichloroethene (TCE)	ND	0.0124						0		30	
1,2-Dichloropropane	ND	0.0124						0		30	
Bromodichloromethane	ND	0.0124						0		30	
Dibromomethane	ND	0.0124						0		30	
cis-1,3-Dichloropropene	ND	0.0124						0		30	
Toluene	ND	0.0124						0		30	
trans-1,3-Dichloropropylene	ND	0.0124						0		30	
1,1,2-Trichloroethane	ND	0.0124						0		30	
1,3-Dichloropropane	ND	0.0156						0		30	
Tetrachloroethene (PCE)	ND	0.0156						0		30	
Dibromochloromethane	ND	0.0156						0		30	
1,2-Dibromoethane (EDB)	ND	0.00311						0		30	
Chlorobenzene	ND	0.0156						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0156						0		30	
Ethylbenzene	0.0229	0.0156						0.02323	1.58	30	
m,p-Xylene	ND	0.0311						0		30	
o-Xylene	ND	0.0156						0		30	
Styrene	ND	0.0156						0		30	
Isopropylbenzene	0.0344	0.0156						0.03417	0.680	30	
Bromoform	ND	0.0311						0		30	Q
1,1,1,2,2-Tetrachloroethane	ND	0.0124						0		30	Q
n-Propylbenzene	0.182	0.0156						0.1875	2.73	30	
Bromobenzene	ND	0.0124						0		30	
1,3,5-Trimethylbenzene	ND	0.0156						0		30	
2-Chlorotoluene	ND	0.0156						0		30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-007BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598		
Client ID: GLB-BB		Batch ID: 25679		Analysis Date: 8/30/2019						SeqNo: 1061193	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	0.0156						0		30	
tert-Butylbenzene	ND	0.0156						0		30	
1,2,3-Trichloropropane	ND	0.0156						0		30	Q
1,2,4-Trichlorobenzene	ND	0.0156						0		30	
sec-Butylbenzene	ND	0.0311						0		30	
4-Isopropyltoluene	ND	0.0311						0		30	
1,3-Dichlorobenzene	ND	0.0124						0		30	
1,4-Dichlorobenzene	ND	0.0124						0		30	
n-Butylbenzene	0.0454	0.0156						0	200	30	
1,2-Dichlorobenzene	ND	0.0124						0		30	
1,2-Dibromo-3-chloropropane	ND	0.311						0		30	Q
1,2,4-Trimethylbenzene	0.0139	0.0124						0.01383	0.234	30	
Hexachloro-1,3-butadiene	ND	0.0311						0		30	
Naphthalene	ND	0.0311						0		30	
1,2,3-Trichlorobenzene	ND	0.0124						0		30	
Surr: Dibromofluoromethane	0.752		0.7778		96.7	56.5	129		0		
Surr: Toluene-d8	0.768		0.7778		98.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	2.93		3.889		75.3	54.8	168		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908349-008BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/30/2019		RunNo: 53598			
Client ID: GLB-16-2'		Batch ID: 25679				Analysis Date: 8/30/2019		SeqNo: 1061195			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.532	0.0103	0.5129	0	104	43.5	121				
Chloromethane	0.537	0.0256	0.5129	0	105	45	130				
Vinyl chloride	0.530	0.0128	0.5129	0	103	43.6	150				
Bromomethane	0.953	0.0256	0.5129	0	186	21.3	120				S
Trichlorofluoromethane (CFC-11)	0.542	0.0103	0.5129	0	106	35	131				
Chloroethane	0.666	0.0256	0.5129	0	130	31.9	123				S

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-008BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/30/2019		RunNo: 53598			
Client ID: GLB-16-2'		Batch ID: 25679				Analysis Date: 8/30/2019		SeqNo: 1061195			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.549	0.0103	0.5129	0	107	47.3	147				
Methylene chloride	0.508	0.0103	0.5129	0	99.1	54.7	142				
trans-1,2-Dichloroethene	0.544	0.0103	0.5129	0	106	52	136				
Methyl tert-butyl ether (MTBE)	0.485	0.0256	0.5129	0	94.6	58.5	167				
1,1-Dichloroethane	0.508	0.0103	0.5129	0	99.1	51.8	141				
cis-1,2-Dichloroethene	0.524	0.0103	0.5129	0	102	58.6	136				
Chloroform	0.517	0.0103	0.5129	0	101	53.2	129				
1,1,1-Trichloroethane (TCA)	0.502	0.0128	0.5129	0	98.0	58.3	145				
1,1-Dichloropropene	0.524	0.0103	0.5129	0	102	55.1	138				
Carbon tetrachloride	0.503	0.0128	0.5129	0	98.1	53.3	144				
1,2-Dichloroethane (EDC)	0.492	0.0103	0.5129	0	96.0	51.3	139				
Benzene	0.527	0.0103	0.5129	0	103	63.5	133				
Trichloroethene (TCE)	0.541	0.0103	0.5129	0	105	61.6	147				
1,2-Dichloropropane	0.505	0.0103	0.5129	0	98.4	59	136				
Bromodichloromethane	0.481	0.0103	0.5129	0	93.8	50.7	141				
Dibromomethane	0.526	0.0103	0.5129	0	102	50.6	137				
cis-1,3-Dichloropropene	0.463	0.0103	0.5129	0	90.3	50.4	138				
Toluene	0.538	0.0103	0.5129	0	105	63.4	132				
trans-1,3-Dichloropropylene	0.443	0.0103	0.5129	0	86.4	44.1	147				
1,1,2-Trichloroethane	0.531	0.0103	0.5129	0	103	51.6	137				
1,3-Dichloropropane	0.519	0.0128	0.5129	0	101	53.1	134				
Tetrachloroethene (PCE)	0.552	0.0128	0.5129	0	108	35.6	158				
Dibromochloromethane	0.479	0.0128	0.5129	0	93.4	55.3	140				
1,2-Dibromoethane (EDB)	0.519	0.00256	0.5129	0	101	50.4	136				
Chlorobenzene	0.545	0.0128	0.5129	0	106	60	133				
1,1,1,2-Tetrachloroethane	0.513	0.0128	0.5129	0	100	53.1	142				
Ethylbenzene	0.558	0.0128	0.5129	0	109	54.5	134				
m,p-Xylene	1.10	0.0256	1.026	0.006391	106	53.1	132				
o-Xylene	0.538	0.0128	0.5129	0	105	53.3	139				
Styrene	0.529	0.0128	0.5129	0	103	51.1	132				
Isopropylbenzene	0.559	0.0128	0.5129	0	109	58.9	138				

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-008BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598			
Client ID: GLB-16-2'		Batch ID: 25679					Analysis Date: 8/30/2019			SeqNo: 1061195		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Bromoform	0.455	0.0256	0.5129	0	88.8	57.9	130				
1,1,2,2-Tetrachloroethane	0.490	0.0103	0.5129	0	95.5	51.9	131				
n-Propylbenzene	0.563	0.0128	0.5129	0.01178	107	53.6	140				
Bromobenzene	0.529	0.0103	0.5129	0	103	54.2	140				
1,3,5-Trimethylbenzene	0.543	0.0128	0.5129	0	106	51.8	136				
2-Chlorotoluene	0.527	0.0128	0.5129	0	103	51.6	136				
4-Chlorotoluene	0.524	0.0128	0.5129	0	102	50.1	139				
tert-Butylbenzene	0.539	0.0128	0.5129	0	105	50.5	135				
1,2,3-Trichloropropane	0.463	0.0128	0.5129	0	90.3	50.5	131				
1,2,4-Trichlorobenzene	0.551	0.0128	0.5129	0	107	50.8	130				
sec-Butylbenzene	0.551	0.0256	0.5129	0	107	52.6	141				
4-Isopropyltoluene	0.551	0.0256	0.5129	0	107	52.9	134				
1,3-Dichlorobenzene	0.555	0.0103	0.5129	0	108	52.6	131				
1,4-Dichlorobenzene	0.558	0.0103	0.5129	0	109	52.9	129				
n-Butylbenzene	0.561	0.0128	0.5129	0	109	52.6	130				
1,2-Dichlorobenzene	0.554	0.0103	0.5129	0	108	55.8	129				
1,2-Dibromo-3-chloropropane	0.435	0.256	0.5129	0	84.8	40.5	131				
1,2,4-Trimethylbenzene	0.552	0.0103	0.5129	0.01270	105	50.6	137				
Hexachloro-1,3-butadiene	0.533	0.0256	0.5129	0	104	40.6	158				
Naphthalene	0.563	0.0256	0.5129	0	110	52.3	124				
1,2,3-Trichlorobenzene	0.548	0.0103	0.5129	0	107	54.4	124				
Surr: Dibromofluoromethane	0.618		0.6412		96.4	56.5	129				
Surr: Toluene-d8	0.629		0.6412		98.1	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	2.50		3.206		78.0	54.8	168				

NOTES:

S - Outlying spike recovery observed.

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-008BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598		
Client ID: GLB-16-2'		Batch ID: 25679					Analysis Date: 8/30/2019			SeqNo: 1061196	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.533	0.0103	0.5129	0	104	43.5	121	0.5318	0.305	30	
Chloromethane	0.545	0.0256	0.5129	0	106	45	130	0.5371	1.53	30	
Vinyl chloride	0.526	0.0128	0.5129	0	103	43.6	150	0.5304	0.788	30	
Bromomethane	0.884	0.0256	0.5129	0	172	21.3	120	0.9528	7.43	30	S
Trichlorofluoromethane (CFC-11)	0.540	0.0103	0.5129	0	105	35	131	0.5417	0.256	30	
Chloroethane	0.673	0.0256	0.5129	0	131	31.9	123	0.6660	1.03	30	S
1,1-Dichloroethene	0.538	0.0103	0.5129	0	105	47.3	147	0.5486	1.89	30	
Methylene chloride	0.511	0.0103	0.5129	0	99.6	54.7	142	0.5084	0.522	30	
trans-1,2-Dichloroethene	0.547	0.0103	0.5129	0	107	52	136	0.5445	0.430	30	
Methyl tert-butyl ether (MTBE)	0.490	0.0256	0.5129	0	95.5	58.5	167	0.4851	1.02	30	
1,1-Dichloroethane	0.514	0.0103	0.5129	0	100	51.8	141	0.5081	1.15	30	
cis-1,2-Dichloroethene	0.536	0.0103	0.5129	0	105	58.6	136	0.5243	2.21	30	
Chloroform	0.528	0.0103	0.5129	0	103	53.2	129	0.5172	2.16	30	
1,1,1-Trichloroethane (TCA)	0.515	0.0128	0.5129	0	100	58.3	145	0.5025	2.40	30	
1,1-Dichloropropene	0.545	0.0103	0.5129	0	106	55.1	138	0.5243	3.82	30	
Carbon tetrachloride	0.509	0.0128	0.5129	0	99.2	53.3	144	0.5033	1.11	30	
1,2-Dichloroethane (EDC)	0.494	0.0103	0.5129	0	96.4	51.3	139	0.4925	0.360	30	
Benzene	0.538	0.0103	0.5129	0	105	63.5	133	0.5273	2.04	30	
Trichloroethene (TCE)	0.577	0.0103	0.5129	0	113	61.6	147	0.5411	6.49	30	
1,2-Dichloropropane	0.509	0.0103	0.5129	0	99.1	59	136	0.5048	0.738	30	
Bromodichloromethane	0.495	0.0103	0.5129	0	96.5	50.7	141	0.4809	2.92	30	
Dibromomethane	0.520	0.0103	0.5129	0	101	50.6	137	0.5257	1.11	30	
cis-1,3-Dichloropropene	0.477	0.0103	0.5129	0	92.9	50.4	138	0.4632	2.84	30	
Toluene	0.550	0.0103	0.5129	0	107	63.4	132	0.5375	2.38	30	
trans-1,3-Dichloropropylene	0.457	0.0103	0.5129	0	89.1	44.1	147	0.4433	3.05	30	
1,1,2-Trichloroethane	0.535	0.0103	0.5129	0	104	51.6	137	0.5308	0.883	30	
1,3-Dichloropropane	0.523	0.0128	0.5129	0	102	53.1	134	0.5194	0.635	30	
Tetrachloroethene (PCE)	0.560	0.0128	0.5129	0	109	35.6	158	0.5523	1.38	30	
Dibromochloromethane	0.490	0.0128	0.5129	0	95.6	55.3	140	0.4793	2.27	30	
1,2-Dibromoethane (EDB)	0.527	0.00256	0.5129	0	103	50.4	136	0.5192	1.44	30	
Chlorobenzene	0.557	0.0128	0.5129	0	109	60	133	0.5446	2.29	30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-008BMSD	SampType: MSD	Units: mg/Kg-dry			Prep Date: 8/30/2019			RunNo: 53598			
Client ID: GLB-16-2'	Batch ID: 25679	Analysis Date: 8/30/2019							SeqNo: 1061196		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.528	0.0128	0.5129	0	103	53.1	142	0.5127	2.91	30	
Ethylbenzene	0.569	0.0128	0.5129	0	111	54.5	134	0.5583	1.85	30	
m,p-Xylene	1.13	0.0256	1.026	0.006391	109	53.1	132	1.098	2.58	30	
o-Xylene	0.549	0.0128	0.5129	0	107	53.3	139	0.5378	2.08	30	
Styrene	0.547	0.0128	0.5129	0	107	51.1	132	0.5290	3.35	30	
Isopropylbenzene	0.570	0.0128	0.5129	0	111	58.9	138	0.5593	1.92	30	
Bromoform	0.474	0.0256	0.5129	0	92.4	57.9	130	0.4554	3.99	30	
1,1,2,2-Tetrachloroethane	0.464	0.0103	0.5129	0	90.5	51.9	131	0.4899	5.42	30	
n-Propylbenzene	0.572	0.0128	0.5129	0.01178	109	53.6	140	0.5626	1.59	30	
Bromobenzene	0.550	0.0103	0.5129	0	107	54.2	140	0.5295	3.81	30	
1,3,5-Trimethylbenzene	0.556	0.0128	0.5129	0	108	51.8	136	0.5430	2.40	30	
2-Chlorotoluene	0.537	0.0128	0.5129	0	105	51.6	136	0.5274	1.87	30	
4-Chlorotoluene	0.535	0.0128	0.5129	0	104	50.1	139	0.5243	2.08	30	
tert-Butylbenzene	0.549	0.0128	0.5129	0	107	50.5	135	0.5386	1.86	30	
1,2,3-Trichloropropane	0.474	0.0128	0.5129	0	92.4	50.5	131	0.4633	2.26	30	
1,2,4-Trichlorobenzene	0.567	0.0128	0.5129	0	110	50.8	130	0.5509	2.81	30	
sec-Butylbenzene	0.562	0.0256	0.5129	0	109	52.6	141	0.5513	1.85	30	
4-Isopropyltoluene	0.559	0.0256	0.5129	0	109	52.9	134	0.5514	1.31	30	
1,3-Dichlorobenzene	0.577	0.0103	0.5129	0	112	52.6	131	0.5550	3.88	30	
1,4-Dichlorobenzene	0.578	0.0103	0.5129	0	113	52.9	129	0.5579	3.46	30	
n-Butylbenzene	0.579	0.0128	0.5129	0	113	52.6	130	0.5610	3.12	30	
1,2-Dichlorobenzene	0.571	0.0103	0.5129	0	111	55.8	129	0.5542	3.01	30	
1,2-Dibromo-3-chloropropane	0.456	0.256	0.5129	0	88.8	40.5	131	0.4347	4.70	30	
1,2,4-Trimethylbenzene	0.568	0.0103	0.5129	0.01270	108	50.6	137	0.5523	2.77	30	
Hexachloro-1,3-butadiene	0.553	0.0256	0.5129	0	108	40.6	158	0.5327	3.74	30	
Naphthalene	0.580	0.0256	0.5129	0	113	52.3	124	0.5633	2.94	30	
1,2,3-Trichlorobenzene	0.578	0.0103	0.5129	0	113	54.4	124	0.5477	5.34	30	
Surr: Dibromofluoromethane	0.624		0.6412		97.3	56.5	129		0		
Surr: Toluene-d8	0.625		0.6412		97.5	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	2.52		3.206		78.8	54.8	168		0		



Date: 9/9/2019

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-008BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598			
Client ID: GLB-16-2'		Batch ID: 25679					Analysis Date: 8/30/2019			SeqNo: 1061196		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

NOTES:

S - Outlying spike recovery observed.

Sample ID: 1908349-027BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598		
Client ID: TRB-4-6'		Batch ID: 25679		Analysis Date: 8/30/2019						SeqNo: 1061211	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.00933						0		30	
Chloromethane	ND	0.0233						0		30	
Vinyl chloride	ND	0.0117						0		30	
Bromomethane	ND	0.0233						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.00933						0		30	
Chloroethane	ND	0.0233						0		30	
1,1-Dichloroethene	ND	0.00933						0		30	
Methylene chloride	ND	0.00933						0		30	
trans-1,2-Dichloroethene	ND	0.00933						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0233						0		30	
1,1-Dichloroethane	ND	0.00933						0		30	
cis-1,2-Dichloroethene	ND	0.00933						0		30	
Chloroform	ND	0.00933						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0117						0		30	
1,1-Dichloropropene	ND	0.00933						0		30	
Carbon tetrachloride	ND	0.0117						0		30	
1,2-Dichloroethane (EDC)	ND	0.00933						0		30	
Benzene	ND	0.00933						0		30	
Trichloroethene (TCE)	ND	0.00933						0		30	
1,2-Dichloropropane	ND	0.00933						0		30	
Bromodichloromethane	ND	0.00933						0		30	
Dibromomethane	ND	0.00933						0		30	
cis-1,3-Dichloropropene	ND	0.00933						0		30	
Toluene	ND	0.00933						0		30	



Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-027BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/30/2019		RunNo: 53598			
Client ID: TRB-4-6'		Batch ID: 25679		Analysis Date: 8/30/2019						SeqNo: 1061211	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.00933						0		30	
1,1,2-Trichloroethane	ND	0.00933						0		30	
1,3-Dichloropropane	ND	0.0117						0		30	
Tetrachloroethene (PCE)	ND	0.0117						0		30	
Dibromochloromethane	ND	0.0117						0		30	
1,2-Dibromoethane (EDB)	ND	0.00233						0		30	
Chlorobenzene	ND	0.0117						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0117						0		30	
Ethylbenzene	ND	0.0117						0		30	
m,p-Xylene	ND	0.0233						0		30	
o-Xylene	ND	0.0117						0		30	
Styrene	ND	0.0117						0		30	
Isopropylbenzene	ND	0.0117						0		30	
Bromoform	ND	0.0233						0		30	
1,1,2,2-Tetrachloroethane	ND	0.00933						0		30	
n-Propylbenzene	ND	0.0117						0		30	
Bromobenzene	ND	0.00933						0		30	
1,3,5-Trimethylbenzene	ND	0.0117						0		30	
2-Chlorotoluene	ND	0.0117						0		30	
4-Chlorotoluene	ND	0.0117						0		30	
tert-Butylbenzene	ND	0.0117						0		30	
1,2,3-Trichloropropane	ND	0.0117						0		30	
1,2,4-Trichlorobenzene	ND	0.0117						0		30	
sec-Butylbenzene	ND	0.0233						0		30	
4-Isopropyltoluene	ND	0.0233						0		30	
1,3-Dichlorobenzene	ND	0.00933						0		30	
1,4-Dichlorobenzene	ND	0.00933						0		30	
n-Butylbenzene	ND	0.0117						0		30	
1,2-Dichlorobenzene	ND	0.00933						0		30	
1,2-Dibromo-3-chloropropane	ND	0.233						0		30	Q
1,2,4-Trimethylbenzene	ND	0.00933						0		30	

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-027BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/30/2019			RunNo: 53598			
Client ID: TRB-4-6'		Batch ID: 25679					Analysis Date: 8/30/2019			SeqNo: 1061211		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Hexachloro-1,3-butadiene

ND

0.0233

0

30

Naphthalene

ND

0.0233

0

30

1,2,3-Trichlorobenzene

ND

0.00933

0

30

Surr: Dibromofluoromethane

0.554

0.5829

95.0

56.5

129

0

Surr: Toluene-d8

0.577

0.5829

99.0

64.5

151

0

Surr: 1-Bromo-4-fluorobenzene

2.61

2.914

89.7

54.8

168

0

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Date: 9/9/2019

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: LCS-25689	SampType: LCS	Units: mg/Kg			Prep Date: 9/3/2019			RunNo: 53631			
Client ID: LCSS	Batch ID: 25689	Analysis Date: 9/3/2019						SeqNo: 1061776			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.234	0.00597	0.2500	0	93.5	56.1	130				
Trichloroethene (TCE)	0.246	0.0145	0.2500	0	98.6	67.4	133				
1,2-Dibromoethane (EDB)	0.240	0.00146	0.2500	0	96.1	70	130				
Hexachloro-1,3-butadiene	0.250	0.00795	0.2500	0	100	42	151				
Surr: Dibromofluoromethane	0.499		0.5000		99.8	54.7	128				
Surr: Toluene-d8	0.501		0.5000		100	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.505		0.5000		101	73.5	127				

Sample ID: MB-25689		SampType: MBLK		Units: mg/Kg		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: MBLKS		Batch ID: 25689		Analysis Date: 9/3/2019						SeqNo: 1061777	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00597									Q
Trichloroethene (TCE)	ND	0.0145									
1,2-Dibromoethane (EDB)	ND	0.00146									
Hexachloro-1,3-butadiene	ND	0.00795									
Surr: Dibromofluoromethane	0.512		0.5000		102	54.7	128				
Surr: Toluene-d8	0.495		0.5000		99.1	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.491		0.5000		98.3	73.5	127				

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 9/3/2019			RunNo: 53631			
Client ID: GLB-14-4'	Batch ID: 25689				Analysis Date: 9/4/2019			SeqNo: 1061768			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00274						0		30	Q
Trichloroethene (TCE)	ND	0.00668						0		30	
1,2-Dibromoethane (EDB)	ND	0.000671						0		30	
Hexachloro-1,3-butadiene	ND	0.00365						0		30	I
Surr: Dibromofluoromethane	0.205		0.2299		89.3	54.7	128		0		

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-001BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: GLB-14-4'		Batch ID: 25689			Analysis Date: 9/4/2019					SeqNo: 1061768		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Surr: Toluene-d8

0.145

0.2299

63.0

74.2

139

0

S

Surr: 1-Bromo-4-fluorobenzene

1.46

2.529

57.6

73.5

127

0

SI

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908347-019BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/3/2019		RunNo: 53631		
Client ID: BATCH		Batch ID: 25689			Analysis Date: 9/4/2019				SeqNo: 1061764		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride

ND

0.00282

0

30

Q

Trichloroethene (TCE)

ND

0.00685

0

30

1,2-Dibromoethane (EDB)

ND

0.000689

0

30

Hexachloro-1,3-butadiene

ND

0.00375

0

30

Surr: Dibromofluoromethane

0.242

0.2360

103

54.7

128

0

Surr: Toluene-d8

0.240

0.2360

102

74.2

139

0

Surr: 1-Bromo-4-fluorobenzene

1.82

2.596

70.2

73.5

127

0

S

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: GLB-17-4'		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride

0.117

0.00322

0.1079

0

109

51.2

146

Trichloroethene (TCE)

0.119

0.00783

0.1079

0

110

68.6

132

1,2-Dibromoethane (EDB)

0.117

0.000788

0.1079

0

108

50.4

136

Hexachloro-1,3-butadiene

0.115

0.00429

0.1079

0

106

40.6

158

Surr: Dibromofluoromethane

0.260

0.2698

96.4

54.7

128

Surr: Toluene-d8

0.289

0.2698

107

74.2

139

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: GLB-17-4'		Batch ID: 25689		Analysis Date: 9/4/2019						SeqNo: 1061771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	2.14		2.968		71.9	73.5	127				S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908349-010BMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 9/3/2019			RunNo: 53631		
Client ID: GLB-17-4'	Batch ID: 25689	Analysis Date: 9/4/2019							SeqNo: 1061772		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.134	0.00322	0.1079	0	124	51.2	146	0.1172	13.2	30	
Trichloroethene (TCE)	0.130	0.00783	0.1079	0	120	68.6	132	0.1185	8.94	30	
1,2-Dibromoethane (EDB)	0.126	0.000788	0.1079	0	116	50.4	136	0.1170	7.04	30	
Hexachloro-1,3-butadiene	0.121	0.00429	0.1079	0	112	40.6	158	0.1148	5.49	30	
Surr: Dibromofluoromethane	0.260		0.2698		96.4	54.7	128		0		
Surr: Toluene-d8	0.290		0.2698		108	74.2	139		0		
Surr: 1-Bromo-4-fluorobenzene	2.18		2.968		73.4	73.5	127		0		S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908349

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1908349-010ADUP		SampType: DUP		Units: wt%		Prep Date: 8/29/2019			RunNo: 53554			
Client ID: GLB-17-4'		Batch ID: R53554					Analysis Date: 8/29/2019			SeqNo: 1060065		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Percent Moisture	19.0	0.500						17.68	7.08	20		

Sample ID: 1908349-023ADUP		SampType: DUP			Units: wt%		Prep Date: 8/29/2019			RunNo: 53554		
Client ID: TRB-3-6'		Batch ID: R53554			Analysis Date: 8/29/2019			SeqNo: 1060074				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Percent Moisture	3.30	0.500						3.526	6.72	20		

Client Name: **GL**
 Logged by: **Carissa True**

Work Order Number: **1908349**
 Date Received: **8/26/2019 12:30:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☒ No ☐ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☐ NA ☒
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☒ No ☐

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Zackary Wall Date: 8/27/2019
 By Whom: Carissa True Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding: TRB-3-10.5 iar labeled TRB-3-12 at same time (16:45).
 Client Instructions: TRB-3-10.5 correct.

19. Additional remarks:

Item Information

Item #	Temp °C
Cooler 1	5.1
Cooler 2	5.6
Cooler 3	4.9
Cooler 4	5.6
Cooler 5	5.3

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Client Name: **GL**Work Order Number: **1908349**Logged by: **Carissa True**Date Received: **8/26/2019 12:30:00 PM**

Item #	Temp °C
Cooler 6	7.8
Sample 1	3.3
Sample 2	3.3
Sample 3	5.7
Sample 4	3.6
Sample 5	3.3
Sample 6	1.9
Temp Blank 1	3.4
Temp Blank 2	2.3
Temp Blank 3	4.4
Temp Blank 4	5.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Fremont
Analytical

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Seattle, WA 98103
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info@fremontanalytical.com

G-Logics

Zackary Wall
40 Second Ave. SE
Issaquah, WA 98027

RE: Hoonah

Work Order Number: 1908347

September 12, 2019

Attention Zackary Wall:

Fremont Analytical, Inc. received 39 sample(s) on 8/26/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by AK102-AK103

Gasoline by NWTPH-Gx

Gasoline Range Organics by AK101

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260D

Volatile Organic Compounds by EPA Method 8260D SIM

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: G-Logics
Project: Hoonah
Work Order: 1908347

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908347-001	Trip Blank 2	07/30/2019 4:27 PM	08/26/2019 12:30 PM
1908347-002	GLB-19-2'	08/21/2019 8:45 AM	08/26/2019 12:30 PM
1908347-003	GLB-19-4'	08/21/2019 8:55 AM	08/26/2019 12:30 PM
1908347-004	GLB-19-5'	08/21/2019 9:15 AM	08/26/2019 12:30 PM
1908347-005	GLB-CC	08/21/2019 8:50 AM	08/26/2019 12:30 PM
1908347-006	GLB-20-2'	08/21/2019 9:40 AM	08/26/2019 12:30 PM
1908347-007	GLB-20-4'	08/21/2019 9:50 AM	08/26/2019 12:30 PM
1908347-008	GLB-21-2'	08/21/2019 10:05 AM	08/26/2019 12:30 PM
1908347-009	GLB-21-3'	08/21/2019 10:10 AM	08/26/2019 12:30 PM
1908347-010	GLB-22-4'	08/21/2019 10:25 AM	08/26/2019 12:30 PM
1908347-011	GLB-22-5'	08/21/2019 10:30 AM	08/26/2019 12:30 PM
1908347-012	GLB-23-2'	08/21/2019 1:30 PM	08/26/2019 12:30 PM
1908347-013	GLB-23-5'	08/21/2019 1:40 PM	08/26/2019 12:30 PM
1908347-014	GLB-24-4'	08/21/2019 2:00 PM	08/26/2019 12:30 PM
1908347-015	GLB-24-5'	08/21/2019 2:15 PM	08/26/2019 12:30 PM
1908347-016	TRB-5-10'	08/21/2019 4:25 PM	08/26/2019 12:30 PM
1908347-017	TRB-5-11'	08/21/2019 4:35 PM	08/26/2019 12:30 PM
1908347-018	TRB-DD	08/21/2019 4:30 PM	08/26/2019 12:30 PM
1908347-019	TRB-6-11'	08/21/2019 6:15 PM	08/26/2019 12:30 PM
1908347-020	TRB-6-14'	08/21/2019 6:30 PM	08/26/2019 12:30 PM
1908347-021	TRB-7-5'	08/22/2019 10:00 AM	08/26/2019 12:30 PM
1908347-022	TRB-7-8'	08/22/2019 10:15 AM	08/26/2019 12:30 PM
1908347-023	TRB-7-9'	08/22/2019 10:35 AM	08/26/2019 12:30 PM
1908347-024	TRB-8-6'	08/22/2019 11:30 AM	08/26/2019 12:30 PM
1908347-025	TRB-8-8.5'	08/22/2019 11:45 AM	08/26/2019 12:30 PM
1908347-026	GPW-1	08/19/2019 10:30 AM	08/26/2019 12:30 PM
1908347-027	GPW-2	08/19/2019 11:15 AM	08/26/2019 12:30 PM
1908347-028	GPW-3	08/19/2019 2:45 PM	08/26/2019 12:30 PM
1908347-029	GPW-4	08/19/2019 11:45 AM	08/26/2019 12:30 PM
1908347-030	GPW-5	08/19/2019 12:20 PM	08/26/2019 12:30 PM
1908347-031	GPW-6	08/19/2019 2:30 PM	08/26/2019 12:30 PM
1908347-032	GPW-7	08/20/2019 12:50 PM	08/26/2019 12:30 PM
1908347-033	GPW-8	08/20/2019 12:30 PM	08/26/2019 12:30 PM
1908347-034	GPW-9	08/21/2019 5:00 PM	08/26/2019 12:30 PM
1908347-035	GPW-A	08/20/2019 12:35 PM	08/26/2019 12:30 PM
1908347-036	TRPW-1	08/20/2019 8:00 AM	08/26/2019 12:30 PM

CLIENT: G-Logics
Project: Hoonah
Work Order: 1908347

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908347-037	TRPW-2	08/20/2019 8:30 AM	08/26/2019 12:30 PM
1908347-038	TRPW-A	08/20/2019 8:45 AM	08/26/2019 12:30 PM
1908347-039	Trip Blank W1	08/15/2019 10:00 AM	08/26/2019 12:30 PM

CLIENT: G-Logics**Project:** Hoonah

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

NWTPH-GX was run instead of AK101 for all water samples. Data was reported and quantified according to AK101 ranges.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 7/30/2019 4:27:00 PM

Project: Hoonah

Lab ID: 1908347-001

Matrix: Soil

Client Sample ID: Trip Blank 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	5.00	H	mg/Kg	1	9/3/2019 10:05:12 PM
Surr: 1,4-Difluorobenzene	104	50 - 150	H	%Rec	1	9/3/2019 10:05:12 PM
Surr: 4-Bromofluorobenzene	94.5	50 - 150	H	%Rec	1	9/3/2019 10:05:12 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloromethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Vinyl chloride	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromomethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloroethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Methylene chloride	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
trans-1,2-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
cis-1,2-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloroform	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloropropene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Carbon tetrachloride	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichloroethane (EDC)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Benzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Trichloroethene (TCE)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichloropropane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromodichloromethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Dibromomethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
cis-1,3-Dichloropropene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Toluene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
trans-1,3-Dichloropropylene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,2-Trichloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3-Dichloropropane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Tetrachloroethene (PCE)	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Dibromochloromethane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dibromoethane (EDB)	ND	0.00500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chlorobenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Ethylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 7/30/2019 4:27:00 PM

Project: Hoonah

Lab ID: 1908347-001

Matrix: Soil

Client Sample ID: Trip Blank 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

m,p-Xylene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
o-Xylene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Styrene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Isopropylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromoform	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,2,2-Tetrachloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
n-Propylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3,5-Trimethylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
2-Chlorotoluene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
4-Chlorotoluene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
tert-Butylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,3-Trichloropropane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,4-Trichlorobenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
sec-Butylbenzene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
4-Isopropyltoluene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,4-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
n-Butylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dibromo-3-chloropropane	ND	0.500	QH	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,4-Trimethylbenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Hexachloro-1,3-butadiene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Naphthalene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,3-Trichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Surr: Dibromofluoromethane	94.5	56.5 - 129	H	%Rec	1	8/28/2019 11:02:29 PM
Surr: Toluene-d8	98.9	64.5 - 151	H	%Rec	1	8/28/2019 11:02:29 PM
Surr: 1-Bromo-4-fluorobenzene	90.9	54.8 - 168	H	%Rec	1	8/28/2019 11:02:29 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25727

Analyst: DW

Diesel Range Organics (C10-C25)	32.4	20.8	H	mg/Kg-dry	1	9/9/2019 1:24:28 PM
Residual Range Organics (C25-C36)	ND	52.0	H	mg/Kg-dry	1	9/9/2019 1:24:28 PM
Surr: 2-Fluorobiphenyl	104	50 - 150	H	%Rec	1	9/9/2019 1:24:28 PM
Surr: o-Terphenyl	109	50 - 150	H	%Rec	1	9/9/2019 1:24:28 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25728

Analyst: SB

Naphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
2-Methylnaphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
1-Methylnaphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Acenaphthylene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Acenaphthene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Fluorene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Phenanthrene	104	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Anthracene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Fluoranthene	142	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Pyrene	128	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benz(a)anthracene	67.5	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Chrysene	64.8	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(b)fluoranthene	71.2	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(k)fluoranthene	42.0	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(a)pyrene	73.9	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Indeno(1,2,3-cd)pyrene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Dibenz(a,h)anthracene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(g,h,i)perylene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Surr: 2-Fluorobiphenyl	84.1	24.4 - 151	H	%Rec	1	9/6/2019 10:59:32 PM
Surr: Terphenyl-d14 (surr)	99.0	31.4 - 162	H	%Rec	1	9/6/2019 10:59:32 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.55		mg/Kg-dry	1	9/5/2019 6:12:05 PM
Surr: 1,4-Difluorobenzene	116	50 - 150		%Rec	1	9/5/2019 6:12:05 PM
Surr: 4-Bromofluorobenzene	98.4	50 - 150		%Rec	1	9/5/2019 6:12:05 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloromethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Vinyl chloride	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

Bromomethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Trichlorofluoromethane (CFC-11)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloroethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Methylene chloride	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
trans-1,2-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Methyl tert-butyl ether (MTBE)	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
cis-1,2-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloroform	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,1-Trichloroethane (TCA)	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloropropene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Carbon tetrachloride	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichloroethane (EDC)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Benzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Trichloroethene (TCE)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichloropropane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromodichloromethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Dibromomethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
cis-1,3-Dichloropropene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Toluene	0.0250	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
trans-1,3-Dichloropropylene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,2-Trichloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3-Dichloropropane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Tetrachloroethene (PCE)	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Dibromochloromethane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dibromoethane (EDB)	ND	0.00255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chlorobenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,1,2-Tetrachloroethane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Ethylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
m,p-Xylene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
o-Xylene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Styrene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Isopropylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromoform	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,2,2-Tetrachloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
n-Propylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3,5-Trimethylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

2-Chlorotoluene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
4-Chlorotoluene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
tert-Butylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,3-Trichloropropane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,4-Trichlorobenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
sec-Butylbenzene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
4-Isopropyltoluene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,4-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
n-Butylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dibromo-3-chloropropane	ND	0.255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,4-Trimethylbenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Hexachloro-1,3-butadiene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Naphthalene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,3-Trichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Surr: Dibromofluoromethane	98.6	56.5 - 129	H	%Rec	1	9/7/2019 1:21:36 AM
Surr: Toluene-d8	101	64.5 - 151	H	%Rec	1	9/7/2019 1:21:36 AM
Surr: 1-Bromo-4-fluorobenzene	116	54.8 - 168	H	%Rec	1	9/7/2019 1:21:36 AM

Sample Moisture (Percent Moisture)

Batch ID: R53712

Analyst: CJ

Percent Moisture	8.24	0.500		wt%	1	9/6/2019 11:02:39 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.1		mg/Kg-dry	1	8/27/2019 8:11:22 PM
Residual Range Organics (C25-C36)	ND	52.7		mg/Kg-dry	1	8/27/2019 8:11:22 PM
Surr: 2-Fluorobiphenyl	85.9	50 - 150		%Rec	1	8/27/2019 8:11:22 PM
Surr: o-Terphenyl	94.0	50 - 150		%Rec	1	8/27/2019 8:11:22 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
2-Methylnaphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
1-Methylnaphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Acenaphthylene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Acenaphthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Fluorene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Phenanthrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benz(a)anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Chrysene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(b)fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(k)fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(a)pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Indeno(1,2,3-cd)pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Dibenz(a,h)anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(g,h,i)perylene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Surr: 2-Fluorobiphenyl	83.0	24.4 - 151		%Rec	1	8/28/2019 9:32:36 PM
Surr: Terphenyl-d14 (surr)	115	31.4 - 162		%Rec	1	8/28/2019 9:32:36 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.90		mg/Kg-dry	1	9/3/2019 10:46:20 PM
Surr: 1,4-Difluorobenzene	101	50 - 150		%Rec	1	9/3/2019 10:46:20 PM
Surr: 4-Bromofluorobenzene	83.1	50 - 150		%Rec	1	9/3/2019 10:46:20 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloromethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Vinyl chloride	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Trichlorofluoromethane (CFC-11)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloroethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Methylene chloride	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
trans-1,2-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Methyl tert-butyl ether (MTBE)	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
cis-1,2-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloroform	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,1-Trichloroethane (TCA)	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloropropene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Carbon tetrachloride	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichloroethane (EDC)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Benzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Trichloroethene (TCE)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichloropropane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromodichloromethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Dibromomethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
cis-1,3-Dichloropropene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Toluene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
trans-1,3-Dichloropropylene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,2-Trichloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3-Dichloropropane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Tetrachloroethene (PCE)	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Dibromochloromethane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dibromoethane (EDB)	ND	0.00290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chlorobenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,1,2-Tetrachloroethane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Ethylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
m,p-Xylene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
o-Xylene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Styrene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Isopropylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromoform	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,2,2-Tetrachloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
n-Propylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3,5-Trimethylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
4-Chlorotoluene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
tert-Butylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,3-Trichloropropane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,4-Trichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
sec-Butylbenzene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
4-Isopropyltoluene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,4-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
n-Butylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dibromo-3-chloropropane	ND	0.290	Q	mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,4-Trimethylbenzene	0.0118	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Hexachloro-1,3-butadiene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Naphthalene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,3-Trichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/28/2019 11:32:38 PM
Surr: Toluene-d8	98.9	64.5 - 151		%Rec	1	8/28/2019 11:32:38 PM
Surr: 1-Bromo-4-fluorobenzene	81.8	54.8 - 168		%Rec	1	8/28/2019 11:32:38 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527

Analyst: SBM

Percent Moisture	7.92	0.500		wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	20.7		mg/Kg-dry	1	8/27/2019 10:11:11 PM
Residual Range Organics (C25-C36)	ND	51.6		mg/Kg-dry	1	8/27/2019 10:11:11 PM
Surr: 2-Fluorobiphenyl	83.1	50 - 150		%Rec	1	8/27/2019 10:11:11 PM
Surr: o-Terphenyl	91.2	50 - 150		%Rec	1	8/27/2019 10:11:11 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
2-Methylnaphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
1-Methylnaphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Acenaphthylene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Acenaphthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Fluorene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Phenanthrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benz(a)anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Chrysene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(b)fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(k)fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(a)pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Indeno(1,2,3-cd)pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Dibenz(a,h)anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(g,h,i)perylene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Surr: 2-Fluorobiphenyl	74.3	24.4 - 151		%Rec	1	8/28/2019 2:56:27 PM
Surr: Terphenyl-d14 (surr)	93.6	31.4 - 162		%Rec	1	8/28/2019 2:56:27 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	3.21		mg/Kg-dry	1	9/3/2019 11:27:34 PM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/3/2019 11:27:34 PM
Surr: 4-Bromofluorobenzene	83.8	50 - 150		%Rec	1	9/3/2019 11:27:34 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloromethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Vinyl chloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Trichlorofluoromethane (CFC-11)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloroethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Methylene chloride	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
trans-1,2-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Methyl tert-butyl ether (MTBE)	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
cis-1,2-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloroform	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,1-Trichloroethane (TCA)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloropropene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Carbon tetrachloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichloroethane (EDC)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Benzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Trichloroethene (TCE)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromodichloromethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Dibromomethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
cis-1,3-Dichloropropene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Toluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
trans-1,3-Dichloropropylene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,2-Trichloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3-Dichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Tetrachloroethene (PCE)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Dibromochloromethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dibromoethane (EDB)	ND	0.00321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,1,2-Tetrachloroethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
m,p-Xylene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
o-Xylene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Styrene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Isopropylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromoform	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,2,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
n-Propylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3,5-Trimethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
4-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
tert-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,3-Trichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,4-Trichlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
sec-Butylbenzene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
4-Isopropyltoluene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,4-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
n-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dibromo-3-chloropropane	ND	0.321	Q	mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,4-Trimethylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Hexachloro-1,3-butadiene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Naphthalene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,3-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Surr: Dibromofluoromethane	95.3	56.5 - 129		%Rec	1	8/29/2019 12:02:47 AM
Surr: Toluene-d8	99.2	64.5 - 151		%Rec	1	8/29/2019 12:02:47 AM
Surr: 1-Bromo-4-fluorobenzene	84.3	54.8 - 168		%Rec	1	8/29/2019 12:02:47 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527

Analyst: SBM

Percent Moisture	14.2	0.500		wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	27.2	19.7		mg/Kg-dry	1	8/27/2019 10:41:04 PM
Residual Range Organics (C25-C36)	53.6	49.2		mg/Kg-dry	1	8/27/2019 10:41:04 PM
Surr: 2-Fluorobiphenyl	87.3	50 - 150		%Rec	1	8/27/2019 10:41:04 PM
Surr: o-Terphenyl	91.7	50 - 150		%Rec	1	8/27/2019 10:41:04 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
1-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Fluorene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Phenanthrene	46.5	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Fluoranthene	75.4	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Pyrene	65.2	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Chrysene	44.1	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Surr: 2-Fluorobiphenyl	91.7	24.4 - 151		%Rec	1	8/28/2019 3:17:15 PM
Surr: Terphenyl-d14 (surr)	112	31.4 - 162		%Rec	1	8/28/2019 3:17:15 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	ND	3.21		mg/Kg-dry	1	9/4/2019 12:08:46 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 12:08:46 AM
Surr: 4-Bromofluorobenzene	87.9	50 - 150		%Rec	1	9/4/2019 12:08:46 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloromethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Vinyl chloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260D</u>			Batch ID: 25646		Analyst: KT	
Bromomethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloroethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Methylene chloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
trans-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
cis-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloroform	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Carbon tetrachloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichloroethane (EDC)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Benzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Trichloroethene (TCE)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromodichloromethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Dibromomethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
cis-1,3-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Toluene	0.0182	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
trans-1,3-Dichloropropylene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,2-Trichloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3-Dichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Tetrachloroethene (PCE)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Dibromochloromethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dibromoethane (EDB)	ND	0.00321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
m,p-Xylene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
o-Xylene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Styrene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Isopropylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromoform	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,2,2-Tetrachloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
n-Propylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3,5-Trimethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
2-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
4-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
tert-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,3-Trichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,4-Trichlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
sec-Butylbenzene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
4-Isopropyltoluene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,4-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
n-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dibromo-3-chloropropane	ND	0.321	Q	mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,4-Trimethylbenzene	0.0131	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Hexachloro-1,3-butadiene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Naphthalene	0.138	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,3-Trichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Surr: Dibromofluoromethane	95.8	56.5 - 129		%Rec	1	8/29/2019 12:32:55 AM
Surr: Toluene-d8	97.6	64.5 - 151		%Rec	1	8/29/2019 12:32:55 AM
Surr: 1-Bromo-4-fluorobenzene	87.1	54.8 - 168		%Rec	1	8/29/2019 12:32:55 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527 Analyst: SBM

Percent Moisture	8.99	0.500	wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	23.7		mg/Kg-dry	1	8/27/2019 11:10:55 PM
Residual Range Organics (C25-C36)	ND	59.4		mg/Kg-dry	1	8/27/2019 11:10:55 PM
Surr: 2-Fluorobiphenyl	42.5	50 - 150	S	%Rec	1	8/27/2019 11:10:55 PM
Surr: o-Terphenyl	47.6	50 - 150	S	%Rec	1	8/27/2019 11:10:55 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
2-Methylnaphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
1-Methylnaphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Acenaphthylene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Acenaphthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Fluorene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Phenanthrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benz(a)anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Chrysene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(b)fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(k)fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(a)pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Indeno(1,2,3-cd)pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Dibenz(a,h)anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(g,h,i)perylene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Surr: 2-Fluorobiphenyl	83.9	24.4 - 151		%Rec	1	8/28/2019 3:38:11 PM
Surr: Terphenyl-d14 (surr)	104	31.4 - 162		%Rec	1	8/28/2019 3:38:11 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	ND	2.50		mg/Kg-dry	1	9/4/2019 12:49:54 AM
Surr: 1,4-Difluorobenzene	104	50 - 150		%Rec	1	9/4/2019 12:49:54 AM
Surr: 4-Bromofluorobenzene	83.4	50 - 150		%Rec	1	9/4/2019 12:49:54 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Chloromethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Vinyl chloride	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromomethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Trichlorofluoromethane (CFC-11)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chloroethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Methylene chloride	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
trans-1,2-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Methyl tert-butyl ether (MTBE)	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
cis-1,2-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chloroform	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,1-Trichloroethane (TCA)	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloropropene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Carbon tetrachloride	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichloroethane (EDC)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Benzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Trichloroethene (TCE)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichloropropane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromodichloromethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Dibromomethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
cis-1,3-Dichloropropene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Toluene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
trans-1,3-Dichloropropylene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,2-Trichloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3-Dichloropropane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Tetrachloroethene (PCE)	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Dibromochloromethane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dibromoethane (EDB)	ND	0.00250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chlorobenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,1,2-Tetrachloroethane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Ethylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
m,p-Xylene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
o-Xylene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Styrene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Isopropylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromoform	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,2,2-Tetrachloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
n-Propylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3,5-Trimethylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
2-Chlorotoluene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
4-Chlorotoluene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
tert-Butylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,3-Trichloropropane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,4-Trichlorobenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
sec-Butylbenzene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
4-Isopropyltoluene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,4-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
n-Butylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dibromo-3-chloropropane	ND	0.250	Q	mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,4-Trimethylbenzene	0.0113	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Hexachloro-1,3-butadiene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Naphthalene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,3-Trichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Surr: Dibromofluoromethane	95.4	56.5 - 129		%Rec	1	8/29/2019 1:03:05 AM
Surr: Toluene-d8	98.8	64.5 - 151		%Rec	1	8/29/2019 1:03:05 AM
Surr: 1-Bromo-4-fluorobenzene	77.8	54.8 - 168		%Rec	1	8/29/2019 1:03:05 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	18.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	20.2		mg/Kg-dry	1	8/27/2019 11:40:46 PM
Residual Range Organics (C25-C36)	ND	50.5		mg/Kg-dry	1	8/27/2019 11:40:46 PM
Surr: 2-Fluorobiphenyl	74.2	50 - 150		%Rec	1	8/27/2019 11:40:46 PM
Surr: o-Terphenyl	84.1	50 - 150		%Rec	1	8/27/2019 11:40:46 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
2-Methylnaphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
1-Methylnaphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Acenaphthylene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Acenaphthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Fluorene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Phenanthrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benz(a)anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Chrysene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(b)fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(k)fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(a)pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Indeno(1,2,3-cd)pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Dibenz(a,h)anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(g,h,i)perylene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Surr: 2-Fluorobiphenyl	79.3	24.4 - 151		%Rec	1	8/28/2019 3:59:07 PM
Surr: Terphenyl-d14 (surr)	99.9	31.4 - 162		%Rec	1	8/28/2019 3:59:07 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.29		mg/Kg-dry	1	9/4/2019 1:31:09 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 1:31:09 AM
Surr: 4-Bromofluorobenzene	82.1	50 - 150		%Rec	1	9/4/2019 1:31:09 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloromethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Vinyl chloride	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Trichlorofluoromethane (CFC-11)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloroethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Methylene chloride	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
trans-1,2-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Methyl tert-butyl ether (MTBE)	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
cis-1,2-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloroform	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,1-Trichloroethane (TCA)	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloropropene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Carbon tetrachloride	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichloroethane (EDC)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Benzene	0.0200	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Trichloroethene (TCE)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichloropropane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromodichloromethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Dibromomethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
cis-1,3-Dichloropropene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Toluene	0.0525	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
trans-1,3-Dichloropropylene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,2-Trichloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3-Dichloropropane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Tetrachloroethene (PCE)	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Dibromochloromethane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dibromoethane (EDB)	ND	0.00229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chlorobenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,1,2-Tetrachloroethane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Ethylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
m,p-Xylene	0.0426	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
o-Xylene	0.0159	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Styrene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Isopropylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromoform	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,2,2-Tetrachloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
n-Propylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3,5-Trimethylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
4-Chlorotoluene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
tert-Butylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,3-Trichloropropane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,4-Trichlorobenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,4-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
n-Butylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dibromo-3-chloropropane	ND	0.229	Q	mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,4-Trimethylbenzene	0.0295	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Hexachloro-1,3-butadiene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Naphthalene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,3-Trichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/29/2019 1:33:14 AM
Surr: Toluene-d8	99.4	64.5 - 151		%Rec	1	8/29/2019 1:33:14 AM
Surr: 1-Bromo-4-fluorobenzene	78.6	54.8 - 168		%Rec	1	8/29/2019 1:33:14 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	13.3	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	23.0		mg/Kg-dry	1	8/28/2019 12:10:36 AM
Residual Range Organics (C25-C36)	ND	57.5		mg/Kg-dry	1	8/28/2019 12:10:36 AM
Surr: 2-Fluorobiphenyl	77.7	50 - 150		%Rec	1	8/28/2019 12:10:36 AM
Surr: o-Terphenyl	88.5	50 - 150		%Rec	1	8/28/2019 12:10:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
2-Methylnaphthalene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
1-Methylnaphthalene	55.7	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Acenaphthylene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Acenaphthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Fluorene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Phenanthrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benz(a)anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Chrysene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(b)fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(k)fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(a)pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Indeno(1,2,3-cd)pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Dibenz(a,h)anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(g,h,i)perylene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Surr: 2-Fluorobiphenyl	77.5	24.4 - 151		%Rec	1	8/28/2019 4:19:57 PM
Surr: Terphenyl-d14 (surr)	71.3	31.4 - 162		%Rec	1	8/28/2019 4:19:57 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	3.38	2.98		mg/Kg-dry	1	9/4/2019 2:53:41 AM
Surr: 1,4-Difluorobenzene	108	50 - 150		%Rec	1	9/4/2019 2:53:41 AM
Surr: 4-Bromofluorobenzene	82.0	50 - 150		%Rec	1	9/4/2019 2:53:41 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloromethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromomethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloroethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Methylene chloride	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
trans-1,2-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Methyl tert-butyl ether (MTBE)	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
cis-1,2-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloroform	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,1-Trichloroethane (TCA)	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloropropene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Carbon tetrachloride	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichloroethane (EDC)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Benzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichloropropane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromodichloromethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Dibromomethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
cis-1,3-Dichloropropene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Toluene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
trans-1,3-Dichloropropylene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,2-Trichloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3-Dichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Tetrachloroethene (PCE)	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Dibromochloromethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,1,2-Tetrachloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Ethylbenzene	0.0609	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
m,p-Xylene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
o-Xylene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Styrene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Isopropylbenzene	0.0425	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromoform	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,2,2-Tetrachloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
n-Propylbenzene	0.233	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3,5-Trimethylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
2-Chlorotoluene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
4-Chlorotoluene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
tert-Butylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

1,2,3-Trichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,4-Trichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
sec-Butylbenzene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
4-Isopropyltoluene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,4-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
n-Butylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dibromo-3-chloropropane	ND	0.298	Q	mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,4-Trimethylbenzene	0.0365	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Naphthalene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,3-Trichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Surr: Dibromofluoromethane	95.6	56.5 - 129		%Rec	1	8/29/2019 2:03:24 AM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	8/29/2019 2:03:24 AM
Surr: 1-Bromo-4-fluorobenzene	74.6	54.8 - 168		%Rec	1	8/29/2019 2:03:24 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00355	Q	mg/Kg-dry	1	9/4/2019 1:38:11 AM
Trichloroethene (TCE)	ND	0.00864		mg/Kg-dry	1	9/4/2019 1:38:11 AM
1,2-Dibromoethane (EDB)	ND	0.000869		mg/Kg-dry	1	9/4/2019 1:38:11 AM
Hexachloro-1,3-butadiene	ND	0.00473		mg/Kg-dry	1	9/4/2019 1:38:11 AM
Surr: Dibromofluoromethane	96.9	54.7 - 128		%Rec	1	9/4/2019 1:38:11 AM
Surr: Toluene-d8	96.9	74.2 - 139		%Rec	1	9/4/2019 1:38:11 AM
Surr: 1-Bromo-4-fluorobenzene	67.8	73.5 - 127	S	%Rec	1	9/4/2019 1:38:11 AM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	21.6	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	19.3		mg/Kg-dry	1	8/28/2019 12:40:26 AM
Residual Range Organics (C25-C36)	ND	48.3		mg/Kg-dry	1	8/28/2019 12:40:26 AM
Surr: 2-Fluorobiphenyl	87.2	50 - 150		%Rec	1	8/28/2019 12:40:26 AM
Surr: o-Terphenyl	96.8	50 - 150		%Rec	1	8/28/2019 12:40:26 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
2-Methylnaphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
1-Methylnaphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Acenaphthylene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Acenaphthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Fluorene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Phenanthrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benz(a)anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Chrysene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(b)fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(k)fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(a)pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Indeno(1,2,3-cd)pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Dibenz(a,h)anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(g,h,i)perylene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Surr: 2-Fluorobiphenyl	78.8	24.4 - 151		%Rec	1	8/28/2019 4:40:58 PM
Surr: Terphenyl-d14 (surr)	105	31.4 - 162		%Rec	1	8/28/2019 4:40:58 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.63		mg/Kg-dry	1	9/4/2019 3:34:38 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 3:34:38 AM
Surr: 4-Bromofluorobenzene	84.4	50 - 150		%Rec	1	9/4/2019 3:34:38 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloromethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Vinyl chloride	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Trichlorofluoromethane (CFC-11)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloroethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Methylene chloride	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
trans-1,2-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Methyl tert-butyl ether (MTBE)	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
cis-1,2-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloroform	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,1-Trichloroethane (TCA)	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloropropene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Carbon tetrachloride	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichloroethane (EDC)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Benzene	0.0481	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Trichloroethene (TCE)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichloropropane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromodichloromethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Dibromomethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
cis-1,3-Dichloropropene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Toluene	0.0208	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
trans-1,3-Dichloropropylene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,2-Trichloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3-Dichloropropane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Tetrachloroethene (PCE)	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Dibromochloromethane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dibromoethane (EDB)	ND	0.00263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chlorobenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,1,2-Tetrachloroethane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Ethylbenzene	0.0901	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
m,p-Xylene	0.0444	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
o-Xylene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Styrene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Isopropylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromoform	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,2,2-Tetrachloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
n-Propylbenzene	0.0404	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3,5-Trimethylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
4-Chlorotoluene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
tert-Butylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,3-Trichloropropane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,4-Trichlorobenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
sec-Butylbenzene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
4-Isopropyltoluene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,4-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
n-Butylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dibromo-3-chloropropane	ND	0.263	Q	mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,4-Trimethylbenzene	0.0197	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Hexachloro-1,3-butadiene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Naphthalene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,3-Trichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Surr: Dibromofluoromethane	94.6	56.5 - 129		%Rec	1	8/29/2019 2:33:31 AM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	8/29/2019 2:33:31 AM
Surr: 1-Bromo-4-fluorobenzene	80.7	54.8 - 168		%Rec	1	8/29/2019 2:33:31 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	10.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	3,900	243	D	mg/Kg-dry	10	8/28/2019 3:08:56 PM
Residual Range Organics (C25-C36)	ND	60.7		mg/Kg-dry	1	8/28/2019 10:08:21 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/28/2019 10:08:21 AM
Surr: o-Terphenyl	97.6	50 - 150		%Rec	1	8/28/2019 10:08:21 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	19,700	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
2-Methylnaphthalene	21,500	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
1-Methylnaphthalene	16,500	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
Acenaphthylene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Acenaphthene	459	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Fluorene	1,140	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Phenanthrene	1,910	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Anthracene	183	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Fluoranthene	337	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Pyrene	255	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benz(a)anthracene	64.9	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Chrysene	61.3	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(b)fluoranthene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(k)fluoranthene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(a)pyrene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Indeno(1,2,3-cd)pyrene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Dibenz(a,h)anthracene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(g,h,i)perylene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Surr: 2-Fluorobiphenyl	91.0	24.4 - 151		%Rec	1	8/28/2019 5:01:54 PM
Surr: Terphenyl-d14 (surr)	17.6	31.4 - 162	S	%Rec	1	8/28/2019 5:01:54 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	716	256	D	mg/Kg-dry	100	9/5/2019 4:11:32 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/5/2019 4:11:32 AM
Surr: 4-Bromofluorobenzene	95.1	50 - 150	D	%Rec	100	9/5/2019 4:11:32 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Chloromethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Bromomethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Trichlorofluoromethane (CFC-11)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chloroethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Methylene chloride	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
trans-1,2-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Methyl tert-butyl ether (MTBE)	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
cis-1,2-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chloroform	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,1-Trichloroethane (TCA)	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloropropene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Carbon tetrachloride	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichloroethane (EDC)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Benzene	0.0186	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichloropropane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Bromodichloromethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Dibromomethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
cis-1,3-Dichloropropene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Toluene	1.38	0.205	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
trans-1,3-Dichloropropylene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,2-Trichloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Tetrachloroethene (PCE)	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Dibromochloromethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,1,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Ethylbenzene	25.4	0.639	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
m,p-Xylene	38.4	1.28	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
o-Xylene	3.57	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Styrene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Isopropylbenzene	2.74	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Bromoform	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,2,2-Tetrachloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
n-Propylbenzene	7.66	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Bromobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3,5-Trimethylbenzene	10.7	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
2-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

4-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
tert-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,3-Trichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,4-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
sec-Butylbenzene	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
4-Isopropyltoluene	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,4-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
n-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dibromo-3-chloropropane	ND	0.256	Q	mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,4-Trimethylbenzene	48.7	0.511	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
Naphthalene	13.4	0.511	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
1,2,3-Trichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Surr: Dibromofluoromethane	93.2	56.5 - 129		%Rec	1	8/29/2019 3:03:41 AM
Surr: Toluene-d8	128	64.5 - 151		%Rec	1	8/29/2019 3:03:41 AM
Surr: 1-Bromo-4-fluorobenzene	73.6	54.8 - 168		%Rec	1	8/29/2019 3:03:41 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00305	Q	mg/Kg-dry	1	9/4/2019 2:11:40 AM
Trichloroethene (TCE)	ND	0.00743		mg/Kg-dry	1	9/4/2019 2:11:40 AM
1,2-Dibromoethane (EDB)	ND	0.000747		mg/Kg-dry	1	9/4/2019 2:11:40 AM
Hexachloro-1,3-butadiene	ND	0.00406	I	mg/Kg-dry	1	9/4/2019 2:11:40 AM
Surr: Dibromofluoromethane	86.2	54.7 - 128		%Rec	1	9/4/2019 2:11:40 AM
Surr: Toluene-d8	57.1	74.2 - 139	S	%Rec	1	9/4/2019 2:11:40 AM
Surr: 1-Bromo-4-fluorobenzene	77.9	73.5 - 127	I	%Rec	1	9/4/2019 2:11:40 AM

NOTES:

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	23.4	0.500	wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	43.0	22.3		mg/Kg-dry	1	8/28/2019 3:39:46 AM
Residual Range Organics (C25-C36)	ND	55.6		mg/Kg-dry	1	8/28/2019 3:39:46 AM
Surr: 2-Fluorobiphenyl	83.2	50 - 150		%Rec	1	8/28/2019 3:39:46 AM
Surr: o-Terphenyl	88.2	50 - 150		%Rec	1	8/28/2019 3:39:46 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	128	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
2-Methylnaphthalene	113	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
1-Methylnaphthalene	136	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Acenaphthylene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Acenaphthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Fluorene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Phenanthrene	68.6	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benz(a)anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Chrysene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(b)fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(k)fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(a)pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Indeno(1,2,3-cd)pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Dibenz(a,h)anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(g,h,i)perylene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Surr: 2-Fluorobiphenyl	81.6	24.4 - 151		%Rec	1	8/28/2019 5:22:50 PM
Surr: Terphenyl-d14 (surr)	93.4	31.4 - 162		%Rec	1	8/28/2019 5:22:50 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	71.2	36.3	D	mg/Kg-dry	10	9/5/2019 6:14:19 AM
Surr: 1,4-Difluorobenzene	109	50 - 150	D	%Rec	10	9/5/2019 6:14:19 AM
Surr: 4-Bromofluorobenzene	97.3	50 - 150	D	%Rec	10	9/5/2019 6:14:19 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloromethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Vinyl chloride	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Trichlorofluoromethane (CFC-11)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloroethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Methylene chloride	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
trans-1,2-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Methyl tert-butyl ether (MTBE)	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
cis-1,2-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloroform	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,1-Trichloroethane (TCA)	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloropropene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Carbon tetrachloride	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichloroethane (EDC)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Benzene	0.350	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Trichloroethene (TCE)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichloropropane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Bromodichloromethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Dibromomethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
cis-1,3-Dichloropropene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Toluene	0.0875	0.0145		mg/Kg-dry	1	8/29/2019 12:39:44 PM
trans-1,3-Dichloropropylene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,2-Trichloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3-Dichloropropane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Tetrachloroethene (PCE)	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Dibromochloromethane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dibromoethane (EDB)	ND	0.00363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chlorobenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,1,2-Tetrachloroethane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Ethylbenzene	1.24	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
m,p-Xylene	1.79	0.0363		mg/Kg-dry	1	8/29/2019 12:39:44 PM
o-Xylene	0.125	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Styrene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Isopropylbenzene	0.160	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Bromoform	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,2,2-Tetrachloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
n-Propylbenzene	0.470	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Bromobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3,5-Trimethylbenzene	0.521	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
4-Chlorotoluene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
tert-Butylbenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,3-Trichloropropane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,4-Trichlorobenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
sec-Butylbenzene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
4-Isopropyltoluene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,4-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
n-Butylbenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dibromo-3-chloropropane	ND	0.363	Q	mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,4-Trimethylbenzene	3.28	0.145	D	mg/Kg-dry	10	8/29/2019 11:09:24 AM
Hexachloro-1,3-butadiene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Naphthalene	0.564	0.0363		mg/Kg-dry	1	8/29/2019 12:39:44 PM
1,2,3-Trichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Surr: Dibromofluoromethane	93.9	56.5 - 129		%Rec	1	8/29/2019 3:33:49 AM
Surr: Toluene-d8	97.7	64.5 - 151		%Rec	1	8/29/2019 3:33:49 AM
Surr: 1-Bromo-4-fluorobenzene	87.3	54.8 - 168		%Rec	1	8/29/2019 3:33:49 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	15.0	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	1,560	22.7		mg/Kg-dry	1	8/28/2019 11:08:20 AM
Residual Range Organics (C25-C36)	ND	56.6		mg/Kg-dry	1	8/28/2019 11:08:20 AM
Surr: 2-Fluorobiphenyl	77.2	50 - 150		%Rec	1	8/28/2019 11:08:20 AM
Surr: o-Terphenyl	75.9	50 - 150		%Rec	1	8/28/2019 11:08:20 AM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	9,610	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
2-Methylnaphthalene	16,900	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
1-Methylnaphthalene	14,200	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
Acenaphthylene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Acenaphthene	777	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Fluorene	1,240	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Phenanthrene	1,720	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Anthracene	176	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Fluoranthene	524	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Pyrene	421	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benz(a)anthracene	102	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Chrysene	83.9	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(b)fluoranthene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(k)fluoranthene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(a)pyrene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Indeno(1,2,3-cd)pyrene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Dibenz(a,h)anthracene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(g,h,i)perylene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Surr: 2-Fluorobiphenyl	102	24.4 - 151		%Rec	1	8/28/2019 5:43:53 PM
Surr: Terphenyl-d14 (surr)	32.1	31.4 - 162	D	%Rec	10	8/29/2019 11:05:57 AM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	1,300	305	D	mg/Kg-dry	100	9/4/2019 8:21:32 AM
Surr: 1,4-Difluorobenzene	109	50 - 150	D	%Rec	100	9/4/2019 8:21:32 AM
Surr: 4-Bromofluorobenzene	116	50 - 150	D	%Rec	100	9/4/2019 8:21:32 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloromethane	ND	0.122	DQ	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromomethane	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloroethane	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Methylene chloride	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
trans-1,2-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
cis-1,2-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloroform	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,1-Trichloroethane (TCA)	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloropropene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Carbon tetrachloride	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichloroethane (EDC)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Benzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichloropropane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromodichloromethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Dibromomethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
cis-1,3-Dichloropropene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Toluene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
trans-1,3-Dichloropropylene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,2-Trichloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3-Dichloropropane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Tetrachloroethene (PCE)	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Dibromochloromethane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chlorobenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,1,2-Tetrachloroethane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Ethylbenzene	2.25	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
m,p-Xylene	24.5	3.05	D	mg/Kg-dry	100	9/3/2019 5:53:57 PM
o-Xylene	0.838	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Styrene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Isopropylbenzene	0.488	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromoform	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,2,2-Tetrachloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
n-Propylbenzene	1.71	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3,5-Trimethylbenzene	3.11	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
2-Chlorotoluene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
4-Chlorotoluene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
tert-Butylbenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,4-Trichlorobenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
sec-Butylbenzene	0.320	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
4-Isopropyltoluene	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,4-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
n-Butylbenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dibromo-3-chloropropane	ND	1.22	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,4-Trimethylbenzene	32.3	1.22	D	mg/Kg-dry	100	9/3/2019 5:53:57 PM
Naphthalene	2.51	0.122	DQ	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,3-Trichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Surr: Dibromofluoromethane	101	56.5 - 129	D	%Rec	20	8/29/2019 12:56:39 PM
Surr: Toluene-d8	103	64.5 - 151	D	%Rec	20	8/29/2019 12:56:39 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	54.8 - 168	D	%Rec	20	8/29/2019 12:56:39 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00364	Q	mg/Kg-dry	1	9/4/2019 2:45:08 AM
Trichloroethene (TCE)	ND	0.00886		mg/Kg-dry	1	9/4/2019 2:45:08 AM
1,2-Dibromoethane (EDB)	ND	0.000890		mg/Kg-dry	1	9/4/2019 2:45:08 AM
Hexachloro-1,3-butadiene	ND	0.00485		mg/Kg-dry	1	9/4/2019 2:45:08 AM
Surr: Dibromofluoromethane	88.7	54.7 - 128		%Rec	1	9/4/2019 2:45:08 AM
Surr: Toluene-d8	98.4	74.2 - 139		%Rec	1	9/4/2019 2:45:08 AM
Surr: 1-Bromo-4-fluorobenzene	93.5	73.5 - 127		%Rec	1	9/4/2019 2:45:08 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	19.7	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	377	21.8		mg/Kg-dry	1	8/28/2019 4:09:35 AM
Residual Range Organics (C25-C36)	ND	54.5		mg/Kg-dry	1	8/28/2019 4:09:35 AM
Surr: 2-Fluorobiphenyl	94.3	50 - 150		%Rec	1	8/28/2019 4:09:35 AM
Surr: o-Terphenyl	98.1	50 - 150		%Rec	1	8/28/2019 4:09:35 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	143	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
2-Methylnaphthalene	254	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
1-Methylnaphthalene	430	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Acenaphthylene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Acenaphthene	45.5	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Fluorene	70.1	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Phenanthrene	145	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benz(a)anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Chrysene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(b)fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(k)fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(a)pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Indeno(1,2,3-cd)pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Dibenz(a,h)anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(g,h,i)perylene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Surr: 2-Fluorobiphenyl	107	24.4 - 151		%Rec	1	8/28/2019 6:04:51 PM
Surr: Terphenyl-d14 (surr)	116	31.4 - 162		%Rec	1	8/28/2019 6:04:51 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	136	37.3	D	mg/Kg-dry	10	9/5/2019 6:55:21 AM
Surr: 1,4-Difluorobenzene	112	50 - 150	D	%Rec	10	9/5/2019 6:55:21 AM
Surr: 4-Bromofluorobenzene	99.9	50 - 150	D	%Rec	10	9/5/2019 6:55:21 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloromethane	ND	0.0373	Q	mg/Kg-dry	1	8/29/2019 8:02:16 PM
Vinyl chloride	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Trichlorofluoromethane (CFC-11)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloroethane	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Methylene chloride	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
trans-1,2-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Methyl tert-butyl ether (MTBE)	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
cis-1,2-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloroform	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,1-Trichloroethane (TCA)	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloropropene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Carbon tetrachloride	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichloroethane (EDC)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Benzene	0.189	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Trichloroethene (TCE)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromodichloromethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Dibromomethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
cis-1,3-Dichloropropene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Toluene	0.0342	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
trans-1,3-Dichloropropylene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,2-Trichloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3-Dichloropropane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Tetrachloroethene (PCE)	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Dibromochloromethane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dibromoethane (EDB)	ND	0.00373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chlorobenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,1,2-Tetrachloroethane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Ethylbenzene	0.831	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
m,p-Xylene	1.32	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
o-Xylene	0.0650	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Styrene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Isopropylbenzene	0.157	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromoform	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,2,2-Tetrachloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
n-Propylbenzene	0.514	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3,5-Trimethylbenzene	0.400	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
4-Chlorotoluene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
tert-Butylbenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,3-Trichloropropane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,4-Trichlorobenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
sec-Butylbenzene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
4-Isopropyltoluene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,4-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
n-Butylbenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dibromo-3-chloropropane	ND	0.373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,4-Trimethylbenzene	3.27	0.149	D	mg/Kg-dry	10	9/3/2019 6:24:53 PM
Hexachloro-1,3-butadiene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Naphthalene	0.642	0.0373	Q	mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,3-Trichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Surr: Dibromofluoromethane	94.8	56.5 - 129		%Rec	1	8/29/2019 8:02:16 PM
Surr: Toluene-d8	96.1	64.5 - 151		%Rec	1	8/29/2019 8:02:16 PM
Surr: 1-Bromo-4-fluorobenzene	98.9	54.8 - 168		%Rec	1	8/29/2019 8:02:16 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	12.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	1,120	23.1		mg/Kg-dry	1	8/28/2019 12:08:25 PM
Residual Range Organics (C25-C36)	ND	57.8		mg/Kg-dry	1	8/28/2019 12:08:25 PM
Surr: 2-Fluorobiphenyl	99.9	50 - 150		%Rec	1	8/28/2019 12:08:25 PM
Surr: o-Terphenyl	101	50 - 150		%Rec	1	8/28/2019 12:08:25 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	196	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
2-Methylnaphthalene	54.6	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
1-Methylnaphthalene	5,020	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Acenaphthylene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Acenaphthene	483	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Fluorene	791	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Phenanthrene	1,250	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Anthracene	113	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Fluoranthene	432	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Pyrene	326	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benz(a)anthracene	84.6	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Chrysene	73.5	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(b)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(k)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(a)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(g,h,i)perylene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Surr: 2-Fluorobiphenyl	91.3	24.4 - 151		%Rec	1	8/28/2019 6:25:42 PM
Surr: Terphenyl-d14 (surr)	29.1	31.4 - 162	S	%Rec	1	8/28/2019 6:25:42 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	429	311	D	mg/Kg-dry	100	9/5/2019 4:52:26 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/5/2019 4:52:26 AM
Surr: 4-Bromofluorobenzene	107	50 - 150	D	%Rec	100	9/5/2019 4:52:26 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Chloromethane	ND	0.311	DQ	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromomethane	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Trichlorofluoromethane (CFC-11)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chloroethane	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Methylene chloride	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
trans-1,2-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Methyl tert-butyl ether (MTBE)	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
cis-1,2-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chloroform	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,1-Trichloroethane (TCA)	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloropropene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Carbon tetrachloride	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichloroethane (EDC)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Benzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromodichloromethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Dibromomethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
cis-1,3-Dichloropropene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Toluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
trans-1,3-Dichloropropylene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,2-Trichloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3-Dichloropropane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Tetrachloroethene (PCE)	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Dibromochloromethane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chlorobenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,1,2-Tetrachloroethane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Ethylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
m,p-Xylene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
o-Xylene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Styrene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Isopropylbenzene	1.41	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromoform	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,2,2-Tetrachloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
n-Propylbenzene	5.15	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3,5-Trimethylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
2-Chlorotoluene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

4-Chlorotoluene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
tert-Butylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,3-Trichloropropane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,4-Trichlorobenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
sec-Butylbenzene	1.98	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
4-Isopropyltoluene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,4-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
n-Butylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dibromo-3-chloropropane	ND	3.11	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,4-Trimethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Naphthalene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,3-Trichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Surr: Dibromofluoromethane	96.0	56.5 - 129	D	%Rec	10	8/29/2019 10:02:53 PM
Surr: Toluene-d8	98.4	64.5 - 151	D	%Rec	10	8/29/2019 10:02:53 PM
Surr: 1-Bromo-4-fluorobenzene	94.3	54.8 - 168	D	%Rec	10	8/29/2019 10:02:53 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00371	Q	mg/Kg-dry	1	9/4/2019 3:18:38 AM
Trichloroethene (TCE)	ND	0.00902		mg/Kg-dry	1	9/4/2019 3:18:38 AM
1,2-Dibromoethane (EDB)	ND	0.000907		mg/Kg-dry	1	9/4/2019 3:18:38 AM
Hexachloro-1,3-butadiene	ND	0.00494		mg/Kg-dry	1	9/4/2019 3:18:38 AM
Surr: Dibromofluoromethane	90.9	54.7 - 128		%Rec	1	9/4/2019 3:18:38 AM
Surr: Toluene-d8	102	74.2 - 139		%Rec	1	9/4/2019 3:18:38 AM
Surr: 1-Bromo-4-fluorobenzene	79.7	73.5 - 127		%Rec	1	9/4/2019 3:18:38 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	18.5	0.500	wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.8		mg/Kg-dry	1	8/28/2019 5:09:15 AM
Residual Range Organics (C25-C36)	ND	54.4		mg/Kg-dry	1	8/28/2019 5:09:15 AM
Surr: 2-Fluorobiphenyl	84.6	50 - 150		%Rec	1	8/28/2019 5:09:15 AM
Surr: o-Terphenyl	92.2	50 - 150		%Rec	1	8/28/2019 5:09:15 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	96.7	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
1-Methylnaphthalene	137	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Fluorene	58.7	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Phenanthrene	110	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Chrysene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Surr: 2-Fluorobiphenyl	71.0	24.4 - 151		%Rec	1	8/28/2019 6:46:35 PM
Surr: Terphenyl-d14 (surr)	99.0	31.4 - 162		%Rec	1	8/28/2019 6:46:35 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	6.73	4.08		mg/Kg-dry	1	9/5/2019 3:30:43 AM
Surr: 1,4-Difluorobenzene	106	50 - 150		%Rec	1	9/5/2019 3:30:43 AM
Surr: 4-Bromofluorobenzene	83.3	50 - 150		%Rec	1	9/5/2019 3:30:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloromethane	ND	0.0408	Q	mg/Kg-dry	1	8/29/2019 2:57:59 PM
Vinyl chloride	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloroethane	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Methylene chloride	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
trans-1,2-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
cis-1,2-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloroform	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloropropene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Carbon tetrachloride	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichloroethane (EDC)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Benzene	0.0850	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Trichloroethene (TCE)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichloropropane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromodichloromethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Dibromomethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
cis-1,3-Dichloropropene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Toluene	0.114	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
trans-1,3-Dichloropropylene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,2-Trichloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3-Dichloropropane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Tetrachloroethene (PCE)	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Dibromochloromethane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dibromoethane (EDB)	ND	0.00408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chlorobenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,1,2-Tetrachloroethane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Ethylbenzene	0.368	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
m,p-Xylene	0.124	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
o-Xylene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Styrene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Isopropylbenzene	0.0470	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromoform	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,2,2-Tetrachloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
n-Propylbenzene	0.404	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3,5-Trimethylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
4-Chlorotoluene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
tert-Butylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,3-Trichloropropane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,4-Trichlorobenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
sec-Butylbenzene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
4-Isopropyltoluene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,4-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
n-Butylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dibromo-3-chloropropane	ND	0.408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,4-Trimethylbenzene	0.104	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Hexachloro-1,3-butadiene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Naphthalene	0.217	0.0408	Q	mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,3-Trichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Surr: Dibromofluoromethane	102	56.5 - 129		%Rec	1	8/29/2019 2:57:59 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	8/29/2019 2:57:59 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	8/29/2019 2:57:59 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	9.51	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,460	21.7		mg/Kg-dry	1	8/28/2019 5:39:07 AM
Residual Range Organics (C25-C36)	ND	54.2		mg/Kg-dry	1	8/28/2019 5:39:07 AM
Surr: 2-Fluorobiphenyl	98.3	50 - 150		%Rec	1	8/28/2019 5:39:07 AM
Surr: o-Terphenyl	94.8	50 - 150		%Rec	1	8/28/2019 5:39:07 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	212	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
2-Methylnaphthalene	85.3	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
1-Methylnaphthalene	1,390	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Acenaphthylene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Acenaphthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Fluorene	446	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Phenanthrene	396	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benz(a)anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Chrysene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(b)fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(k)fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(a)pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Indeno(1,2,3-cd)pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Dibenz(a,h)anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(g,h,i)perylene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Surr: 2-Fluorobiphenyl	98.3	24.4 - 151		%Rec	1	8/28/2019 7:07:23 PM
Surr: Terphenyl-d14 (surr)	89.5	31.4 - 162		%Rec	1	8/28/2019 7:07:23 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	445	39.9	D	mg/Kg-dry	10	9/5/2019 7:36:28 AM
Surr: 1,4-Difluorobenzene	110	50 - 150	D	%Rec	10	9/5/2019 7:36:28 AM
Surr: 4-Bromofluorobenzene	106	50 - 150	D	%Rec	10	9/5/2019 7:36:28 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloromethane	ND	0.0399	Q	mg/Kg-dry	1	8/29/2019 3:28:34 PM
Vinyl chloride	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Trichlorofluoromethane (CFC-11)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloroethane	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Methylene chloride	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
trans-1,2-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
cis-1,2-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloroform	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloropropene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichloroethane (EDC)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Benzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Trichloroethene (TCE)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichloropropane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromodichloromethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Dibromomethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
cis-1,3-Dichloropropene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Toluene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
trans-1,3-Dichloropropylene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,2-Trichloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3-Dichloropropane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Dibromochloromethane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dibromoethane (EDB)	ND	0.00399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,1,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Ethylbenzene	0.160	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
m,p-Xylene	0.114	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
o-Xylene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Styrene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Isopropylbenzene	0.296	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromoform	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,2,2-Tetrachloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
n-Propylbenzene	0.810	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3,5-Trimethylbenzene	0.0245	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,4-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
sec-Butylbenzene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
4-Isopropyltoluene	0.229	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,4-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dibromo-3-chloropropane	ND	0.399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,4-Trimethylbenzene	1.35	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Hexachloro-1,3-butadiene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Naphthalene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,3-Trichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Surr: Dibromofluoromethane	102	56.5 - 129		%Rec	1	8/29/2019 3:28:34 PM
Surr: Toluene-d8	107	64.5 - 151		%Rec	1	8/29/2019 3:28:34 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	8/29/2019 3:28:34 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.9	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	2,460	202	D	mg/Kg-dry	10	8/28/2019 3:39:02 PM
Residual Range Organics (C25-C36)	ND	50.5		mg/Kg-dry	1	8/28/2019 6:08:56 AM
Surr: 2-Fluorobiphenyl	92.2	50 - 150		%Rec	1	8/28/2019 6:08:56 AM
Surr: o-Terphenyl	95.0	50 - 150		%Rec	1	8/28/2019 6:08:56 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	878	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
2-Methylnaphthalene	1,170	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
1-Methylnaphthalene	4,340	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Acenaphthylene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Acenaphthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Fluorene	946	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Phenanthrene	773	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benz(a)anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Chrysene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(b)fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(k)fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(a)pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Indeno(1,2,3-cd)pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Dibenz(a,h)anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(g,h,i)perylene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Surr: 2-Fluorobiphenyl	97.4	24.4 - 151		%Rec	1	8/28/2019 7:28:08 PM
Surr: Terphenyl-d14 (surr)	98.3	31.4 - 162		%Rec	1	8/28/2019 7:28:08 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	279	24.9	D	mg/Kg-dry	10	9/4/2019 11:06:10 AM
Surr: 1,4-Difluorobenzene	113	50 - 150	D	%Rec	10	9/4/2019 11:06:10 AM
Surr: 4-Bromofluorobenzene	100	50 - 150	D	%Rec	10	9/4/2019 11:06:10 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloromethane	ND	0.249	DQ	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromomethane	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloroethane	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Methylene chloride	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
trans-1,2-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
cis-1,2-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloroform	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloropropene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Carbon tetrachloride	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichloroethane (EDC)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Benzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichloropropane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromodichloromethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Dibromomethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
cis-1,3-Dichloropropene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Toluene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
trans-1,3-Dichloropropylene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,2-Trichloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3-Dichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Tetrachloroethene (PCE)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Dibromochloromethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,1,2-Tetrachloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Ethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
m,p-Xylene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
o-Xylene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Styrene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Isopropylbenzene	0.154	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromoform	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,2,2-Tetrachloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
n-Propylbenzene	0.348	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3,5-Trimethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
2-Chlorotoluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
4-Chlorotoluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
tert-Butylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,4-Trichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
sec-Butylbenzene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
4-Isopropyltoluene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,4-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
n-Butylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dibromo-3-chloropropane	ND	2.49	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,4-Trimethylbenzene	1.09	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Naphthalene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,3-Trichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Surr: Dibromofluoromethane	96.0	56.5 - 129	D	%Rec	10	8/29/2019 10:33:06 PM
Surr: Toluene-d8	91.8	64.5 - 151	D	%Rec	10	8/29/2019 10:33:06 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	54.8 - 168	D	%Rec	10	8/29/2019 10:33:06 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00297	Q	mg/Kg-dry	1	9/4/2019 3:52:07 AM
Trichloroethene (TCE)	ND	0.00722		mg/Kg-dry	1	9/4/2019 3:52:07 AM
1,2-Dibromoethane (EDB)	ND	0.000726		mg/Kg-dry	1	9/4/2019 3:52:07 AM
Hexachloro-1,3-butadiene	ND	0.00395		mg/Kg-dry	1	9/4/2019 3:52:07 AM
Surr: Dibromofluoromethane	105	54.7 - 128		%Rec	1	9/4/2019 3:52:07 AM
Surr: Toluene-d8	105	74.2 - 139		%Rec	1	9/4/2019 3:52:07 AM
Surr: 1-Bromo-4-fluorobenzene	89.3	73.5 - 127		%Rec	1	9/4/2019 3:52:07 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	11.1	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-018
Client Sample ID: TRB-DD

Collection Date: 8/21/2019 4:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	815	22.1		mg/Kg-dry	1	8/28/2019 1:08:32 PM
Residual Range Organics (C25-C36)	ND	55.3		mg/Kg-dry	1	8/28/2019 1:08:32 PM
Surr: 2-Fluorobiphenyl	90.2	50 - 150		%Rec	1	8/28/2019 1:08:32 PM
Surr: o-Terphenyl	90.9	50 - 150		%Rec	1	8/28/2019 1:08:32 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	263	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
2-Methylnaphthalene	309	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
1-Methylnaphthalene	1,450	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Acenaphthylene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Acenaphthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Fluorene	422	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Phenanthrene	339	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benz(a)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Chrysene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(b)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(k)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(a)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(g,h,i)perylene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Surr: 2-Fluorobiphenyl	99.4	24.4 - 151		%Rec	1	8/28/2019 7:48:55 PM
Surr: Terphenyl-d14 (surr)	79.5	31.4 - 162		%Rec	1	8/28/2019 7:48:55 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	408	73.2	D	mg/Kg-dry	20	9/5/2019 5:33:22 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	20	9/5/2019 5:33:22 AM
Surr: 4-Bromofluorobenzene	106	50 - 150	D	%Rec	20	9/5/2019 5:33:22 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloromethane	ND	0.366	DQ	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Vinyl chloride	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-018
Client Sample ID: TRB-DD

Collection Date: 8/21/2019 4:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Bromomethane	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Trichlorofluoromethane (CFC-11)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloroethane	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Methylene chloride	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
trans-1,2-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Methyl tert-butyl ether (MTBE)	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
cis-1,2-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloroform	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,1-Trichloroethane (TCA)	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloropropene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Carbon tetrachloride	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichloroethane (EDC)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Benzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Trichloroethene (TCE)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichloropropane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromodichloromethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Dibromomethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
cis-1,3-Dichloropropene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Toluene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
trans-1,3-Dichloropropylene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,2-Trichloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3-Dichloropropane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Tetrachloroethene (PCE)	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Dibromochloromethane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dibromoethane (EDB)	ND	0.0366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chlorobenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,1,2-Tetrachloroethane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Ethylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
m,p-Xylene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
o-Xylene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Styrene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Isopropylbenzene	0.277	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromoform	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,2,2-Tetrachloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
n-Propylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3,5-Trimethylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-018
Client Sample ID: TRB-DD

Collection Date: 8/21/2019 4:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
4-Chlorotoluene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
tert-Butylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,3-Trichloropropane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,4-Trichlorobenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
sec-Butylbenzene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
4-Isopropyltoluene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,4-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
n-Butylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dibromo-3-chloropropane	ND	3.66	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,4-Trimethylbenzene	1.30	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Hexachloro-1,3-butadiene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Naphthalene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,3-Trichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Surr: Dibromofluoromethane	96.1	56.5 - 129	D	%Rec	10	8/29/2019 11:03:12 PM
Surr: Toluene-d8	92.3	64.5 - 151	D	%Rec	10	8/29/2019 11:03:12 PM
Surr: 1-Bromo-4-fluorobenzene	105	54.8 - 168	D	%Rec	10	8/29/2019 11:03:12 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.3	0.500	wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,780	22.4		mg/Kg-dry	1	8/28/2019 2:08:40 PM
Residual Range Organics (C25-C36)	ND	55.9		mg/Kg-dry	1	8/28/2019 2:08:40 PM
Surr: 2-Fluorobiphenyl	94.4	50 - 150		%Rec	1	8/28/2019 2:08:40 PM
Surr: o-Terphenyl	93.1	50 - 150		%Rec	1	8/28/2019 2:08:40 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
2-Methylnaphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
1-Methylnaphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Acenaphthylene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Acenaphthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Fluorene	1,070	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Phenanthrene	769	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Fluoranthene	60.7	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Pyrene	106	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benz(a)anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Chrysene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(b)fluoranthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(k)fluoranthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(a)pyrene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Indeno(1,2,3-cd)pyrene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Dibenz(a,h)anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(g,h,i)perylene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Surr: 2-Fluorobiphenyl	95.8	24.4 - 151		%Rec	1	8/28/2019 8:09:42 PM
Surr: Terphenyl-d14 (surr)	58.8	31.4 - 162		%Rec	1	8/28/2019 8:09:42 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	65.9	23.6	D	mg/Kg-dry	10	9/5/2019 8:17:39 AM
Surr: 1,4-Difluorobenzene	112	50 - 150	D	%Rec	10	9/5/2019 8:17:39 AM
Surr: 4-Bromofluorobenzene	98.9	50 - 150	D	%Rec	10	9/5/2019 8:17:39 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloromethane	ND	0.0236	Q	mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromomethane	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloroethane	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Methylene chloride	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
trans-1,2-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Methyl tert-butyl ether (MTBE)	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
cis-1,2-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloroform	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,1-Trichloroethane (TCA)	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloropropene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Carbon tetrachloride	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichloroethane (EDC)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Benzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichloropropane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromodichloromethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Dibromomethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
cis-1,3-Dichloropropene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Toluene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
trans-1,3-Dichloropropylene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,2-Trichloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3-Dichloropropane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Tetrachloroethene (PCE)	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Dibromochloromethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,1,2-Tetrachloroethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Ethylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
m,p-Xylene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
o-Xylene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Styrene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Isopropylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromoform	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,2,2-Tetrachloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
n-Propylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3,5-Trimethylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
2-Chlorotoluene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
4-Chlorotoluene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
tert-Butylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,4-Trichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
sec-Butylbenzene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
4-Isopropyltoluene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,4-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
n-Butylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dibromo-3-chloropropane	ND	0.236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,4-Trimethylbenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Naphthalene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,3-Trichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Surr: Dibromofluoromethane	96.0	56.5 - 129		%Rec	1	8/30/2019 1:03:33 AM
Surr: Toluene-d8	92.5	64.5 - 151		%Rec	1	8/30/2019 1:03:33 AM
Surr: 1-Bromo-4-fluorobenzene	87.0	54.8 - 168		%Rec	1	8/30/2019 1:03:33 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00282	Q	mg/Kg-dry	1	9/4/2019 4:25:36 AM
Trichloroethene (TCE)	ND	0.00685		mg/Kg-dry	1	9/4/2019 4:25:36 AM
1,2-Dibromoethane (EDB)	ND	0.000689		mg/Kg-dry	1	9/4/2019 4:25:36 AM
Hexachloro-1,3-butadiene	ND	0.00375		mg/Kg-dry	1	9/4/2019 4:25:36 AM
Surr: Dibromofluoromethane	96.2	54.7 - 128		%Rec	1	9/4/2019 4:25:36 AM
Surr: Toluene-d8	95.8	74.2 - 139		%Rec	1	9/4/2019 4:25:36 AM
Surr: 1-Bromo-4-fluorobenzene	68.9	73.5 - 127	S	%Rec	1	9/4/2019 4:25:36 AM

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	17.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	32.5	19.5		mg/Kg-dry	1	8/28/2019 6:38:48 AM
Residual Range Organics (C25-C36)	ND	48.7		mg/Kg-dry	1	8/28/2019 6:38:48 AM
Surr: 2-Fluorobiphenyl	85.9	50 - 150		%Rec	1	8/28/2019 6:38:48 AM
Surr: o-Terphenyl	94.0	50 - 150		%Rec	1	8/28/2019 6:38:48 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
1-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Fluorene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Phenanthrene	48.7	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Chrysene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Surr: 2-Fluorobiphenyl	95.4	24.4 - 151		%Rec	1	8/28/2019 8:30:24 PM
Surr: Terphenyl-d14 (surr)	120	31.4 - 162		%Rec	1	8/28/2019 8:30:24 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	302	52.0	D	mg/Kg-dry	10	9/5/2019 8:58:46 AM
Surr: 1,4-Difluorobenzene	105	50 - 150	D	%Rec	10	9/5/2019 8:58:46 AM
Surr: 4-Bromofluorobenzene	99.5	50 - 150	D	%Rec	10	9/5/2019 8:58:46 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloromethane	ND	0.0520	Q	mg/Kg-dry	1	8/29/2019 3:59:02 PM
Vinyl chloride	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Trichlorofluoromethane (CFC-11)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloroethane	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Methylene chloride	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
trans-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Methyl tert-butyl ether (MTBE)	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
cis-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloroform	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,1-Trichloroethane (TCA)	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloropropene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Carbon tetrachloride	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichloroethane (EDC)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Benzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Trichloroethene (TCE)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichloropropane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromodichloromethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Dibromomethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
cis-1,3-Dichloropropene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Toluene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
trans-1,3-Dichloropropylene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,2-Trichloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3-Dichloropropane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Tetrachloroethene (PCE)	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Dibromochloromethane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dibromoethane (EDB)	ND	0.00520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chlorobenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,1,2-Tetrachloroethane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Ethylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
m,p-Xylene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
o-Xylene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Styrene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Isopropylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromoform	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,2,2-Tetrachloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
n-Propylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3,5-Trimethylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
4-Chlorotoluene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
tert-Butylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,3-Trichloropropane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,4-Trichlorobenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
sec-Butylbenzene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
4-Isopropyltoluene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,4-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
n-Butylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dibromo-3-chloropropane	ND	0.520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,4-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Hexachloro-1,3-butadiene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Naphthalene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,3-Trichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Surr: Dibromofluoromethane	97.8	56.5 - 129		%Rec	1	8/29/2019 3:59:02 PM
Surr: Toluene-d8	96.0	64.5 - 151		%Rec	1	8/29/2019 3:59:02 PM
Surr: 1-Bromo-4-fluorobenzene	112	54.8 - 168		%Rec	1	8/29/2019 3:59:02 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	9.53	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,850	19.6		mg/Kg-dry	1	8/28/2019 7:08:36 AM
Residual Range Organics (C25-C36)	ND	49.1		mg/Kg-dry	1	8/28/2019 7:08:36 AM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	8/28/2019 7:08:36 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	8/28/2019 7:08:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
2-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
1-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Acenaphthylene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Acenaphthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Fluorene	553	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Phenanthrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Pyrene	96.9	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benz(a)anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Chrysene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(b)fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(k)fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(a)pyrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Indeno(1,2,3-cd)pyrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Dibenz(a,h)anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(g,h,i)perylene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Surr: 2-Fluorobiphenyl	109	24.4 - 151		%Rec	1	8/28/2019 8:51:10 PM
Surr: Terphenyl-d14 (surr)	86.2	31.4 - 162		%Rec	1	8/28/2019 8:51:10 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	146	42.3	D	mg/Kg-dry	10	9/5/2019 9:40:04 AM
Surr: 1,4-Difluorobenzene	115	50 - 150	D	%Rec	10	9/5/2019 9:40:04 AM
Surr: 4-Bromofluorobenzene	99.9	50 - 150	D	%Rec	10	9/5/2019 9:40:04 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloromethane	ND	0.0423	Q	mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromomethane	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloroethane	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Methylene chloride	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
trans-1,2-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
cis-1,2-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloroform	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,1-Trichloroethane (TCA)	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloropropene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Carbon tetrachloride	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichloroethane (EDC)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Benzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichloropropane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromodichloromethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Dibromomethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
cis-1,3-Dichloropropene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Toluene	0.0590	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
trans-1,3-Dichloropropylene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,2-Trichloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3-Dichloropropane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Tetrachloroethene (PCE)	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Dibromochloromethane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chlorobenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,1,2-Tetrachloroethane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Ethylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
m,p-Xylene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
o-Xylene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Styrene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Isopropylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromoform	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,2,2-Tetrachloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
n-Propylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3,5-Trimethylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
2-Chlorotoluene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
4-Chlorotoluene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
tert-Butylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,4-Trichlorobenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
sec-Butylbenzene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
4-Isopropyltoluene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,4-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
n-Butylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dibromo-3-chloropropane	ND	0.423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,4-Trimethylbenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Naphthalene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,3-Trichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Surr: Dibromofluoromethane	95.5	56.5 - 129		%Rec	1	8/29/2019 4:29:36 PM
Surr: Toluene-d8	93.2	64.5 - 151		%Rec	1	8/29/2019 4:29:36 PM
Surr: 1-Bromo-4-fluorobenzene	103	54.8 - 168		%Rec	1	8/29/2019 4:29:36 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00505	Q	mg/Kg-dry	1	9/4/2019 5:32:35 AM
Trichloroethene (TCE)	ND	0.0123		mg/Kg-dry	1	9/4/2019 5:32:35 AM
1,2-Dibromoethane (EDB)	ND	0.00123		mg/Kg-dry	1	9/4/2019 5:32:35 AM
Hexachloro-1,3-butadiene	ND	0.00672		mg/Kg-dry	1	9/4/2019 5:32:35 AM
Surr: Dibromofluoromethane	101	54.7 - 128		%Rec	1	9/4/2019 5:32:35 AM
Surr: Toluene-d8	100	74.2 - 139		%Rec	1	9/4/2019 5:32:35 AM
Surr: 1-Bromo-4-fluorobenzene	88.7	73.5 - 127		%Rec	1	9/4/2019 5:32:35 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25642

Analyst: DW

Diesel Range Organics (C10-C25)	30.4	19.8		mg/Kg-dry	1	8/29/2019 4:09:36 AM
Residual Range Organics (C25-C36)	ND	49.5		mg/Kg-dry	1	8/29/2019 4:09:36 AM
Surr: 2-Fluorobiphenyl	73.8	50 - 150		%Rec	1	8/29/2019 4:09:36 AM
Surr: o-Terphenyl	81.7	50 - 150		%Rec	1	8/29/2019 4:09:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
2-Methylnaphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
1-Methylnaphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Acenaphthylene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Acenaphthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Fluorene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Phenanthrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benz(a)anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Chrysene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(b)fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(k)fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(a)pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Indeno(1,2,3-cd)pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Dibenz(a,h)anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(g,h,i)perylene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Surr: 2-Fluorobiphenyl	83.5	24.4 - 151		%Rec	1	8/29/2019 7:46:43 PM
Surr: Terphenyl-d14 (surr)	97.8	31.4 - 162		%Rec	1	8/29/2019 7:46:43 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	2.59	2.57		mg/Kg-dry	1	9/5/2019 7:35:14 PM
Surr: 1,4-Difluorobenzene	109	50 - 150		%Rec	1	9/5/2019 7:35:14 PM
Surr: 4-Bromofluorobenzene	97.7	50 - 150		%Rec	1	9/5/2019 7:35:14 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloromethane	ND	0.0257	Q	mg/Kg-dry	1	8/29/2019 5:00:07 PM
Vinyl chloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Trichlorofluoromethane (CFC-11)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloroethane	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Methylene chloride	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
trans-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Methyl tert-butyl ether (MTBE)	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
cis-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloroform	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,1-Trichloroethane (TCA)	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Carbon tetrachloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichloroethane (EDC)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Benzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Trichloroethene (TCE)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichloropropane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromodichloromethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Dibromomethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
cis-1,3-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Toluene	0.0274	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
trans-1,3-Dichloropropylene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,2-Trichloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3-Dichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Tetrachloroethene (PCE)	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Dibromochloromethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dibromoethane (EDB)	ND	0.00257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,1,2-Tetrachloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Ethylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
m,p-Xylene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
o-Xylene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Styrene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Isopropylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromoform	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,2,2-Tetrachloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
n-Propylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3,5-Trimethylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
4-Chlorotoluene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
tert-Butylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,3-Trichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,4-Trichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
sec-Butylbenzene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
4-Isopropyltoluene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,4-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
n-Butylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dibromo-3-chloropropane	ND	0.257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,4-Trimethylbenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Hexachloro-1,3-butadiene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Naphthalene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,3-Trichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Surr: Dibromofluoromethane	95.8	56.5 - 129		%Rec	1	8/29/2019 5:00:07 PM
Surr: Toluene-d8	92.4	64.5 - 151		%Rec	1	8/29/2019 5:00:07 PM
Surr: 1-Bromo-4-fluorobenzene	94.3	54.8 - 168		%Rec	1	8/29/2019 5:00:07 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	10.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25642

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.4		mg/Kg-dry	1	8/29/2019 4:39:24 AM
Residual Range Organics (C25-C36)	ND	53.6		mg/Kg-dry	1	8/29/2019 4:39:24 AM
Surr: 2-Fluorobiphenyl	64.9	50 - 150		%Rec	1	8/29/2019 4:39:24 AM
Surr: o-Terphenyl	72.4	50 - 150		%Rec	1	8/29/2019 4:39:24 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
2-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
1-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Acenaphthylene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Acenaphthene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Fluorene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Phenanthrene	118	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Anthracene	50.0	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Fluoranthene	332	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Pyrene	334	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benz(a)anthracene	161	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Chrysene	155	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(b)fluoranthene	109	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(k)fluoranthene	99.1	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(a)pyrene	180	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Indeno(1,2,3-cd)pyrene	79.8	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Dibenz(a,h)anthracene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(g,h,i)perylene	93.6	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Surr: 2-Fluorobiphenyl	85.4	24.4 - 151		%Rec	1	8/29/2019 9:09:21 PM
Surr: Terphenyl-d14 (surr)	108	31.4 - 162		%Rec	1	8/29/2019 9:09:21 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	3.32		mg/Kg-dry	1	9/5/2019 8:16:48 PM
Surr: 1,4-Difluorobenzene	112	50 - 150		%Rec	1	9/5/2019 8:16:48 PM
Surr: 4-Bromofluorobenzene	99.2	50 - 150		%Rec	1	9/5/2019 8:16:48 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloromethane	ND	0.0332	Q	mg/Kg-dry	1	8/29/2019 5:30:38 PM
Vinyl chloride	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Trichlorofluoromethane (CFC-11)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloroethane	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Methylene chloride	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
trans-1,2-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Methyl tert-butyl ether (MTBE)	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
cis-1,2-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloroform	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,1-Trichloroethane (TCA)	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloropropene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Carbon tetrachloride	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichloroethane (EDC)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Benzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Trichloroethene (TCE)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichloropropane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromodichloromethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Dibromomethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
cis-1,3-Dichloropropene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Toluene	0.0303	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
trans-1,3-Dichloropropylene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,2-Trichloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3-Dichloropropane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Tetrachloroethene (PCE)	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Dibromochloromethane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dibromoethane (EDB)	ND	0.00332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chlorobenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,1,2-Tetrachloroethane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Ethylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
m,p-Xylene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
o-Xylene	0.0170	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Styrene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Isopropylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromoform	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,2,2-Tetrachloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
n-Propylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3,5-Trimethylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
4-Chlorotoluene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
tert-Butylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,3-Trichloropropane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,4-Trichlorobenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
sec-Butylbenzene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
4-Isopropyltoluene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,4-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
n-Butylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dibromo-3-chloropropane	ND	0.332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,4-Trimethylbenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Hexachloro-1,3-butadiene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Naphthalene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,3-Trichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Surr: Dibromofluoromethane	95.4	56.5 - 129		%Rec	1	8/29/2019 5:30:38 PM
Surr: Toluene-d8	91.7	64.5 - 151		%Rec	1	8/29/2019 5:30:38 PM
Surr: 1-Bromo-4-fluorobenzene	96.2	54.8 - 168		%Rec	1	8/29/2019 5:30:38 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	8.14	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	113	20.8		mg/Kg-dry	1	8/29/2019 8:10:51 PM
Residual Range Organics (C25-C36)	ND	51.9		mg/Kg-dry	1	8/29/2019 8:10:51 PM
Surr: 2-Fluorobiphenyl	69.6	50 - 150		%Rec	1	8/29/2019 8:10:51 PM
Surr: o-Terphenyl	76.8	50 - 150		%Rec	1	8/29/2019 8:10:51 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
2-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
1-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Acenaphthylene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Acenaphthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Fluorene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Phenanthrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benz(a)anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Chrysene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(b)fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(k)fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(a)pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Indeno(1,2,3-cd)pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Dibenz(a,h)anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(g,h,i)perylene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Surr: 2-Fluorobiphenyl	92.4	24.4 - 151		%Rec	1	8/29/2019 9:29:59 PM
Surr: Terphenyl-d14 (surr)	114	31.4 - 162		%Rec	1	8/29/2019 9:29:59 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	16.0	3.25		mg/Kg-dry	1	9/5/2019 8:58:26 PM
Surr: 1,4-Difluorobenzene	114	50 - 150		%Rec	1	9/5/2019 8:58:26 PM
Surr: 4-Bromofluorobenzene	104	50 - 150		%Rec	1	9/5/2019 8:58:26 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloromethane	ND	0.0325	Q	mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromomethane	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloroethane	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Methylene chloride	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
trans-1,2-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
cis-1,2-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloroform	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloropropene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Carbon tetrachloride	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichloroethane (EDC)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Benzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichloropropane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromodichloromethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Dibromomethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
cis-1,3-Dichloropropene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Toluene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
trans-1,3-Dichloropropylene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,2-Trichloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3-Dichloropropane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Tetrachloroethene (PCE)	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Dibromochloromethane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chlorobenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Ethylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
m,p-Xylene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
o-Xylene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Styrene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Isopropylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromoform	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,2,2-Tetrachloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
n-Propylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3,5-Trimethylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
2-Chlorotoluene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
4-Chlorotoluene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
tert-Butylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,4-Trichlorobenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
sec-Butylbenzene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
4-Isopropyltoluene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,4-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
n-Butylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dibromo-3-chloropropane	ND	0.325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,4-Trimethylbenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Naphthalene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,3-Trichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Surr: Dibromofluoromethane	95.0	56.5 - 129		%Rec	1	8/29/2019 6:01:00 PM
Surr: Toluene-d8	91.0	64.5 - 151		%Rec	1	8/29/2019 6:01:00 PM
Surr: 1-Bromo-4-fluorobenzene	93.4	54.8 - 168		%Rec	1	8/29/2019 6:01:00 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00387	Q	mg/Kg-dry	1	9/4/2019 6:06:04 AM
Trichloroethene (TCE)	ND	0.00943		mg/Kg-dry	1	9/4/2019 6:06:04 AM
1,2-Dibromoethane (EDB)	ND	0.000948		mg/Kg-dry	1	9/4/2019 6:06:04 AM
Hexachloro-1,3-butadiene	ND	0.00516		mg/Kg-dry	1	9/4/2019 6:06:04 AM
Surr: Dibromofluoromethane	97.7	54.7 - 128		%Rec	1	9/4/2019 6:06:04 AM
Surr: Toluene-d8	96.8	74.2 - 139		%Rec	1	9/4/2019 6:06:04 AM
Surr: 1-Bromo-4-fluorobenzene	72.1	73.5 - 127	S	%Rec	1	9/4/2019 6:06:04 AM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	13.2	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	1,280	50.1		µg/L	1	8/28/2019 5:09:42 PM
Residual Range Organics (C25-C36)	135	100		µg/L	1	8/28/2019 5:09:42 PM
Surr: 2-Fluorobiphenyl	96.3	50 - 150		%Rec	1	8/28/2019 5:09:42 PM
Surr: o-Terphenyl	104	50 - 150		%Rec	1	8/28/2019 5:09:42 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Acenaphthene	0.165	0.100		µg/L	1	8/27/2019 2:14:50 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Surr: 2-Fluorobiphenyl	118	42.6 - 159		%Rec	1	8/27/2019 2:14:50 PM
Surr: Terphenyl-d14	99.0	8.99 - 147		%Rec	1	8/27/2019 2:14:50 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	120	50.0		µg/L	1	8/29/2019 5:19:12 AM
Surr: Toluene-d8	106	65 - 135		%Rec	1	8/29/2019 5:19:12 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	8/29/2019 5:19:12 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:19:12 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:19:12 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 5:19:12 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	8/29/2019 5:19:12 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 5:19:12 AM
Surr: 1-Bromo-4-fluorobenzene	99.3	64.2 - 128		%Rec	1	8/29/2019 5:19:12 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	49.9		µg/L	1	8/28/2019 9:40:44 PM
Residual Range Organics (C25-C36)	ND	99.8		µg/L	1	8/28/2019 9:40:44 PM
Surr: 2-Fluorobiphenyl	89.6	50 - 150		%Rec	1	8/28/2019 9:40:44 PM
Surr: o-Terphenyl	98.6	50 - 150		%Rec	1	8/28/2019 9:40:44 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Surr: 2-Fluorobiphenyl	99.2	42.6 - 159		%Rec	1	8/27/2019 3:17:16 PM
Surr: Terphenyl-d14	87.2	8.99 - 147		%Rec	1	8/27/2019 3:17:16 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 5:49:49 AM
Surr: Toluene-d8	98.0	65 - 135		%Rec	1	8/29/2019 5:49:49 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	8/29/2019 5:49:49 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:49:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Chloroform	1.13	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:49:49 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 5:49:49 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 5:49:49 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 5:49:49 AM
Surr: 1-Bromo-4-fluorobenzene	103	64.2 - 128		%Rec	1	8/29/2019 5:49:49 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	53.7	50.3		µg/L	1	8/28/2019 10:10:49 PM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/28/2019 10:10:49 PM
Surr: 2-Fluorobiphenyl	92.2	50 - 150		%Rec	1	8/28/2019 10:10:49 PM
Surr: o-Terphenyl	99.2	50 - 150		%Rec	1	8/28/2019 10:10:49 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
2-Methylnaphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
1-Methylnaphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Acenaphthylene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Acenaphthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Fluorene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Phenanthrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benz(a)anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Chrysene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(b)fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(k)fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(a)pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Indeno(1,2,3-cd)pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Dibenz(a,h)anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(g,h,i)perylene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Surr: 2-Fluorobiphenyl	107	42.6 - 159		%Rec	1	8/27/2019 3:38:06 PM
Surr: Terphenyl-d14	96.1	8.99 - 147		%Rec	1	8/27/2019 3:38:06 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 6:20:24 AM
Surr: Toluene-d8	98.9	65 - 135		%Rec	1	8/29/2019 6:20:24 AM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	8/29/2019 6:20:24 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 6:20:24 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 6:20:24 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 6:20:24 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 6:20:24 AM
Surr: Toluene-d8	99.6	40.1 - 139		%Rec	1	8/29/2019 6:20:24 AM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	8/29/2019 6:20:24 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
Surr: Dibromofluoromethane	80.2	68 - 140		%Rec	1	8/30/2019 12:10:06 PM
Surr: Toluene-d8	89.6	63.5 - 144		%Rec	1	8/30/2019 12:10:06 PM
Surr: 4-Bromofluorobenzene	92.9	55 - 134		%Rec	1	8/30/2019 12:10:06 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	201	50.3		µg/L	1	8/28/2019 10:40:44 PM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/28/2019 10:40:44 PM
Surr: 2-Fluorobiphenyl	98.1	50 - 150		%Rec	1	8/28/2019 10:40:44 PM
Surr: o-Terphenyl	102	50 - 150		%Rec	1	8/28/2019 10:40:44 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Surr: 2-Fluorobiphenyl	87.0	42.6 - 159		%Rec	1	8/27/2019 3:58:52 PM
Surr: Terphenyl-d14	82.9	8.99 - 147		%Rec	1	8/27/2019 3:58:52 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline	ND	50.0		µg/L	1	8/29/2019 4:41:57 PM
Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 4:41:57 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	8/29/2019 4:41:57 PM
Surr: 4-Bromofluorobenzene	97.1	65 - 135		%Rec	1	8/29/2019 4:41:57 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 4:41:57 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 4:41:57 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Benzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Toluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 4:41:57 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	8/29/2019 4:41:57 PM
Naphthalene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 4:41:57 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 4:41:57 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	8/29/2019 4:41:57 PM
Surr: 1-Bromo-4-fluorobenzene	94.7	64.2 - 128		%Rec	1	8/29/2019 4:41:57 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	741	50.2		µg/L	1	8/28/2019 11:10:48 PM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/28/2019 11:10:48 PM
Surr: 2-Fluorobiphenyl	93.8	50 - 150		%Rec	1	8/28/2019 11:10:48 PM
Surr: o-Terphenyl	89.9	50 - 150		%Rec	1	8/28/2019 11:10:48 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
2-Methylnaphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
1-Methylnaphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Acenaphthylene	0.108	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Acenaphthene	8.30	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Fluorene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Phenanthrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Anthracene	0.171	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Fluoranthene	0.781	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Pyrene	0.372	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benz(a)anthracene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Chrysene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(b)fluoranthene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(k)fluoranthene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(a)pyrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Indeno(1,2,3-cd)pyrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Dibenz(a,h)anthracene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(g,h,i)perylene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Surr: 2-Fluorobiphenyl	114	42.6 - 159		%Rec	1	8/27/2019 4:19:37 PM
Surr: Terphenyl-d14	85.8	8.99 - 147		%Rec	1	8/27/2019 4:19:37 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline	ND	50.0		µg/L	1	8/29/2019 5:13:15 PM
Gasoline Range Organics (C6-C10)	197	50.0		µg/L	1	8/29/2019 5:13:15 PM
Surr: Toluene-d8	107	65 - 135		%Rec	1	8/29/2019 5:13:15 PM
Surr: 4-Bromofluorobenzene	99.4	65 - 135		%Rec	1	8/29/2019 5:13:15 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:13:15 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:13:15 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Benzene	6.40	1.00		µg/L	1	8/29/2019 5:13:15 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:13:15 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Isopropylbenzene	2.07	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
n-Propylbenzene	2.11	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	8/29/2019 5:13:15 PM
Naphthalene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:13:15 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 5:13:15 PM
Surr: Toluene-d8	98.5	40.1 - 139		%Rec	1	8/29/2019 5:13:15 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	64.2 - 128		%Rec	1	8/29/2019 5:13:15 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:30:00 PM

Project: Hoonah

Lab ID: 1908347-031

Matrix: Water

Client Sample ID: GPW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	6,850	502	D	µg/L	10	8/29/2019 9:40:52 AM
Residual Range Organics (C25-C36)	138	100		µg/L	1	8/28/2019 11:40:41 PM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	8/28/2019 11:40:41 PM
Surr: o-Terphenyl	66.2	50 - 150		%Rec	1	8/28/2019 11:40:41 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25627		Analyst: SB
Naphthalene	29.6	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
2-Methylnaphthalene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
1-Methylnaphthalene	37.1	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
Acenaphthylene	0.746	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Acenaphthene	13.1	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
Fluorene	4.88	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Phenanthrene	2.77	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Anthracene	0.289	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Fluoranthene	0.461	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Pyrene	0.377	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benz(a)anthracene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Chrysene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(b)fluoranthene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(k)fluoranthene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(a)pyrene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Indeno(1,2,3-cd)pyrene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Dibenz(a,h)anthracene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(g,h,i)perylene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Surr: 2-Fluorobiphenyl	102	42.6 - 159		%Rec	1	8/27/2019 4:40:27 PM
Surr: Terphenyl-d14	58.0	8.99 - 147		%Rec	1	8/27/2019 4:40:27 PM

<u>Gasoline by NWTPH-Gx</u>				Batch ID: 25645		Analyst: CR
Gasoline	ND	50.0		µg/L	1	8/29/2019 5:44:20 PM
Gasoline Range Organics (C6-C10)	4,760	50.0	E	µg/L	1	8/29/2019 5:44:20 PM
Surr: Toluene-d8	104	65 - 135		%Rec	1	8/29/2019 5:44:20 PM
Surr: 4-Bromofluorobenzene	106	65 - 135		%Rec	1	8/29/2019 5:44:20 PM

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:30:00 PM

Project: Hoonah

Lab ID: 1908347-031

Matrix: Water

Client Sample ID: GPW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:44:20 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Benzene	13.2	1.00		µg/L	1	8/29/2019 5:44:20 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Toluene	15.1	1.00		µg/L	1	8/29/2019 5:44:20 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Ethylbenzene	171	1.00		µg/L	1	8/29/2019 5:44:20 PM
m,p-Xylene	14.2	1.00		µg/L	1	8/29/2019 5:44:20 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Isopropylbenzene	35.9	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
n-Propylbenzene	69.3	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-031
Client Sample ID: GPW-6

Collection Date: 8/19/2019 2:30:00 PM

Matrix: Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
tert-Butylbenzene	1.65	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
4-Isopropyltoluene	1.65	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,4-Trimethylbenzene	58.3	1.00		µg/L	1	8/29/2019 5:44:20 PM
Naphthalene	68.4	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:44:20 PM
Surr: Dibromofluoromethane	93.7	45.4 - 152		%Rec	1	8/29/2019 5:44:20 PM
Surr: Toluene-d8	94.1	40.1 - 139		%Rec	1	8/29/2019 5:44:20 PM
Surr: 1-Bromo-4-fluorobenzene	106	64.2 - 128		%Rec	1	8/29/2019 5:44:20 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
1,2-Dibromoethane (EDB)	0.246	0.0100		µg/L	1	8/30/2019 4:15:33 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
Surr: Dibromofluoromethane	105	68 - 140		%Rec	1	8/30/2019 4:15:33 PM
Surr: Toluene-d8	98.9	63.5 - 144		%Rec	1	8/30/2019 4:15:33 PM
Surr: 4-Bromofluorobenzene	111	55 - 134		%Rec	1	8/30/2019 4:15:33 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	1,630	50.4		µg/L	1	8/29/2019 12:10:38 AM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/29/2019 12:10:38 AM
Surr: 2-Fluorobiphenyl	88.0	50 - 150		%Rec	1	8/29/2019 12:10:38 AM
Surr: o-Terphenyl	89.9	50 - 150		%Rec	1	8/29/2019 12:10:38 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	0.129	0.0998		µg/L	1	8/27/2019 5:01:12 PM
2-Methylnaphthalene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
1-Methylnaphthalene	0.132	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Acenaphthylene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Acenaphthene	0.939	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Fluorene	0.122	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Phenanthrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Fluoranthene	0.116	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benz(a)anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Chrysene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(b)fluoranthene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(k)fluoranthene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(a)pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Indeno(1,2,3-cd)pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Dibenz(a,h)anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(g,h,i)perylene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Surr: 2-Fluorobiphenyl	104	42.6 - 159		%Rec	1	8/27/2019 5:01:12 PM
Surr: Terphenyl-d14	67.7	8.99 - 147		%Rec	1	8/27/2019 5:01:12 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	175	50.0		µg/L	1	8/29/2019 6:51:07 AM
Surr: Toluene-d8	105	65 - 135		%Rec	1	8/29/2019 6:51:07 AM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	8/29/2019 6:51:07 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 6:51:07 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
n-Propylbenzene	1.61	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 6:51:07 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 6:51:07 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	8/29/2019 6:51:07 AM
Surr: Toluene-d8	99.7	40.1 - 139		%Rec	1	8/29/2019 6:51:07 AM
Surr: 1-Bromo-4-fluorobenzene	98.5	64.2 - 128		%Rec	1	8/29/2019 6:51:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
1,1,2-Trichloroethane	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
1,2-Dibromoethane (EDB)	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 12:44:54 PM
Surr: Dibromofluoromethane	0	68 - 140	S	%Rec	1	8/30/2019 12:44:54 PM
Surr: Toluene-d8	0	63.5 - 144	S	%Rec	1	8/30/2019 12:44:54 PM
Surr: 4-Bromofluorobenzene	116	55 - 134		%Rec	1	8/30/2019 12:44:54 PM

NOTES:

S - Outlying surrogate recovery(ies) observed, attributed to matrix.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	244	50.0		µg/L	1	8/29/2019 12:40:30 AM
Residual Range Organics (C25-C36)	ND	99.9		µg/L	1	8/29/2019 12:40:30 AM
Surr: 2-Fluorobiphenyl	93.3	50 - 150		%Rec	1	8/29/2019 12:40:30 AM
Surr: o-Terphenyl	94.5	50 - 150		%Rec	1	8/29/2019 12:40:30 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Acenaphthene	0.396	0.100		µg/L	1	8/27/2019 5:22:01 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Surr: 2-Fluorobiphenyl	106	42.6 - 159		%Rec	1	8/27/2019 5:22:01 PM
Surr: Terphenyl-d14	95.0	8.99 - 147		%Rec	1	8/27/2019 5:22:01 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 7:21:48 AM
Surr: Toluene-d8	99.0	65 - 135		%Rec	1	8/29/2019 7:21:48 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	8/29/2019 7:21:48 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 7:21:48 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 7:21:48 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 7:21:48 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 7:21:48 AM
Surr: Toluene-d8	99.1	40.1 - 139		%Rec	1	8/29/2019 7:21:48 AM
Surr: 1-Bromo-4-fluorobenzene	102	64.2 - 128		%Rec	1	8/29/2019 7:21:48 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
Surr: Dibromofluoromethane	105	68 - 140		%Rec	1	8/30/2019 1:19:51 PM
Surr: Toluene-d8	100	63.5 - 144		%Rec	1	8/30/2019 1:19:51 PM
Surr: 4-Bromofluorobenzene	103	55 - 134		%Rec	1	8/30/2019 1:19:51 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	ND	49.6		µg/L	1	8/29/2019 1:10:31 AM
Residual Range Organics (C25-C36)	ND	99.2		µg/L	1	8/29/2019 1:10:31 AM
Surr: 2-Fluorobiphenyl	94.4	50 - 150		%Rec	1	8/29/2019 1:10:31 AM
Surr: o-Terphenyl	97.6	50 - 150		%Rec	1	8/29/2019 1:10:31 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
2-Methylnaphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
1-Methylnaphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Acenaphthylene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Acenaphthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Fluorene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Phenanthrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benz(a)anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Chrysene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(b)fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(k)fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(a)pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Indeno(1,2,3-cd)pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Dibenz(a,h)anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(g,h,i)perylene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Surr: 2-Fluorobiphenyl	115	42.6 - 159		%Rec	1	8/27/2019 5:42:54 PM
Surr: Terphenyl-d14	99.3	8.99 - 147		%Rec	1	8/27/2019 5:42:54 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 7:52:29 AM
Surr: Toluene-d8	98.1	65 - 135		%Rec	1	8/29/2019 7:52:29 AM
Surr: 4-Bromofluorobenzene	98.8	65 - 135		%Rec	1	8/29/2019 7:52:29 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 7:52:29 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 7:52:29 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 7:52:29 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 7:52:29 AM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	8/29/2019 7:52:29 AM
Surr: 1-Bromo-4-fluorobenzene	96.4	64.2 - 128		%Rec	1	8/29/2019 7:52:29 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	249	50.0		µg/L	1	8/29/2019 1:40:23 AM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/29/2019 1:40:23 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/29/2019 1:40:23 AM
Surr: o-Terphenyl	97.5	50 - 150		%Rec	1	8/29/2019 1:40:23 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Acenaphthene	0.380	0.100		µg/L	1	8/27/2019 6:03:41 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Surr: 2-Fluorobiphenyl	102	42.6 - 159		%Rec	1	8/27/2019 6:03:41 PM
Surr: Terphenyl-d14	89.0	8.99 - 147		%Rec	1	8/27/2019 6:03:41 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 8:23:07 AM
Surr: Toluene-d8	97.2	65 - 135		%Rec	1	8/29/2019 8:23:07 AM
Surr: 4-Bromofluorobenzene	100	65 - 135		%Rec	1	8/29/2019 8:23:07 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 8:23:07 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 8:23:07 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 8:23:07 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 8:23:07 AM
Surr: Toluene-d8	98.2	40.1 - 139		%Rec	1	8/29/2019 8:23:07 AM
Surr: 1-Bromo-4-fluorobenzene	97.6	64.2 - 128		%Rec	1	8/29/2019 8:23:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
1,1,2-Trichloroethane	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
1,2-Dibromoethane (EDB)	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 1:54:49 PM
Surr: Dibromofluoromethane	0	68 - 140	S	%Rec	1	8/30/2019 1:54:49 PM
Surr: Toluene-d8	0	63.5 - 144	S	%Rec	1	8/30/2019 1:54:49 PM
Surr: 4-Bromofluorobenzene	120	55 - 134		%Rec	1	8/30/2019 1:54:49 PM

NOTES:

S - Outlying surrogate recovery(ies) observed, attributed to matrix.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	50.0		µg/L	1	8/29/2019 2:10:14 AM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/29/2019 2:10:14 AM
Surr: 2-Fluorobiphenyl	93.1	50 - 150		%Rec	1	8/29/2019 2:10:14 AM
Surr: o-Terphenyl	95.4	50 - 150		%Rec	1	8/29/2019 2:10:14 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Surr: 2-Fluorobiphenyl	114	42.6 - 159		%Rec	1	8/27/2019 6:24:26 PM
Surr: Terphenyl-d14	110	8.99 - 147		%Rec	1	8/27/2019 6:24:26 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 8:53:43 AM
Surr: Toluene-d8	97.7	65 - 135		%Rec	1	8/29/2019 8:53:43 AM
Surr: 4-Bromofluorobenzene	99.7	65 - 135		%Rec	1	8/29/2019 8:53:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 8:53:43 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 8:53:43 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 8:53:43 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 8:53:43 AM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	8/29/2019 8:53:43 AM
Surr: 1-Bromo-4-fluorobenzene	97.3	64.2 - 128		%Rec	1	8/29/2019 8:53:43 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
Surr: Dibromofluoromethane	97.8	68 - 140		%Rec	1	8/30/2019 2:29:56 PM
Surr: Toluene-d8	90.0	63.5 - 144		%Rec	1	8/30/2019 2:29:56 PM
Surr: 4-Bromofluorobenzene	99.7	55 - 134		%Rec	1	8/30/2019 2:29:56 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	49.9		µg/L	1	8/29/2019 2:40:04 AM
Residual Range Organics (C25-C36)	ND	99.7		µg/L	1	8/29/2019 2:40:04 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/29/2019 2:40:04 AM
Surr: o-Terphenyl	95.8	50 - 150		%Rec	1	8/29/2019 2:40:04 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Surr: 2-Fluorobiphenyl	105	42.6 - 159		%Rec	1	8/27/2019 6:45:15 PM
Surr: Terphenyl-d14	99.7	8.99 - 147		%Rec	1	8/27/2019 6:45:15 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 9:24:21 AM
Surr: Toluene-d8	101	65 - 135		%Rec	1	8/29/2019 9:24:21 AM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	8/29/2019 9:24:21 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 9:24:21 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 9:24:21 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 9:24:21 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 9:24:21 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 9:24:21 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2 - 128		%Rec	1	8/29/2019 9:24:21 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
Surr: Dibromofluoromethane	91.5	68 - 140		%Rec	1	8/30/2019 3:05:09 PM
Surr: Toluene-d8	89.8	63.5 - 144		%Rec	1	8/30/2019 3:05:09 PM
Surr: 4-Bromofluorobenzene	94.7	55 - 134		%Rec	1	8/30/2019 3:05:09 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	50.4		µg/L	1	8/29/2019 3:09:55 AM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/29/2019 3:09:55 AM
Surr: 2-Fluorobiphenyl	103	50 - 150		%Rec	1	8/29/2019 3:09:55 AM
Surr: o-Terphenyl	110	50 - 150		%Rec	1	8/29/2019 3:09:55 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
2-Methylnaphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
1-Methylnaphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Acenaphthylene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Acenaphthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Fluorene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Phenanthrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benz(a)anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Chrysene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(b)fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(k)fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(a)pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Indeno(1,2,3-cd)pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Dibenz(a,h)anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(g,h,i)perylene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Surr: 2-Fluorobiphenyl	99.7	42.6 - 159		%Rec	1	8/27/2019 7:05:57 PM
Surr: Terphenyl-d14	103	8.99 - 147		%Rec	1	8/27/2019 7:05:57 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 9:55:02 AM
Surr: Toluene-d8	97.9	65 - 135		%Rec	1	8/29/2019 9:55:02 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	8/29/2019 9:55:02 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 9:55:02 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 9:55:02 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 9:55:02 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 9:55:02 AM
Surr: Toluene-d8	99.6	40.1 - 139		%Rec	1	8/29/2019 9:55:02 AM
Surr: 1-Bromo-4-fluorobenzene	99.2	64.2 - 128		%Rec	1	8/29/2019 9:55:02 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
Surr: Dibromofluoromethane	92.1	68 - 140		%Rec	1	8/30/2019 3:40:22 PM
Surr: Toluene-d8	90.2	63.5 - 144		%Rec	1	8/30/2019 3:40:22 PM
Surr: 4-Bromofluorobenzene	99.0	55 - 134		%Rec	1	8/30/2019 3:40:22 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908347-039

Matrix: Water

Client Sample ID: Trip Blank W1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics C6-C10	ND	50.0		µg/L	1	8/29/2019 1:12:23 AM
Surr: Toluene-d8	97.6	65 - 135		%Rec	1	8/29/2019 1:12:23 AM
Surr: 4-Bromofluorobenzene	95.4	65 - 135		%Rec	1	8/29/2019 1:12:23 AM

NOTES:

GRO - Indicates the presence of unresolved compounds eluting from hexane to dodecane (~C6-C12).

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 1:12:23 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 1:12:23 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908347-039

Matrix: Water

Client Sample ID: Trip Blank W1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 1:12:23 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	8/29/2019 1:12:23 AM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	8/29/2019 1:12:23 AM
Surr: 1-Bromo-4-fluorobenzene	93.0	64.2 - 128		%Rec	1	8/29/2019 1:12:23 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25634		SampType: MBLK		Units: mg/Kg		Prep Date: 8/27/2019			RunNo: 53548			
Client ID: MBLKS		Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059903		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	16.6		20.00		82.8	60	120				
Surr: o-Terphenyl	18.1		20.00		90.4	60	120				

Sample ID: LCS-25634		SampType: LCS			Units: mg/Kg		Prep Date: 8/27/2019			RunNo: 53548		
Client ID: LCSS		Batch ID: 25634			Analysis Date: 8/27/2019			SeqNo: 1059904				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	459	20.0	500.0	0	91.9	75	125				
Surr: 2-Fluorobiphenyl	19.2		20.00		95.8	60	120				
Surr: o-Terphenyl	19.2		20.00		96.2	60	120				

Sample ID: 1908347-003ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-19-4'		Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059906	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	ND	20.6						0		30	
Residual Range Organics (C25-C36)	ND	51.6						0		30	
Surr: 2-Fluorobiphenyl	16.9		20.63		81.8	50	150		0		
Surr: o-Terphenyl	18.7		20.63		90.7	50	150		0		

Sample ID: 1908347-003AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/27/2019		RunNo: 53548		
Client ID: GLB-19-4'		Batch ID: 25634			Analysis Date: 8/27/2019				SeqNo: 1059907		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	540	20.5	512.8	11.97	103	75	125				
Surr: 2-Fluorobiphenyl	21.0		20.51		103	50	150				
Surr: o-Terphenyl	21.7		20.51		106	50	150				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908347-003AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-19-4'		Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059907	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1908347-003AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-19-4'	Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059908		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	476	19.0	474.3	11.97	97.8	75	125	540.0	12.6	30	
Surr: 2-Fluorobiphenyl	18.5		18.97		97.4	50	150		0		
Surr: o-Terphenyl	18.6		18.97		98.0	50	150		0		

Sample ID: 1908347-013ADUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/27/2019			RunNo: 53548			
Client ID: GLB-23-5'	Batch ID: 25634				Analysis Date: 8/28/2019			SeqNo: 1059919			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	226	22.8						377.2	50.2	30	R
Residual Range Organics (C25-C36)	ND	57.0						0		30	
Surr: 2-Fluorobiphenyl	19.6		22.80		85.9	50	150		0		
Surr: o-Terphenyl	20.9		22.80		91.7	50	150		0		

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: MB-25642	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53575			
Client ID: MBLKS	Batch ID: 25642				Analysis Date: 8/28/2019			SeqNo: 1060628			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	13.4		20.00		67.0	60	120				
Surr: o-Terphenyl	14.8		20.00		73.8	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: LCS-25642		SampType: LCS			Units: mg/Kg		Prep Date: 8/28/2019			RunNo: 53575		
Client ID: LCSS		Batch ID: 25642			Analysis Date: 8/28/2019			SeqNo: 1060629				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

474

20.0

500.0

0

94.7

75

125

Surr: 2-Fluorobiphenyl

15.4

20.00

76.8

60

120

Surr: o-Terphenyl

15.8

20.00

78.9

60

120

Sample ID: 1908347-024ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/28/2019		RunNo: 53575		
Client ID: TRB-8-6'		Batch ID: 25642			Analysis Date: 8/29/2019				SeqNo: 1060632		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

ND

21.7

0

30

Residual Range Organics (C25-C36)

ND

54.2

0

30

Surr: 2-Fluorobiphenyl

14.3

21.66

66.1

50

150

0

Surr: o-Terphenyl

16.1

21.66

74.4

50

150

0

Sample ID: 1908347-024AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53575			
Client ID: TRB-8-6'		Batch ID: 25642					Analysis Date: 8/29/2019			SeqNo: 1060633		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

511

20.2

504.5

16.35

98.1

75

125

Surr: 2-Fluorobiphenyl

14.7

20.18

72.8

50

150

Surr: o-Terphenyl

15.2

20.18

75.5

50

150

Sample ID: 1908347-024AMSD		SampType: MSD			Units: mg/Kg-dry		Prep Date: 8/28/2019		RunNo: 53575		
Client ID: TRB-8-6'		Batch ID: 25642			Analysis Date: 8/29/2019				SeqNo: 1060634		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

524

21.0

523.9

16.35

96.8

75

125

511.1

2.44

30

Surr: 2-Fluorobiphenyl

15.4

20.96

73.5

50

150

0

Surr: o-Terphenyl

16.1

20.96

76.8

50

150

0

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25660		SampType: MBLK		Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588			
Client ID: MBLKS		Batch ID: 25660					Analysis Date: 8/29/2019			SeqNo: 1060875		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	14.4		20.00		71.8	60	120				
Surr: o-Terphenyl	16.2		20.00		80.8	60	120				

Sample ID: LCS-25660		SampType: LCS			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: LCSS		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060876				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	489	20.0	500.0	0	97.7	75	125				
Surr: 2-Fluorobiphenyl	14.7		20.00		73.7	60	120				
Surr: o-Terphenyl	16.5		20.00		82.5	60	120				

Sample ID: 1908382-001ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019					SeqNo: 1060878		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	19.7						0		30	
Residual Range Organics (C25-C36)	ND	49.1						0		30	
Surr: 2-Fluorobiphenyl	13.5		19.66		68.8	50	150		0		
Surr: o-Terphenyl	15.2		19.66		77.4	50	150		0		

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019				SeqNo: 1060879		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	475	19.5	488.7	8.611	95.4	75	125				
Surr: 2-Fluorobiphenyl	15.9		19.55		81.2	50	150				
Surr: o-Terphenyl	16.1		19.55		82.1	50	150				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060879				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: 1908382-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH	Batch ID: 25660					Analysis Date: 8/29/2019			SeqNo: 1060880		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	512	19.6	490.0	8.611	103	75	125	474.7	7.55	30	
Surr: 2-Fluorobiphenyl	14.9		19.60		76.1	50	150		0		
Surr: o-Terphenyl	16.2		19.60		82.7	50	150		0		

Sample ID: 1908349-009ADUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53588			
Client ID: BATCH	Batch ID: 25660				Analysis Date: 8/29/2019			SeqNo: 1060883			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	22.6						0		30	
Residual Range Organics (C25-C36)	ND	56.4						0		30	
Surr: 2-Fluorobiphenyl	21.5		22.55		95.3	50	150		0		
Surr: o-Terphenyl	23.9		22.55		106	50	150		0		

Sample ID: MB-25727	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53760			
Client ID: MBLKS	Batch ID: 25727				Analysis Date: 9/9/2019			SeqNo: 1064007			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	19.5		20.00		97.7	60	120				
Surr: o-Terphenyl	20.2		20.00		101	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: LCS-25727		SampType: LCS			Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53760		
Client ID: LCSS		Batch ID: 25727			Analysis Date: 9/9/2019			SeqNo: 1064008				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

606

20.0

500.0

0

121

75

125

Surr: 2-Fluorobiphenyl

24.1

20.00

120

60

120

Surr: o-Terphenyl

23.2

20.00

116

60

120

Sample ID: 1908347-002ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53760		
Client ID: GLB-19-2'		Batch ID: 25727			Analysis Date: 9/9/2019				SeqNo: 1064010		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

54.5

21.0

32.43

50.7

30

RH

Residual Range Organics (C25-C36)

ND

52.4

0

30

H

Surr: 2-Fluorobiphenyl

22.2

20.98

106

50

150

0

H

Surr: o-Terphenyl

23.1

20.98

110

50

150

0

H

NOTES:

R - High RPD due to suspected sample inhomogeneity.

Sample ID: 1909007-001AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53760		
Client ID: BATCH		Batch ID: 25727					Analysis Date: 9/9/2019			SeqNo: 1064012	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

5,170

23.9

598.0

5,513

-56.5

75

125

SE

Surr: 2-Fluorobiphenyl

79.3

23.92

331

50

150

S

Surr: o-Terphenyl

37.6

23.92

157

50

150

S

NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1909007-001AMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53760		
Client ID: BATCH		Batch ID: 25727		Analysis Date: 9/9/2019					SeqNo: 1064013		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	4,040	23.4	585.4	5,513	-251	75	125	5,175	24.6	30	SE
Surr: 2-Fluorobiphenyl	61.2		23.42		261	50	150		0		S
Surr: o-Terphenyl	27.4		23.42		117	50	150		0		

NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25632		SampType: MBLK			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: MBLKW		Batch ID: 25632						Analysis Date: 8/28/2019			SeqNo: 1060156	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	49.5									
Residual Range Organics (C25-C36)	ND	99.1									
Surr: 2-Fluorobiphenyl	71.5		79.26		90.2	60	120				
Surr: o-Terphenyl	76.4		79.26		96.4	60	120				

Sample ID: LCS-25632		SampType: LCS			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: LCSW		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060157				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	1,130	50.3	1,007	0	112	75	125				
Surr: 2-Fluorobiphenyl	86.3		80.55		107	60	120				
Surr: o-Terphenyl	82.9		80.55		103	60	120				

Sample ID: 1908325-001ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: BATCH		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060159				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	214	56.4						150.3	35.1	30	R
Residual Range Organics (C25-C36)	118	113						78.02	40.5	30	
Surr: 2-Fluorobiphenyl	56.5		90.18		62.7	50	150		0		
Surr: o-Terphenyl	18.6		90.18		20.6	50	150		0		S

NOTES:

R - High RPD observed.

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908347-026BDUP		SampType: DUP			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632						Analysis Date: 8/28/2019			SeqNo: 1060161	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	1,150	49.8						1,276	10.7	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908347-026BDUP		SampType: DUP		Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560			
Client ID: GPW-1		Batch ID: 25632					Analysis Date: 8/28/2019			SeqNo: 1060161		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Residual Range Organics (C25-C36)	ND	99.5						135.3	43.9	30	
Surr: 2-Fluorobiphenyl	66.3		79.63		83.2	50	150		0		
Surr: o-Terphenyl	67.1		79.63		84.3	50	150		0		

Sample ID: 1908347-026BMS		SampType: MS			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060162				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	2,090	50.2	1,005	1,276	81.1	75	125				
Surr: 2-Fluorobiphenyl	75.8		80.37		94.3	50	150				
Surr: o-Terphenyl	71.5		80.37		88.9	50	150				

Sample ID: 1908347-026BMSD		SampType: MSD			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060163				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	2,130	49.5	990.2	1,276	86.3	75	125	2,090	1.91	30	
Surr: 2-Fluorobiphenyl	76.4		79.22		96.5	50	150		0	0	
Surr: o-Terphenyl	68.8		79.22		86.8	50	150		0	0	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: LCS-25663		SampType: LCS			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: LCSS		Batch ID: 25663			Analysis Date: 9/3/2019					SeqNo: 1062663		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

108

25.0

125.0

0

86.8

60

120

Surr: 1,4-Difluorobenzene

13.5

12.50

108

60

120

Surr: 4-Bromofluorobenzene

12.5

12.50

99.8

60

120

Sample ID: MB-25663		SampType: MBLK			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: MBLKS		Batch ID: 25663			Analysis Date: 9/3/2019					SeqNo: 1062664		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

ND

25.0

Surr: 1,4-Difluorobenzene

12.7

12.50

102

60

120

Surr: 4-Bromofluorobenzene

12.8

12.50

103

60

120

Sample ID: 1908347-007BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: GLB-20-4'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062642	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)

ND

2.29

0

20

Surr: 1,4-Difluorobenzene

1.16

1.145

101

50

150

0

Surr: 4-Bromofluorobenzene

3.03

3.436

88.2

50

150

0

Sample ID: 1908347-017BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53676		
Client ID: TRB-5-11'		Batch ID: 25663			Analysis Date: 9/4/2019				SeqNo: 1062653		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)

296

24.9

278.9

6.04

20

D

Surr: 1,4-Difluorobenzene

13.1

12.44

105

50

150

0

D

Surr: 4-Bromofluorobenzene

15.0

14.93

101

50

150

0

D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: 1908347-022BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: TRB-7-8'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062658	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	173	4.23	21.14	145.9	127	60	120				SE
Surr: 1,4-Difluorobenzene	2.42		2.114		114	60	120				
Surr: 4-Bromofluorobenzene	6.77		6.343		107	60	120				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: 1908347-022BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: TRB-7-8'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062659	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	170	4.23	21.14	145.9	113	60	120	172.8	1.77	20	E
Surr: 1,4-Difluorobenzene	2.42		2.114		115	60	120		0		
Surr: 4-Bromofluorobenzene	6.64		6.343		105	60	120		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: LCS-25719		SampType: LCS			Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: LCSS		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063235				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)	28.2	5.00	25.00	0	113	60	120				
Surr: 1,4-Difluorobenzene	2.66		2.500		106	60	120				
Surr: 4-Bromofluorobenzene	2.56		2.500		102	60	120				

Sample ID: MB-25719		SampType: MBLK		Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713			
Client ID: MBLKS		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063236		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)	ND	5.00									
Surr: 1,4-Difluorobenzene	2.90		2.500		116	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: MB-25719		SampType: MBLK		Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: MBLKS		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063236	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: 4-Bromofluorobenzene 2.78 2.500 111 60 120

Sample ID: 1908347-002BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: GLB-19-2'		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063210				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) ND 2.55 0 20

Surr: 1,4-Difluorobenzene 1.47 1.274 115 50 150 0

Surr: 4-Bromofluorobenzene 3.68 3.822 96.4 50 150 0

Sample ID: 1908349-005BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 4.18 3.37 4.786 13.5 20

Surr: 1,4-Difluorobenzene 1.82 1.685 108 50 150 0

Surr: 4-Bromofluorobenzene 4.53 5.055 89.5 50 150 0

Sample ID: 1908349-020BMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH		Batch ID: 25719			Analysis Date: 9/6/2019			SeqNo: 1063231				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 31.4 3.90 19.48 7.691 122 60 120 S

Surr: 1,4-Difluorobenzene 2.45 1.948 126 60 120 S

Surr: 4-Bromofluorobenzene 6.56 5.845 112 60 120

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: 1908349-020BMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH	Batch ID: 25719					Analysis Date: 9/6/2019			SeqNo: 1063232		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (C6-C10)	29.6	3.90	19.48	7.691	112	60	120	31.44	6.06	20	
Surr: 1,4-Difluorobenzene	2.67		1.948		137	60	120		0		S
Surr: 4-Bromofluorobenzene	6.20		5.845		106	60	120		0		

NOTES:

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: LCS-25714		SampType: LCS			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: LCSW		Batch ID: 25714			Analysis Date: 9/4/2019			SeqNo: 1062590				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

485

50.0

500.0

0

97.1

60

120

Surr: 1,4-Difluorobenzene

53.9

50.00

108

60

120

Surr: 4-Bromofluorobenzene

49.6

50.00

99.3

60

120

Sample ID: LCSD-25714		SampType: LCSD			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: LCSW02		Batch ID: 25714			Analysis Date: 9/4/2019					SeqNo: 1062591		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

431

50.0

500.0

0

86.1

60

120

485.3

12.0

20

Surr: 1,4-Difluorobenzene

54.3

50.00

109

60

120

0

Surr: 4-Bromofluorobenzene

48.4

50.00

96.8

60

120

0

Sample ID: MB-25714		SampType: MBLK			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: MBLKW		Batch ID: 25714			Analysis Date: 9/4/2019					SeqNo: 1062592		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

ND

50.0

50.00

99.8

60

120

Surr: 1,4-Difluorobenzene

49.9

50.00

99.8

60

120

Surr: 4-Bromofluorobenzene

47.2

50.00

94.4

60

120

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25635	SampType: MBLK	Units: µg/Kg			Prep Date: 8/27/2019			RunNo: 53572			
Client ID: MBLKS	Batch ID: 25635	Analysis Date: 8/28/2019						SeqNo: 1060557			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	540		500.0		108	24.4	151				
Surr: Terphenyl-d14 (surr)	680		500.0		136	31.4	162				

Sample ID: LCS-25635	SampType: LCS	Units: µg/Kg			Prep Date: 8/27/2019			RunNo: 53572			
Client ID: LCSS	Batch ID: 25635				Analysis Date: 8/28/2019			SeqNo: 1060558			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	874	40.0	1,000	0	87.4	63.6	135				
2-Methylnaphthalene	895	40.0	1,000	0	89.5	61.5	140				
1-Methylnaphthalene	852	40.0	1,000	0	85.2	59.6	140				
Acenaphthylene	842	40.0	1,000	0	84.2	61.2	141				
Acenaphthene	874	40.0	1,000	0	87.4	62.3	134				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25635	SampType: LCS	Units: µg/Kg				Prep Date: 8/27/2019			RunNo: 53572		
Client ID: LCSS	Batch ID: 25635	Analysis Date: 8/28/2019						SeqNo: 1060558			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	908	40.0	1,000	0	90.8	64.1	134				
Phenanthrene	854	40.0	1,000	0	85.4	63.2	132				
Anthracene	907	40.0	1,000	0	90.7	61.5	136				
Fluoranthene	922	40.0	1,000	0	92.2	63.1	140				
Pyrene	914	40.0	1,000	0	91.4	63.4	140				
Benz(a)anthracene	932	40.0	1,000	0	93.2	62.7	148				
Chrysene	899	40.0	1,000	0	89.9	60.5	142				
Benzo(b)fluoranthene	913	40.0	1,000	0	91.3	55.8	158				
Benzo(k)fluoranthene	948	40.0	1,000	0	94.8	64	136				
Benzo(a)pyrene	940	40.0	1,000	0	94.0	61.9	151				
Indeno(1,2,3-cd)pyrene	792	40.0	1,000	0	79.2	48.3	147				
Dibenz(a,h)anthracene	797	40.0	1,000	0	79.7	47.9	150				
Benzo(g,h,i)perylene	753	40.0	1,000	0	75.3	44.4	144				
Surr: 2-Fluorobiphenyl	535		500.0		107	24.4	151				
Surr: Terphenyl-d14 (surr)	671		500.0		134	31.4	162				

Sample ID: 1908347-003ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060579	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	41.5						0		30	
2-Methylnaphthalene	ND	41.5						0		30	
1-Methylnaphthalene	ND	41.5						0		30	
Acenaphthylene	ND	41.5						0		30	
Acenaphthene	ND	41.5						0		30	
Fluorene	ND	41.5						0		30	
Phenanthrene	ND	41.5						0		30	
Anthracene	ND	41.5						0		30	
Fluoranthene	ND	41.5						0		30	
Pyrene	ND	41.5						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060579	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	41.5						0		30	
Chrysene	ND	41.5						0		30	
Benzo(b)fluoranthene	ND	41.5						0		30	
Benzo(k)fluoranthene	ND	41.5						0		30	
Benzo(a)pyrene	ND	41.5						0		30	
Indeno(1,2,3-cd)pyrene	ND	41.5						0		30	
Dibenz(a,h)anthracene	ND	41.5						0		30	
Benzo(g,h,i)perylene	ND	41.5						0		30	
Surr: 2-Fluorobiphenyl	500		519.1		96.4	24.4	151		0		
Surr: Terphenyl-d14 (surr)	624		519.1		120	31.4	162		0		

Sample ID: 1908347-003AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572			
Client ID: GLB-19-4'		Batch ID: 25635		Analysis Date: 8/28/2019							SeqNo: 1060580	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	738	40.5	1,012	9.546	72.0	37	127					
2-Methylnaphthalene	790	40.5	1,012	5.648	77.5	38.9	128					
1-Methylnaphthalene	745	40.5	1,012	0	73.6	36.2	129					
Acenaphthylene	765	40.5	1,012	0	75.5	39	132					
Acenaphthene	731	40.5	1,012	1.763	72.0	39.5	124					
Fluorene	778	40.5	1,012	4.186	76.5	38.3	128					
Phenanthrene	739	40.5	1,012	12.24	71.8	29.2	132					
Anthracene	753	40.5	1,012	6.758	73.7	38.8	128					
Fluoranthene	861	40.5	1,012	15.64	83.5	38.4	135					
Pyrene	836	40.5	1,012	9.499	81.7	37.8	134					
Benz(a)anthracene	880	40.5	1,012	14.14	85.6	39.2	143					
Chrysene	777	40.5	1,012	15.31	75.2	35.9	131					
Benzo(b)fluoranthene	777	40.5	1,012	19.07	74.9	36.3	148					
Benzo(k)fluoranthene	821	40.5	1,012	16.35	79.5	31.2	133					
Benzo(a)pyrene	848	40.5	1,012	10.53	82.8	35.9	144					

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003AMS	SampType: MS	Units: µg/Kg-dry				Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'	Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060580		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	657	40.5	1,012	7.456	64.1	25.3	131				
Dibenz(a,h)anthracene	634	40.5	1,012	0	62.6	27.4	132				
Benzo(g,h,i)perylene	604	40.5	1,012	7.024	58.9	20.1	128				
Surr: 2-Fluorobiphenyl	559		506.1		111	24.4	151				
Surr: Terphenyl-d14 (surr)	629		506.1		124	31.4	162				

Sample ID: 1908347-003AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572			
Client ID: GLB-19-4'		Batch ID: 25635		Analysis Date: 8/28/2019							SeqNo: 1060581	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	793	43.0	1,075	9.546	72.8	37	127	738.3	7.09	30		
2-Methylnaphthalene	767	43.0	1,075	5.648	70.8	38.9	128	789.9	2.88	30		
1-Methylnaphthalene	800	43.0	1,075	0	74.4	36.2	129	745.1	7.08	30		
Acenaphthylene	836	43.0	1,075	0	77.8	39	132	764.5	8.94	30		
Acenaphthene	811	43.0	1,075	1.763	75.3	39.5	124	730.8	10.4	30		
Fluorene	849	43.0	1,075	4.186	78.6	38.3	128	778.0	8.77	30		
Phenanthrene	779	43.0	1,075	12.24	71.3	29.2	132	739.4	5.26	30		
Anthracene	855	43.0	1,075	6.758	78.9	38.8	128	752.7	12.7	30		
Fluoranthene	901	43.0	1,075	15.64	82.3	38.4	135	860.5	4.57	30		
Pyrene	884	43.0	1,075	9.499	81.3	37.8	134	836.0	5.53	30		
Benz(a)anthracene	928	43.0	1,075	14.14	85.0	39.2	143	880.4	5.23	30		
Chrysene	836	43.0	1,075	15.31	76.3	35.9	131	776.6	7.38	30		
Benzo(b)fluoranthene	801	43.0	1,075	19.07	72.7	36.3	148	777.3	2.95	30		
Benzo(k)fluoranthene	870	43.0	1,075	16.35	79.4	31.2	133	820.6	5.81	30		
Benzo(a)pyrene	878	43.0	1,075	10.53	80.6	35.9	144	848.1	3.41	30		
Indeno(1,2,3-cd)pyrene	674	43.0	1,075	7.456	62.0	25.3	131	656.7	2.56	30		
Dibenz(a,h)anthracene	663	43.0	1,075	0	61.6	27.4	132	633.7	4.44	30		
Benzo(g,h,i)perylene	662	43.0	1,075	7.024	60.9	20.1	128	603.6	9.15	30		
Surr: 2-Fluorobiphenyl	587		537.6		109	24.4	151		0			
Surr: Terphenyl-d14 (surr)	676		537.6		126	31.4	162		0			

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003AMSD		SampType: MSD			Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635			Analysis Date: 8/28/2019			SeqNo: 1060581				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: MB-25641		SampType: MBLK		Units: µg/Kg		Prep Date: 8/28/2019			RunNo: 53586			
Client ID: MBLKS		Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060814		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	567		500.0		113	24.4	151				
Surr: Terphenyl-d14 (surr)	630		500.0		126	31.4	162				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25641	SampType: LCS	Units: µg/Kg				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: LCSS	Batch ID: 25641	Analysis Date: 8/29/2019						SeqNo: 1060815			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	826	40.0	1,000	0	82.6	63.6	135				
2-Methylnaphthalene	827	40.0	1,000	0	82.7	61.5	140				
1-Methylnaphthalene	792	40.0	1,000	0	79.2	59.6	140				
Acenaphthylene	830	40.0	1,000	0	83.0	61.2	141				
Acenaphthene	809	40.0	1,000	0	80.9	62.3	134				
Fluorene	860	40.0	1,000	0	86.0	64.1	134				
Phenanthrene	800	40.0	1,000	0	80.0	63.2	132				
Anthracene	846	40.0	1,000	0	84.6	61.5	136				
Fluoranthene	879	40.0	1,000	0	87.9	63.1	140				
Pyrene	867	40.0	1,000	0	86.7	63.4	140				
Benz(a)anthracene	819	40.0	1,000	0	81.9	62.7	148				
Chrysene	865	40.0	1,000	0	86.5	60.5	142				
Benzo(b)fluoranthene	877	40.0	1,000	0	87.7	55.8	158				
Benzo(k)fluoranthene	820	40.0	1,000	0	82.0	64	136				
Benzo(a)pyrene	900	40.0	1,000	0	90.0	61.9	151				
Indeno(1,2,3-cd)pyrene	820	40.0	1,000	0	82.0	48.3	147				
Dibenz(a,h)anthracene	806	40.0	1,000	0	80.6	47.9	150				
Benzo(g,h,i)perylene	782	40.0	1,000	0	78.2	44.4	144				
Surr: 2-Fluorobiphenyl	610		500.0		122	24.4	151				
Surr: Terphenyl-d14 (surr)	699		500.0		140	31.4	162				

Sample ID: 1908347-023ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'		Batch ID: 25641				Analysis Date: 8/29/2019			SeqNo: 1060817		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	44.4						0		30	
2-Methylnaphthalene	ND	44.4						0		30	
1-Methylnaphthalene	ND	44.4						0		30	
Acenaphthylene	ND	44.4						0		30	
Acenaphthene	ND	44.4						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023ADUP	SampType: DUP	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060817		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	ND	44.4						0		30	
Phenanthrene	ND	44.4						0		30	
Anthracene	ND	44.4						0		30	
Fluoranthene	ND	44.4						0		30	
Pyrene	ND	44.4						0		30	
Benz(a)anthracene	ND	44.4						0		30	
Chrysene	ND	44.4						0		30	
Benzo(b)fluoranthene	ND	44.4						0		30	
Benzo(k)fluoranthene	ND	44.4						0		30	
Benzo(a)pyrene	ND	44.4						0		30	
Indeno(1,2,3-cd)pyrene	ND	44.4						0		30	
Dibenz(a,h)anthracene	ND	44.4						0		30	
Benzo(g,h,i)perylene	ND	44.4						0		30	
Surr: 2-Fluorobiphenyl	559		555.2		101	24.4	151		0		
Surr: Terphenyl-d14 (surr)	711		555.2		128	31.4	162		0		

Sample ID: 1908347-023AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586			
Client ID: TRB-7-9'		Batch ID: 25641		Analysis Date: 8/29/2019							SeqNo: 1060818	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	839	44.5	1,111	10.92	74.5	37	127					
2-Methylnaphthalene	770	44.5	1,111	3.841	69.0	38.9	128					
1-Methylnaphthalene	794	44.5	1,111	0	71.5	36.2	129					
Acenaphthylene	833	44.5	1,111	0	74.9	39	132					
Acenaphthene	825	44.5	1,111	0	74.3	39.5	124					
Fluorene	904	44.5	1,111	6.373	80.8	38.3	128					
Phenanthrene	852	44.5	1,111	25.14	74.4	29.2	132					
Anthracene	877	44.5	1,111	7.251	78.3	38.8	128					
Fluoranthene	935	44.5	1,111	0	84.1	38.4	135					
Pyrene	898	44.5	1,111	0	80.8	37.8	134					

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMS	SampType: MS	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060818		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	865	44.5	1,111	5.310	77.4	39.2	143				
Chrysene	888	44.5	1,111	6.013	79.3	35.9	131				
Benzo(b)fluoranthene	905	44.5	1,111	0	81.4	36.3	148				
Benzo(k)fluoranthene	780	44.5	1,111	10.16	69.3	31.2	133				
Benzo(a)pyrene	874	44.5	1,111	0	78.6	35.9	144				
Indeno(1,2,3-cd)pyrene	834	44.5	1,111	0	75.1	25.3	131				
Dibenz(a,h)anthracene	829	44.5	1,111	0	74.6	27.4	132				
Benzo(g,h,i)perylene	792	44.5	1,111	0	71.3	20.1	128				
Surr: 2-Fluorobiphenyl	592		555.7		106	24.4	151				
Surr: Terphenyl-d14 (surr)	720		555.7		130	31.4	162				

Sample ID: 1908347-023AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	615	38.8	969.6	10.92	62.3	37	127	839.4	30.9	30	R
2-Methylnaphthalene	626	38.8	969.6	3.841	64.2	38.9	128	770.4	20.7	30	
1-Methylnaphthalene	611	38.8	969.6	0	63.0	36.2	129	794.2	26.0	30	
Acenaphthylene	646	38.8	969.6	0	66.6	39	132	832.9	25.3	30	
Acenaphthene	616	38.8	969.6	0	63.5	39.5	124	825.4	29.1	30	
Fluorene	656	38.8	969.6	6.373	67.0	38.3	128	904.4	31.8	30	R
Phenanthrene	616	38.8	969.6	25.14	60.9	29.2	132	851.6	32.2	30	R
Anthracene	668	38.8	969.6	7.251	68.2	38.8	128	877.2	27.0	30	
Fluoranthene	682	38.8	969.6	0	70.3	38.4	135	934.7	31.2	30	R
Pyrene	660	38.8	969.6	0	68.0	37.8	134	898.1	30.6	30	R
Benz(a)anthracene	623	38.8	969.6	5.310	63.7	39.2	143	865.4	32.6	30	R
Chrysene	678	38.8	969.6	6.013	69.3	35.9	131	887.9	26.8	30	
Benzo(b)fluoranthene	624	38.8	969.6	0	64.3	36.3	148	904.9	36.8	30	R
Benzo(k)fluoranthene	711	38.8	969.6	10.16	72.3	31.2	133	780.5	9.31	30	
Benzo(a)pyrene	704	38.8	969.6	0	72.6	35.9	144	873.8	21.5	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	563	38.8	969.6	0	58.0	25.3	131	834.4	38.9	30	R
Dibenz(a,h)anthracene	564	38.8	969.6	0	58.1	27.4	132	829.2	38.1	30	R
Benzo(g,h,i)perylene	530	38.8	969.6	0	54.6	20.1	128	792.0	39.7	30	R
Surr: 2-Fluorobiphenyl	449		484.8		92.5	24.4	151		0		
Surr: Terphenyl-d14 (surr)	533		484.8		110	31.4	162		0		

NOTES:

R - High RPD observed, spike recovery is within range.

Sample ID: MB-25728	SampType: MBLK	Units: µg/Kg			Prep Date: 9/6/2019			RunNo: 53737			
Client ID: MBLKS	Batch ID: 25728				Analysis Date: 9/6/2019			SeqNo: 1063667			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	326		500.0		65.2	24.4	151				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25728		SampType: MBLK		Units: µg/Kg		Prep Date: 9/6/2019		RunNo: 53737			
Client ID: MBLKS		Batch ID: 25728				Analysis Date: 9/6/2019		SeqNo: 1063667			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Terphenyl-d14 (surr)	483		500.0		96.7	31.4	162				

Sample ID: LCS-25728	SampType: LCS	Units: µg/Kg			Prep Date: 9/6/2019			RunNo: 53737			
Client ID: LCSS	Batch ID: 25728	Analysis Date: 9/6/2019						SeqNo: 1063668			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	896	40.0	1,000	0	89.6	63.6	135				
2-Methylnaphthalene	889	40.0	1,000	0	88.9	61.5	140				
1-Methylnaphthalene	871	40.0	1,000	0	87.1	59.6	140				
Acenaphthylene	904	40.0	1,000	0	90.4	61.2	141				
Acenaphthene	894	40.0	1,000	0	89.4	62.3	134				
Fluorene	901	40.0	1,000	0	90.1	64.1	134				
Phenanthrene	892	40.0	1,000	0	89.2	63.2	132				
Anthracene	903	40.0	1,000	0	90.3	61.5	136				
Fluoranthene	882	40.0	1,000	0	88.2	63.1	140				
Pyrene	898	40.0	1,000	0	89.8	63.4	140				
Benz(a)anthracene	990	40.0	1,000	0	99.0	62.7	148				
Chrysene	903	40.0	1,000	0	90.3	60.5	142				
Benzo(b)fluoranthene	954	40.0	1,000	0	95.4	55.8	158				
Benzo(k)fluoranthene	958	40.0	1,000	0	95.8	64	136				
Benzo(a)pyrene	1,030	40.0	1,000	0	103	61.9	151				
Indeno(1,2,3-cd)pyrene	974	40.0	1,000	0	97.4	48.3	147				
Dibenz(a,h)anthracene	974	40.0	1,000	0	97.4	47.9	150				
Benzo(g,h,i)perylene	958	40.0	1,000	0	95.8	44.4	144				
Surr: 2-Fluorobiphenyl	399		500.0		79.7	24.4	151				
Surr: Terphenyl-d14 (surr)	473		500.0		94.6	31.4	162				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-001AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728		Analysis Date: 9/6/2019						SeqNo: 1063670	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,310	42.9	1,073	456.4	79.6	37	127				
2-Methylnaphthalene	1,080	42.9	1,073	194.0	82.3	38.9	128				
1-Methylnaphthalene	934	42.9	1,073	92.17	78.4	36.2	129				
Acenaphthylene	955	42.9	1,073	34.22	85.8	39	132				
Acenaphthene	979	42.9	1,073	109.8	81.0	39.5	124				
Fluorene	1,090	42.9	1,073	176.1	85.0	38.3	128				
Phenanthrene	1,730	42.9	1,073	655.3	99.7	29.2	132				
Anthracene	1,560	42.9	1,073	277.5	120	38.8	128				
Fluoranthene	2,570	42.9	1,073	977.1	149	38.4	135				S
Pyrene	3,550	42.9	1,073	1,363	204	37.8	134				S
Benz(a)anthracene	2,850	42.9	1,073	915.9	180	39.2	143				S
Chrysene	3,560	42.9	1,073	1,021	236	35.9	131				S
Benzo(b)fluoranthene	3,870	42.9	1,073	1,244	245	36.3	148				S
Benzo(k)fluoranthene	2,120	42.9	1,073	578.5	144	31.2	133				S
Benzo(a)pyrene	3,370	42.9	1,073	1,299	193	35.9	144				S
Indeno(1,2,3-cd)pyrene	1,800	42.9	1,073	533.0	118	25.3	131				
Dibenz(a,h)anthracene	1,270	42.9	1,073	207.3	99.2	27.4	132				
Benzo(g,h,i)perylene	1,830	42.9	1,073	540.5	120	20.1	128				
Surr: 2-Fluorobiphenyl	438		536.6		81.7	24.4	151				
Surr: Terphenyl-d14 (surr)	471		536.6		87.8	31.4	162				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 1909007-001AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728				Analysis Date: 9/6/2019			SeqNo: 1063671		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,660	44.9	1,121	456.4	108	37	127	1,311	23.8	30	
2-Methylnaphthalene	1,210	44.9	1,121	194.0	90.4	38.9	128	1,077	11.5	30	
1-Methylnaphthalene	982	44.9	1,121	92.17	79.4	36.2	129	933.5	5.08	30	
Acenaphthylene	934	44.9	1,121	34.22	80.2	39	132	954.8	2.23	30	

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-001AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737			
Client ID: BATCH		Batch ID: 25728		Analysis Date: 9/6/2019							SeqNo: 1063671	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Acenaphthene	1,030	44.9	1,121	109.8	81.7	39.5	124	978.9	4.67	30		
Fluorene	1,200	44.9	1,121	176.1	90.9	38.3	128	1,088	9.40	30		
Phenanthrene	2,190	44.9	1,121	655.3	137	29.2	132	1,726	23.6	30	S	
Anthracene	2,730	44.9	1,121	277.5	219	38.8	128	1,561	54.5	30	RS	
Fluoranthene	2,940	44.9	1,121	977.1	175	38.4	135	2,574	13.3	30	S	
Pyrene	3,930	44.9	1,121	1,363	229	37.8	134	3,550	10.2	30	S	
Benz(a)anthracene	3,330	44.9	1,121	915.9	215	39.2	143	2,845	15.6	30	S	
Chrysene	5,080	44.9	1,121	1,021	362	35.9	131	3,555	35.2	30	RS	
Benzo(b)fluoranthene	4,430	44.9	1,121	1,244	285	36.3	148	3,874	13.5	30	S	
Benzo(k)fluoranthene	2,600	44.9	1,121	578.5	181	31.2	133	2,121	20.4	30	S	
Benzo(a)pyrene	3,870	44.9	1,121	1,299	229	35.9	144	3,369	13.9	30	S	
Indeno(1,2,3-cd)pyrene	2,020	44.9	1,121	533.0	133	25.3	131	1,796	11.8	30	S	
Dibenz(a,h)anthracene	1,360	44.9	1,121	207.3	103	27.4	132	1,272	6.53	30		
Benzo(g,h,i)perylene	2,020	44.9	1,121	540.5	132	20.1	128	1,830	9.97	30	S	
Surr: 2-Fluorobiphenyl	463		560.7		82.5	24.4	151		0			
Surr: Terphenyl-d14 (surr)	495		560.7		88.4	31.4	162		0			

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: 1909007-002ADUP	SampType: DUP	Units: µg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH	Batch ID: 25728	Analysis Date: 9/6/2019							SeqNo: 1063673		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	47.1						0		30	
2-Methylnaphthalene	ND	47.1						0		30	
1-Methylnaphthalene	ND	47.1						0		30	
Acenaphthylene	ND	47.1						0		30	
Acenaphthene	ND	47.1						0		30	
Fluorene	ND	47.1						0		30	
Phenanthrene	ND	47.1						0		30	

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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-002ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728		Analysis Date: 9/6/2019						SeqNo: 1063673	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	ND	47.1						0		30	
Fluoranthene	ND	47.1						0		30	
Pyrene	ND	47.1						0		30	
Benz(a)anthracene	ND	47.1						0		30	
Chrysene	ND	47.1						0		30	
Benzo(b)fluoranthene	ND	47.1						0		30	
Benzo(k)fluoranthene	ND	47.1						0		30	
Benzo(a)pyrene	ND	47.1						0		30	
Indeno(1,2,3-cd)pyrene	ND	47.1						0		30	
Dibenz(a,h)anthracene	ND	47.1						0		30	
Benzo(g,h,i)perylene	ND	47.1						0		30	
Surr: 2-Fluorobiphenyl	527		588.3		89.6	24.4	151		0		
Surr: Terphenyl-d14 (surr)	603		588.3		102	31.4	162		0		

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25627	SampType: MBLK	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: MBLKW	Batch ID: 25627	Analysis Date: 8/27/2019						SeqNo: 1059447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.100									
2-Methylnaphthalene	ND	0.100									
1-Methylnaphthalene	ND	0.100									
Acenaphthylene	ND	0.100									
Acenaphthene	ND	0.100									
Fluorene	ND	0.100									
Phenanthrene	ND	0.100									
Anthracene	ND	0.100									
Fluoranthene	ND	0.100									
Pyrene	ND	0.100									
Benz(a)anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)fluoranthene	ND	0.100									
Benzo(k)fluoranthene	ND	0.100									
Benzo(a)pyrene	ND	0.100									
Indeno(1,2,3-cd)pyrene	ND	0.100									
Dibenz(a,h)anthracene	ND	0.100									
Benzo(g,h,i)perylene	ND	0.100									
Surr: 2-Fluorobiphenyl	1.99		2.004		99.1	42.6	159				
Surr: Terphenyl-d14	2.08		2.004		104	8.99	147				

Sample ID: LCS-25627	SampType: LCS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: LCSW	Batch ID: 25627				Analysis Date: 8/27/2019			SeqNo: 1059448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.84	0.0993	3.970	0	71.5	50.6	120				
2-Methylnaphthalene	2.89	0.0993	3.970	0	72.8	54.8	128				
1-Methylnaphthalene	3.05	0.0993	3.970	0	76.9	52.4	129				
Acenaphthylene	3.24	0.0993	3.970	0	81.7	57.2	130				
Acenaphthene	3.15	0.0993	3.970	0	79.4	56.1	128				

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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25627	SampType: LCS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: LCSW	Batch ID: 25627				Analysis Date: 8/27/2019			SeqNo: 1059448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	3.48	0.0993	3.970	0	87.5	57.8	133				
Phenanthrene	3.34	0.0993	3.970	0	84.2	57.8	132				
Anthracene	3.00	0.0993	3.970	0	75.7	46.3	125				
Fluoranthene	3.55	0.0993	3.970	0	89.4	54.1	139				
Pyrene	3.51	0.0993	3.970	0	88.4	57.9	134				
Benz(a)anthracene	3.11	0.0993	3.970	0	78.4	35.8	133				
Chrysene	2.72	0.0993	3.970	0	68.6	32.3	120				
Benzo(b)fluoranthene	2.22	0.0993	3.970	0	55.8	22.7	130				
Benzo(k)fluoranthene	2.17	0.0993	3.970	0	54.6	21	112				
Benzo(a)pyrene	2.20	0.0993	3.970	0	55.3	24.7	115				
Indeno(1,2,3-cd)pyrene	1.61	0.0993	3.970	0	40.5	16.3	105				
Dibenz(a,h)anthracene	1.53	0.0993	3.970	0	38.5	16.3	106				
Benzo(g,h,i)perylene	1.61	0.0993	3.970	0	40.6	14.8	103				
Surr: 2-Fluorobiphenyl	2.26		1.985		114	42.6	159				
Surr: Terphenyl-d14	1.98		1.985		99.7	8.99	147				

Sample ID: 1908343-001CDUP		SampType: DUP		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531		
Client ID: BATCH		Batch ID: 25627					Analysis Date: 8/27/2019			SeqNo: 1059450	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.101						0		30	
2-Methylnaphthalene	ND	0.101						0		30	
1-Methylnaphthalene	ND	0.101						0		30	
Acenaphthylene	ND	0.101						0		30	
Acenaphthene	ND	0.101						0		30	
Fluorene	ND	0.101						0		30	
Phenanthrene	ND	0.101						0		30	
Anthracene	ND	0.101						0		30	
Fluoranthene	ND	0.101						0		30	
Pyrene	ND	0.101						0		30	

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908343-001CDUP		SampType: DUP		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531		
Client ID: BATCH		Batch ID: 25627					Analysis Date: 8/27/2019			SeqNo: 1059450	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	0.101						0		30	
Chrysene	ND	0.101						0		30	
Benzo(b)fluoranthene	ND	0.101						0		30	
Benzo(k)fluoranthene	ND	0.101						0		30	
Benzo(a)pyrene	ND	0.101						0		30	
Indeno(1,2,3-cd)pyrene	ND	0.101						0		30	
Dibenz(a,h)anthracene	ND	0.101						0		30	
Benzo(g,h,i)perylene	ND	0.101						0		30	
Surr: 2-Fluorobiphenyl	2.17		2.012		108	42.6	159		0		
Surr: Terphenyl-d14	2.03		2.012		101	8.99	147		0		

Sample ID: 1908347-026CMS	SampType: MS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: GPW-1	Batch ID: 25627	Analysis Date: 8/27/2019						SeqNo: 1059456			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.75	0.101	4.032	0	68.2	45.5	119				
2-Methylnaphthalene	3.02	0.101	4.032	0	75.0	50.3	118				
1-Methylnaphthalene	3.08	0.101	4.032	0	76.3	43.9	125				
Acenaphthylene	3.39	0.101	4.032	0	84.1	52.8	105				
Acenaphthene	3.35	0.101	4.032	0.1648	79.0	44.2	117				
Fluorene	3.44	0.101	4.032	0	85.2	44.4	122				
Phenanthrene	3.44	0.101	4.032	0	85.4	30	124				
Anthracene	3.20	0.101	4.032	0	79.4	17.8	117				
Fluoranthene	3.33	0.101	4.032	0.06290	80.9	5	140				
Pyrene	3.22	0.101	4.032	0.05275	78.6	5	134				
Benz(a)anthracene	2.52	0.101	4.032	0.02461	62.0	5	131				
Chrysene	2.26	0.101	4.032	0	56.0	5	132				
Benzo(b)fluoranthene	1.93	0.101	4.032	0	47.9	5	129				
Benzo(k)fluoranthene	1.59	0.101	4.032	0	39.3	5	111				
Benzo(a)pyrene	1.92	0.101	4.032	0	47.7	5	116				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-026CMS	SampType: MS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: GPW-1	Batch ID: 25627				Analysis Date: 8/27/2019			SeqNo: 1059456			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1.25	0.101	4.032	0.007247	30.7	5	108				
Dibenz(a,h)anthracene	1.21	0.101	4.032	0.004867	29.8	5	110				
Benzo(g,h,i)perylene	1.19	0.101	4.032	0	29.5	5	106				
Surr: 2-Fluorobiphenyl	2.08		2.016		103	42.6	159				
Surr: Terphenyl-d14	1.47		2.016		73.0	8.99	147				

Sample ID: 1908347-026CMSD		SampType: MSD		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531			
Client ID: GPW-1		Batch ID: 25627		Analysis Date: 8/27/2019							SeqNo: 1059457	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	2.69	0.101	4.024	0	66.9	45.5	119	2.748	2.11	30		
2-Methylnaphthalene	2.70	0.101	4.024	0	67.0	50.3	118	3.025	11.5	30		
1-Methylnaphthalene	2.84	0.101	4.024	0	70.6	43.9	125	3.077	7.99	30		
Acenaphthylene	2.98	0.101	4.024	0	74.1	52.8	105	3.391	12.9	30		
Acenaphthene	2.99	0.101	4.024	0.1648	70.3	44.2	117	3.349	11.3	30		
Fluorene	3.05	0.101	4.024	0	75.7	44.4	122	3.435	12.0	30		
Phenanthrene	3.00	0.101	4.024	0	74.6	30	124	3.441	13.7	30		
Anthracene	2.73	0.101	4.024	0	67.9	17.8	117	3.201	15.8	30		
Fluoranthene	2.83	0.101	4.024	0.06290	68.7	5	140	3.325	16.1	30		
Pyrene	2.74	0.101	4.024	0.05275	66.7	5	134	3.222	16.3	30		
Benz(a)anthracene	2.11	0.101	4.024	0.02461	51.8	5	131	2.524	18.0	30		
Chrysene	1.90	0.101	4.024	0	47.3	5	132	2.256	16.9	30		
Benzo(b)fluoranthene	1.66	0.101	4.024	0	41.3	5	129	1.933	14.9	30		
Benzo(k)fluoranthene	1.37	0.101	4.024	0	34.0	5	111	1.586	14.6	30		
Benzo(a)pyrene	1.64	0.101	4.024	0	40.7	5	116	1.921	15.9	30		
Indeno(1,2,3-cd)pyrene	1.08	0.101	4.024	0.007247	26.6	5	108	1.246	14.4	30		
Dibenz(a,h)anthracene	1.04	0.101	4.024	0.004867	25.7	5	110	1.207	15.0	30		
Benzo(g,h,i)perylene	1.02	0.101	4.024	0	25.4	5	106	1.188	15.2	30		
Surr: 2-Fluorobiphenyl	2.17		2.012		108	42.6	159		0	0		
Surr: Terphenyl-d14	1.42		2.012		70.5	8.99	147		0	0		



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-026CMSD	SampType: MSD	Units: µg/L	Prep Date: 8/26/2019	RunNo: 53531							
Client ID: GPW-1	Batch ID: 25627		Analysis Date: 8/27/2019	SeqNo: 1059457							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: LCS-25645		SampType: LCS			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: LCSW		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1061384				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	521	50.0	500.0	0	104	65	135				
Surr: Toluene-d8	24.9		25.00		99.5	65	135				
Surr: 4-Bromofluorobenzene	24.4		25.00		97.7	65	135				

Sample ID: LCS-25645		SampType: LCS			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062541				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0	500.0	0	0	65	135				
Gasoline Range Organics (C6-C10)	511	50.0	500.0	0	102	65	135				
Surr: Toluene-d8	24.9		25.00		99.5	65	135				
Surr: 4-Bromofluorobenzene	24.4		25.00		97.7	65	135				

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1061385				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	503	50.0	500.0	0	101	65	135	521.1	3.55	20	
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	24.3		25.00		97.0	65	135		0		

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062542				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0	500.0	0	0	65	135	0		20	
Gasoline Range Organics (C6-C10)	494	50.0	500.0	0	98.8	65	135	510.7	3.38	20	
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	24.3		25.00		97.0	65	135		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062542				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: MB-25645		SampType: MBLK		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607			
Client ID: MBLKW		Batch ID: 25645					Analysis Date: 8/28/2019			SeqNo: 1061386		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0									
Surr: Toluene-d8	25.1		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	23.8		25.00		95.2	65	135				

Sample ID: MB-25645		SampType: MBLK		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: MBLKW		Batch ID: 25645					Analysis Date: 8/28/2019			SeqNo: 1062543	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Gasoline Range Organics (C6-C10)	ND	50.0									
Surr: Toluene-d8	25.1		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	23.8		25.00		95.2	65	135				

Sample ID: 1908367-001ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607			
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061380		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.5		25.00		97.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.8		25.00		99.3	65	135		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: 1908367-001ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1062536				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Gasoline Range Organics (C6-C10)	ND	50.0						0		30	
Surr: Toluene-d8	24.5		25.00		97.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.8		25.00		99.3	65	135		0		

Sample ID: 1908355-003ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1061378				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.7		25.00		98.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.4		25.00		97.4	65	135		0		

Sample ID: 1908355-003ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1062534				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Gasoline Range Organics (C6-C10)	ND	50.0						0		30	
Surr: Toluene-d8	24.7		25.00		98.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.4		25.00		97.4	65	135		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25646	SampType: LCS	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: LCSS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060215			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.782	0.0200	1.000	0	78.2	14.3	167				
Chloromethane	0.885	0.0500	1.000	0	88.5	32	156				
Vinyl chloride	0.852	0.0250	1.000	0	85.2	43.4	151				
Bromomethane	1.49	0.0500	1.000	0	149	35	155				
Trichlorofluoromethane (CFC-11)	0.928	0.0200	1.000	0	92.8	33.8	156				
Chloroethane	1.09	0.0500	1.000	0	109	33.1	147				
1,1-Dichloroethene	0.919	0.0200	1.000	0	91.9	30.9	145				
Methylene chloride	0.894	0.0200	1.000	0	89.4	46.3	140				
trans-1,2-Dichloroethene	0.946	0.0200	1.000	0	94.6	68	130				
Methyl tert-butyl ether (MTBE)	0.856	0.0500	1.000	0	85.6	44.1	152				
1,1-Dichloroethane	0.890	0.0200	1.000	0	89.0	61.9	137				
cis-1,2-Dichloroethene	0.925	0.0200	1.000	0	92.5	71.3	135				
Chloroform	0.923	0.0200	1.000	0	92.3	69	145				
1,1,1-Trichloroethane (TCA)	0.888	0.0250	1.000	0	88.8	69	132				
1,1-Dichloropropene	0.925	0.0200	1.000	0	92.5	72.7	131				
Carbon tetrachloride	0.891	0.0250	1.000	0	89.1	63.4	137				
1,2-Dichloroethane (EDC)	0.879	0.0200	1.000	0	87.9	50.9	162				
Benzene	0.933	0.0200	1.000	0	93.3	64.3	133				
Trichloroethene (TCE)	0.994	0.0200	1.000	0	99.4	65.5	137				
1,2-Dichloropropane	0.892	0.0200	1.000	0	89.2	63.2	142				
Bromodichloromethane	0.878	0.0200	1.000	0	87.8	53.4	131				
Dibromomethane	0.935	0.0200	1.000	0	93.5	60.1	146				
cis-1,3-Dichloropropene	0.849	0.0200	1.000	0	84.9	59.1	143				
Toluene	0.942	0.0200	1.000	0	94.2	67	144				
trans-1,3-Dichloropropylene	0.825	0.0200	1.000	0	82.5	49.2	149				
1,1,2-Trichloroethane	0.944	0.0200	1.000	0	94.4	56.9	147				
1,3-Dichloropropane	0.925	0.0250	1.000	0	92.5	56.1	153				
Tetrachloroethene (PCE)	1.00	0.0250	1.000	0	100	52.7	150				
Dibromochloromethane	0.870	0.0250	1.000	0	87.0	70.6	144				
1,2-Dibromoethane (EDB)	0.935	0.00500	1.000	0	93.5	50.5	154				
Chlorobenzene	0.967	0.0250	1.000	0	96.7	84.9	125				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25646	SampType: LCS	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: LCSS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060215			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.918	0.0250	1.000	0	91.8	65.9	141				
Ethylbenzene	0.960	0.0250	1.000	0	96.0	74	129				
m,p-Xylene	1.93	0.0500	2.000	0	96.5	70	124				
o-Xylene	0.938	0.0250	1.000	0	93.8	68.1	139				
Styrene	0.951	0.0250	1.000	0	95.1	73.3	146				
Isopropylbenzene	0.960	0.0250	1.000	0	96.0	70	130				
Bromoform	0.801	0.0500	1.000	0	80.1	44.3	130				
1,1,2,2-Tetrachloroethane	0.803	0.0200	1.000	0	80.3	44.8	165				
n-Propylbenzene	0.959	0.0250	1.000	0	95.9	75.8	139				
Bromobenzene	0.968	0.0200	1.000	0	96.8	49.2	144				
1,3,5-Trimethylbenzene	0.950	0.0250	1.000	0	95.0	76.5	135				
2-Chlorotoluene	0.933	0.0250	1.000	0	93.3	76.7	129				
4-Chlorotoluene	0.934	0.0250	1.000	0	93.4	77.5	125				
tert-Butylbenzene	0.937	0.0250	1.000	0	93.7	66.2	130				
1,2,3-Trichloropropane	0.828	0.0250	1.000	0	82.8	67.9	136				
1,2,4-Trichlorobenzene	0.972	0.0250	1.000	0	97.2	65.5	150				
sec-Butylbenzene	0.957	0.0500	1.000	0	95.7	75.6	133				
4-Isopropyltoluene	0.960	0.0500	1.000	0	96.0	76.8	131				
1,3-Dichlorobenzene	1.01	0.0200	1.000	0	101	48.6	144				
1,4-Dichlorobenzene	0.999	0.0200	1.000	0	99.9	72.6	126				
n-Butylbenzene	0.974	0.0250	1.000	0	97.4	78.4	140				
1,2-Dichlorobenzene	1.00	0.0200	1.000	0	100	72.8	126				
1,2-Dibromo-3-chloropropane	0.730	0.500	1.000	0	73.0	40.2	155				
1,2,4-Trimethylbenzene	0.954	0.0200	1.000	0	95.4	77.5	129				
Hexachloro-1,3-butadiene	0.944	0.0500	1.000	0	94.4	42	151				
Naphthalene	0.924	0.0500	1.000	0	92.4	46.5	167				
1,2,3-Trichlorobenzene	0.969	0.0200	1.000	0	96.9	64.5	149				
Surr: Dibromofluoromethane	1.24		1.250		99.0	56.5	129				
Surr: Toluene-d8	1.24		1.250		99.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.18		1.250		94.0	54.8	168				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: MBLKS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060216			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									Q
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: MBLKS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060216			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									Q
1,1,1,2-Tetrachloroethane	ND	0.0200									Q
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									Q
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									Q
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.18		1.250		94.4	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.16		1.250		93.0	54.8	168				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: MBLKS	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060216			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-001BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019							SeqNo: 1060199		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200						0		30	
Chloromethane	ND	0.0500						0		30	
Vinyl chloride	ND	0.0250						0		30	
Bromomethane	ND	0.0500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0200						0		30	
Chloroethane	ND	0.0500						0		30	
1,1-Dichloroethene	ND	0.0200						0		30	
Methylene chloride	ND	0.0200						0		30	
trans-1,2-Dichloroethene	ND	0.0200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0500						0		30	
1,1-Dichloroethane	ND	0.0200						0		30	
cis-1,2-Dichloroethene	ND	0.0200						0		30	
Chloroform	ND	0.0200						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0250						0		30	
1,1-Dichloropropene	ND	0.0200						0		30	
Carbon tetrachloride	ND	0.0250						0		30	
1,2-Dichloroethane (EDC)	ND	0.0200						0		30	
Benzene	ND	0.0200						0		30	
Trichloroethene (TCE)	ND	0.0200						0		30	
1,2-Dichloropropane	ND	0.0200						0		30	
Bromodichloromethane	ND	0.0200						0		30	
Dibromomethane	ND	0.0200						0		30	
cis-1,3-Dichloropropene	ND	0.0200						0		30	
Toluene	ND	0.0200						0		30	



Work Order: 1908347
CLIENT: G-Logics
Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060199			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

trans-1,3-Dichloropropylene	ND	0.0200						0		30	Q
1,1,2-Trichloroethane	ND	0.0200						0		30	
1,3-Dichloropropane	ND	0.0250						0		30	
Tetrachloroethene (PCE)	ND	0.0250						0		30	
Dibromochloromethane	ND	0.0250						0		30	
1,2-Dibromoethane (EDB)	ND	0.00500						0		30	
Chlorobenzene	ND	0.0250						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0250						0		30	
Ethylbenzene	ND	0.0250						0		30	
m,p-Xylene	ND	0.0500						0		30	
o-Xylene	ND	0.0250						0		30	
Styrene	ND	0.0250						0		30	
Isopropylbenzene	ND	0.0250						0		30	
Bromoform	ND	0.0500						0		30	Q
1,1,1,2-Tetrachloroethane	ND	0.0200						0		30	Q
n-Propylbenzene	ND	0.0250						0		30	
Bromobenzene	ND	0.0200						0		30	
1,3,5-Trimethylbenzene	ND	0.0250						0		30	
2-Chlorotoluene	ND	0.0250						0		30	
4-Chlorotoluene	ND	0.0250						0		30	
tert-Butylbenzene	ND	0.0250						0		30	
1,2,3-Trichloropropane	ND	0.0250						0		30	Q
1,2,4-Trichlorobenzene	ND	0.0250						0		30	
sec-Butylbenzene	ND	0.0500						0		30	
4-Isopropyltoluene	ND	0.0500						0		30	
1,3-Dichlorobenzene	ND	0.0200						0		30	
1,4-Dichlorobenzene	ND	0.0200						0		30	
n-Butylbenzene	ND	0.0250						0		30	
1,2-Dichlorobenzene	ND	0.0200						0		30	
1,2-Dibromo-3-chloropropane	ND	0.500						0		30	Q
1,2,4-Trimethylbenzene	ND	0.0200						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060199	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500						0		30	
Naphthalene	ND	0.0500						0		30	
1,2,3-Trichlorobenzene	ND	0.0200						0		30	
Surr: Dibromofluoromethane	1.18		1.250		94.4	56.5	129		0		
Surr: Toluene-d8	1.22		1.250		97.6	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.18		1.250		94.7	54.8	168		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-003BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060204	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0316						0		30	
Chloromethane	ND	0.0791						0		30	
Vinyl chloride	ND	0.0395						0		30	
Bromomethane	ND	0.0791						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0316						0		30	
Chloroethane	ND	0.0791						0		30	
1,1-Dichloroethene	ND	0.0316						0		30	
Methylene chloride	ND	0.0316						0		30	
trans-1,2-Dichloroethene	ND	0.0316						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0791						0		30	
1,1-Dichloroethane	ND	0.0316						0		30	
cis-1,2-Dichloroethene	ND	0.0316						0		30	
Chloroform	ND	0.0316						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0395						0		30	
1,1-Dichloropropene	ND	0.0316						0		30	
Carbon tetrachloride	ND	0.0395						0		30	
1,2-Dichloroethane (EDC)	ND	0.0316						0		30	
Benzene	ND	0.0316						0		30	



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-003BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019		RunNo: 53562			
Client ID: BATCH		Batch ID: 25646		Analysis Date: 8/28/2019						SeqNo: 1060204	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0316						0		30	
1,2-Dichloropropane	ND	0.0316						0		30	
Bromodichloromethane	ND	0.0316						0		30	
Dibromomethane	ND	0.0316						0		30	
cis-1,3-Dichloropropene	ND	0.0316						0		30	
Toluene	ND	0.0316						0		30	
trans-1,3-Dichloropropylene	ND	0.0316						0		30	Q
1,1,2-Trichloroethane	ND	0.0316						0		30	
1,3-Dichloropropane	ND	0.0395						0		30	
Tetrachloroethene (PCE)	ND	0.0395						0		30	
Dibromochloromethane	ND	0.0395						0		30	
1,2-Dibromoethane (EDB)	ND	0.00791						0		30	
Chlorobenzene	ND	0.0395						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0395						0		30	
Ethylbenzene	ND	0.0395						0		30	
m,p-Xylene	ND	0.0791						0		30	
o-Xylene	ND	0.0395						0		30	
Styrene	ND	0.0395						0		30	
Isopropylbenzene	ND	0.0395						0		30	
Bromoform	ND	0.0791						0		30	Q
1,1,2,2-Tetrachloroethane	ND	0.0316						0		30	Q
n-Propylbenzene	ND	0.0395						0		30	
Bromobenzene	ND	0.0316						0		30	
1,3,5-Trimethylbenzene	ND	0.0395						0		30	
2-Chlorotoluene	ND	0.0395						0		30	
4-Chlorotoluene	ND	0.0395						0		30	
tert-Butylbenzene	ND	0.0395						0		30	
1,2,3-Trichloropropane	ND	0.0395						0		30	Q
1,2,4-Trichlorobenzene	ND	0.0395						0		30	
sec-Butylbenzene	ND	0.0791						0		30	
4-Isopropyltoluene	ND	0.0791						0		30	

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-003BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060204			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0316						0		30	
1,4-Dichlorobenzene	ND	0.0316						0		30	
n-Butylbenzene	ND	0.0395						0		30	
1,2-Dichlorobenzene	ND	0.0316						0		30	
1,2-Dibromo-3-chloropropane	ND	0.791						0		30	Q
1,2,4-Trimethylbenzene	ND	0.0316						0		30	
Hexachloro-1,3-butadiene	ND	0.0791						0		30	
Naphthalene	ND	0.0791						0		30	
1,2,3-Trichlorobenzene	ND	0.0316						0		30	
Surr: Dibromofluoromethane	1.86		1.976		94.1	56.5	129		0		
Surr: Toluene-d8	1.95		1.976		98.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.83		1.976		92.6	54.8	168		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-002BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060201			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.691	0.0190	0.9513	0	72.7	43.5	121				S
Chloromethane	0.793	0.0476	0.9513	0	83.4	45	130				
Vinyl chloride	0.820	0.0238	0.9513	0	86.2	43.6	150				
Bromomethane	1.43	0.0476	0.9513	0	150	21.3	120				
Trichlorofluoromethane (CFC-11)	0.906	0.0190	0.9513	0	95.2	35	131				
Chloroethane	0.976	0.0476	0.9513	0	103	31.9	123				
1,1-Dichloroethene	0.912	0.0190	0.9513	0	95.9	47.3	147				
Methylene chloride	0.852	0.0190	0.9513	0	89.5	54.7	142				
trans-1,2-Dichloroethene	0.915	0.0190	0.9513	0	96.2	52	136				
Methyl tert-butyl ether (MTBE)	0.853	0.0476	0.9513	0	89.7	58.5	167				
1,1-Dichloroethane	0.865	0.0190	0.9513	0	90.9	51.8	141				
cis-1,2-Dichloroethene	0.898	0.0190	0.9513	0	94.4	58.6	136				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060201	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloroform	0.881	0.0190	0.9513	0	92.7	53.2	129				
1,1,1-Trichloroethane (TCA)	0.862	0.0238	0.9513	0	90.6	58.3	145				
1,1-Dichloropropene	0.883	0.0190	0.9513	0	92.8	55.1	138				
Carbon tetrachloride	0.854	0.0238	0.9513	0	89.8	53.3	144				
1,2-Dichloroethane (EDC)	0.871	0.0190	0.9513	0	91.5	51.3	139				
Benzene	0.903	0.0190	0.9513	0	94.9	63.5	133				
Trichloroethene (TCE)	0.966	0.0190	0.9513	0	102	61.6	147				
1,2-Dichloropropane	0.864	0.0190	0.9513	0	90.8	59	136				
Bromodichloromethane	0.835	0.0190	0.9513	0	87.8	50.7	141				
Dibromomethane	0.921	0.0190	0.9513	0	96.8	50.6	137				
cis-1,3-Dichloropropene	0.791	0.0190	0.9513	0	83.1	50.4	138				
Toluene	0.917	0.0190	0.9513	0	96.4	63.4	132				
trans-1,3-Dichloropropylene	0.764	0.0190	0.9513	0	80.4	44.1	147				
1,1,2-Trichloroethane	0.942	0.0190	0.9513	0	99.0	51.6	137				
1,3-Dichloropropane	0.910	0.0238	0.9513	0	95.6	53.1	134				
Tetrachloroethene (PCE)	0.945	0.0238	0.9513	0	99.3	35.6	158				
Dibromochloromethane	0.832	0.0238	0.9513	0	87.5	55.3	140				
1,2-Dibromoethane (EDB)	0.915	0.00476	0.9513	0	96.1	50.4	136				
Chlorobenzene	0.931	0.0238	0.9513	0	97.8	60	133				
1,1,1,2-Tetrachloroethane	0.870	0.0238	0.9513	0	91.5	53.1	142				
Ethylbenzene	0.927	0.0238	0.9513	0	97.4	54.5	134				
m,p-Xylene	1.85	0.0476	1.903	0	97.3	53.1	132				
o-Xylene	0.892	0.0238	0.9513	0	93.8	53.3	139				
Styrene	0.915	0.0238	0.9513	0	96.2	51.1	132				
Isopropylbenzene	0.928	0.0238	0.9513	0	97.5	58.9	138				
Bromoform	0.780	0.0476	0.9513	0	82.0	57.9	130				
1,1,1,2,2-Tetrachloroethane	0.809	0.0190	0.9513	0	85.1	51.9	131				
n-Propylbenzene	0.922	0.0238	0.9513	0	97.0	53.6	140				
Bromobenzene	0.927	0.0190	0.9513	0	97.5	54.2	140				
1,3,5-Trimethylbenzene	0.900	0.0238	0.9513	0	94.6	51.8	136				
2-Chlorotoluene	0.902	0.0238	0.9513	0	94.8	51.6	136				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060201			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	0.900	0.0238	0.9513	0	94.6	50.1	139				
tert-Butylbenzene	0.911	0.0238	0.9513	0	95.8	50.5	135				
1,2,3-Trichloropropane	0.839	0.0238	0.9513	0	88.2	50.5	131				
1,2,4-Trichlorobenzene	0.938	0.0238	0.9513	0	98.6	50.8	130				
sec-Butylbenzene	0.923	0.0476	0.9513	0	97.0	52.6	141				
4-Isopropyltoluene	0.915	0.0476	0.9513	0	96.2	52.9	134				
1,3-Dichlorobenzene	0.948	0.0190	0.9513	0	99.7	52.6	131				
1,4-Dichlorobenzene	0.956	0.0190	0.9513	0	101	52.9	129				
n-Butylbenzene	0.915	0.0238	0.9513	0	96.1	52.6	130				
1,2-Dichlorobenzene	0.964	0.0190	0.9513	0	101	55.8	129				
1,2-Dibromo-3-chloropropane	0.776	0.476	0.9513	0	81.6	40.5	131				
1,2,4-Trimethylbenzene	0.907	0.0190	0.9513	0	95.3	50.6	137				
Hexachloro-1,3-butadiene	0.878	0.0476	0.9513	0	92.3	40.6	158				
Naphthalene	0.980	0.0476	0.9513	0	103	52.3	124				
1,2,3-Trichlorobenzene	0.974	0.0190	0.9513	0	102	54.4	124				
Surr: Dibromofluoromethane	1.16		1.189		97.9	56.5	129				
Surr: Toluene-d8	1.18		1.189		98.8	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.14		1.189		95.9	54.8	168				

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: 1908368-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646		Analysis Date: 8/28/2019					SeqNo: 1060202		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.666	0.0190	0.9513	0	70.0	43.5	121	0.6912	3.75	30	
Chloromethane	0.798	0.0476	0.9513	0	83.9	45	130	0.7935	0.580	30	
Vinyl chloride	0.798	0.0238	0.9513	0	83.8	43.6	150	0.8197	2.74	30	
Bromomethane	1.38	0.0476	0.9513	0	145	21.3	120	1.425	3.10	30	S
Trichlorofluoromethane (CFC-11)	0.892	0.0190	0.9513	0	93.8	35	131	0.9056	1.52	30	
Chloroethane	0.992	0.0476	0.9513	0	104	31.9	123	0.9759	1.59	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060202	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.887	0.0190	0.9513	0	93.3	47.3	147	0.9123	2.76	30	
Methylene chloride	0.858	0.0190	0.9513	0	90.1	54.7	142	0.8515	0.702	30	
trans-1,2-Dichloroethene	0.913	0.0190	0.9513	0	96.0	52	136	0.9148	0.201	30	
Methyl tert-butyl ether (MTBE)	0.835	0.0476	0.9513	0	87.7	58.5	167	0.8529	2.17	30	
1,1-Dichloroethane	0.852	0.0190	0.9513	0	89.5	51.8	141	0.8649	1.56	30	
cis-1,2-Dichloroethene	0.888	0.0190	0.9513	0	93.4	58.6	136	0.8981	1.10	30	
Chloroform	0.878	0.0190	0.9513	0	92.3	53.2	129	0.8814	0.336	30	
1,1,1-Trichloroethane (TCA)	0.859	0.0238	0.9513	0	90.3	58.3	145	0.8619	0.326	30	
1,1-Dichloropropene	0.903	0.0190	0.9513	0	94.9	55.1	138	0.8828	2.24	30	
Carbon tetrachloride	0.849	0.0238	0.9513	0	89.3	53.3	144	0.8543	0.599	30	
1,2-Dichloroethane (EDC)	0.857	0.0190	0.9513	0	90.0	51.3	139	0.8707	1.65	30	
Benzene	0.895	0.0190	0.9513	0	94.1	63.5	133	0.9032	0.879	30	
Trichloroethene (TCE)	0.987	0.0190	0.9513	0	104	61.6	147	0.9663	2.14	30	
1,2-Dichloropropane	0.853	0.0190	0.9513	0	89.7	59	136	0.8642	1.30	30	
Bromodichloromethane	0.832	0.0190	0.9513	0	87.5	50.7	141	0.8350	0.360	30	
Dibromomethane	0.892	0.0190	0.9513	0	93.7	50.6	137	0.9206	3.20	30	
cis-1,3-Dichloropropene	0.784	0.0190	0.9513	0	82.4	50.4	138	0.7907	0.910	30	
Toluene	0.911	0.0190	0.9513	0	95.8	63.4	132	0.9172	0.683	30	
trans-1,3-Dichloropropylene	0.761	0.0190	0.9513	0	80.0	44.1	147	0.7645	0.401	30	
1,1,2-Trichloroethane	0.916	0.0190	0.9513	0	96.3	51.6	137	0.9416	2.73	30	
1,3-Dichloropropane	0.898	0.0238	0.9513	0	94.4	53.1	134	0.9097	1.32	30	
Tetrachloroethene (PCE)	0.950	0.0238	0.9513	0	99.8	35.6	158	0.9446	0.538	30	
Dibromochloromethane	0.822	0.0238	0.9513	0	86.4	55.3	140	0.8320	1.25	30	
1,2-Dibromoethane (EDB)	0.906	0.00476	0.9513	0	95.3	50.4	136	0.9146	0.917	30	
Chlorobenzene	0.944	0.0238	0.9513	0	99.2	60	133	0.9308	1.37	30	
1,1,1,2-Tetrachloroethane	0.885	0.0238	0.9513	0	93.1	53.1	142	0.8704	1.71	30	
Ethylbenzene	0.931	0.0238	0.9513	0	97.8	54.5	134	0.9268	0.424	30	
m,p-Xylene	1.87	0.0476	1.903	0	98.3	53.1	132	1.851	1.01	30	
o-Xylene	0.899	0.0238	0.9513	0	94.5	53.3	139	0.8923	0.796	30	
Styrene	0.912	0.0238	0.9513	0	95.9	51.1	132	0.9148	0.269	30	
Isopropylbenzene	0.931	0.0238	0.9513	0	97.9	58.9	138	0.9276	0.352	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019							SeqNo: 1060202		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	0.783	0.0476	0.9513	0	82.3	57.9	130	0.7802	0.337	30	
1,1,2,2-Tetrachloroethane	0.757	0.0190	0.9513	0	79.6	51.9	131	0.8093	6.63	30	
n-Propylbenzene	0.930	0.0238	0.9513	0	97.7	53.6	140	0.9224	0.773	30	
Bromobenzene	0.930	0.0190	0.9513	0	97.7	54.2	140	0.9273	0.251	30	
1,3,5-Trimethylbenzene	0.908	0.0238	0.9513	0	95.5	51.8	136	0.8998	0.926	30	
2-Chlorotoluene	0.903	0.0238	0.9513	0	94.9	51.6	136	0.9019	0.0793	30	
4-Chlorotoluene	0.893	0.0238	0.9513	0	93.9	50.1	139	0.8997	0.763	30	
tert-Butylbenzene	0.914	0.0238	0.9513	0	96.0	50.5	135	0.9109	0.292	30	
1,2,3-Trichloropropane	0.827	0.0238	0.9513	0	87.0	50.5	131	0.8390	1.39	30	
1,2,4-Trichlorobenzene	0.945	0.0238	0.9513	0	99.3	50.8	130	0.9382	0.670	30	
sec-Butylbenzene	0.927	0.0476	0.9513	0	97.4	52.6	141	0.9228	0.437	30	
4-Isopropyltoluene	0.922	0.0476	0.9513	0	97.0	52.9	134	0.9148	0.830	30	
1,3-Dichlorobenzene	0.969	0.0190	0.9513	0	102	52.6	131	0.9480	2.16	30	
1,4-Dichlorobenzene	0.959	0.0190	0.9513	0	101	52.9	129	0.9562	0.333	30	
n-Butylbenzene	0.930	0.0238	0.9513	0	97.7	52.6	130	0.9146	1.65	30	
1,2-Dichlorobenzene	0.962	0.0190	0.9513	0	101	55.8	129	0.9638	0.141	30	
1,2-Dibromo-3-chloropropane	0.757	0.476	0.9513	0	79.6	40.5	131	0.7764	2.51	30	
1,2,4-Trimethylbenzene	0.911	0.0190	0.9513	0	95.8	50.6	137	0.9065	0.498	30	
Hexachloro-1,3-butadiene	0.904	0.0476	0.9513	0	95.0	40.6	158	0.8782	2.88	30	
Naphthalene	0.968	0.0476	0.9513	0	102	52.3	124	0.9799	1.21	30	
1,2,3-Trichlorobenzene	0.969	0.0190	0.9513	0	102	54.4	124	0.9741	0.492	30	
Surr: Dibromofluoromethane	1.15		1.189		96.8	56.5	129		0		
Surr: Toluene-d8	1.17		1.189		98.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.14		1.189		95.9	54.8	168		0		

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg				Prep Date: 8/29/2019			RunNo: 53612		
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.19	0.0200	1.000	0	119	14.3	167				
Chloromethane	1.05	0.0500	1.000	0	105	32	156				
Vinyl chloride	1.08	0.0250	1.000	0	108	43.4	151				
Bromomethane	1.82	0.0500	1.000	0	182	35	155				S
Trichlorofluoromethane (CFC-11)	1.45	0.0200	1.000	0	145	33.8	156				
Chloroethane	1.31	0.0500	1.000	0	131	33.1	147				
1,1-Dichloroethene	1.09	0.0200	1.000	0	109	30.9	145				
Methylene chloride	1.09	0.0200	1.000	0	109	46.3	140				
trans-1,2-Dichloroethene	1.08	0.0200	1.000	0	108	68	130				
Methyl tert-butyl ether (MTBE)	1.10	0.0500	1.000	0	110	44.1	152				
1,1-Dichloroethane	1.10	0.0200	1.000	0	110	61.9	137				
cis-1,2-Dichloroethene	1.06	0.0200	1.000	0	106	71.3	135				
Chloroform	1.08	0.0200	1.000	0	108	69	145				
1,1,1-Trichloroethane (TCA)	1.06	0.0250	1.000	0	106	69	132				
1,1-Dichloropropene	1.06	0.0200	1.000	0	106	72.7	131				
Carbon tetrachloride	1.04	0.0250	1.000	0	104	63.4	137				
1,2-Dichloroethane (EDC)	1.07	0.0200	1.000	0	107	50.9	162				
Benzene	1.08	0.0200	1.000	0	108	64.3	133				
Trichloroethene (TCE)	1.08	0.0200	1.000	0	108	65.5	137				
1,2-Dichloropropane	1.05	0.0200	1.000	0	105	63.2	142				
Bromodichloromethane	1.03	0.0200	1.000	0	103	53.4	131				
Dibromomethane	1.09	0.0200	1.000	0	109	60.1	146				
cis-1,3-Dichloropropene	1.03	0.0200	1.000	0	103	59.1	143				
Toluene	1.02	0.0200	1.000	0	102	67	144				
trans-1,3-Dichloropropylene	1.02	0.0200	1.000	0	102	49.2	149				
1,1,2-Trichloroethane	1.10	0.0200	1.000	0	110	56.9	147				
1,3-Dichloropropane	1.04	0.0250	1.000	0	104	56.1	153				
Tetrachloroethene (PCE)	1.02	0.0250	1.000	0	102	52.7	150				
Dibromochloromethane	1.01	0.0250	1.000	0	101	70.6	144				
1,2-Dibromoethane (EDB)	0.961	0.00500	1.000	0	96.1	50.5	154				
Chlorobenzene	1.04	0.0250	1.000	0	104	84.9	125				

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg				Prep Date: 8/29/2019			RunNo: 53612		
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	1.03	0.0250	1.000	0	103	65.9	141				
Ethylbenzene	1.00	0.0250	1.000	0	100	74	129				
m,p-Xylene	2.05	0.0500	2.000	0	103	70	124				
o-Xylene	0.995	0.0250	1.000	0	99.5	68.1	139				
Styrene	1.04	0.0250	1.000	0	104	73.3	146				
Isopropylbenzene	0.992	0.0250	1.000	0	99.2	70	130				
Bromoform	1.02	0.0500	1.000	0	102	44.3	130				
1,1,2,2-Tetrachloroethane	1.15	0.0200	1.000	0	115	44.8	165				
n-Propylbenzene	1.05	0.0250	1.000	0	105	75.8	139				
Bromobenzene	1.05	0.0200	1.000	0	105	49.2	144				
1,3,5-Trimethylbenzene	1.05	0.0250	1.000	0	105	76.5	135				
2-Chlorotoluene	1.05	0.0250	1.000	0	105	76.7	129				
4-Chlorotoluene	1.08	0.0250	1.000	0	108	77.5	125				
tert-Butylbenzene	1.00	0.0250	1.000	0	100	66.2	130				
1,2,3-Trichloropropane	1.09	0.0250	1.000	0	109	67.9	136				
1,2,4-Trichlorobenzene	0.978	0.0250	1.000	0	97.8	65.5	150				
sec-Butylbenzene	1.03	0.0500	1.000	0	103	75.6	133				
4-Isopropyltoluene	1.03	0.0500	1.000	0	103	76.8	131				
1,3-Dichlorobenzene	1.02	0.0200	1.000	0	102	48.6	144				
1,4-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.6	126				
n-Butylbenzene	0.979	0.0250	1.000	0	97.9	78.4	140				
1,2-Dichlorobenzene	1.04	0.0200	1.000	0	104	72.8	126				
1,2-Dibromo-3-chloropropane	1.03	0.500	1.000	0	103	40.2	155				
1,2,4-Trimethylbenzene	1.06	0.0200	1.000	0	106	77.5	129				
Hexachloro-1,3-butadiene	1.05	0.0500	1.000	0	105	42	151				
Naphthalene	1.03	0.0500	1.000	0	103	46.5	167				
1,2,3-Trichlorobenzene	1.09	0.0200	1.000	0	109	64.5	149				
Surr: Dibromofluoromethane	1.33		1.250		107	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	54.8	168				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019				RunNo: 53612		
Client ID: LCSS	Batch ID: 25656				Analysis Date: 8/29/2019				SeqNo: 1061447		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: MB-25656		SampType: MBLK		Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: MBLKS		Batch ID: 25656					Analysis Date: 8/29/2019			SeqNo: 1061448	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									Q
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: MBLKS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									



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QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: MBLKS	Batch ID: 25656				Analysis Date: 8/29/2019			SeqNo: 1061448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.29		1.250		103	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.13		1.250		90.6	54.8	168				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-2'		Batch ID: 25656					Analysis Date: 8/29/2019			SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0488						0		30	D
Chloromethane	ND	0.122						0		30	DQ
Vinyl chloride	ND	0.0610						0		30	D
Bromomethane	ND	0.122						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0488						0		30	D
Chloroethane	ND	0.122						0		30	D
1,1-Dichloroethene	ND	0.0488						0		30	D
Methylene chloride	ND	0.0488						0		30	D
trans-1,2-Dichloroethene	ND	0.0488						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.122						0		30	D
1,1-Dichloroethane	ND	0.0488						0		30	D
cis-1,2-Dichloroethene	ND	0.0488						0		30	D
Chloroform	ND	0.0488						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.0610						0		30	D
1,1-Dichloropropene	ND	0.0488						0		30	D
Carbon tetrachloride	ND	0.0610						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0488						0		30	D
Benzene	ND	0.0488						0		30	D

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-2'	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061422			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0488						0		30	D
1,2-Dichloropropane	ND	0.0488						0		30	D
Bromodichloromethane	ND	0.0488						0		30	D
Dibromomethane	ND	0.0488						0		30	D
cis-1,3-Dichloropropene	ND	0.0488						0		30	D
Toluene	ND	0.0488						0		30	D
trans-1,3-Dichloropropylene	ND	0.0488						0		30	D
1,1,2-Trichloroethane	ND	0.0488						0		30	D
1,3-Dichloropropane	ND	0.0610						0		30	D
Tetrachloroethene (PCE)	ND	0.0610						0		30	D
Dibromochloromethane	ND	0.0610						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0122						0		30	D
Chlorobenzene	ND	0.0610						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.0610						0		30	D
Ethylbenzene	1.80	0.0610						2.248	22.4	30	D
m,p-Xylene	6.72	0.122						8.559	24.0	30	DE
o-Xylene	0.677	0.0610						0.8378	21.3	30	D
Styrene	ND	0.0610						0		30	D
Isopropylbenzene	0.394	0.0610						0.4877	21.4	30	D
Bromoform	ND	0.122						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0488						0		30	D
n-Propylbenzene	1.35	0.0610						1.709	23.5	30	D
Bromobenzene	ND	0.0488						0		30	D
1,3,5-Trimethylbenzene	2.43	0.0610						3.113	24.7	30	D
2-Chlorotoluene	ND	0.0610						0		30	D
4-Chlorotoluene	ND	0.0610						0		30	D
tert-Butylbenzene	ND	0.0610						0		30	D
1,2,3-Trichloropropane	ND	0.0610						0		30	D
1,2,4-Trichlorobenzene	ND	0.0610						0		30	D
sec-Butylbenzene	0.248	0.122						0.3202	25.5	30	D
4-Isopropyltoluene	0.173	0.122						0	200	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-2'		Batch ID: 25656					Analysis Date: 8/29/2019			SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0488						0		30	D
1,4-Dichlorobenzene	ND	0.0488						0		30	D
n-Butylbenzene	ND	0.0610						0		30	D
1,2-Dichlorobenzene	ND	0.0488						0		30	D
1,2-Dibromo-3-chloropropane	ND	1.22						0		30	D
1,2,4-Trimethylbenzene	8.37	0.0488						9.823	16.0	30	DE
Hexachloro-1,3-butadiene	ND	0.122						0		30	D
Naphthalene	2.19	0.122						2.510	13.6	30	DQ
1,2,3-Trichlorobenzene	ND	0.0488						0		30	D
Surr: Dibromofluoromethane	3.07		3.049		101	56.5	129		0		D
Surr: Toluene-d8	3.05		3.049		100	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	3.50		3.659		95.6	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0920						0		30	D
Chloromethane	ND	0.230						0		30	DQ
Vinyl chloride	ND	0.115						0		30	D
Bromomethane	ND	0.230						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0920						0		30	D
Chloroethane	ND	0.230						0		30	D
1,1-Dichloroethene	ND	0.0920						0		30	D
Methylene chloride	ND	0.0920						0		30	D
trans-1,2-Dichloroethene	ND	0.0920						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.230						0		30	D
1,1-Dichloroethane	ND	0.0920						0		30	D



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: BATCH		Batch ID: 25656		Analysis Date: 8/30/2019						SeqNo: 1061437	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	ND	0.0920						0		30	D
Chloroform	ND	0.0920						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.115						0		30	D
1,1-Dichloropropene	ND	0.0920						0		30	D
Carbon tetrachloride	ND	0.115						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0920						0		30	D
Benzene	ND	0.0920						0		30	D
Trichloroethene (TCE)	ND	0.0920						0		30	D
1,2-Dichloropropane	ND	0.0920						0		30	D
Bromodichloromethane	ND	0.0920						0		30	D
Dibromomethane	ND	0.0920						0		30	D
cis-1,3-Dichloropropene	ND	0.0920						0		30	D
Toluene	ND	0.0920						0		30	D
trans-1,3-Dichloropropylene	ND	0.0920						0		30	D
1,1,2-Trichloroethane	ND	0.0920						0		30	D
1,3-Dichloropropane	ND	0.115						0		30	D
Tetrachloroethene (PCE)	ND	0.115						0		30	D
Dibromochloromethane	ND	0.115						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0230						0		30	D
Chlorobenzene	ND	0.115						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.115						0		30	D
Ethylbenzene	ND	0.115						0		30	D
m,p-Xylene	ND	0.230						0		30	D
o-Xylene	ND	0.115						0		30	D
Styrene	ND	0.115						0		30	D
Isopropylbenzene	1.53	0.115						1.562	1.77	30	D
Bromoform	ND	0.230						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0920						0		30	D
n-Propylbenzene	1.39	0.115						1.412	1.27	30	D
Bromobenzene	ND	0.0920						0		30	D
1,3,5-Trimethylbenzene	ND	0.115						0		30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	0.115						0		30	D
4-Chlorotoluene	ND	0.115						0		30	D
tert-Butylbenzene	ND	0.115						0		30	D
1,2,3-Trichloropropane	ND	0.115						0		30	D
1,2,4-Trichlorobenzene	ND	0.115						0		30	D
sec-Butylbenzene	1.60	0.230						1.620	0.997	30	D
4-Isopropyltoluene	ND	0.230						0		30	D
1,3-Dichlorobenzene	ND	0.0920						0		30	D
1,4-Dichlorobenzene	ND	0.0920						0		30	D
n-Butylbenzene	ND	0.115						0		30	D
1,2-Dichlorobenzene	ND	0.0920						0		30	D
1,2-Dibromo-3-chloropropane	ND	2.30						0		30	D
1,2,4-Trimethylbenzene	0.395	0.0920						0.3993	1.07	30	D
Hexachloro-1,3-butadiene	ND	0.230						0		30	D
Naphthalene	ND	0.230						0		30	D
1,2,3-Trichlorobenzene	ND	0.0920						0		30	D
Surr: Dibromofluoromethane	5.54		5.749		96.3	56.5	129		0		D
Surr: Toluene-d8	5.43		5.749		94.5	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	7.69		8.048		95.5	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Diluted due to matrix.

Sample ID: 1908347-013BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-5'	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.736	0.0149	0.7465	0	98.5	43.5	121				
Chloromethane	0.625	0.0373	0.7465	0	83.7	45	130				
Vinyl chloride	0.689	0.0187	0.7465	0	92.3	43.6	150				
Bromomethane	1.01	0.0373	0.7465	0	136	21.3	120				S

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53612			
Client ID: GLB-23-5'		Batch ID: 25656				Analysis Date: 8/30/2019		SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	0.904	0.0149	0.7465	0	121	35	131				S
Chloroethane	0.965	0.0373	0.7465	0	129	31.9	123				
1,1-Dichloroethene	0.727	0.0149	0.7465	0	97.4	47.3	147				
Methylene chloride	0.798	0.0149	0.7465	0	107	54.7	142				
trans-1,2-Dichloroethene	0.741	0.0149	0.7465	0	99.3	52	136				
Methyl tert-butyl ether (MTBE)	0.763	0.0373	0.7465	0	102	58.5	167				
1,1-Dichloroethane	0.701	0.0149	0.7465	0	93.9	51.8	141				
cis-1,2-Dichloroethene	0.731	0.0149	0.7465	0	98.0	58.6	136				
Chloroform	0.760	0.0149	0.7465	0	102	53.2	129				
1,1,1-Trichloroethane (TCA)	0.729	0.0187	0.7465	0	97.7	58.3	145				
1,1-Dichloropropene	0.773	0.0149	0.7465	0	104	55.1	138				
Carbon tetrachloride	0.734	0.0187	0.7465	0	98.3	53.3	144				
1,2-Dichloroethane (EDC)	0.751	0.0149	0.7465	0	101	51.3	139				
Benzene	0.908	0.0149	0.7465	0.1888	96.3	63.5	133				
Trichloroethene (TCE)	0.881	0.0149	0.7465	0	118	61.6	147				
1,2-Dichloropropane	0.720	0.0149	0.7465	0	96.5	59	136				
Bromodichloromethane	0.760	0.0149	0.7465	0	102	50.7	141				
Dibromomethane	0.773	0.0149	0.7465	0	104	50.6	137				
cis-1,3-Dichloropropene	0.699	0.0149	0.7465	0	93.7	50.4	138				
Toluene	0.783	0.0149	0.7465	0.03415	100	63.4	132				
trans-1,3-Dichloropropylene	0.681	0.0149	0.7465	0	91.2	44.1	147				
1,1,2-Trichloroethane	0.811	0.0149	0.7465	0	109	51.6	137				
1,3-Dichloropropane	0.726	0.0187	0.7465	0	97.3	53.1	134				
Tetrachloroethene (PCE)	0.777	0.0187	0.7465	0	104	35.6	158				
Dibromochloromethane	0.720	0.0187	0.7465	0	96.5	55.3	140				
1,2-Dibromoethane (EDB)	0.762	0.00373	0.7465	0	102	50.4	136				
Chlorobenzene	0.765	0.0187	0.7465	0	102	60	133				
1,1,1,2-Tetrachloroethane	0.749	0.0187	0.7465	0	100	53.1	142				
Ethylbenzene	1.51	0.0187	0.7465	0.8306	90.4	54.5	134				
m,p-Xylene	2.74	0.0373	1.493	1.322	95.2	53.1	132				
o-Xylene	0.835	0.0187	0.7465	0.06496	103	53.3	139				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-5'		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061424		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Styrene	0.785	0.0187	0.7465	0	105	51.1	132				
Isopropylbenzene	0.932	0.0187	0.7465	0.1574	104	58.9	138				
Bromoform	0.742	0.0373	0.7465	0	99.4	57.9	130				
1,1,2,2-Tetrachloroethane	1.31	0.0149	0.7465	0	176	51.9	131				S
n-Propylbenzene	1.25	0.0187	0.7465	0.5136	99.1	53.6	140				
Bromobenzene	0.823	0.0149	0.7465	0	110	54.2	140				
1,3,5-Trimethylbenzene	1.19	0.0187	0.7465	0.3997	106	51.8	136				
2-Chlorotoluene	0.997	0.0187	0.7465	0	134	51.6	136				
4-Chlorotoluene	0.780	0.0187	0.7465	0	105	50.1	139				
tert-Butylbenzene	0.829	0.0187	0.7465	0	111	50.5	135				
1,2,3-Trichloropropane	0.762	0.0187	0.7465	0	102	50.5	131				
1,2,4-Trichlorobenzene	0.930	0.0187	0.7465	0	125	50.8	130				
sec-Butylbenzene	0.998	0.0373	0.7465	0	134	52.6	141				
4-Isopropyltoluene	0.957	0.0373	0.7465	0	128	52.9	134				
1,3-Dichlorobenzene	0.806	0.0149	0.7465	0	108	52.6	131				
1,4-Dichlorobenzene	0.801	0.0149	0.7465	0	107	52.9	129				
n-Butylbenzene	1.27	0.0187	0.7465	0	170	52.6	130				S
1,2-Dichlorobenzene	0.813	0.0149	0.7465	0	109	55.8	129				
1,2-Dibromo-3-chloropropane	1.12	0.373	0.7465	0	150	40.5	131				S
1,2,4-Trimethylbenzene	2.86	0.0149	0.7465	2.693	21.7	50.6	137				S
Hexachloro-1,3-butadiene	1.03	0.0373	0.7465	0	138	40.6	158				
Naphthalene	1.57	0.0373	0.7465	0.6422	124	52.3	124				S
1,2,3-Trichlorobenzene	0.997	0.0149	0.7465	0	134	54.4	124				S
Surr: Dibromofluoromethane	0.913		0.9331		97.8	56.5	129				
Surr: Toluene-d8	0.893		0.9331		95.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	4.29		4.665		91.9	54.8	168				

NOTES:

S - Outlying spike recovery(ies) observed.



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656		Analysis Date: 8/30/2019						SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.679	0.0149	0.7465	0	91.0	43.5	121	0.7356	7.97	30	
Chloromethane	0.634	0.0373	0.7465	0	84.9	45	130	0.6248	1.47	30	
Vinyl chloride	0.671	0.0187	0.7465	0	89.9	43.6	150	0.6887	2.59	30	
Bromomethane	1.08	0.0373	0.7465	0	144	21.3	120	1.014	5.85	30	S
Trichlorofluoromethane (CFC-11)	0.866	0.0149	0.7465	0	116	35	131	0.9037	4.27	30	
Chloroethane	0.944	0.0373	0.7465	0	126	31.9	123	0.9654	2.24	30	S
1,1-Dichloroethene	0.698	0.0149	0.7465	0	93.6	47.3	147	0.7268	3.99	30	
Methylene chloride	0.767	0.0149	0.7465	0	103	54.7	142	0.7983	3.99	30	
trans-1,2-Dichloroethene	0.719	0.0149	0.7465	0	96.4	52	136	0.7411	2.99	30	
Methyl tert-butyl ether (MTBE)	0.758	0.0373	0.7465	0	102	58.5	167	0.7627	0.624	30	
1,1-Dichloroethane	0.683	0.0149	0.7465	0	91.5	51.8	141	0.7013	2.64	30	
cis-1,2-Dichloroethene	0.716	0.0149	0.7465	0	95.9	58.6	136	0.7312	2.14	30	
Chloroform	0.735	0.0149	0.7465	0	98.4	53.2	129	0.7598	3.36	30	
1,1,1-Trichloroethane (TCA)	0.701	0.0187	0.7465	0	93.9	58.3	145	0.7293	3.93	30	
1,1-Dichloropropene	0.732	0.0149	0.7465	0	98.1	55.1	138	0.7729	5.41	30	
Carbon tetrachloride	0.702	0.0187	0.7465	0	94.1	53.3	144	0.7341	4.43	30	
1,2-Dichloroethane (EDC)	0.740	0.0149	0.7465	0	99.2	51.3	139	0.7512	1.48	30	
Benzene	0.870	0.0149	0.7465	0.1888	91.3	63.5	133	0.9078	4.20	30	
Trichloroethene (TCE)	0.845	0.0149	0.7465	0	113	61.6	147	0.8815	4.20	30	
1,2-Dichloropropane	0.704	0.0149	0.7465	0	94.3	59	136	0.7204	2.36	30	
Bromodichloromethane	0.732	0.0149	0.7465	0	98.1	50.7	141	0.7604	3.82	30	
Dibromomethane	0.749	0.0149	0.7465	0	100	50.6	137	0.7731	3.17	30	
cis-1,3-Dichloropropene	0.684	0.0149	0.7465	0	91.6	50.4	138	0.6992	2.28	30	
Toluene	0.753	0.0149	0.7465	0.03415	96.3	63.4	132	0.7834	3.96	30	
trans-1,3-Dichloropropylene	0.669	0.0149	0.7465	0	89.6	44.1	147	0.6811	1.82	30	
1,1,2-Trichloroethane	0.782	0.0149	0.7465	0	105	51.6	137	0.8112	3.66	30	
1,3-Dichloropropane	0.716	0.0187	0.7465	0	96.0	53.1	134	0.7260	1.33	30	
Tetrachloroethene (PCE)	0.735	0.0187	0.7465	0	98.5	35.6	158	0.7770	5.52	30	
Dibromochloromethane	0.702	0.0187	0.7465	0	94.0	55.3	140	0.7201	2.60	30	
1,2-Dibromoethane (EDB)	0.734	0.00373	0.7465	0	98.4	50.4	136	0.7624	3.77	30	
Chlorobenzene	0.741	0.0187	0.7465	0	99.3	60	133	0.7650	3.13	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656		Analysis Date: 8/30/2019						SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.721	0.0187	0.7465	0	96.6	53.1	142	0.7490	3.81	30	
Ethylbenzene	1.41	0.0187	0.7465	0.8306	77.1	54.5	134	1.506	6.82	30	
m,p-Xylene	2.56	0.0373	1.493	1.322	82.6	53.1	132	2.744	7.09	30	
o-Xylene	0.805	0.0187	0.7465	0.06496	99.1	53.3	139	0.8354	3.74	30	
Styrene	0.779	0.0187	0.7465	0	104	51.1	132	0.7851	0.780	30	
Isopropylbenzene	0.885	0.0187	0.7465	0.1574	97.5	58.9	138	0.9318	5.13	30	
Bromoform	0.738	0.0373	0.7465	0	98.8	57.9	130	0.7423	0.595	30	
1,1,2,2-Tetrachloroethane	1.18	0.0149	0.7465	0	158	51.9	131	1.311	10.6	30	S
n-Propylbenzene	1.17	0.0187	0.7465	0.5136	88.4	53.6	140	1.253	6.53	30	
Bromobenzene	0.803	0.0149	0.7465	0	108	54.2	140	0.8230	2.44	30	
1,3,5-Trimethylbenzene	1.13	0.0187	0.7465	0.3997	97.4	51.8	136	1.195	5.85	30	
2-Chlorotoluene	0.942	0.0187	0.7465	0	126	51.6	136	0.9973	5.66	30	
4-Chlorotoluene	0.738	0.0187	0.7465	0	98.9	50.1	139	0.7803	5.57	30	
tert-Butylbenzene	0.792	0.0187	0.7465	0	106	50.5	135	0.8292	4.63	30	
1,2,3-Trichloropropane	0.753	0.0187	0.7465	0	101	50.5	131	0.7624	1.22	30	
1,2,4-Trichlorobenzene	0.912	0.0187	0.7465	0	122	50.8	130	0.9301	2.01	30	
sec-Butylbenzene	0.946	0.0373	0.7465	0	127	52.6	141	0.9975	5.27	30	
4-Isopropyltoluene	0.911	0.0373	0.7465	0	122	52.9	134	0.9573	4.91	30	
1,3-Dichlorobenzene	0.793	0.0149	0.7465	0	106	52.6	131	0.8060	1.67	30	
1,4-Dichlorobenzene	0.797	0.0149	0.7465	0	107	52.9	129	0.8012	0.545	30	
n-Butylbenzene	1.21	0.0187	0.7465	0	163	52.6	130	1.273	4.74	30	S
1,2-Dichlorobenzene	0.802	0.0149	0.7465	0	107	55.8	129	0.8127	1.33	30	
1,2-Dibromo-3-chloropropane	1.11	0.373	0.7465	0	149	40.5	131	1.121	0.955	30	S
1,2,4-Trimethylbenzene	2.71	0.0149	0.7465	2.693	2.25	50.6	137	2.855	5.23	30	S
Hexachloro-1,3-butadiene	1.01	0.0373	0.7465	0	136	40.6	158	1.032	1.97	30	
Naphthalene	1.58	0.0373	0.7465	0.6422	125	52.3	124	1.569	0.556	30	S
1,2,3-Trichlorobenzene	1.01	0.0149	0.7465	0	136	54.4	124	0.9973	1.45	30	S
Surr: Dibromofluoromethane	0.919		0.9331		98.5	56.5	129		0		
Surr: Toluene-d8	0.886		0.9331		95.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	4.05		4.665		86.9	54.8	168		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID: LCS-25737		SampType: LCS			Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: LCSS		Batch ID: 25737			Analysis Date: 9/6/2019			SeqNo: 1063595				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Dichlorodifluoromethane (CFC-12)	0.870	0.0200	1.000	0	87.0	14.3	167				
Chloromethane	0.797	0.0500	1.000	0	79.7	32	156				
Vinyl chloride	0.904	0.0250	1.000	0	90.4	43.4	151				
Bromomethane	1.38	0.0500	1.000	0	138	35	155				
Trichlorofluoromethane (CFC-11)	1.43	0.0200	1.000	0	143	33.8	156				
Chloroethane	1.32	0.0500	1.000	0	132	33.1	147				
1,1-Dichloroethene	0.903	0.0200	1.000	0	90.3	30.9	145				
Methylene chloride	0.911	0.0200	1.000	0	91.1	46.3	140				
trans-1,2-Dichloroethene	0.969	0.0200	1.000	0	96.9	68	130				
Methyl tert-butyl ether (MTBE)	0.933	0.0500	1.000	0	93.3	44.1	152				
1,1-Dichloroethane	0.934	0.0200	1.000	0	93.4	61.9	137				
cis-1,2-Dichloroethene	0.909	0.0200	1.000	0	90.9	71.3	135				
Chloroform	0.902	0.0200	1.000	0	90.2	69	145				
1,1,1-Trichloroethane (TCA)	0.946	0.0250	1.000	0	94.6	69	132				
1,1-Dichloropropene	0.956	0.0200	1.000	0	95.6	72.7	131				
Carbon tetrachloride	0.953	0.0250	1.000	0	95.3	63.4	137				
1,2-Dichloroethane (EDC)	0.890	0.0200	1.000	0	89.0	50.9	162				
Benzene	1.00	0.0200	1.000	0	100	64.3	133				
Trichloroethene (TCE)	0.913	0.0200	1.000	0	91.3	65.5	137				
1,2-Dichloropropane	0.919	0.0200	1.000	0	91.9	63.2	142				
Bromodichloromethane	0.878	0.0200	1.000	0	87.8	53.4	131				
Dibromomethane	0.852	0.0200	1.000	0	85.2	60.1	146				
cis-1,3-Dichloropropene	0.867	0.0200	1.000	0	86.7	59.1	143				
Toluene	0.954	0.0200	1.000	0	95.4	67	144				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25737	SampType: LCS	Units: mg/Kg				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: LCSS	Batch ID: 25737	Analysis Date: 9/6/2019						SeqNo: 1063595			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	0.831	0.0200	1.000	0	83.1	49.2	149				
1,1,2-Trichloroethane	0.821	0.0200	1.000	0	82.1	56.9	147				
1,3-Dichloropropane	0.838	0.0250	1.000	0	83.8	56.1	153				
Tetrachloroethene (PCE)	0.870	0.0250	1.000	0	87.0	52.7	150				
Dibromochloromethane	0.809	0.0250	1.000	0	80.9	70.6	144				
1,2-Dibromoethane (EDB)	0.811	0.00500	1.000	0	81.1	50.5	154				
Chlorobenzene	0.943	0.0250	1.000	0	94.3	84.9	125				
1,1,1,2-Tetrachloroethane	0.950	0.0250	1.000	0	95.0	65.9	141				
Ethylbenzene	1.04	0.0250	1.000	0	104	74	129				
m,p-Xylene	2.06	0.0500	2.000	0	103	70	124				
o-Xylene	1.01	0.0250	1.000	0	101	68.1	139				
Styrene	0.909	0.0250	1.000	0	90.9	73.3	146				
Isopropylbenzene	0.925	0.0250	1.000	0	92.5	70	130				
Bromoform	0.858	0.0500	1.000	0	85.8	44.3	130				
1,1,2,2-Tetrachloroethane	0.833	0.0200	1.000	0	83.3	44.8	165				
n-Propylbenzene	0.917	0.0250	1.000	0	91.7	75.8	139				
Bromobenzene	0.906	0.0200	1.000	0	90.6	49.2	144				
1,3,5-Trimethylbenzene	0.885	0.0250	1.000	0	88.5	76.5	135				
2-Chlorotoluene	1.09	0.0250	1.000	0	109	76.7	129				
4-Chlorotoluene	0.873	0.0250	1.000	0	87.3	77.5	125				
tert-Butylbenzene	0.910	0.0250	1.000	0	91.0	66.2	130				
1,2,3-Trichloropropane	0.849	0.0250	1.000	0	84.9	67.9	136				
1,2,4-Trichlorobenzene	0.967	0.0250	1.000	0	96.7	65.5	150				
sec-Butylbenzene	0.882	0.0500	1.000	0	88.2	75.6	133				
4-Isopropyltoluene	0.910	0.0500	1.000	0	91.0	76.8	131				
1,3-Dichlorobenzene	0.986	0.0200	1.000	0	98.6	48.6	144				
1,4-Dichlorobenzene	0.978	0.0200	1.000	0	97.8	72.6	126				
n-Butylbenzene	0.968	0.0250	1.000	0	96.8	78.4	140				
1,2-Dichlorobenzene	0.964	0.0200	1.000	0	96.4	72.8	126				
1,2-Dibromo-3-chloropropane	0.882	0.500	1.000	0	88.2	40.2	155				
1,2,4-Trimethylbenzene	0.884	0.0200	1.000	0	88.4	77.5	129				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25737	SampType: LCS	Units: mg/Kg				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: LCSS	Batch ID: 25737	Analysis Date: 9/6/2019							SeqNo: 1063595		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.943	0.0500	1.000	0	94.3	42	151				
Naphthalene	0.900	0.0500	1.000	0	90.0	46.5	167				
1,2,3-Trichlorobenzene	0.969	0.0200	1.000	0	96.9	64.5	149				
Surr: Dibromofluoromethane	1.26		1.250		101	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.28		1.250		103	54.8	168				

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.21		1.250		97.1	56.5	129				
Surr: Toluene-d8	1.19		1.250		94.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.15		1.250		91.9	54.8	168				

Sample ID: 1909070-002BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: BATCH		Batch ID: 25737					Analysis Date: 9/7/2019			SeqNo: 1063591	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0176						0		30	
Chloromethane	ND	0.0439						0		30	
Vinyl chloride	ND	0.0219						0		30	
Bromomethane	ND	0.0439						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0176						0		30	
Chloroethane	ND	0.0439						0		30	
1,1-Dichloroethene	ND	0.0176						0		30	
Methylene chloride	ND	0.0176						0		30	
trans-1,2-Dichloroethene	ND	0.0176						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0439						0		30	
1,1-Dichloroethane	ND	0.0176						0		30	
cis-1,2-Dichloroethene	ND	0.0176						0		30	
Chloroform	ND	0.0176						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0219						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1909070-002BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: BATCH		Batch ID: 25737		Analysis Date: 9/7/2019						SeqNo: 1063591	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.0176						0		30	
Carbon tetrachloride	ND	0.0219						0		30	
1,2-Dichloroethane (EDC)	ND	0.0176						0		30	
Benzene	ND	0.0176						0		30	
Trichloroethene (TCE)	ND	0.0176						0		30	
1,2-Dichloropropane	ND	0.0176						0		30	
Bromodichloromethane	ND	0.0176						0		30	
Dibromomethane	ND	0.0176						0		30	
cis-1,3-Dichloropropene	ND	0.0176						0		30	
Toluene	ND	0.0176						0		30	
trans-1,3-Dichloropropylene	ND	0.0176						0		30	
1,1,2-Trichloroethane	ND	0.0176						0		30	
1,3-Dichloropropane	ND	0.0219						0		30	
Tetrachloroethene (PCE)	ND	0.0219						0		30	
Dibromochloromethane	ND	0.0219						0		30	
1,2-Dibromoethane (EDB)	ND	0.00439						0		30	
Chlorobenzene	ND	0.0219						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0219						0		30	
Ethylbenzene	ND	0.0219						0		30	
m,p-Xylene	ND	0.0439						0		30	
o-Xylene	ND	0.0219						0		30	
Styrene	ND	0.0219						0		30	
Isopropylbenzene	ND	0.0219						0		30	
Bromoform	ND	0.0439						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0176						0		30	
n-Propylbenzene	ND	0.0219						0		30	
Bromobenzene	ND	0.0176						0		30	
1,3,5-Trimethylbenzene	ND	0.0219						0		30	
2-Chlorotoluene	ND	0.0219						0		30	
4-Chlorotoluene	ND	0.0219						0		30	
tert-Butylbenzene	ND	0.0219						0		30	

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1909070-002BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: BATCH	Batch ID: 25737	Analysis Date: 9/7/2019						SeqNo: 1063591			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	0.0219						0		30	
1,2,4-Trichlorobenzene	ND	0.0219						0		30	
sec-Butylbenzene	ND	0.0439						0		30	
4-Isopropyltoluene	ND	0.0439						0		30	
1,3-Dichlorobenzene	ND	0.0176						0		30	
1,4-Dichlorobenzene	ND	0.0176						0		30	
n-Butylbenzene	ND	0.0219						0		30	
1,2-Dichlorobenzene	ND	0.0176						0		30	
1,2-Dibromo-3-chloropropane	ND	0.439						0		30	
1,2,4-Trimethylbenzene	ND	0.0176						0		30	
Hexachloro-1,3-butadiene	ND	0.0439						0		30	
Naphthalene	ND	0.0439						0		30	
1,2,3-Trichlorobenzene	ND	0.0176						0		30	
Surr: Dibromofluoromethane	1.06		1.097		97.0	56.5	129		0		
Surr: Toluene-d8	1.05		1.097		95.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.01		1.097		91.9	54.8	168		0		

Sample ID: 1908347-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'		Batch ID: 25737		Analysis Date: 9/7/2019						SeqNo: 1063587	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.508	0.0102	0.5095	0	99.6	43.5	121				H
Chloromethane	0.480	0.0255	0.5095	0	94.1	45	130				H
Vinyl chloride	0.583	0.0127	0.5095	0	114	43.6	150				H
Bromomethane	0.839	0.0255	0.5095	0	165	21.3	120				SH
Trichlorofluoromethane (CFC-11)	0.903	0.0102	0.5095	0	177	35	131				SH
Chloroethane	0.994	0.0255	0.5095	0	195	31.9	123				SH
1,1-Dichloroethene	0.402	0.0102	0.5095	0	78.8	47.3	147				H
Methylene chloride	0.491	0.0102	0.5095	0	96.4	54.7	142				H
trans-1,2-Dichloroethene	0.496	0.0102	0.5095	0	97.3	52	136				H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'	Batch ID: 25737	Analysis Date: 9/7/2019							SeqNo: 1063587		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.442	0.0255	0.5095	0	86.8	58.5	167				H
1,1-Dichloroethane	0.518	0.0102	0.5095	0	102	51.8	141				H
cis-1,2-Dichloroethene	0.502	0.0102	0.5095	0	98.6	58.6	136				H
Chloroform	0.512	0.0102	0.5095	0	100	53.2	129				H
1,1,1-Trichloroethane (TCA)	0.511	0.0127	0.5095	0	100	58.3	145				H
1,1-Dichloropropene	0.506	0.0102	0.5095	0	99.3	55.1	138				H
Carbon tetrachloride	0.505	0.0127	0.5095	0	99.2	53.3	144				H
1,2-Dichloroethane (EDC)	0.486	0.0102	0.5095	0	95.5	51.3	139				H
Benzene	0.523	0.0102	0.5095	0	103	63.5	133				H
Trichloroethene (TCE)	0.646	0.0102	0.5095	0	127	61.6	147				H
1,2-Dichloropropane	0.505	0.0102	0.5095	0	99.1	59	136				H
Bromodichloromethane	0.497	0.0102	0.5095	0	97.5	50.7	141				H
Dibromomethane	0.479	0.0102	0.5095	0	94.1	50.6	137				H
cis-1,3-Dichloropropene	0.486	0.0102	0.5095	0	95.4	50.4	138				H
Toluene	0.547	0.0102	0.5095	0.02502	102	63.4	132				H
trans-1,3-Dichloropropylene	0.471	0.0102	0.5095	0	92.3	44.1	147				H
1,1,2-Trichloroethane	0.468	0.0102	0.5095	0	91.9	51.6	137				H
1,3-Dichloropropane	0.481	0.0127	0.5095	0	94.4	53.1	134				H
Tetrachloroethene (PCE)	0.512	0.0127	0.5095	0	100	35.6	158				H
Dibromochloromethane	0.478	0.0127	0.5095	0	93.8	55.3	140				H
1,2-Dibromoethane (EDB)	0.469	0.00255	0.5095	0	92.1	50.4	136				H
Chlorobenzene	0.511	0.0127	0.5095	0	100	60	133				H
1,1,1,2-Tetrachloroethane	0.504	0.0127	0.5095	0	99.0	53.1	142				H
Ethylbenzene	0.524	0.0127	0.5095	0.01067	101	54.5	134				H
m,p-Xylene	1.05	0.0255	1.019	0.02443	101	53.1	132				H
o-Xylene	0.525	0.0127	0.5095	0.01216	101	53.3	139				H
Styrene	0.489	0.0127	0.5095	0	95.9	51.1	132				H
Isopropylbenzene	0.507	0.0127	0.5095	0	99.5	58.9	138				H
Bromoform	0.434	0.0255	0.5095	0	85.1	57.9	130				H
1,1,2,2-Tetrachloroethane	0.278	0.0102	0.5095	0	54.6	51.9	131				H
n-Propylbenzene	0.511	0.0127	0.5095	0	100	53.6	140				H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'		Batch ID: 25737		Analysis Date: 9/7/2019						SeqNo: 1063587	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	0.502	0.0102	0.5095	0	98.6	54.2	140				H
1,3,5-Trimethylbenzene	0.490	0.0127	0.5095	0	96.2	51.8	136				H
2-Chlorotoluene	0.519	0.0127	0.5095	0	102	51.6	136				H
4-Chlorotoluene	0.494	0.0127	0.5095	0	96.9	50.1	139				H
tert-Butylbenzene	0.501	0.0127	0.5095	0	98.3	50.5	135				H
1,2,3-Trichloropropane	0.421	0.0127	0.5095	0	82.6	50.5	131				H
1,2,4-Trichlorobenzene	0.511	0.0127	0.5095	0	100	50.8	130				H
sec-Butylbenzene	0.495	0.0255	0.5095	0	97.2	52.6	141				H
4-Isopropyltoluene	0.501	0.0255	0.5095	0	98.3	52.9	134				H
1,3-Dichlorobenzene	0.507	0.0102	0.5095	0	99.6	52.6	131				H
1,4-Dichlorobenzene	0.526	0.0102	0.5095	0	103	52.9	129				H
n-Butylbenzene	0.508	0.0127	0.5095	0	99.8	52.6	130				H
1,2-Dichlorobenzene	0.504	0.0102	0.5095	0	98.9	55.8	129				H
1,2-Dibromo-3-chloropropane	0.422	0.255	0.5095	0	82.9	40.5	131				H
1,2,4-Trimethylbenzene	0.507	0.0102	0.5095	0	99.5	50.6	137				H
Hexachloro-1,3-butadiene	0.533	0.0255	0.5095	0	105	40.6	158				H
Naphthalene	0.506	0.0255	0.5095	0.02468	94.5	52.3	124				H
1,2,3-Trichlorobenzene	0.511	0.0102	0.5095	0	100	54.4	124				H
Surr: Dibromofluoromethane	0.652		0.6369		102	56.5	129				H
Surr: Toluene-d8	0.668		0.6369		105	64.5	151				H
Surr: 1-Bromo-4-fluorobenzene	3.98		3.185		125	54.8	168				H

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732			
Client ID: GLB-19-2'		Batch ID: 25737		Analysis Date: 9/7/2019							SeqNo: 1063588	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Dichlorodifluoromethane (CFC-12)	0.544	0.0102	0.5095	0	107	43.5	121	0.5077	6.90	30	H	
Chloromethane	0.517	0.0255	0.5095	0	101	45	130	0.4795	7.54	30	H	
Vinyl chloride	0.637	0.0127	0.5095	0	125	43.6	150	0.5830	8.90	30	H	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53732			
Client ID: GLB-19-2'		Batch ID: 25737				Analysis Date: 9/7/2019		SeqNo: 1063588			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	0.914	0.0255	0.5095	0	179	21.3	120	0.8387	8.61	30	SH
Trichlorofluoromethane (CFC-11)	0.924	0.0102	0.5095	0	181	35	131	0.9032	2.26	30	SH
Chloroethane	1.12	0.0255	0.5095	0	220	31.9	123	0.9936	11.9	30	SH
1,1-Dichloroethene	0.377	0.0102	0.5095	0	74.0	47.3	147	0.4017	6.36	30	H
Methylene chloride	0.476	0.0102	0.5095	0	93.4	54.7	142	0.4914	3.20	30	H
trans-1,2-Dichloroethene	0.475	0.0102	0.5095	0	93.3	52	136	0.4956	4.17	30	H
Methyl tert-butyl ether (MTBE)	0.426	0.0255	0.5095	0	83.6	58.5	167	0.4425	3.76	30	H
1,1-Dichloroethane	0.502	0.0102	0.5095	0	98.5	51.8	141	0.5184	3.26	30	H
cis-1,2-Dichloroethene	0.490	0.0102	0.5095	0	96.2	58.6	136	0.5023	2.43	30	H
Chloroform	0.499	0.0102	0.5095	0	97.9	53.2	129	0.5117	2.59	30	H
1,1,1-Trichloroethane (TCA)	0.501	0.0127	0.5095	0	98.3	58.3	145	0.5109	1.97	30	H
1,1-Dichloropropene	0.500	0.0102	0.5095	0	98.0	55.1	138	0.5059	1.25	30	H
Carbon tetrachloride	0.508	0.0127	0.5095	0	99.8	53.3	144	0.5053	0.591	30	H
1,2-Dichloroethane (EDC)	0.479	0.0102	0.5095	0	94.1	51.3	139	0.4864	1.43	30	H
Benzene	0.513	0.0102	0.5095	0	101	63.5	133	0.5230	1.92	30	H
Trichloroethene (TCE)	0.634	0.0102	0.5095	0	124	61.6	147	0.6464	1.91	30	H
1,2-Dichloropropane	0.495	0.0102	0.5095	0	97.2	59	136	0.5049	1.91	30	H
Bromodichloromethane	0.497	0.0102	0.5095	0	97.5	50.7	141	0.4970	0.0536	30	H
Dibromomethane	0.475	0.0102	0.5095	0	93.2	50.6	137	0.4794	0.914	30	H
cis-1,3-Dichloropropene	0.479	0.0102	0.5095	0	94.0	50.4	138	0.4860	1.49	30	H
Toluene	0.540	0.0102	0.5095	0.02502	101	63.4	132	0.5468	1.22	30	H
trans-1,3-Dichloropropylene	0.466	0.0102	0.5095	0	91.5	44.1	147	0.4705	0.943	30	H
1,1,2-Trichloroethane	0.455	0.0102	0.5095	0	89.3	51.6	137	0.4683	2.89	30	H
1,3-Dichloropropane	0.470	0.0127	0.5095	0	92.2	53.1	134	0.4811	2.40	30	H
Tetrachloroethene (PCE)	0.511	0.0127	0.5095	0	100	35.6	158	0.5120	0.279	30	H
Dibromochloromethane	0.472	0.0127	0.5095	0	92.6	55.3	140	0.4779	1.32	30	H
1,2-Dibromoethane (EDB)	0.461	0.00255	0.5095	0	90.4	50.4	136	0.4693	1.83	30	H
Chlorobenzene	0.504	0.0127	0.5095	0	98.9	60	133	0.5106	1.31	30	H
1,1,1,2-Tetrachloroethane	0.490	0.0127	0.5095	0	96.2	53.1	142	0.5043	2.83	30	H
Ethylbenzene	0.519	0.0127	0.5095	0.01067	99.7	54.5	134	0.5242	1.04	30	H
m,p-Xylene	1.04	0.0255	1.019	0.02443	100	53.1	132	1.051	0.672	30	H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'		Batch ID: 25737					Analysis Date: 9/7/2019			SeqNo: 1063588	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	0.521	0.0127	0.5095	0.01216	100	53.3	139	0.5254	0.751	30	H
Styrene	0.488	0.0127	0.5095	0	95.7	51.1	132	0.4889	0.253	30	H
Isopropylbenzene	0.512	0.0127	0.5095	0	100	58.9	138	0.5071	0.891	30	H
Bromoform	0.224	0.0255	0.5095	0	43.9	57.9	130	0.4338	63.8	30	RSH
1,1,2,2-Tetrachloroethane	0.266	0.0102	0.5095	0	52.3	51.9	131	0.2783	4.39	30	H
n-Propylbenzene	0.515	0.0127	0.5095	0	101	53.6	140	0.5108	0.738	30	H
Bromobenzene	0.497	0.0102	0.5095	0	97.5	54.2	140	0.5024	1.15	30	H
1,3,5-Trimethylbenzene	0.486	0.0127	0.5095	0	95.5	51.8	136	0.4903	0.799	30	H
2-Chlorotoluene	0.508	0.0127	0.5095	0	99.7	51.6	136	0.5185	2.09	30	H
4-Chlorotoluene	0.485	0.0127	0.5095	0	95.2	50.1	139	0.4935	1.75	30	H
tert-Butylbenzene	0.495	0.0127	0.5095	0	97.1	50.5	135	0.5010	1.28	30	H
1,2,3-Trichloropropane	0.416	0.0127	0.5095	0	81.7	50.5	131	0.4208	1.14	30	H
1,2,4-Trichlorobenzene	0.530	0.0127	0.5095	0	104	50.8	130	0.5112	3.64	30	H
sec-Butylbenzene	0.486	0.0255	0.5095	0	95.4	52.6	141	0.4951	1.82	30	H
4-Isopropyltoluene	0.495	0.0255	0.5095	0	97.1	52.9	134	0.5010	1.28	30	H
1,3-Dichlorobenzene	0.515	0.0102	0.5095	0	101	52.6	131	0.5075	1.44	30	H
1,4-Dichlorobenzene	0.533	0.0102	0.5095	0	105	52.9	129	0.5262	1.19	30	H
n-Butylbenzene	0.525	0.0127	0.5095	0	103	52.6	130	0.5083	3.15	30	H
1,2-Dichlorobenzene	0.509	0.0102	0.5095	0	99.8	55.8	129	0.5040	0.923	30	H
1,2-Dibromo-3-chloropropane	0.414	0.255	0.5095	0	81.2	40.5	131	0.4224	2.02	30	H
1,2,4-Trimethylbenzene	0.494	0.0102	0.5095	0	96.9	50.6	137	0.5068	2.64	30	H
Hexachloro-1,3-butadiene	0.564	0.0255	0.5095	0	111	40.6	158	0.5331	5.60	30	H
Naphthalene	0.517	0.0255	0.5095	0.02468	96.5	52.3	124	0.5062	2.03	30	H
1,2,3-Trichlorobenzene	0.524	0.0102	0.5095	0	103	54.4	124	0.5110	2.47	30	H
Surr: Dibromofluoromethane	0.653		0.6369		103	56.5	129		0		H
Surr: Toluene-d8	0.669		0.6369		105	64.5	151		0		H
Surr: 1-Bromo-4-fluorobenzene	3.91		3.185		123	54.8	168		0		H

NOTES:

S - Outlying spike recovery observed.

R - High RPD observed. The method is in control as indicated by the LCS.



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: LCS-25689	SampType: LCS	Units: mg/Kg			Prep Date: 9/3/2019			RunNo: 53631			
Client ID: LCSS	Batch ID: 25689	Analysis Date: 9/3/2019						SeqNo: 1061776			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.234	0.00597	0.2500	0	93.5	56.1	130				
Trichloroethene (TCE)	0.246	0.0145	0.2500	0	98.6	67.4	133				
1,2-Dibromoethane (EDB)	0.240	0.00146	0.2500	0	96.1	70	130				
Hexachloro-1,3-butadiene	0.250	0.00795	0.2500	0	100	42	151				
Surr: Dibromofluoromethane	0.499		0.5000		99.8	54.7	128				
Surr: Toluene-d8	0.501		0.5000		100	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.505		0.5000		101	73.5	127				

Sample ID: MB-25689		SampType: MBLK		Units: mg/Kg		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: MBLKS		Batch ID: 25689		Analysis Date: 9/3/2019						SeqNo: 1061777	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00597									Q
Trichloroethene (TCE)	ND	0.0145									
1,2-Dibromoethane (EDB)	ND	0.00146									
Hexachloro-1,3-butadiene	ND	0.00795									
Surr: Dibromofluoromethane	0.512		0.5000		102	54.7	128				
Surr: Toluene-d8	0.495		0.5000		99.1	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.491		0.5000		98.3	73.5	127				

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061768	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00274						0		30	Q
Trichloroethene (TCE)	ND	0.00668						0		30	
1,2-Dibromoethane (EDB)	ND	0.000671						0		30	
Hexachloro-1,3-butadiene	ND	0.00365						0		30	I
Surr: Dibromofluoromethane	0.205		0.2299		89.3	54.7	128		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061768	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	0.145		0.2299		63.0	74.2	139		0		S
Surr: 1-Bromo-4-fluorobenzene	1.46		2.529		57.6	73.5	127		0		SI

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908347-019BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: TRB-6-11'		Batch ID: 25689			Analysis Date: 9/4/2019			SeqNo: 1061764				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Vinyl chloride	ND	0.00282						0		30	Q
Trichloroethene (TCE)	ND	0.00685						0		30	
1,2-Dibromoethane (EDB)	ND	0.000689						0		30	
Hexachloro-1,3-butadiene	ND	0.00375						0		30	
Surr: Dibromofluoromethane	0.242		0.2360		103	54.7	128		0		
Surr: Toluene-d8	0.240		0.2360		102	74.2	139		0		
Surr: 1-Bromo-4-fluorobenzene	1.82		2.596		70.2	73.5	127		0		S

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	0.117	0.00322	0.1079	0	109	51.2	146				
Trichloroethene (TCE)	0.119	0.00783	0.1079	0	110	68.6	132				
1,2-Dibromoethane (EDB)	0.117	0.000788	0.1079	0	108	50.4	136				
Hexachloro-1,3-butadiene	0.115	0.00429	0.1079	0	106	40.6	158				
Surr: Dibromofluoromethane	0.260		0.2698		96.4	54.7	128				
Surr: Toluene-d8	0.289		0.2698		107	74.2	139				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	2.14		2.968		71.9	73.5	127				S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908349-010BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689		Analysis Date: 9/4/2019					SeqNo: 1061772		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.134	0.00322	0.1079	0	124	51.2	146	0.1172	13.2	30	
Trichloroethene (TCE)	0.130	0.00783	0.1079	0	120	68.6	132	0.1185	8.94	30	
1,2-Dibromoethane (EDB)	0.126	0.000788	0.1079	0	116	50.4	136	0.1170	7.04	30	
Hexachloro-1,3-butadiene	0.121	0.00429	0.1079	0	112	40.6	158	0.1148	5.49	30	
Surr: Dibromofluoromethane	0.260		0.2698		96.4	54.7	128		0		
Surr: Toluene-d8	0.290		0.2698		108	74.2	139		0		
Surr: 1-Bromo-4-fluorobenzene	2.18		2.968		73.4	73.5	127		0		S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25645	SampType: LCS	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: LCSW	Batch ID: 25645	Analysis Date: 8/28/2019						SeqNo: 1061374			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.5	1.00	20.00	0	82.7	18.7	171				
Chloromethane	16.6	2.00	20.00	0	83.1	38.5	171				
Vinyl chloride	17.6	0.200	20.00	0	88.0	48	145				
Bromomethane	19.4	1.00	20.00	0	97.2	32.5	184				
Trichlorofluoromethane (CFC-11)	18.9	1.00	20.00	0	94.6	43.5	149				
Chloroethane	17.8	1.00	20.00	0	89.2	43.8	168				
1,1-Dichloroethene	20.3	1.00	20.00	0	102	57.5	150				
Methylene chloride	19.7	1.00	20.00	0	98.6	67.1	131				
trans-1,2-Dichloroethene	19.9	1.00	20.00	0	99.3	71.7	129				
Methyl tert-butyl ether (MTBE)	20.5	1.00	20.00	0	102	58	138				
1,1-Dichloroethane	19.8	1.00	20.00	0	99.2	67.9	134				
cis-1,2-Dichloroethene	19.7	1.00	20.00	0	98.3	70.2	139				
Chloroform	19.7	1.00	20.00	0	98.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	97.1	63	140				
1,1-Dichloropropene	19.7	1.00	20.00	0	98.5	69.9	124				
Carbon tetrachloride	19.1	1.00	20.00	0	95.6	66.2	134				
1,2-Dichloroethane (EDC)	19.9	1.00	20.00	0	99.6	67	126				
Benzene	19.7	1.00	20.00	0	98.7	69.3	132				
Trichloroethene (TCE)	20.1	0.500	20.00	0	100	65.2	136				
1,2-Dichloropropane	19.5	1.00	20.00	0	97.7	70.5	130				
Bromodichloromethane	19.7	1.00	20.00	0	98.5	67.2	137				
Dibromomethane	20.6	1.00	20.00	0	103	69.3	143				
cis-1,3-Dichloropropene	19.9	1.00	20.00	0	99.7	62.6	137				
Toluene	19.6	1.00	20.00	0	97.9	61.3	145				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	56.5	163				
1,1,2-Trichloroethane	20.5	1.00	20.00	0	103	71.7	131				
1,3-Dichloropropane	20.1	1.00	20.00	0	100	73.5	127				
Tetrachloroethene (PCE)	19.2	1.00	20.00	0	96.1	47.5	147				
Dibromochloromethane	19.0	1.00	20.00	0	95.1	67.2	134				
1,2-Dibromoethane (EDB)	19.9	0.250	20.00	0	99.3	73.6	125				
Chlorobenzene	18.8	1.00	20.00	0	94.0	73.9	126				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25645	SampType: LCS	Units: µg/L				Prep Date: 8/28/2019			RunNo: 53606		
Client ID: LCSW	Batch ID: 25645	Analysis Date: 8/28/2019							SeqNo: 1061374		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.3	76.8	124				
Ethylbenzene	19.3	1.00	20.00	0	96.6	72	130				
m,p-Xylene	37.3	1.00	40.00	0	93.2	70.3	134				
o-Xylene	18.0	1.00	20.00	0	90.2	62	125				
Styrene	17.8	1.00	20.00	0	89.0	64.3	140				
Isopropylbenzene	17.9	1.00	20.00	0	89.4	73.9	128				
Bromoform	19.1	2.00	20.00	0	95.7	55.3	141				
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	62.9	132				
n-Propylbenzene	17.6	1.00	20.00	0	87.9	74.5	127				
Bromobenzene	17.6	1.00	20.00	0	87.8	71	131				
1,3,5-Trimethylbenzene	17.3	1.00	20.00	0	86.5	73.1	128				
2-Chlorotoluene	17.6	1.00	20.00	0	88.0	70.8	130				
4-Chlorotoluene	17.8	1.00	20.00	0	88.8	70.1	131				
tert-Butylbenzene	17.7	1.00	20.00	0	88.6	68.2	131				
1,2,3-Trichloropropane	21.4	1.00	20.00	0	107	67.7	131				
1,2,4-Trichlorobenzene	15.3	2.00	20.00	0	76.6	41	139				
sec-Butylbenzene	17.4	1.00	20.00	0	86.8	72	129				
4-Isopropyltoluene	17.7	1.00	20.00	0	88.6	69.2	130				
1,3-Dichlorobenzene	19.9	1.00	20.00	0	99.4	69.5	128				
1,4-Dichlorobenzene	19.8	1.00	20.00	0	99.2	66.8	119				
n-Butylbenzene	20.6	1.00	20.00	0	103	73.8	127				
1,2-Dichlorobenzene	20.5	1.00	20.00	0	103	69.7	119				
1,2-Dibromo-3-chloropropane	24.7	1.00	20.00	0	124	63.1	136				
1,2,4-Trimethylbenzene	17.4	1.00	20.00	0	86.8	73.4	127				
Hexachloro-1,3-butadiene	14.2	4.00	20.00	0	71.1	58.6	138				
Naphthalene	16.1	1.00	20.00	0	80.3	41.8	165				
1,2,3-Trichlorobenzene	14.5	4.00	20.00	0	72.5	35.8	155				
Surr: Dibromofluoromethane	25.9		25.00		104	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.3	64.2	128				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: MBLKW	Batch ID: 25645				Analysis Date: 8/28/2019			SeqNo: 1061375			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									Q
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: MBLKW	Batch ID: 25645	Analysis Date: 8/28/2019						SeqNo: 1061375			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									Q
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									Q
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									Q
Surr: Dibromofluoromethane	25.6		25.00		103	45.4	152				
Surr: Toluene-d8	25.4		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.2		25.00		92.9	64.2	128				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L			Prep Date: 8/28/2019				RunNo: 53606		
Client ID: MBLKW	Batch ID: 25645				Analysis Date: 8/28/2019				SeqNo: 1061375		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908367-001ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645		Analysis Date: 8/29/2019						SeqNo: 1061369	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908367-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645				Analysis Date: 8/29/2019			SeqNo: 1061369			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	



Date: 9/12/2019

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908367-001ADUP	SampType: DUP	Units: µg/L		Prep Date: 8/28/2019	RunNo: 53606						
Client ID: BATCH	Batch ID: 25645			Analysis Date: 8/29/2019	SeqNo: 1061369						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00						0		30	Q
Naphthalene	ND	1.00						0		30	Q
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q
Surr: Dibromofluoromethane	25.9		25.00		103	45.4	152		0		
Surr: Toluene-d8	25.1		25.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908355-003ADUP	SampType: DUP	Units: µg/L		Prep Date: 8/28/2019	RunNo: 53606						
Client ID: BATCH	Batch ID: 25645			Analysis Date: 8/29/2019	SeqNo: 1061365						
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-003ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061365		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Trichloroethene (TCE)	ND	0.500						0		30		
1,2-Dichloropropane	ND	1.00						0		30		
Bromodichloromethane	ND	1.00						0		30		
Dibromomethane	ND	1.00						0		30		
cis-1,3-Dichloropropene	ND	1.00						0		30		
Toluene	ND	1.00						0		30		
trans-1,3-Dichloropropylene	ND	1.00						0		30		
1,1,2-Trichloroethane	ND	1.00						0		30		
1,3-Dichloropropane	ND	1.00						0		30		
Tetrachloroethene (PCE)	ND	1.00						0		30		
Dibromochloromethane	ND	1.00						0		30		
1,2-Dibromoethane (EDB)	ND	0.250						0		30		
Chlorobenzene	ND	1.00						0		30		
1,1,1,2-Tetrachloroethane	ND	1.00						0		30		
Ethylbenzene	ND	1.00						0		30		
m,p-Xylene	ND	1.00						0		30		
o-Xylene	ND	1.00						0		30		
Styrene	ND	1.00						0		30		
Isopropylbenzene	ND	1.00						0		30		
Bromoform	ND	2.00						0		30		
1,1,2,2-Tetrachloroethane	ND	1.00						0		30		
n-Propylbenzene	ND	1.00						0		30		
Bromobenzene	ND	1.00						0		30		
1,3,5-Trimethylbenzene	ND	1.00						0		30		
2-Chlorotoluene	ND	1.00						0		30		
4-Chlorotoluene	ND	1.00						0		30		
tert-Butylbenzene	ND	1.00						0		30		
1,2,3-Trichloropropane	ND	1.00						0		30		
1,2,4-Trichlorobenzene	ND	2.00						0		30		
sec-Butylbenzene	ND	1.00						0		30		
4-Isopropyltoluene	ND	1.00						0		30		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-003ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061365	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	Q
Naphthalene	ND	1.00						0		30	Q
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q
Surr: Dibromofluoromethane	26.1		25.00		104	45.4	152		0		
Surr: Toluene-d8	25.3		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.0	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908355-001AMS	SampType: MS	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645				Analysis Date: 8/29/2019			SeqNo: 1061361			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	198	10.0	200.0	0	99.0	33.3	122				D
Chloromethane	212	20.0	200.0	0	106	39.7	143				D
Vinyl chloride	211	2.00	200.0	0	105	41	165				D
Bromomethane	232	10.0	200.0	0	116	31.5	135				D
Trichlorofluoromethane (CFC-11)	221	10.0	200.0	0	111	54.7	138				D
Chloroethane	227	10.0	200.0	0	114	49.9	143				D
1,1-Dichloroethene	233	10.0	200.0	0	117	51.6	164				D
Methylene chloride	228	10.0	200.0	0	114	61.6	135				D
trans-1,2-Dichloroethene	225	10.0	200.0	0	113	63.5	138				D
Methyl tert-butyl ether (MTBE)	228	10.0	200.0	0	114	60.9	132				D
1,1-Dichloroethane	228	10.0	200.0	0	114	55.7	151				D
cis-1,2-Dichloroethene	223	10.0	200.0	0	111	60	154				D



Date: 9/12/2019

Work Order: 1908347
 CLIENT: G-Logics
 Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMS		SampType: MS		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061361			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	226	10.0	200.0	0	113	48.1	140				D
1,1,1-Trichloroethane (TCA)	223	10.0	200.0	0	112	64.2	146				D
1,1-Dichloropropene	217	10.0	200.0	0	109	73.8	136				D
Carbon tetrachloride	218	10.0	200.0	0	109	62.7	146				D
1,2-Dichloroethane (EDC)	227	10.0	200.0	0	113	63.4	137				D
Benzene	236	10.0	200.0	8.655	114	65.4	138				D
Trichloroethene (TCE)	216	5.00	200.0	0	108	60.4	134				D
1,2-Dichloropropane	227	10.0	200.0	0	113	62.6	138				D
Bromodichloromethane	227	10.0	200.0	0	113	59.4	139				D
Dibromomethane	233	10.0	200.0	0	116	58.7	148				D
cis-1,3-Dichloropropene	212	10.0	200.0	0	106	63.8	132				D
Toluene	283	10.0	200.0	43.86	120	52	147				D
trans-1,3-Dichloropropylene	219	10.0	200.0	0	110	57.7	125				D
1,1,2-Trichloroethane	235	10.0	200.0	0	118	57.5	153				D
1,3-Dichloropropane	234	10.0	200.0	0	117	54.1	157				D
Tetrachloroethene (PCE)	226	10.0	200.0	0	113	50.3	133				D
Dibromochloromethane	227	10.0	200.0	0	113	61.6	139				D
1,2-Dibromoethane (EDB)	232	2.50	200.0	0	116	63.2	134				D
Chlorobenzene	215	10.0	200.0	0	107	65.8	134				D
1,1,1,2-Tetrachloroethane	218	10.0	200.0	0	109	65.4	135				D
Ethylbenzene	248	10.0	200.0	22.34	113	64.5	136				D
m,p-Xylene	567	10.0	400.0	112.1	114	63.3	135				D
o-Xylene	306	10.0	200.0	78.94	114	64.8	150				D
Styrene	209	10.0	200.0	0	105	52.9	163				D
Isopropylbenzene	205	10.0	200.0	2.711	101	56	147				D
Bromoform	213	20.0	200.0	0	107	57.7	139				D
1,1,2,2-Tetrachloroethane	243	10.0	200.0	0	122	59.8	146				D
n-Propylbenzene	200	10.0	200.0	10.95	94.7	57.6	142				D
Bromobenzene	197	10.0	200.0	0	98.4	69.3	157				D
1,3,5-Trimethylbenzene	222	10.0	200.0	28.52	96.6	59.9	136				D
2-Chlorotoluene	205	10.0	200.0	0	102	61.7	134				D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMS		SampType: MS		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061361			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	204	10.0	200.0	0	102	58.4	134				D
tert-Butylbenzene	202	10.0	200.0	0	101	66.8	141				D
1,2,3-Trichloropropane	222	10.0	200.0	0	111	62.4	129				D
1,2,4-Trichlorobenzene	162	20.0	200.0	0	81.2	50.9	133				D
sec-Butylbenzene	196	10.0	200.0	0	98.0	56	146				D
4-Isopropyltoluene	202	10.0	200.0	0	101	56.4	136				D
1,3-Dichlorobenzene	221	10.0	200.0	0	111	58.2	128				D
1,4-Dichlorobenzene	220	10.0	200.0	0	110	60.1	123				D
n-Butylbenzene	229	10.0	200.0	0	115	54.6	135				D
1,2-Dichlorobenzene	226	10.0	200.0	0	113	65.4	133				D
1,2-Dibromo-3-chloropropane	276	10.0	200.0	0	138	51.8	142				D
1,2,4-Trimethylbenzene	250	10.0	200.0	49.50	100	63.7	132				D
Hexachloro-1,3-butadiene	161	40.0	200.0	0	80.5	58.1	130				D
Naphthalene	237	10.0	200.0	52.36	92.1	50.7	154				D
1,2,3-Trichlorobenzene	165	40.0	200.0	0	82.6	57	131				D
Surr: Dibromofluoromethane	262		250.0		105	45.4	152				D
Surr: Toluene-d8	262		250.0		105	40.1	139				D
Surr: 1-Bromo-4-fluorobenzene	249		250.0		99.7	64.2	128				D

Sample ID: 1908355-001AMSD		SampType: MSD		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061362			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	182	10.0	200.0	0	90.9	33.3	122	197.9	8.48	30	D
Chloromethane	214	20.0	200.0	0	107	39.7	143	211.8	1.04	30	D
Vinyl chloride	211	2.00	200.0	0	105	41	165	211.0	0.155	30	D
Bromomethane	255	10.0	200.0	0	127	31.5	135	232.4	9.14	30	D
Trichlorofluoromethane (CFC-11)	217	10.0	200.0	0	109	54.7	138	221.2	1.90	30	D
Chloroethane	217	10.0	200.0	0	108	49.9	143	227.3	4.82	30	D
1,1-Dichloroethene	230	10.0	200.0	0	115	51.6	164	233.1	1.29	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMSD	SampType: MSD	Units: µg/L				Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH	Batch ID: 25645	Analysis Date: 8/29/2019							SeqNo: 1061362		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	227	10.0	200.0	0	113	61.6	135	228.3	0.731	30	D
trans-1,2-Dichloroethene	227	10.0	200.0	0	113	63.5	138	225.4	0.607	30	D
Methyl tert-butyl ether (MTBE)	239	10.0	200.0	0	119	60.9	132	227.5	4.84	30	D
1,1-Dichloroethane	227	10.0	200.0	0	114	55.7	151	227.6	0.113	30	D
cis-1,2-Dichloroethene	226	10.0	200.0	0	113	60	154	222.7	1.40	30	D
Chloroform	228	10.0	200.0	0	114	48.1	140	225.6	1.03	30	D
1,1,1-Trichloroethane (TCA)	224	10.0	200.0	0	112	64.2	146	223.3	0.311	30	D
1,1-Dichloropropene	221	10.0	200.0	0	110	73.8	136	217.2	1.59	30	D
Carbon tetrachloride	220	10.0	200.0	0	110	62.7	146	218.3	0.612	30	D
1,2-Dichloroethane (EDC)	231	10.0	200.0	0	115	63.4	137	227.0	1.64	30	D
Benzene	237	10.0	200.0	8.655	114	65.4	138	235.9	0.662	30	D
Trichloroethene (TCE)	214	5.00	200.0	0	107	60.4	134	216.0	0.788	30	D
1,2-Dichloropropane	228	10.0	200.0	0	114	62.6	138	226.6	0.685	30	D
Bromodichloromethane	229	10.0	200.0	0	114	59.4	139	226.8	0.794	30	D
Dibromomethane	235	10.0	200.0	0	117	58.7	148	232.8	0.865	30	D
cis-1,3-Dichloropropene	215	10.0	200.0	0	108	63.8	132	211.6	1.81	30	D
Toluene	282	10.0	200.0	43.86	119	52	147	283.4	0.386	30	D
trans-1,3-Dichloropropylene	224	10.0	200.0	0	112	57.7	125	219.5	2.26	30	D
1,1,2-Trichloroethane	238	10.0	200.0	0	119	57.5	153	235.3	0.955	30	D
1,3-Dichloropropane	240	10.0	200.0	0	120	54.1	157	233.8	2.59	30	D
Tetrachloroethene (PCE)	217	10.0	200.0	0	109	50.3	133	225.5	3.71	30	D
Dibromochloromethane	233	10.0	200.0	0	116	61.6	139	226.7	2.60	30	D
1,2-Dibromoethane (EDB)	239	2.50	200.0	0	120	63.2	134	232.1	3.10	30	D
Chlorobenzene	211	10.0	200.0	0	105	65.8	134	214.9	2.05	30	D
1,1,1,2-Tetrachloroethane	214	10.0	200.0	0	107	65.4	135	218.1	2.13	30	D
Ethylbenzene	244	10.0	200.0	22.34	111	64.5	136	247.7	1.41	30	D
m,p-Xylene	563	10.0	400.0	112.1	113	63.3	135	567.4	0.823	30	D
o-Xylene	302	10.0	200.0	78.94	111	64.8	150	306.0	1.42	30	D
Styrene	211	10.0	200.0	0	105	52.9	163	209.3	0.651	30	D
Isopropylbenzene	206	10.0	200.0	2.711	102	56	147	205.1	0.518	30	D
Bromoform	217	20.0	200.0	0	108	57.7	139	213.1	1.79	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMSD	SampType: MSD	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645	Analysis Date: 8/29/2019							SeqNo: 1061362		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	250	10.0	200.0	0	125	59.8	146	243.4	2.57	30	D
n-Propylbenzene	198	10.0	200.0	10.95	93.6	57.6	142	200.4	1.11	30	D
Bromobenzene	196	10.0	200.0	0	97.9	69.3	157	196.8	0.517	30	D
1,3,5-Trimethylbenzene	215	10.0	200.0	28.52	93.4	59.9	136	221.7	2.86	30	D
2-Chlorotoluene	203	10.0	200.0	0	101	61.7	134	204.9	1.12	30	D
4-Chlorotoluene	201	10.0	200.0	0	100	58.4	134	204.2	1.59	30	D
tert-Butylbenzene	200	10.0	200.0	0	99.9	66.8	141	202.0	1.14	30	D
1,2,3-Trichloropropane	238	10.0	200.0	0	119	62.4	129	222.4	6.65	30	D
1,2,4-Trichlorobenzene	224	20.0	200.0	0	112	50.9	133	162.5	31.9	30	DR
sec-Butylbenzene	191	10.0	200.0	0	95.5	56	146	196.0	2.58	30	D
4-Isopropyltoluene	200	10.0	200.0	0	99.9	56.4	136	202.0	1.14	30	D
1,3-Dichlorobenzene	222	10.0	200.0	0	111	58.2	128	221.5	0.246	30	D
1,4-Dichlorobenzene	218	10.0	200.0	0	109	60.1	123	220.0	0.745	30	D
n-Butylbenzene	223	10.0	200.0	0	112	54.6	135	229.1	2.48	30	D
1,2-Dichlorobenzene	229	10.0	200.0	0	115	65.4	133	225.8	1.50	30	D
1,2-Dibromo-3-chloropropane	288	10.0	200.0	0	144	51.8	142	275.7	4.40	30	DS
1,2,4-Trimethylbenzene	244	10.0	200.0	49.50	97.0	63.7	132	249.9	2.56	30	D
Hexachloro-1,3-butadiene	163	40.0	200.0	0	81.3	58.1	130	161.1	0.904	30	D
Naphthalene	245	10.0	200.0	52.36	96.4	50.7	154	236.6	3.54	30	D
1,2,3-Trichlorobenzene	167	40.0	200.0	0	83.6	57	131	165.1	1.30	30	D
Surr: Dibromofluoromethane	264		250.0		105	45.4	152		0		D
Surr: Toluene-d8	261		250.0		104	40.1	139		0		D
Surr: 1-Bromo-4-fluorobenzene	250		250.0		99.9	64.2	128		0		D

NOTES:

S - Outlying spike recovery observed (high bias).

R - High RPD observed, spike recovery is within range.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: LCS-25673	SampType: LCS	Units: µg/L			Prep Date: 8/30/2019			RunNo: 53616			
Client ID: LCSW	Batch ID: 25673				Analysis Date: 8/30/2019			SeqNo: 1061518			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	4.37	0.0100	5.000	0	87.5	56.3	134				
1,1,2-Trichloroethane	4.84	0.0100	5.000	0	96.7	61.8	133				
1,2-Dibromoethane (EDB)	4.68	0.0100	5.000	0	93.6	63.2	128				
Hexachlorobutadiene	6.53	0.0100	5.000	0	131	71.8	138				
Surr: Dibromofluoromethane	9.31		10.00		93.1	68	140				
Surr: Toluene-d8	8.91		10.00		89.1	63.5	144				
Surr: 4-Bromofluorobenzene	10.6		10.00		106	55	134				

Sample ID: LCSD-25673	SampType: LCSD	Units: µg/L				Prep Date: 8/30/2019			RunNo: 53616		
Client ID: LCSW02	Batch ID: 25673	Analysis Date: 8/30/2019							SeqNo: 1061519		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	4.23	0.0100	5.000	0	84.6	56.3	134	4.374	3.35	20	
1,1,2-Trichloroethane	4.84	0.0100	5.000	0	96.9	61.8	133	4.837	0.132	20	
1,2-Dibromoethane (EDB)	4.73	0.0100	5.000	0	94.7	63.2	128	4.681	1.14	20	
Hexachlorobutadiene	6.28	0.0100	5.000	0	126	71.8	138	6.535	3.90	20	
Surr: Dibromofluoromethane	9.36		10.00		93.6	68	140		0		
Surr: Toluene-d8	8.93		10.00		89.3	63.5	144		0		
Surr: 4-Bromofluorobenzene	10.2		10.00		102	55	134		0		

Sample ID: MB-25673		SampType: MBLK		Units: µg/L		Prep Date: 8/30/2019			RunNo: 53616		
Client ID: MBLKW		Batch ID: 25673					Analysis Date: 8/30/2019			SeqNo: 1061520	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0100									
1,1,2-Trichloroethane	ND	0.0100									
1,2-Dibromoethane (EDB)	ND	0.0100									
Hexachlorobutadiene	ND	0.0100									
Surr: Dibromofluoromethane	8.86		10.00		88.6	68	140				
Surr: Toluene-d8	9.07		10.00		90.7	63.5	144				



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: MB-25673	SampType: MBLK	Units: µg/L			Prep Date: 8/30/2019			RunNo: 53616			
Client ID: MBLKW	Batch ID: 25673				Analysis Date: 8/30/2019			SeqNo: 1061520			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.26		10.00		92.6	55	134				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1908318-016ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53527		
Client ID: BATCH		Batch ID: R53527			Analysis Date: 8/28/2019			SeqNo: 1059356				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	8.27	0.500						7.749	6.45	20	

Sample ID: 1908348-024ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53527		
Client ID: BATCH		Batch ID: R53527			Analysis Date: 8/28/2019			SeqNo: 1059370				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	6.97	0.500						6.577	5.87	20	

Sample ID: 1908347-012ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53539		
Client ID: GLB-23-2'		Batch ID: R53539			Analysis Date: 8/28/2019			SeqNo: 1059668				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	18.2	0.500						19.73	8.26	20	

Sample ID: 1908347-024ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53539		
Client ID: TRB-8-6'		Batch ID: R53539			Analysis Date: 8/28/2019			SeqNo: 1059680				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	8.27	0.500						8.143	1.60	20	

Sample ID: 1909040-002ADUP		SampType: DUP			Units: wt%		Prep Date: 9/6/2019			RunNo: 53712		
Client ID: BATCH		Batch ID: R53712			Analysis Date: 9/6/2019			SeqNo: 1063160				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	3.19	0.500						3.207	0.485	20	



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1909037-004ADUP	SampType: DUP	Units: wt%			Prep Date: 9/6/2019			RunNo: 53712			
Client ID: BATCH	Batch ID: R53712				Analysis Date: 9/6/2019			SeqNo: 1063167			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	26.1	0.500						26.78	2.72	20	

Client Name: **GL**
 Logged by: **Brianna Barnes**

Work Order Number: **1908347**
 Date Received: **8/26/2019 12:30:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☒ No ☐ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☒ NA ☐
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☐ No ☒

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐

Person Notified: Zak Wall Date: 8/26/2019
 By Whom: Brianna Barnes Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding: Confirmation of methods, low volume.
 Client Instructions: See Additional Remarks.

19. Additional remarks:

NWTPH-Gx okay for Trip Blank W1 due to low volume. Prioritize AK101 and 8260 scan for low volume water samples.

Item Information

Item #	Temp °C
Cooler 1	5.1
Cooler 2	5.6
Cooler 3	4.9
Cooler 4	5.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Sample Log-In Check List

Client Name: **GL**Work Order Number: **1908347**Logged by: **Brianna Barnes**Date Received: **8/26/2019 12:30:00 PM**

Item #	Temp °C
Cooler 5	5.3
Cooler 6	7.8
Sample 1	3.3
Sample 2	3.3
Sample 3	5.7
Sample 4	3.6
Sample 5	3.3
Sample 6	1.9
Temp Blank 1	3.4
Temp Blank 2	2.3
Temp Blank 3	4.4
Temp Blank 4	5.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



3600 Fremont Ave N.
Seattle, WA 98103
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Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 1 of 4

Project Name: Hoonah

Project No: 01-0294-H

Collected by: SH/ELJ

Location: Hoonah, AK

Report To (PM): Zak Wally

PM Email: zadaryw@fremontanalytical.com

Laboratory Project No (Internal): 1908347

Special Remarks:

AK Methods AL101/102/103
SOL 6260 SIM: EDB, TCE, Vinyl Chloride
Hexachlorobenzene
Water 8260 SIM: 400 Trichloroethane, EDB
Hexachlorobenzene, Vinyl Chloride

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Client: G-Logics
Address: 40 2nd Ave SE
City, State, zip: Issaquah WA 98027
Telephone: 425-391-6874

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCS (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	SOL 8260 SIM	Comments	
1 Trip Blank 2	7/31/19	1637	S	X			X		X									
2 GLB-19-2'	8/4/19	8/21/19																Hold
3 GLB-19-4'	8/5/19			X			X		X									
4 GLB-19-5'	8/5/19			X			X		X									
5 GLB-CC	8/5/19			X			X		X									
6 GLB-20-2'	8/9/19			X			X		X									
7 GLB-20-4'	8/9/19			X			X		X									
8 GLB-21-2'	8/21/19			X			X		X									
9 GLB-21-3'				X			X		X									
10 GLB-22-4'				X			X		X									

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MTC-A-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time 8/26/19 1230

Relinquished Date/Time 8/26/19 1230

Turn-around Time: ☒ Standard ☐ 3 Day ☐ 2 Day ☐ Next Day

Same Day (specify)

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate-Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
<u>DL</u>	<u>8/26/19 1230</u>	<u>ELH</u>	<u>8/26/19 1230</u>
Reinquired	Date/Time	Received	Date/Time
X		X	

Turn-around Time:
☒ Standard
☐ 3 Day
☐ 2 Day
☐ Next Day
Same Day (specify)



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 2 of 4

Project Name: Houch

Project No: 01-0294-H

Laboratory Project No (Internal): 1908347

Special Remarks:

Sec P5 1

Client: G-Logics

Address:

City, State, Zip:

Telephone:

Fax:

Collected by:

Location:

Report to (PM):

PM Email:

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DOX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 8082 / 608)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	WIS 8260 SIM*	Comments

1	GLB-22-5'	8/24/19	1030	S	X		X	X	X	X	X	X	X	X	X	X	X		
2	GLB-23-2'		1330		X		X	X	X	X	X	X	X	X	X	X	X		
3	GLB-23-5'		1340		X		X	X	X	X	X	X	X	X	X	X	X		
4	GLB-24-4'		1400		X		X	X	X	X	X	X	X	X	X	X	X		
5	GLB-24-5'		1415		X		X	X	X	X	X	X	X	X	X	X	X		
6	TRB-5-10'		1625		X		X	X	X	X	X	X	X	X	X	X	X		
7	TRB-5-11'		1635		X		X	X	X	X	X	X	X	X	X	X	X		
8	TRB-11-D		1630		X		X	X	X	X	X	X	X	X	X	X	X		
9	TRB-6-11'		1815		X		X	X	X	X	X	X	X	X	X	X	X		
10	TRB-6-14'		1830		X		X	X	X	X	X	X	X	X	X	X	X		

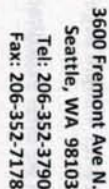
*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTC-A-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	8/26/19 1230	x	8/26/19 1230
Relinquished	Date/Time	Received	Date/Time
x		x	



Chain of Custody Record & Laboratory Services Agreement

Project No: 01-0294-H

Collected by:

Location:

Report To (PM):

PM Email:

See pg 1

Laboratory Project No (internal): **16 mm 1908347**
Special Remarks: **8/24**

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)														GX/BTEX														BTEX														Gasoline Range Organics (GX)														Hydrocarbon Identification (HCID)														Diesel/Heavy Oil Range Organics (DX)														SVOCs (EPA 8270 / 625)														PAHs (EPA 8270 - SIM)														PCBs (EPA 8082 / 609)														Metals** (EPA 6020 / 200.8)														Total (T) Dissolved (D)														Anions ((Cl))***														EDB (8011)														SOIL 8260 SIM														WATER 8260 SIM														Comments																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Received

Date/Time

****Matrix:** A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

****Metals (Circle):** MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Received

Date/Time

Received

Date/Time

✕

×

Same Day

(specify)



Fremont

Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 4 of 4

Project Name: Mounch

Project No: 01-029444

Laboratory Project No (Internal): 1908347

Special Remarks: See P5

Client: G-Legies

Address:

Collected by:

City, State, Zip:

Location:

Telephone:

Report To (PM):

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax:

PM Email:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	Analysis												Comments
				VOCS (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (GX)	Diesel/Heavy Oil Range Organics (HCID)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)

1	GPW-6	8/19/19	1430	W	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	GPW-7	8/20/19	1250	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	GPW-8	8/20/19	1330	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4	GPW-9	8/21/19	1700	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	GPW-A	8/20/19	1335	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
6	TRPW-1	8/20/19	0800	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	TRPW-2	8/20/19	0830	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
8	TRPW-A	8/20/19	0845	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
9	TRPW-1	8/15/19	1000	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
10																		

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time	Turn-around Time:
x	8/28/19 1230	x	8/26/19 1250	☒ Standard
Relinquished	Date/Time	Received	Date/Time	☐ 3 Day
x		x		☐ 2 Day
				☐ Next Day
				Same Day (specify) _____



Fremont

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 1 of 4

Project Name: Hoonah

Project No: 01-0294-H

Collected by: SH/EL

Location: Hoonah, AK

Report To (PM): Fal Wal

PM Email: zadarym@geosics

Laboratory Project No (internal): 1908247

Special Remarks:

AK Methods AL161/161/103
Soil 8260 SIM: EDB, TCE, Vinyl Chloride
Water 8260 SIM: 400 Trichloroethylene, EDB, Hexachlorobenzene, Vinyl Chloride

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOCs (EPA 8260 / 624)	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 Trip Blank 2	7/31/19	1637	S	X	X	X	X	X	X	X	X	X	X	
2 GLB-19-2'	0845	8/21/19		X	X	X	X	X	X	X	X	X	X	Hold off Hold 9/5
3 GLB-19-4'	0855			X	X	X	X	X	X	X	X	X	X	8/24/19
4 GLB-19-5'	0915			X	X	X	X	X	X	X	X	X	X	
5 GLB-19-5'	0850			X	X	X	X	X	X	X	X	X	X	
6 GLB-20-2'	0940			X	X	X	X	X	X	X	X	X	X	
7 GLB-20-4'	0956			X	X	X	X	X	X	X	X	X	X	
8 GLB-21-2'	01/21/19	1005		X	X	X	X	X	X	X	X	X	X	
9 GLB-21-3'		1010		X	X	X	X	X	X	X	X	X	X	
10 GLB-22-4'		1025		X	X	X	X	X	X	X	X	X	X	

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Si Sn Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time

8/26/19 1230

Received

8/26/19 1230

Date/Time

8/26/19 1230

Standard

3 Day

2 Day

Next Day

Same Day

(specify)



Chain of Custody Record & Laboratory Services Agreement	
Date: 8/21/19	Page: 1 of 3
Laboratory Project No (Internal): 1908349	
Special Remarks:	

AK 101 / 102 / 103

8660 SIM: EDB, TCE, Vinyl Chloride

+ Hexachlorobutadiene

Sample Disposal: ☐ Return to client ☐ Disposal by IAD (after 30 days)

PM Email: facen@yrc.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*																Comments
				VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heav Oil Range Organics (DOX)	SVOCS (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)**	EDB (8011)	VOL 8260 SIM*		
1 GLB-14-4'	8/20/19	0915	S	X		X	X	X	X						X				
2 GLB-14-6'	8/20/19	0945	S	X		X	X	X	X										
3 TEP Black L	8/15/19	1000	S	X		X		X	X										
4 ~~TEP Black lot~~	~~8/15/19~~	~~1000~~	~~AIR~~																
5 GLB-AA	8/20/19	0920	S	X		X		X	X										
6 GLB-15-2'		1015	X	X		X	X	X	X					X					
7 GLB-15-3'		1040	X	X		X	X	X	X										
8 GLB-BB		1020	X	X		X	X	X	X										
9 GLB-16-2'		1100	X	X		X	X	X	X										
10 GLB-16-4'	Y	1120	Y	X		X	X	X	X										

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
~~2/1/15~~	1145	8/6/17	
		X 6/6-17	8/7/19
			1730

Relinquished	Date/Time	Received	Date/Time
	6/21/11 10:11	6/21/11 10:11	6/21/11 10:11

Page 1 of 2



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/21/19 Page: 2 of 3

Project Name: Hoonah

Project No: 01-0294-H

Collected by:

Location:

Report To (PM):

PM Email:

Laboratory Project No (Internal): 1908349

Alaska Methods
ALC101/102/105

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

City, State, Zip:

Telephone:

Fax:

Client: G-Logics

Address:

Sample Name

Sample Date

Sample Time

Sample Type (Matrix)*

VOCs (EPA 8260 / 624)
GX/BTEX
BTEX
Gasoline Range Organics (GX)
Hydrocarbon Identification (HCID)
Diesel/Heavy Oil Range Organics (DH)
SVOCs (EPA 8270 / 625)
PAHs (EPA 8270 - SIM)
PCBs (EPA 8082 / 608)
Metals** (EPA 6020 / 200.8)
Total (T) Dissolved (D)
Anions (IC)**
EDB (8011)
VOC 709
VOC 809
VOC 810
VOC 811
VOC 812
VOC 813
VOC 814
VOC 815
VOC 816
VOC 817
VOC 818
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VOC 997
VOC 998
VOC 999
VOC 1000

Comments

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished Date/Time 8/21/19 1245 8/26/19 1230 Received Date/Time 8/26/19 1230

Relinquished Date/Time 8/21/19 1245 Received Date/Time 8/26/19 1230

Turn-around Time: ☒ Standard ☐ 3 Day ☐ 2 Day ☐ Next Day ☐ Same Day (specify)



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/21/19 Page: 3 of 3

Project Name: Hoonah

Project No: 01-0294-H

Collected by:

Location:

Report To (PM):

PM Email:

Laboratory Project No (Internal): 1908349

Special Remarks:

Alaska Methods
AK101/102/103

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

City, State, Zip:

Telephone:

Fax:

Client: Gillogics

Address:

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished

Date/Time

8/21/19 1345

Received

Date/Time

1230

Relinquished

Date/Time

8/21/19 1345

Received

Date/Time

1230



Fremont
Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

G-Logics

Zackary Wall
40 Second Ave. SE
Issaquah, WA 98027

RE: Hoonah

Work Order Number: 1908347

September 12, 2019

Attention Zackary Wall:

Fremont Analytical, Inc. received 39 sample(s) on 8/26/2019 for the analyses presented in the following report.

Diesel and Heavy Oil by AK102-AK103

Gasoline by NWTPH-Gx

Gasoline Range Organics by AK101

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample Moisture (Percent Moisture)

Volatile Organic Compounds by EPA Method 8260D

Volatile Organic Compounds by EPA Method 8260D SIM

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

DoD/ELAP Certification #L17-135, ISO/IEC 17025:2005
ORELAP Certification: WA 100009-007 (NELAP Recognized)

CLIENT: G-Logics
Project: Hoonah
Work Order: 1908347

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908347-001	Trip Blank 2	07/30/2019 4:27 PM	08/26/2019 12:30 PM
1908347-002	GLB-19-2'	08/21/2019 8:45 AM	08/26/2019 12:30 PM
1908347-003	GLB-19-4'	08/21/2019 8:55 AM	08/26/2019 12:30 PM
1908347-004	GLB-19-5'	08/21/2019 9:15 AM	08/26/2019 12:30 PM
1908347-005	GLB-CC	08/21/2019 8:50 AM	08/26/2019 12:30 PM
1908347-006	GLB-20-2'	08/21/2019 9:40 AM	08/26/2019 12:30 PM
1908347-007	GLB-20-4'	08/21/2019 9:50 AM	08/26/2019 12:30 PM
1908347-008	GLB-21-2'	08/21/2019 10:05 AM	08/26/2019 12:30 PM
1908347-009	GLB-21-3'	08/21/2019 10:10 AM	08/26/2019 12:30 PM
1908347-010	GLB-22-4'	08/21/2019 10:25 AM	08/26/2019 12:30 PM
1908347-011	GLB-22-5'	08/21/2019 10:30 AM	08/26/2019 12:30 PM
1908347-012	GLB-23-2'	08/21/2019 1:30 PM	08/26/2019 12:30 PM
1908347-013	GLB-23-5'	08/21/2019 1:40 PM	08/26/2019 12:30 PM
1908347-014	GLB-24-4'	08/21/2019 2:00 PM	08/26/2019 12:30 PM
1908347-015	GLB-24-5'	08/21/2019 2:15 PM	08/26/2019 12:30 PM
1908347-016	TRB-5-10'	08/21/2019 4:25 PM	08/26/2019 12:30 PM
1908347-017	TRB-5-11'	08/21/2019 4:35 PM	08/26/2019 12:30 PM
1908347-018	TRB-DD	08/21/2019 4:30 PM	08/26/2019 12:30 PM
1908347-019	TRB-6-11'	08/21/2019 6:15 PM	08/26/2019 12:30 PM
1908347-020	TRB-6-14'	08/21/2019 6:30 PM	08/26/2019 12:30 PM
1908347-021	TRB-7-5'	08/22/2019 10:00 AM	08/26/2019 12:30 PM
1908347-022	TRB-7-8'	08/22/2019 10:15 AM	08/26/2019 12:30 PM
1908347-023	TRB-7-9'	08/22/2019 10:35 AM	08/26/2019 12:30 PM
1908347-024	TRB-8-6'	08/22/2019 11:30 AM	08/26/2019 12:30 PM
1908347-025	TRB-8-8.5'	08/22/2019 11:45 AM	08/26/2019 12:30 PM
1908347-026	GPW-1	08/19/2019 10:30 AM	08/26/2019 12:30 PM
1908347-027	GPW-2	08/19/2019 11:15 AM	08/26/2019 12:30 PM
1908347-028	GPW-3	08/19/2019 2:45 PM	08/26/2019 12:30 PM
1908347-029	GPW-4	08/19/2019 11:45 AM	08/26/2019 12:30 PM
1908347-030	GPW-5	08/19/2019 12:20 PM	08/26/2019 12:30 PM
1908347-031	GPW-6	08/19/2019 2:30 PM	08/26/2019 12:30 PM
1908347-032	GPW-7	08/20/2019 12:50 PM	08/26/2019 12:30 PM
1908347-033	GPW-8	08/20/2019 12:30 PM	08/26/2019 12:30 PM
1908347-034	GPW-9	08/21/2019 5:00 PM	08/26/2019 12:30 PM
1908347-035	GPW-A	08/20/2019 12:35 PM	08/26/2019 12:30 PM
1908347-036	TRPW-1	08/20/2019 8:00 AM	08/26/2019 12:30 PM

CLIENT: G-Logics
Project: Hoonah
Work Order: 1908347

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1908347-037	TRPW-2	08/20/2019 8:30 AM	08/26/2019 12:30 PM
1908347-038	TRPW-A	08/20/2019 8:45 AM	08/26/2019 12:30 PM
1908347-039	Trip Blank W1	08/15/2019 10:00 AM	08/26/2019 12:30 PM

CLIENT: G-Logics**Project:** Hoonah

I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

NWTPH-GX was run instead of AK101 for all water samples. Data was reported and quantified according to AK101 ranges.

Qualifiers:

- * - Flagged value is not within established control limits
- B - Analyte detected in the associated Method Blank
- D - Dilution was required
- E - Value above quantitation range
- H - Holding times for preparation or analysis exceeded
- I - Analyte with an internal standard that does not meet established acceptance criteria
- J - Analyte detected below Reporting Limit
- N - Tentatively Identified Compound (TIC)
- Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
- S - Spike recovery outside accepted recovery limits
- ND - Not detected at the Reporting Limit
- R - High relative percent difference observed

Acronyms:

- %Rec - Percent Recovery
- CCB - Continued Calibration Blank
- CCV - Continued Calibration Verification
- DF - Dilution Factor
- HEM - Hexane Extractable Material
- ICV - Initial Calibration Verification
- LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
- MB or MBLANK - Method Blank
- MDL - Method Detection Limit
- MS/MSD - Matrix Spike / Matrix Spike Duplicate
- PDS - Post Digestion Spike
- Ref Val - Reference Value
- RL - Reporting Limit
- RPD - Relative Percent Difference
- SD - Serial Dilution
- SGT - Silica Gel Treatment
- SPK - Spike
- Surr - Surrogate



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 7/30/2019 4:27:00 PM

Project: Hoonah

Lab ID: 1908347-001

Matrix: Soil

Client Sample ID: Trip Blank 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	5.00	H	mg/Kg	1	9/3/2019 10:05:12 PM
Surr: 1,4-Difluorobenzene	104	50 - 150	H	%Rec	1	9/3/2019 10:05:12 PM
Surr: 4-Bromofluorobenzene	94.5	50 - 150	H	%Rec	1	9/3/2019 10:05:12 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloromethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Vinyl chloride	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromomethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Trichlorofluoromethane (CFC-11)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloroethane	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Methylene chloride	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
trans-1,2-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Methyl tert-butyl ether (MTBE)	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
cis-1,2-Dichloroethene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chloroform	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,1-Trichloroethane (TCA)	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1-Dichloropropene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Carbon tetrachloride	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichloroethane (EDC)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Benzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Trichloroethene (TCE)	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichloropropane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromodichloromethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Dibromomethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
cis-1,3-Dichloropropene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Toluene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
trans-1,3-Dichloropropylene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,2-Trichloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3-Dichloropropane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Tetrachloroethene (PCE)	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Dibromochloromethane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dibromoethane (EDB)	ND	0.00500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Chlorobenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,1,2-Tetrachloroethane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Ethylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 7/30/2019 4:27:00 PM

Project: Hoonah

Lab ID: 1908347-001

Matrix: Soil

Client Sample ID: Trip Blank 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

m,p-Xylene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
o-Xylene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Styrene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Isopropylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromoform	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,1,2,2-Tetrachloroethane	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
n-Propylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
Bromobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3,5-Trimethylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
2-Chlorotoluene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
4-Chlorotoluene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
tert-Butylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,3-Trichloropropane	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,4-Trichlorobenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
sec-Butylbenzene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
4-Isopropyltoluene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,3-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,4-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
n-Butylbenzene	ND	0.0250	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2-Dibromo-3-chloropropane	ND	0.500	QH	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,4-Trimethylbenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Hexachloro-1,3-butadiene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
Naphthalene	ND	0.0500	H	mg/Kg	1	8/28/2019 11:02:29 PM
1,2,3-Trichlorobenzene	ND	0.0200	H	mg/Kg	1	8/28/2019 11:02:29 PM
Surr: Dibromofluoromethane	94.5	56.5 - 129	H	%Rec	1	8/28/2019 11:02:29 PM
Surr: Toluene-d8	98.9	64.5 - 151	H	%Rec	1	8/28/2019 11:02:29 PM
Surr: 1-Bromo-4-fluorobenzene	90.9	54.8 - 168	H	%Rec	1	8/28/2019 11:02:29 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25727

Analyst: DW

Diesel Range Organics (C10-C25)	32.4	20.8	H	mg/Kg-dry	1	9/9/2019 1:24:28 PM
Residual Range Organics (C25-C36)	ND	52.0	H	mg/Kg-dry	1	9/9/2019 1:24:28 PM
Surr: 2-Fluorobiphenyl	104	50 - 150	H	%Rec	1	9/9/2019 1:24:28 PM
Surr: o-Terphenyl	109	50 - 150	H	%Rec	1	9/9/2019 1:24:28 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25728

Analyst: SB

Naphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
2-Methylnaphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
1-Methylnaphthalene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Acenaphthylene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Acenaphthene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Fluorene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Phenanthrene	104	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Anthracene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Fluoranthene	142	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Pyrene	128	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benz(a)anthracene	67.5	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Chrysene	64.8	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(b)fluoranthene	71.2	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(k)fluoranthene	42.0	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(a)pyrene	73.9	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Indeno(1,2,3-cd)pyrene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Dibenz(a,h)anthracene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Benzo(g,h,i)perylene	ND	41.1	H	µg/Kg-dry	1	9/6/2019 10:59:32 PM
Surr: 2-Fluorobiphenyl	84.1	24.4 - 151	H	%Rec	1	9/6/2019 10:59:32 PM
Surr: Terphenyl-d14 (surr)	99.0	31.4 - 162	H	%Rec	1	9/6/2019 10:59:32 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.55		mg/Kg-dry	1	9/5/2019 6:12:05 PM
Surr: 1,4-Difluorobenzene	116	50 - 150		%Rec	1	9/5/2019 6:12:05 PM
Surr: 4-Bromofluorobenzene	98.4	50 - 150		%Rec	1	9/5/2019 6:12:05 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloromethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Vinyl chloride	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

Bromomethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Trichlorofluoromethane (CFC-11)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloroethane	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Methylene chloride	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
trans-1,2-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Methyl tert-butyl ether (MTBE)	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
cis-1,2-Dichloroethene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chloroform	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,1-Trichloroethane (TCA)	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1-Dichloropropene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Carbon tetrachloride	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichloroethane (EDC)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Benzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Trichloroethene (TCE)	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichloropropane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromodichloromethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Dibromomethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
cis-1,3-Dichloropropene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Toluene	0.0250	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
trans-1,3-Dichloropropylene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,2-Trichloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3-Dichloropropane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Tetrachloroethene (PCE)	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Dibromochloromethane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dibromoethane (EDB)	ND	0.00255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Chlorobenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,1,2-Tetrachloroethane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Ethylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
m,p-Xylene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
o-Xylene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Styrene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Isopropylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromoform	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,1,2,2-Tetrachloroethane	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
n-Propylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Bromobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3,5-Trimethylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-002

Matrix: Soil

Client Sample ID: GLB-19-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25737

Analyst: CR

2-Chlorotoluene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
4-Chlorotoluene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
tert-Butylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,3-Trichloropropane	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,4-Trichlorobenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
sec-Butylbenzene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
4-Isopropyltoluene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,3-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,4-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
n-Butylbenzene	ND	0.0127	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2-Dibromo-3-chloropropane	ND	0.255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,4-Trimethylbenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Hexachloro-1,3-butadiene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Naphthalene	ND	0.0255	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
1,2,3-Trichlorobenzene	ND	0.0102	H	mg/Kg-dry	1	9/7/2019 1:21:36 AM
Surr: Dibromofluoromethane	98.6	56.5 - 129	H	%Rec	1	9/7/2019 1:21:36 AM
Surr: Toluene-d8	101	64.5 - 151	H	%Rec	1	9/7/2019 1:21:36 AM
Surr: 1-Bromo-4-fluorobenzene	116	54.8 - 168	H	%Rec	1	9/7/2019 1:21:36 AM

Sample Moisture (Percent Moisture)

Batch ID: R53712

Analyst: CJ

Percent Moisture	8.24	0.500		wt%	1	9/6/2019 11:02:39 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.1		mg/Kg-dry	1	8/27/2019 8:11:22 PM
Residual Range Organics (C25-C36)	ND	52.7		mg/Kg-dry	1	8/27/2019 8:11:22 PM
Surr: 2-Fluorobiphenyl	85.9	50 - 150		%Rec	1	8/27/2019 8:11:22 PM
Surr: o-Terphenyl	94.0	50 - 150		%Rec	1	8/27/2019 8:11:22 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
2-Methylnaphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
1-Methylnaphthalene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Acenaphthylene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Acenaphthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Fluorene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Phenanthrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benz(a)anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Chrysene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(b)fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(k)fluoranthene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(a)pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Indeno(1,2,3-cd)pyrene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Dibenz(a,h)anthracene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Benzo(g,h,i)perylene	ND	41.1		µg/Kg-dry	1	8/28/2019 9:32:36 PM
Surr: 2-Fluorobiphenyl	83.0	24.4 - 151		%Rec	1	8/28/2019 9:32:36 PM
Surr: Terphenyl-d14 (surr)	115	31.4 - 162		%Rec	1	8/28/2019 9:32:36 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.90		mg/Kg-dry	1	9/3/2019 10:46:20 PM
Surr: 1,4-Difluorobenzene	101	50 - 150		%Rec	1	9/3/2019 10:46:20 PM
Surr: 4-Bromofluorobenzene	83.1	50 - 150		%Rec	1	9/3/2019 10:46:20 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloromethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Vinyl chloride	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Trichlorofluoromethane (CFC-11)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloroethane	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Methylene chloride	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
trans-1,2-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Methyl tert-butyl ether (MTBE)	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
cis-1,2-Dichloroethene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chloroform	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,1-Trichloroethane (TCA)	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1-Dichloropropene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Carbon tetrachloride	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichloroethane (EDC)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Benzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Trichloroethene (TCE)	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichloropropane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromodichloromethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Dibromomethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
cis-1,3-Dichloropropene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Toluene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
trans-1,3-Dichloropropylene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,2-Trichloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3-Dichloropropane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Tetrachloroethene (PCE)	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Dibromochloromethane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dibromoethane (EDB)	ND	0.00290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Chlorobenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,1,2-Tetrachloroethane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Ethylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
m,p-Xylene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
o-Xylene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Styrene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Isopropylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromoform	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,1,2,2-Tetrachloroethane	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
n-Propylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Bromobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3,5-Trimethylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 8:55:00 AM

Project: Hoonah

Lab ID: 1908347-003

Matrix: Soil

Client Sample ID: GLB-19-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
4-Chlorotoluene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
tert-Butylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,3-Trichloropropane	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,4-Trichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
sec-Butylbenzene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
4-Isopropyltoluene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,3-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,4-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
n-Butylbenzene	ND	0.0145		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2-Dibromo-3-chloropropane	ND	0.290	Q	mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,4-Trimethylbenzene	0.0118	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Hexachloro-1,3-butadiene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Naphthalene	ND	0.0290		mg/Kg-dry	1	8/28/2019 11:32:38 PM
1,2,3-Trichlorobenzene	ND	0.0116		mg/Kg-dry	1	8/28/2019 11:32:38 PM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/28/2019 11:32:38 PM
Surr: Toluene-d8	98.9	64.5 - 151		%Rec	1	8/28/2019 11:32:38 PM
Surr: 1-Bromo-4-fluorobenzene	81.8	54.8 - 168		%Rec	1	8/28/2019 11:32:38 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527

Analyst: SBM

Percent Moisture	7.92	0.500		wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	20.7		mg/Kg-dry	1	8/27/2019 10:11:11 PM
Residual Range Organics (C25-C36)	ND	51.6		mg/Kg-dry	1	8/27/2019 10:11:11 PM
Surr: 2-Fluorobiphenyl	83.1	50 - 150		%Rec	1	8/27/2019 10:11:11 PM
Surr: o-Terphenyl	91.2	50 - 150		%Rec	1	8/27/2019 10:11:11 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
2-Methylnaphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
1-Methylnaphthalene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Acenaphthylene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Acenaphthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Fluorene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Phenanthrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benz(a)anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Chrysene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(b)fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(k)fluoranthene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(a)pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Indeno(1,2,3-cd)pyrene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Dibenz(a,h)anthracene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Benzo(g,h,i)perylene	ND	42.1		µg/Kg-dry	1	8/28/2019 2:56:27 PM
Surr: 2-Fluorobiphenyl	74.3	24.4 - 151		%Rec	1	8/28/2019 2:56:27 PM
Surr: Terphenyl-d14 (surr)	93.6	31.4 - 162		%Rec	1	8/28/2019 2:56:27 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	3.21		mg/Kg-dry	1	9/3/2019 11:27:34 PM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/3/2019 11:27:34 PM
Surr: 4-Bromofluorobenzene	83.8	50 - 150		%Rec	1	9/3/2019 11:27:34 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloromethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Vinyl chloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Trichlorofluoromethane (CFC-11)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloroethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Methylene chloride	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
trans-1,2-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Methyl tert-butyl ether (MTBE)	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
cis-1,2-Dichloroethene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chloroform	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,1-Trichloroethane (TCA)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1-Dichloropropene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Carbon tetrachloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichloroethane (EDC)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Benzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Trichloroethene (TCE)	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromodichloromethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Dibromomethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
cis-1,3-Dichloropropene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Toluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
trans-1,3-Dichloropropylene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,2-Trichloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3-Dichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Tetrachloroethene (PCE)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Dibromochloromethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dibromoethane (EDB)	ND	0.00321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Chlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,1,2-Tetrachloroethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
m,p-Xylene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
o-Xylene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Styrene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Isopropylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromoform	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,1,2,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
n-Propylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Bromobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3,5-Trimethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:15:00 AM

Project: Hoonah

Lab ID: 1908347-004

Matrix: Soil

Client Sample ID: GLB-19-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
4-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
tert-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,3-Trichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,4-Trichlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
sec-Butylbenzene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
4-Isopropyltoluene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,3-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,4-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
n-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2-Dibromo-3-chloropropane	ND	0.321	Q	mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,4-Trimethylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Hexachloro-1,3-butadiene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Naphthalene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:02:47 AM
1,2,3-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 12:02:47 AM
Surr: Dibromofluoromethane	95.3	56.5 - 129		%Rec	1	8/29/2019 12:02:47 AM
Surr: Toluene-d8	99.2	64.5 - 151		%Rec	1	8/29/2019 12:02:47 AM
Surr: 1-Bromo-4-fluorobenzene	84.3	54.8 - 168		%Rec	1	8/29/2019 12:02:47 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527

Analyst: SBM

Percent Moisture	14.2	0.500		wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	27.2	19.7		mg/Kg-dry	1	8/27/2019 10:41:04 PM
Residual Range Organics (C25-C36)	53.6	49.2		mg/Kg-dry	1	8/27/2019 10:41:04 PM
Surr: 2-Fluorobiphenyl	87.3	50 - 150		%Rec	1	8/27/2019 10:41:04 PM
Surr: o-Terphenyl	91.7	50 - 150		%Rec	1	8/27/2019 10:41:04 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
1-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Fluorene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Phenanthrene	46.5	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Fluoranthene	75.4	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Pyrene	65.2	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Chrysene	44.1	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 3:17:15 PM
Surr: 2-Fluorobiphenyl	91.7	24.4 - 151		%Rec	1	8/28/2019 3:17:15 PM
Surr: Terphenyl-d14 (surr)	112	31.4 - 162		%Rec	1	8/28/2019 3:17:15 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	ND	3.21		mg/Kg-dry	1	9/4/2019 12:08:46 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 12:08:46 AM
Surr: 4-Bromofluorobenzene	87.9	50 - 150		%Rec	1	9/4/2019 12:08:46 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloromethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Vinyl chloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Trichlorofluoromethane (CFC-11)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloroethane	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Methylene chloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
trans-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Methyl tert-butyl ether (MTBE)	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
cis-1,2-Dichloroethene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chloroform	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,1-Trichloroethane (TCA)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Carbon tetrachloride	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichloroethane (EDC)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Benzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Trichloroethene (TCE)	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromodichloromethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Dibromomethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
cis-1,3-Dichloropropene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Toluene	0.0182	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
trans-1,3-Dichloropropylene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,2-Trichloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3-Dichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Tetrachloroethene (PCE)	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Dibromochloromethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dibromoethane (EDB)	ND	0.00321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Chlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,1,2-Tetrachloroethane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Ethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
m,p-Xylene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
o-Xylene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Styrene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Isopropylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromoform	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,1,2,2-Tetrachloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
n-Propylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Bromobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3,5-Trimethylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-005
Client Sample ID: GLB-CC

Collection Date: 8/21/2019 8:50:00 AM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
2-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
4-Chlorotoluene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
tert-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,3-Trichloropropane	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,4-Trichlorobenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
sec-Butylbenzene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
4-Isopropyltoluene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,3-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,4-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
n-Butylbenzene	ND	0.0161		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2-Dibromo-3-chloropropane	ND	0.321	Q	mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,4-Trimethylbenzene	0.0131	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Hexachloro-1,3-butadiene	ND	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Naphthalene	0.138	0.0321		mg/Kg-dry	1	8/29/2019 12:32:55 AM
1,2,3-Trichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 12:32:55 AM
Surr: Dibromofluoromethane	95.8	56.5 - 129		%Rec	1	8/29/2019 12:32:55 AM
Surr: Toluene-d8	97.6	64.5 - 151		%Rec	1	8/29/2019 12:32:55 AM
Surr: 1-Bromo-4-fluorobenzene	87.1	54.8 - 168		%Rec	1	8/29/2019 12:32:55 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53527 Analyst: SBM

Percent Moisture	8.99	0.500	wt%	1	8/28/2019 10:02:57 AM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	23.7		mg/Kg-dry	1	8/27/2019 11:10:55 PM
Residual Range Organics (C25-C36)	ND	59.4		mg/Kg-dry	1	8/27/2019 11:10:55 PM
Surr: 2-Fluorobiphenyl	42.5	50 - 150	S	%Rec	1	8/27/2019 11:10:55 PM
Surr: o-Terphenyl	47.6	50 - 150	S	%Rec	1	8/27/2019 11:10:55 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
2-Methylnaphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
1-Methylnaphthalene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Acenaphthylene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Acenaphthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Fluorene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Phenanthrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benz(a)anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Chrysene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(b)fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(k)fluoranthene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(a)pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Indeno(1,2,3-cd)pyrene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Dibenz(a,h)anthracene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Benzo(g,h,i)perylene	ND	41.6		µg/Kg-dry	1	8/28/2019 3:38:11 PM
Surr: 2-Fluorobiphenyl	83.9	24.4 - 151		%Rec	1	8/28/2019 3:38:11 PM
Surr: Terphenyl-d14 (surr)	104	31.4 - 162		%Rec	1	8/28/2019 3:38:11 PM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	ND	2.50		mg/Kg-dry	1	9/4/2019 12:49:54 AM
Surr: 1,4-Difluorobenzene	104	50 - 150		%Rec	1	9/4/2019 12:49:54 AM
Surr: 4-Bromofluorobenzene	83.4	50 - 150		%Rec	1	9/4/2019 12:49:54 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25646		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Chloromethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Vinyl chloride	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromomethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Trichlorofluoromethane (CFC-11)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chloroethane	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Methylene chloride	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
trans-1,2-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Methyl tert-butyl ether (MTBE)	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
cis-1,2-Dichloroethene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chloroform	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,1-Trichloroethane (TCA)	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1-Dichloropropene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Carbon tetrachloride	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichloroethane (EDC)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Benzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Trichloroethene (TCE)	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichloropropane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromodichloromethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Dibromomethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
cis-1,3-Dichloropropene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Toluene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
trans-1,3-Dichloropropylene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,2-Trichloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3-Dichloropropane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Tetrachloroethene (PCE)	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Dibromochloromethane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dibromoethane (EDB)	ND	0.00250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Chlorobenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,1,2-Tetrachloroethane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Ethylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
m,p-Xylene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
o-Xylene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Styrene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Isopropylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Bromoform	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,1,2,2-Tetrachloroethane	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
n-Propylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:40:00 AM

Project: Hoonah

Lab ID: 1908347-006

Matrix: Soil

Client Sample ID: GLB-20-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3,5-Trimethylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
2-Chlorotoluene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
4-Chlorotoluene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
tert-Butylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,3-Trichloropropane	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,4-Trichlorobenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
sec-Butylbenzene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
4-Isopropyltoluene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,3-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,4-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
n-Butylbenzene	ND	0.0125		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2-Dibromo-3-chloropropane	ND	0.250	Q	mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,4-Trimethylbenzene	0.0113	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Hexachloro-1,3-butadiene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Naphthalene	ND	0.0250		mg/Kg-dry	1	8/29/2019 1:03:05 AM
1,2,3-Trichlorobenzene	ND	0.00999		mg/Kg-dry	1	8/29/2019 1:03:05 AM
Surr: Dibromofluoromethane	95.4	56.5 - 129		%Rec	1	8/29/2019 1:03:05 AM
Surr: Toluene-d8	98.8	64.5 - 151		%Rec	1	8/29/2019 1:03:05 AM
Surr: 1-Bromo-4-fluorobenzene	77.8	54.8 - 168		%Rec	1	8/29/2019 1:03:05 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	18.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	ND	20.2		mg/Kg-dry	1	8/27/2019 11:40:46 PM
Residual Range Organics (C25-C36)	ND	50.5		mg/Kg-dry	1	8/27/2019 11:40:46 PM
Surr: 2-Fluorobiphenyl	74.2	50 - 150		%Rec	1	8/27/2019 11:40:46 PM
Surr: o-Terphenyl	84.1	50 - 150		%Rec	1	8/27/2019 11:40:46 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
2-Methylnaphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
1-Methylnaphthalene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Acenaphthylene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Acenaphthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Fluorene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Phenanthrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benz(a)anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Chrysene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(b)fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(k)fluoranthene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(a)pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Indeno(1,2,3-cd)pyrene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Dibenz(a,h)anthracene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Benzo(g,h,i)perylene	ND	39.8		µg/Kg-dry	1	8/28/2019 3:59:07 PM
Surr: 2-Fluorobiphenyl	79.3	24.4 - 151		%Rec	1	8/28/2019 3:59:07 PM
Surr: Terphenyl-d14 (surr)	99.9	31.4 - 162		%Rec	1	8/28/2019 3:59:07 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.29		mg/Kg-dry	1	9/4/2019 1:31:09 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 1:31:09 AM
Surr: 4-Bromofluorobenzene	82.1	50 - 150		%Rec	1	9/4/2019 1:31:09 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloromethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Vinyl chloride	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Trichlorofluoromethane (CFC-11)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloroethane	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Methylene chloride	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
trans-1,2-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Methyl tert-butyl ether (MTBE)	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
cis-1,2-Dichloroethene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chloroform	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,1-Trichloroethane (TCA)	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1-Dichloropropene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Carbon tetrachloride	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichloroethane (EDC)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Benzene	0.0200	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Trichloroethene (TCE)	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichloropropane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromodichloromethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Dibromomethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
cis-1,3-Dichloropropene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Toluene	0.0525	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
trans-1,3-Dichloropropylene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,2-Trichloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3-Dichloropropane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Tetrachloroethene (PCE)	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Dibromochloromethane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dibromoethane (EDB)	ND	0.00229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Chlorobenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,1,2-Tetrachloroethane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Ethylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
m,p-Xylene	0.0426	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
o-Xylene	0.0159	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Styrene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Isopropylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromoform	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,1,2,2-Tetrachloroethane	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
n-Propylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Bromobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3,5-Trimethylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 9:50:00 AM

Project: Hoonah

Lab ID: 1908347-007

Matrix: Soil

Client Sample ID: GLB-20-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
4-Chlorotoluene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
tert-Butylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,3-Trichloropropane	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,4-Trichlorobenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
sec-Butylbenzene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
4-Isopropyltoluene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,3-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,4-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
n-Butylbenzene	ND	0.0115		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2-Dibromo-3-chloropropane	ND	0.229	Q	mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,4-Trimethylbenzene	0.0295	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Hexachloro-1,3-butadiene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Naphthalene	ND	0.0229		mg/Kg-dry	1	8/29/2019 1:33:14 AM
1,2,3-Trichlorobenzene	ND	0.00916		mg/Kg-dry	1	8/29/2019 1:33:14 AM
Surr: Dibromofluoromethane	95.2	56.5 - 129		%Rec	1	8/29/2019 1:33:14 AM
Surr: Toluene-d8	99.4	64.5 - 151		%Rec	1	8/29/2019 1:33:14 AM
Surr: 1-Bromo-4-fluorobenzene	78.6	54.8 - 168		%Rec	1	8/29/2019 1:33:14 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	13.3	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	23.0		mg/Kg-dry	1	8/28/2019 12:10:36 AM
Residual Range Organics (C25-C36)	ND	57.5		mg/Kg-dry	1	8/28/2019 12:10:36 AM
Surr: 2-Fluorobiphenyl	77.7	50 - 150		%Rec	1	8/28/2019 12:10:36 AM
Surr: o-Terphenyl	88.5	50 - 150		%Rec	1	8/28/2019 12:10:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
2-Methylnaphthalene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
1-Methylnaphthalene	55.7	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Acenaphthylene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Acenaphthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Fluorene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Phenanthrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benz(a)anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Chrysene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(b)fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(k)fluoranthene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(a)pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Indeno(1,2,3-cd)pyrene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Dibenz(a,h)anthracene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Benzo(g,h,i)perylene	ND	50.2		µg/Kg-dry	1	8/28/2019 4:19:57 PM
Surr: 2-Fluorobiphenyl	77.5	24.4 - 151		%Rec	1	8/28/2019 4:19:57 PM
Surr: Terphenyl-d14 (surr)	71.3	31.4 - 162		%Rec	1	8/28/2019 4:19:57 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	3.38	2.98		mg/Kg-dry	1	9/4/2019 2:53:41 AM
Surr: 1,4-Difluorobenzene	108	50 - 150		%Rec	1	9/4/2019 2:53:41 AM
Surr: 4-Bromofluorobenzene	82.0	50 - 150		%Rec	1	9/4/2019 2:53:41 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloromethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromomethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloroethane	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Methylene chloride	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
trans-1,2-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Methyl tert-butyl ether (MTBE)	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
cis-1,2-Dichloroethene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chloroform	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,1-Trichloroethane (TCA)	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1-Dichloropropene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Carbon tetrachloride	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichloroethane (EDC)	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Benzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichloropropane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromodichloromethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Dibromomethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
cis-1,3-Dichloropropene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Toluene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
trans-1,3-Dichloropropylene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,2-Trichloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3-Dichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Tetrachloroethene (PCE)	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Dibromochloromethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Chlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,1,2-Tetrachloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Ethylbenzene	0.0609	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
m,p-Xylene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
o-Xylene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Styrene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Isopropylbenzene	0.0425	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromoform	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,1,2,2-Tetrachloroethane	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
n-Propylbenzene	0.233	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Bromobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3,5-Trimethylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
2-Chlorotoluene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
4-Chlorotoluene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
tert-Butylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:05:00 AM

Project: Hoonah

Lab ID: 1908347-008

Matrix: Soil

Client Sample ID: GLB-21-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

1,2,3-Trichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,4-Trichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
sec-Butylbenzene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
4-Isopropyltoluene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,3-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,4-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
n-Butylbenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2-Dibromo-3-chloropropane	ND	0.298	Q	mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,4-Trimethylbenzene	0.0365	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Naphthalene	ND	0.0298		mg/Kg-dry	1	8/29/2019 2:03:24 AM
1,2,3-Trichlorobenzene	ND	0.0119		mg/Kg-dry	1	8/29/2019 2:03:24 AM
Surr: Dibromofluoromethane	95.6	56.5 - 129		%Rec	1	8/29/2019 2:03:24 AM
Surr: Toluene-d8	99.0	64.5 - 151		%Rec	1	8/29/2019 2:03:24 AM
Surr: 1-Bromo-4-fluorobenzene	74.6	54.8 - 168		%Rec	1	8/29/2019 2:03:24 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00355	Q	mg/Kg-dry	1	9/4/2019 1:38:11 AM
Trichloroethene (TCE)	ND	0.00864		mg/Kg-dry	1	9/4/2019 1:38:11 AM
1,2-Dibromoethane (EDB)	ND	0.000869		mg/Kg-dry	1	9/4/2019 1:38:11 AM
Hexachloro-1,3-butadiene	ND	0.00473		mg/Kg-dry	1	9/4/2019 1:38:11 AM
Surr: Dibromofluoromethane	96.9	54.7 - 128		%Rec	1	9/4/2019 1:38:11 AM
Surr: Toluene-d8	96.9	74.2 - 139		%Rec	1	9/4/2019 1:38:11 AM
Surr: 1-Bromo-4-fluorobenzene	67.8	73.5 - 127	S	%Rec	1	9/4/2019 1:38:11 AM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	21.6	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	19.3		mg/Kg-dry	1	8/28/2019 12:40:26 AM
Residual Range Organics (C25-C36)	ND	48.3		mg/Kg-dry	1	8/28/2019 12:40:26 AM
Surr: 2-Fluorobiphenyl	87.2	50 - 150		%Rec	1	8/28/2019 12:40:26 AM
Surr: o-Terphenyl	96.8	50 - 150		%Rec	1	8/28/2019 12:40:26 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
2-Methylnaphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
1-Methylnaphthalene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Acenaphthylene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Acenaphthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Fluorene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Phenanthrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benz(a)anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Chrysene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(b)fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(k)fluoranthene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(a)pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Indeno(1,2,3-cd)pyrene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Dibenz(a,h)anthracene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Benzo(g,h,i)perylene	ND	41.0		µg/Kg-dry	1	8/28/2019 4:40:58 PM
Surr: 2-Fluorobiphenyl	78.8	24.4 - 151		%Rec	1	8/28/2019 4:40:58 PM
Surr: Terphenyl-d14 (surr)	105	31.4 - 162		%Rec	1	8/28/2019 4:40:58 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	2.63		mg/Kg-dry	1	9/4/2019 3:34:38 AM
Surr: 1,4-Difluorobenzene	102	50 - 150		%Rec	1	9/4/2019 3:34:38 AM
Surr: 4-Bromofluorobenzene	84.4	50 - 150		%Rec	1	9/4/2019 3:34:38 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloromethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Vinyl chloride	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Trichlorofluoromethane (CFC-11)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloroethane	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Methylene chloride	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
trans-1,2-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Methyl tert-butyl ether (MTBE)	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
cis-1,2-Dichloroethene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chloroform	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,1-Trichloroethane (TCA)	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1-Dichloropropene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Carbon tetrachloride	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichloroethane (EDC)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Benzene	0.0481	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Trichloroethene (TCE)	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichloropropane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromodichloromethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Dibromomethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
cis-1,3-Dichloropropene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Toluene	0.0208	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
trans-1,3-Dichloropropylene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,2-Trichloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3-Dichloropropane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Tetrachloroethene (PCE)	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Dibromochloromethane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dibromoethane (EDB)	ND	0.00263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Chlorobenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,1,2-Tetrachloroethane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Ethylbenzene	0.0901	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
m,p-Xylene	0.0444	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
o-Xylene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Styrene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Isopropylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromoform	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,1,2,2-Tetrachloroethane	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
n-Propylbenzene	0.0404	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Bromobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3,5-Trimethylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:10:00 AM

Project: Hoonah

Lab ID: 1908347-009

Matrix: Soil

Client Sample ID: GLB-21-3'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
4-Chlorotoluene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
tert-Butylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,3-Trichloropropane	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,4-Trichlorobenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
sec-Butylbenzene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
4-Isopropyltoluene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,3-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,4-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
n-Butylbenzene	ND	0.0132		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2-Dibromo-3-chloropropane	ND	0.263	Q	mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,4-Trimethylbenzene	0.0197	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Hexachloro-1,3-butadiene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Naphthalene	ND	0.0263		mg/Kg-dry	1	8/29/2019 2:33:31 AM
1,2,3-Trichlorobenzene	ND	0.0105		mg/Kg-dry	1	8/29/2019 2:33:31 AM
Surr: Dibromofluoromethane	94.6	56.5 - 129		%Rec	1	8/29/2019 2:33:31 AM
Surr: Toluene-d8	98.1	64.5 - 151		%Rec	1	8/29/2019 2:33:31 AM
Surr: 1-Bromo-4-fluorobenzene	80.7	54.8 - 168		%Rec	1	8/29/2019 2:33:31 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	10.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	3,900	243	D	mg/Kg-dry	10	8/28/2019 3:08:56 PM
Residual Range Organics (C25-C36)	ND	60.7		mg/Kg-dry	1	8/28/2019 10:08:21 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/28/2019 10:08:21 AM
Surr: o-Terphenyl	97.6	50 - 150		%Rec	1	8/28/2019 10:08:21 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	19,700	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
2-Methylnaphthalene	21,500	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
1-Methylnaphthalene	16,500	496	D	µg/Kg-dry	10	8/29/2019 10:45:17 AM
Acenaphthylene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Acenaphthene	459	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Fluorene	1,140	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Phenanthrene	1,910	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Anthracene	183	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Fluoranthene	337	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Pyrene	255	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benz(a)anthracene	64.9	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Chrysene	61.3	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(b)fluoranthene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(k)fluoranthene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(a)pyrene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Indeno(1,2,3-cd)pyrene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Dibenz(a,h)anthracene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Benzo(g,h,i)perylene	ND	49.6		µg/Kg-dry	1	8/28/2019 5:01:54 PM
Surr: 2-Fluorobiphenyl	91.0	24.4 - 151		%Rec	1	8/28/2019 5:01:54 PM
Surr: Terphenyl-d14 (surr)	17.6	31.4 - 162	S	%Rec	1	8/28/2019 5:01:54 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	716	256	D	mg/Kg-dry	100	9/5/2019 4:11:32 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/5/2019 4:11:32 AM
Surr: 4-Bromofluorobenzene	95.1	50 - 150	D	%Rec	100	9/5/2019 4:11:32 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Chloromethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Bromomethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Trichlorofluoromethane (CFC-11)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chloroethane	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Methylene chloride	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
trans-1,2-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Methyl tert-butyl ether (MTBE)	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
cis-1,2-Dichloroethene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chloroform	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,1-Trichloroethane (TCA)	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1-Dichloropropene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Carbon tetrachloride	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichloroethane (EDC)	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Benzene	0.0186	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichloropropane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Bromodichloromethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Dibromomethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
cis-1,3-Dichloropropene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Toluene	1.38	0.205	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
trans-1,3-Dichloropropylene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,2-Trichloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3-Dichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Tetrachloroethene (PCE)	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Dibromochloromethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Chlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,1,2-Tetrachloroethane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Ethylbenzene	25.4	0.639	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
m,p-Xylene	38.4	1.28	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
o-Xylene	3.57	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Styrene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Isopropylbenzene	2.74	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Bromoform	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,1,2,2-Tetrachloroethane	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
n-Propylbenzene	7.66	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
Bromobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3,5-Trimethylbenzene	10.7	0.256	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
2-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:25:00 AM

Project: Hoonah

Lab ID: 1908347-010

Matrix: Soil

Client Sample ID: GLB-22-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

4-Chlorotoluene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
tert-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,3-Trichloropropane	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,4-Trichlorobenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
sec-Butylbenzene	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
4-Isopropyltoluene	ND	0.0256		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,3-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,4-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
n-Butylbenzene	ND	0.0128		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2-Dibromo-3-chloropropane	ND	0.256	Q	mg/Kg-dry	1	8/29/2019 3:03:41 AM
1,2,4-Trimethylbenzene	48.7	0.511	D	mg/Kg-dry	50	8/29/2019 11:39:31 AM
Naphthalene	13.4	0.511	D	mg/Kg-dry	20	8/29/2019 10:39:16 AM
1,2,3-Trichlorobenzene	ND	0.0102		mg/Kg-dry	1	8/29/2019 3:03:41 AM
Surr: Dibromofluoromethane	93.2	56.5 - 129		%Rec	1	8/29/2019 3:03:41 AM
Surr: Toluene-d8	128	64.5 - 151		%Rec	1	8/29/2019 3:03:41 AM
Surr: 1-Bromo-4-fluorobenzene	73.6	54.8 - 168		%Rec	1	8/29/2019 3:03:41 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00305	Q	mg/Kg-dry	1	9/4/2019 2:11:40 AM
Trichloroethene (TCE)	ND	0.00743		mg/Kg-dry	1	9/4/2019 2:11:40 AM
1,2-Dibromoethane (EDB)	ND	0.000747		mg/Kg-dry	1	9/4/2019 2:11:40 AM
Hexachloro-1,3-butadiene	ND	0.00406	I	mg/Kg-dry	1	9/4/2019 2:11:40 AM
Surr: Dibromofluoromethane	86.2	54.7 - 128		%Rec	1	9/4/2019 2:11:40 AM
Surr: Toluene-d8	57.1	74.2 - 139	S	%Rec	1	9/4/2019 2:11:40 AM
Surr: 1-Bromo-4-fluorobenzene	77.9	73.5 - 127	I	%Rec	1	9/4/2019 2:11:40 AM

NOTES:

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	23.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	43.0	22.3		mg/Kg-dry	1	8/28/2019 3:39:46 AM
Residual Range Organics (C25-C36)	ND	55.6		mg/Kg-dry	1	8/28/2019 3:39:46 AM
Surr: 2-Fluorobiphenyl	83.2	50 - 150		%Rec	1	8/28/2019 3:39:46 AM
Surr: o-Terphenyl	88.2	50 - 150		%Rec	1	8/28/2019 3:39:46 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	128	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
2-Methylnaphthalene	113	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
1-Methylnaphthalene	136	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Acenaphthylene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Acenaphthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Fluorene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Phenanthrene	68.6	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benz(a)anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Chrysene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(b)fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(k)fluoranthene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(a)pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Indeno(1,2,3-cd)pyrene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Dibenz(a,h)anthracene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Benzo(g,h,i)perylene	ND	45.0		µg/Kg-dry	1	8/28/2019 5:22:50 PM
Surr: 2-Fluorobiphenyl	81.6	24.4 - 151		%Rec	1	8/28/2019 5:22:50 PM
Surr: Terphenyl-d14 (surr)	93.4	31.4 - 162		%Rec	1	8/28/2019 5:22:50 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	71.2	36.3	D	mg/Kg-dry	10	9/5/2019 6:14:19 AM
Surr: 1,4-Difluorobenzene	109	50 - 150	D	%Rec	10	9/5/2019 6:14:19 AM
Surr: 4-Bromofluorobenzene	97.3	50 - 150	D	%Rec	10	9/5/2019 6:14:19 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloromethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Vinyl chloride	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

Bromomethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Trichlorofluoromethane (CFC-11)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloroethane	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Methylene chloride	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
trans-1,2-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Methyl tert-butyl ether (MTBE)	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
cis-1,2-Dichloroethene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chloroform	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,1-Trichloroethane (TCA)	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1-Dichloropropene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Carbon tetrachloride	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichloroethane (EDC)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Benzene	0.350	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Trichloroethene (TCE)	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichloropropane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Bromodichloromethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Dibromomethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
cis-1,3-Dichloropropene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Toluene	0.0875	0.0145		mg/Kg-dry	1	8/29/2019 12:39:44 PM
trans-1,3-Dichloropropylene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,2-Trichloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3-Dichloropropane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Tetrachloroethene (PCE)	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Dibromochloromethane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dibromoethane (EDB)	ND	0.00363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Chlorobenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,1,2-Tetrachloroethane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Ethylbenzene	1.24	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
m,p-Xylene	1.79	0.0363		mg/Kg-dry	1	8/29/2019 12:39:44 PM
o-Xylene	0.125	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Styrene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Isopropylbenzene	0.160	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Bromoform	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,1,2,2-Tetrachloroethane	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
n-Propylbenzene	0.470	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM
Bromobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3,5-Trimethylbenzene	0.521	0.0181		mg/Kg-dry	1	8/29/2019 12:39:44 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-011

Matrix: Soil

Client Sample ID: GLB-22-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25646

Analyst: KT

2-Chlorotoluene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
4-Chlorotoluene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
tert-Butylbenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,3-Trichloropropane	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,4-Trichlorobenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
sec-Butylbenzene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
4-Isopropyltoluene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,3-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,4-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
n-Butylbenzene	ND	0.0181		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2-Dibromo-3-chloropropane	ND	0.363	Q	mg/Kg-dry	1	8/29/2019 3:33:49 AM
1,2,4-Trimethylbenzene	3.28	0.145	D	mg/Kg-dry	10	8/29/2019 11:09:24 AM
Hexachloro-1,3-butadiene	ND	0.0363		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Naphthalene	0.564	0.0363		mg/Kg-dry	1	8/29/2019 12:39:44 PM
1,2,3-Trichlorobenzene	ND	0.0145		mg/Kg-dry	1	8/29/2019 3:33:49 AM
Surr: Dibromofluoromethane	93.9	56.5 - 129		%Rec	1	8/29/2019 3:33:49 AM
Surr: Toluene-d8	97.7	64.5 - 151		%Rec	1	8/29/2019 3:33:49 AM
Surr: 1-Bromo-4-fluorobenzene	87.3	54.8 - 168		%Rec	1	8/29/2019 3:33:49 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	15.0	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	1,560	22.7		mg/Kg-dry	1	8/28/2019 11:08:20 AM
Residual Range Organics (C25-C36)	ND	56.6		mg/Kg-dry	1	8/28/2019 11:08:20 AM
Surr: 2-Fluorobiphenyl	77.2	50 - 150		%Rec	1	8/28/2019 11:08:20 AM
Surr: o-Terphenyl	75.9	50 - 150		%Rec	1	8/28/2019 11:08:20 AM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	9,610	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
2-Methylnaphthalene	16,900	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
1-Methylnaphthalene	14,200	484	D	µg/Kg-dry	10	8/29/2019 11:05:57 AM
Acenaphthylene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Acenaphthene	777	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Fluorene	1,240	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Phenanthrene	1,720	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Anthracene	176	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Fluoranthene	524	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Pyrene	421	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benz(a)anthracene	102	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Chrysene	83.9	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(b)fluoranthene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(k)fluoranthene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(a)pyrene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Indeno(1,2,3-cd)pyrene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Dibenz(a,h)anthracene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Benzo(g,h,i)perylene	ND	48.4		µg/Kg-dry	1	8/28/2019 5:43:53 PM
Surr: 2-Fluorobiphenyl	102	24.4 - 151		%Rec	1	8/28/2019 5:43:53 PM
Surr: Terphenyl-d14 (surr)	32.1	31.4 - 162	D	%Rec	10	8/29/2019 11:05:57 AM

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	1,300	305	D	mg/Kg-dry	100	9/4/2019 8:21:32 AM
Surr: 1,4-Difluorobenzene	109	50 - 150	D	%Rec	100	9/4/2019 8:21:32 AM
Surr: 4-Bromofluorobenzene	116	50 - 150	D	%Rec	100	9/4/2019 8:21:32 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloromethane	ND	0.122	DQ	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromomethane	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloroethane	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Methylene chloride	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
trans-1,2-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
cis-1,2-Dichloroethene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chloroform	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,1-Trichloroethane (TCA)	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1-Dichloropropene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Carbon tetrachloride	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichloroethane (EDC)	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Benzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichloropropane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromodichloromethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Dibromomethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
cis-1,3-Dichloropropene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Toluene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
trans-1,3-Dichloropropylene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,2-Trichloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3-Dichloropropane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Tetrachloroethene (PCE)	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Dibromochloromethane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Chlorobenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,1,2-Tetrachloroethane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Ethylbenzene	2.25	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
m,p-Xylene	24.5	3.05	D	mg/Kg-dry	100	9/3/2019 5:53:57 PM
o-Xylene	0.838	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Styrene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Isopropylbenzene	0.488	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromoform	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,1,2,2-Tetrachloroethane	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
n-Propylbenzene	1.71	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Bromobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3,5-Trimethylbenzene	3.11	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
2-Chlorotoluene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
4-Chlorotoluene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
tert-Butylbenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:30:00 PM

Project: Hoonah

Lab ID: 1908347-012

Matrix: Soil

Client Sample ID: GLB-23-2'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,4-Trichlorobenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
sec-Butylbenzene	0.320	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
4-Isopropyltoluene	ND	0.122	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,3-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,4-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
n-Butylbenzene	ND	0.0610	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2-Dibromo-3-chloropropane	ND	1.22	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,4-Trimethylbenzene	32.3	1.22	D	mg/Kg-dry	100	9/3/2019 5:53:57 PM
Naphthalene	2.51	0.122	DQ	mg/Kg-dry	20	8/29/2019 12:56:39 PM
1,2,3-Trichlorobenzene	ND	0.0488	D	mg/Kg-dry	20	8/29/2019 12:56:39 PM
Surr: Dibromofluoromethane	101	56.5 - 129	D	%Rec	20	8/29/2019 12:56:39 PM
Surr: Toluene-d8	103	64.5 - 151	D	%Rec	20	8/29/2019 12:56:39 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	54.8 - 168	D	%Rec	20	8/29/2019 12:56:39 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00364	Q	mg/Kg-dry	1	9/4/2019 2:45:08 AM
Trichloroethene (TCE)	ND	0.00886		mg/Kg-dry	1	9/4/2019 2:45:08 AM
1,2-Dibromoethane (EDB)	ND	0.000890		mg/Kg-dry	1	9/4/2019 2:45:08 AM
Hexachloro-1,3-butadiene	ND	0.00485		mg/Kg-dry	1	9/4/2019 2:45:08 AM
Surr: Dibromofluoromethane	88.7	54.7 - 128		%Rec	1	9/4/2019 2:45:08 AM
Surr: Toluene-d8	98.4	74.2 - 139		%Rec	1	9/4/2019 2:45:08 AM
Surr: 1-Bromo-4-fluorobenzene	93.5	73.5 - 127		%Rec	1	9/4/2019 2:45:08 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	19.7	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	377	21.8		mg/Kg-dry	1	8/28/2019 4:09:35 AM
Residual Range Organics (C25-C36)	ND	54.5		mg/Kg-dry	1	8/28/2019 4:09:35 AM
Surr: 2-Fluorobiphenyl	94.3	50 - 150		%Rec	1	8/28/2019 4:09:35 AM
Surr: o-Terphenyl	98.1	50 - 150		%Rec	1	8/28/2019 4:09:35 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	143	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
2-Methylnaphthalene	254	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
1-Methylnaphthalene	430	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Acenaphthylene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Acenaphthene	45.5	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Fluorene	70.1	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Phenanthrene	145	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benz(a)anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Chrysene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(b)fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(k)fluoranthene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(a)pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Indeno(1,2,3-cd)pyrene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Dibenz(a,h)anthracene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Benzo(g,h,i)perylene	ND	44.5		µg/Kg-dry	1	8/28/2019 6:04:51 PM
Surr: 2-Fluorobiphenyl	107	24.4 - 151		%Rec	1	8/28/2019 6:04:51 PM
Surr: Terphenyl-d14 (surr)	116	31.4 - 162		%Rec	1	8/28/2019 6:04:51 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	136	37.3	D	mg/Kg-dry	10	9/5/2019 6:55:21 AM
Surr: 1,4-Difluorobenzene	112	50 - 150	D	%Rec	10	9/5/2019 6:55:21 AM
Surr: 4-Bromofluorobenzene	99.9	50 - 150	D	%Rec	10	9/5/2019 6:55:21 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloromethane	ND	0.0373	Q	mg/Kg-dry	1	8/29/2019 8:02:16 PM
Vinyl chloride	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Trichlorofluoromethane (CFC-11)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloroethane	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Methylene chloride	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
trans-1,2-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Methyl tert-butyl ether (MTBE)	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
cis-1,2-Dichloroethene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chloroform	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,1-Trichloroethane (TCA)	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1-Dichloropropene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Carbon tetrachloride	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichloroethane (EDC)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Benzene	0.189	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Trichloroethene (TCE)	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichloropropane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromodichloromethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Dibromomethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
cis-1,3-Dichloropropene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Toluene	0.0342	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
trans-1,3-Dichloropropylene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,2-Trichloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3-Dichloropropane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Tetrachloroethene (PCE)	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Dibromochloromethane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dibromoethane (EDB)	ND	0.00373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Chlorobenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,1,2-Tetrachloroethane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Ethylbenzene	0.831	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
m,p-Xylene	1.32	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
o-Xylene	0.0650	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Styrene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Isopropylbenzene	0.157	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromoform	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,1,2,2-Tetrachloroethane	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
n-Propylbenzene	0.514	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Bromobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3,5-Trimethylbenzene	0.400	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 1:40:00 PM

Project: Hoonah

Lab ID: 1908347-013

Matrix: Soil

Client Sample ID: GLB-23-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
4-Chlorotoluene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
tert-Butylbenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,3-Trichloropropane	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,4-Trichlorobenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
sec-Butylbenzene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
4-Isopropyltoluene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,3-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,4-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
n-Butylbenzene	ND	0.0187		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2-Dibromo-3-chloropropane	ND	0.373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,4-Trimethylbenzene	3.27	0.149	D	mg/Kg-dry	10	9/3/2019 6:24:53 PM
Hexachloro-1,3-butadiene	ND	0.0373		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Naphthalene	0.642	0.0373	Q	mg/Kg-dry	1	8/29/2019 8:02:16 PM
1,2,3-Trichlorobenzene	ND	0.0149		mg/Kg-dry	1	8/29/2019 8:02:16 PM
Surr: Dibromofluoromethane	94.8	56.5 - 129		%Rec	1	8/29/2019 8:02:16 PM
Surr: Toluene-d8	96.1	64.5 - 151		%Rec	1	8/29/2019 8:02:16 PM
Surr: 1-Bromo-4-fluorobenzene	98.9	54.8 - 168		%Rec	1	8/29/2019 8:02:16 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	12.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25634		Analyst: DW
Diesel Range Organics (C10-C25)	1,120	23.1		mg/Kg-dry	1	8/28/2019 12:08:25 PM
Residual Range Organics (C25-C36)	ND	57.8		mg/Kg-dry	1	8/28/2019 12:08:25 PM
Surr: 2-Fluorobiphenyl	99.9	50 - 150		%Rec	1	8/28/2019 12:08:25 PM
Surr: o-Terphenyl	101	50 - 150		%Rec	1	8/28/2019 12:08:25 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25635		Analyst: SB
Naphthalene	196	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
2-Methylnaphthalene	54.6	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
1-Methylnaphthalene	5,020	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Acenaphthylene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Acenaphthene	483	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Fluorene	791	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Phenanthrene	1,250	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Anthracene	113	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Fluoranthene	432	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Pyrene	326	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benz(a)anthracene	84.6	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Chrysene	73.5	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(b)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(k)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(a)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Benzo(g,h,i)perylene	ND	44.7		µg/Kg-dry	1	8/28/2019 6:25:42 PM
Surr: 2-Fluorobiphenyl	91.3	24.4 - 151		%Rec	1	8/28/2019 6:25:42 PM
Surr: Terphenyl-d14 (surr)	29.1	31.4 - 162	S	%Rec	1	8/28/2019 6:25:42 PM

NOTES:

S - Outlying surrogate recovery(ies) observed.

<u>Gasoline Range Organics by AK101</u>				Batch ID: 25663		Analyst: CR
Gasoline Range Organics (C6-C10)	429	311	D	mg/Kg-dry	100	9/5/2019 4:52:26 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	100	9/5/2019 4:52:26 AM
Surr: 4-Bromofluorobenzene	107	50 - 150	D	%Rec	100	9/5/2019 4:52:26 AM

<u>Volatile Organic Compounds by EPA Method 8260D</u>				Batch ID: 25656		Analyst: KT
Dichlorodifluoromethane (CFC-12)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Chloromethane	ND	0.311	DQ	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromomethane	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Trichlorofluoromethane (CFC-11)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chloroethane	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Methylene chloride	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
trans-1,2-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Methyl tert-butyl ether (MTBE)	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
cis-1,2-Dichloroethene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chloroform	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,1-Trichloroethane (TCA)	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1-Dichloropropene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Carbon tetrachloride	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichloroethane (EDC)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Benzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromodichloromethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Dibromomethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
cis-1,3-Dichloropropene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Toluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
trans-1,3-Dichloropropylene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,2-Trichloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3-Dichloropropane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Tetrachloroethene (PCE)	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Dibromochloromethane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Chlorobenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,1,2-Tetrachloroethane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Ethylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
m,p-Xylene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
o-Xylene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Styrene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Isopropylbenzene	1.41	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromoform	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,1,2,2-Tetrachloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
n-Propylbenzene	5.15	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Bromobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3,5-Trimethylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
2-Chlorotoluene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:00:00 PM

Project: Hoonah

Lab ID: 1908347-014

Matrix: Soil

Client Sample ID: GLB-24-4'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

4-Chlorotoluene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
tert-Butylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,3-Trichloropropane	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,4-Trichlorobenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
sec-Butylbenzene	1.98	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
4-Isopropyltoluene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,3-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,4-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
n-Butylbenzene	ND	0.155	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2-Dibromo-3-chloropropane	ND	3.11	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,4-Trimethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Naphthalene	ND	0.311	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
1,2,3-Trichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:02:53 PM
Surr: Dibromofluoromethane	96.0	56.5 - 129	D	%Rec	10	8/29/2019 10:02:53 PM
Surr: Toluene-d8	98.4	64.5 - 151	D	%Rec	10	8/29/2019 10:02:53 PM
Surr: 1-Bromo-4-fluorobenzene	94.3	54.8 - 168	D	%Rec	10	8/29/2019 10:02:53 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00371	Q	mg/Kg-dry	1	9/4/2019 3:18:38 AM
Trichloroethene (TCE)	ND	0.00902		mg/Kg-dry	1	9/4/2019 3:18:38 AM
1,2-Dibromoethane (EDB)	ND	0.000907		mg/Kg-dry	1	9/4/2019 3:18:38 AM
Hexachloro-1,3-butadiene	ND	0.00494		mg/Kg-dry	1	9/4/2019 3:18:38 AM
Surr: Dibromofluoromethane	90.9	54.7 - 128		%Rec	1	9/4/2019 3:18:38 AM
Surr: Toluene-d8	102	74.2 - 139		%Rec	1	9/4/2019 3:18:38 AM
Surr: 1-Bromo-4-fluorobenzene	79.7	73.5 - 127		%Rec	1	9/4/2019 3:18:38 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	18.5	0.500	wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.8		mg/Kg-dry	1	8/28/2019 5:09:15 AM
Residual Range Organics (C25-C36)	ND	54.4		mg/Kg-dry	1	8/28/2019 5:09:15 AM
Surr: 2-Fluorobiphenyl	84.6	50 - 150		%Rec	1	8/28/2019 5:09:15 AM
Surr: o-Terphenyl	92.2	50 - 150		%Rec	1	8/28/2019 5:09:15 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	96.7	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
1-Methylnaphthalene	137	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Fluorene	58.7	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Phenanthrene	110	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Chrysene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 6:46:35 PM
Surr: 2-Fluorobiphenyl	71.0	24.4 - 151		%Rec	1	8/28/2019 6:46:35 PM
Surr: Terphenyl-d14 (surr)	99.0	31.4 - 162		%Rec	1	8/28/2019 6:46:35 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	6.73	4.08		mg/Kg-dry	1	9/5/2019 3:30:43 AM
Surr: 1,4-Difluorobenzene	106	50 - 150		%Rec	1	9/5/2019 3:30:43 AM
Surr: 4-Bromofluorobenzene	83.3	50 - 150		%Rec	1	9/5/2019 3:30:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloromethane	ND	0.0408	Q	mg/Kg-dry	1	8/29/2019 2:57:59 PM
Vinyl chloride	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Trichlorofluoromethane (CFC-11)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloroethane	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Methylene chloride	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
trans-1,2-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Methyl tert-butyl ether (MTBE)	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
cis-1,2-Dichloroethene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chloroform	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,1-Trichloroethane (TCA)	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1-Dichloropropene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Carbon tetrachloride	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichloroethane (EDC)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Benzene	0.0850	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Trichloroethene (TCE)	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichloropropane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromodichloromethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Dibromomethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
cis-1,3-Dichloropropene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Toluene	0.114	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
trans-1,3-Dichloropropylene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,2-Trichloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3-Dichloropropane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Tetrachloroethene (PCE)	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Dibromochloromethane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dibromoethane (EDB)	ND	0.00408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Chlorobenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,1,2-Tetrachloroethane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Ethylbenzene	0.368	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
m,p-Xylene	0.124	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
o-Xylene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Styrene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Isopropylbenzene	0.0470	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromoform	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,1,2,2-Tetrachloroethane	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
n-Propylbenzene	0.404	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Bromobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3,5-Trimethylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 2:15:00 PM

Project: Hoonah

Lab ID: 1908347-015

Matrix: Soil

Client Sample ID: GLB-24-5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
4-Chlorotoluene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
tert-Butylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,3-Trichloropropane	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,4-Trichlorobenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
sec-Butylbenzene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
4-Isopropyltoluene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,3-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,4-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
n-Butylbenzene	ND	0.0204		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2-Dibromo-3-chloropropane	ND	0.408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,4-Trimethylbenzene	0.104	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Hexachloro-1,3-butadiene	ND	0.0408		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Naphthalene	0.217	0.0408	Q	mg/Kg-dry	1	8/29/2019 2:57:59 PM
1,2,3-Trichlorobenzene	ND	0.0163		mg/Kg-dry	1	8/29/2019 2:57:59 PM
Surr: Dibromofluoromethane	102	56.5 - 129		%Rec	1	8/29/2019 2:57:59 PM
Surr: Toluene-d8	103	64.5 - 151		%Rec	1	8/29/2019 2:57:59 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	8/29/2019 2:57:59 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	9.51	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,460	21.7		mg/Kg-dry	1	8/28/2019 5:39:07 AM
Residual Range Organics (C25-C36)	ND	54.2		mg/Kg-dry	1	8/28/2019 5:39:07 AM
Surr: 2-Fluorobiphenyl	98.3	50 - 150		%Rec	1	8/28/2019 5:39:07 AM
Surr: o-Terphenyl	94.8	50 - 150		%Rec	1	8/28/2019 5:39:07 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	212	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
2-Methylnaphthalene	85.3	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
1-Methylnaphthalene	1,390	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Acenaphthylene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Acenaphthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Fluorene	446	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Phenanthrene	396	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benz(a)anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Chrysene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(b)fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(k)fluoranthene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(a)pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Indeno(1,2,3-cd)pyrene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Dibenz(a,h)anthracene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Benzo(g,h,i)perylene	ND	42.2		µg/Kg-dry	1	8/28/2019 7:07:23 PM
Surr: 2-Fluorobiphenyl	98.3	24.4 - 151		%Rec	1	8/28/2019 7:07:23 PM
Surr: Terphenyl-d14 (surr)	89.5	31.4 - 162		%Rec	1	8/28/2019 7:07:23 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	445	39.9	D	mg/Kg-dry	10	9/5/2019 7:36:28 AM
Surr: 1,4-Difluorobenzene	110	50 - 150	D	%Rec	10	9/5/2019 7:36:28 AM
Surr: 4-Bromofluorobenzene	106	50 - 150	D	%Rec	10	9/5/2019 7:36:28 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloromethane	ND	0.0399	Q	mg/Kg-dry	1	8/29/2019 3:28:34 PM
Vinyl chloride	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Trichlorofluoromethane (CFC-11)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloroethane	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Methylene chloride	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
trans-1,2-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
cis-1,2-Dichloroethene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chloroform	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,1-Trichloroethane (TCA)	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1-Dichloropropene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Carbon tetrachloride	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichloroethane (EDC)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Benzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Trichloroethene (TCE)	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichloropropane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromodichloromethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Dibromomethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
cis-1,3-Dichloropropene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Toluene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
trans-1,3-Dichloropropylene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,2-Trichloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3-Dichloropropane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Tetrachloroethene (PCE)	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Dibromochloromethane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dibromoethane (EDB)	ND	0.00399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Chlorobenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,1,2-Tetrachloroethane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Ethylbenzene	0.160	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
m,p-Xylene	0.114	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
o-Xylene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Styrene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Isopropylbenzene	0.296	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromoform	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,1,2,2-Tetrachloroethane	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
n-Propylbenzene	0.810	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Bromobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3,5-Trimethylbenzene	0.0245	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:25:00 PM

Project: Hoonah

Lab ID: 1908347-016

Matrix: Soil

Client Sample ID: TRB-5-10'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
4-Chlorotoluene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
tert-Butylbenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,3-Trichloropropane	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,4-Trichlorobenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
sec-Butylbenzene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
4-Isopropyltoluene	0.229	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,3-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,4-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
n-Butylbenzene	ND	0.0200		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2-Dibromo-3-chloropropane	ND	0.399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,4-Trimethylbenzene	1.35	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Hexachloro-1,3-butadiene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Naphthalene	ND	0.0399		mg/Kg-dry	1	8/29/2019 3:28:34 PM
1,2,3-Trichlorobenzene	ND	0.0160		mg/Kg-dry	1	8/29/2019 3:28:34 PM
Surr: Dibromofluoromethane	102	56.5 - 129		%Rec	1	8/29/2019 3:28:34 PM
Surr: Toluene-d8	107	64.5 - 151		%Rec	1	8/29/2019 3:28:34 PM
Surr: 1-Bromo-4-fluorobenzene	101	54.8 - 168		%Rec	1	8/29/2019 3:28:34 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.9	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	2,460	202	D	mg/Kg-dry	10	8/28/2019 3:39:02 PM
Residual Range Organics (C25-C36)	ND	50.5		mg/Kg-dry	1	8/28/2019 6:08:56 AM
Surr: 2-Fluorobiphenyl	92.2	50 - 150		%Rec	1	8/28/2019 6:08:56 AM
Surr: o-Terphenyl	95.0	50 - 150		%Rec	1	8/28/2019 6:08:56 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	878	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
2-Methylnaphthalene	1,170	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
1-Methylnaphthalene	4,340	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Acenaphthylene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Acenaphthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Fluorene	946	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Phenanthrene	773	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benz(a)anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Chrysene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(b)fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(k)fluoranthene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(a)pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Indeno(1,2,3-cd)pyrene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Dibenz(a,h)anthracene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Benzo(g,h,i)perylene	ND	42.6		µg/Kg-dry	1	8/28/2019 7:28:08 PM
Surr: 2-Fluorobiphenyl	97.4	24.4 - 151		%Rec	1	8/28/2019 7:28:08 PM
Surr: Terphenyl-d14 (surr)	98.3	31.4 - 162		%Rec	1	8/28/2019 7:28:08 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	279	24.9	D	mg/Kg-dry	10	9/4/2019 11:06:10 AM
Surr: 1,4-Difluorobenzene	113	50 - 150	D	%Rec	10	9/4/2019 11:06:10 AM
Surr: 4-Bromofluorobenzene	100	50 - 150	D	%Rec	10	9/4/2019 11:06:10 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloromethane	ND	0.249	DQ	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromomethane	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloroethane	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Methylene chloride	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
trans-1,2-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Methyl tert-butyl ether (MTBE)	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
cis-1,2-Dichloroethene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chloroform	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,1-Trichloroethane (TCA)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1-Dichloropropene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Carbon tetrachloride	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichloroethane (EDC)	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Benzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichloropropane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromodichloromethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Dibromomethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
cis-1,3-Dichloropropene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Toluene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
trans-1,3-Dichloropropylene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,2-Trichloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3-Dichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Tetrachloroethene (PCE)	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Dibromochloromethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Chlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,1,2-Tetrachloroethane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Ethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
m,p-Xylene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
o-Xylene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Styrene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Isopropylbenzene	0.154	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromoform	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,1,2,2-Tetrachloroethane	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
n-Propylbenzene	0.348	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Bromobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3,5-Trimethylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
2-Chlorotoluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
4-Chlorotoluene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
tert-Butylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:35:00 PM

Project: Hoonah

Lab ID: 1908347-017

Matrix: Soil

Client Sample ID: TRB-5-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,4-Trichlorobenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
sec-Butylbenzene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
4-Isopropyltoluene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,3-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,4-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
n-Butylbenzene	ND	0.124	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2-Dibromo-3-chloropropane	ND	2.49	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,4-Trimethylbenzene	1.09	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Naphthalene	ND	0.249	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
1,2,3-Trichlorobenzene	ND	0.0995	D	mg/Kg-dry	10	8/29/2019 10:33:06 PM
Surr: Dibromofluoromethane	96.0	56.5 - 129	D	%Rec	10	8/29/2019 10:33:06 PM
Surr: Toluene-d8	91.8	64.5 - 151	D	%Rec	10	8/29/2019 10:33:06 PM
Surr: 1-Bromo-4-fluorobenzene	98.8	54.8 - 168	D	%Rec	10	8/29/2019 10:33:06 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00297	Q	mg/Kg-dry	1	9/4/2019 3:52:07 AM
Trichloroethene (TCE)	ND	0.00722		mg/Kg-dry	1	9/4/2019 3:52:07 AM
1,2-Dibromoethane (EDB)	ND	0.000726		mg/Kg-dry	1	9/4/2019 3:52:07 AM
Hexachloro-1,3-butadiene	ND	0.00395		mg/Kg-dry	1	9/4/2019 3:52:07 AM
Surr: Dibromofluoromethane	105	54.7 - 128		%Rec	1	9/4/2019 3:52:07 AM
Surr: Toluene-d8	105	74.2 - 139		%Rec	1	9/4/2019 3:52:07 AM
Surr: 1-Bromo-4-fluorobenzene	89.3	73.5 - 127		%Rec	1	9/4/2019 3:52:07 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	11.1	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-018
Client Sample ID: TRB-DD

Collection Date: 8/21/2019 4:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634 Analyst: DW

Diesel Range Organics (C10-C25)	815	22.1		mg/Kg-dry	1	8/28/2019 1:08:32 PM
Residual Range Organics (C25-C36)	ND	55.3		mg/Kg-dry	1	8/28/2019 1:08:32 PM
Surr: 2-Fluorobiphenyl	90.2	50 - 150		%Rec	1	8/28/2019 1:08:32 PM
Surr: o-Terphenyl	90.9	50 - 150		%Rec	1	8/28/2019 1:08:32 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635 Analyst: SB

Naphthalene	263	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
2-Methylnaphthalene	309	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
1-Methylnaphthalene	1,450	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Acenaphthylene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Acenaphthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Fluorene	422	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Phenanthrene	339	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benz(a)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Chrysene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(b)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(k)fluoranthene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(a)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Indeno(1,2,3-cd)pyrene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Dibenz(a,h)anthracene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Benzo(g,h,i)perylene	ND	44.7		µg/Kg-dry	1	8/28/2019 7:48:55 PM
Surr: 2-Fluorobiphenyl	99.4	24.4 - 151		%Rec	1	8/28/2019 7:48:55 PM
Surr: Terphenyl-d14 (surr)	79.5	31.4 - 162		%Rec	1	8/28/2019 7:48:55 PM

Gasoline Range Organics by AK101

Batch ID: 25663 Analyst: CR

Gasoline Range Organics (C6-C10)	408	73.2	D	mg/Kg-dry	20	9/5/2019 5:33:22 AM
Surr: 1,4-Difluorobenzene	108	50 - 150	D	%Rec	20	9/5/2019 5:33:22 AM
Surr: 4-Bromofluorobenzene	106	50 - 150	D	%Rec	20	9/5/2019 5:33:22 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656 Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloromethane	ND	0.366	DQ	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Vinyl chloride	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 4:30:00 PM

Project: Hoonah

Lab ID: 1908347-018

Matrix: Soil

Client Sample ID: TRB-DD

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Trichlorofluoromethane (CFC-11)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloroethane	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Methylene chloride	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
trans-1,2-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Methyl tert-butyl ether (MTBE)	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
cis-1,2-Dichloroethene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chloroform	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,1-Trichloroethane (TCA)	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1-Dichloropropene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Carbon tetrachloride	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichloroethane (EDC)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Benzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Trichloroethene (TCE)	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichloropropane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromodichloromethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Dibromomethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
cis-1,3-Dichloropropene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Toluene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
trans-1,3-Dichloropropylene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,2-Trichloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3-Dichloropropane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Tetrachloroethene (PCE)	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Dibromochloromethane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dibromoethane (EDB)	ND	0.0366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Chlorobenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,1,2-Tetrachloroethane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Ethylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
m,p-Xylene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
o-Xylene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Styrene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Isopropylbenzene	0.277	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromoform	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,1,2,2-Tetrachloroethane	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
n-Propylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Bromobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3,5-Trimethylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics
Project: Hoonah
Lab ID: 1908347-018
Client Sample ID: TRB-DD

Collection Date: 8/21/2019 4:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
4-Chlorotoluene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
tert-Butylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,3-Trichloropropane	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,4-Trichlorobenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
sec-Butylbenzene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
4-Isopropyltoluene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,3-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,4-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
n-Butylbenzene	ND	0.183	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2-Dibromo-3-chloropropane	ND	3.66	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,4-Trimethylbenzene	1.30	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Hexachloro-1,3-butadiene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Naphthalene	ND	0.366	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
1,2,3-Trichlorobenzene	ND	0.146	D	mg/Kg-dry	10	8/29/2019 11:03:12 PM
Surr: Dibromofluoromethane	96.1	56.5 - 129	D	%Rec	10	8/29/2019 11:03:12 PM
Surr: Toluene-d8	92.3	64.5 - 151	D	%Rec	10	8/29/2019 11:03:12 PM
Surr: 1-Bromo-4-fluorobenzene	105	54.8 - 168	D	%Rec	10	8/29/2019 11:03:12 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria
Diluted due to matrix.

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.3	0.500	wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,780	22.4		mg/Kg-dry	1	8/28/2019 2:08:40 PM
Residual Range Organics (C25-C36)	ND	55.9		mg/Kg-dry	1	8/28/2019 2:08:40 PM
Surr: 2-Fluorobiphenyl	94.4	50 - 150		%Rec	1	8/28/2019 2:08:40 PM
Surr: o-Terphenyl	93.1	50 - 150		%Rec	1	8/28/2019 2:08:40 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
2-Methylnaphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
1-Methylnaphthalene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Acenaphthylene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Acenaphthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Fluorene	1,070	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Phenanthrene	769	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Fluoranthene	60.7	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Pyrene	106	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benz(a)anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Chrysene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(b)fluoranthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(k)fluoranthene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(a)pyrene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Indeno(1,2,3-cd)pyrene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Dibenz(a,h)anthracene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Benzo(g,h,i)perylene	ND	42.8		µg/Kg-dry	1	8/28/2019 8:09:42 PM
Surr: 2-Fluorobiphenyl	95.8	24.4 - 151		%Rec	1	8/28/2019 8:09:42 PM
Surr: Terphenyl-d14 (surr)	58.8	31.4 - 162		%Rec	1	8/28/2019 8:09:42 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	65.9	23.6	D	mg/Kg-dry	10	9/5/2019 8:17:39 AM
Surr: 1,4-Difluorobenzene	112	50 - 150	D	%Rec	10	9/5/2019 8:17:39 AM
Surr: 4-Bromofluorobenzene	98.9	50 - 150	D	%Rec	10	9/5/2019 8:17:39 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloromethane	ND	0.0236	Q	mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromomethane	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloroethane	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Methylene chloride	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
trans-1,2-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Methyl tert-butyl ether (MTBE)	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
cis-1,2-Dichloroethene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chloroform	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,1-Trichloroethane (TCA)	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1-Dichloropropene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Carbon tetrachloride	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichloroethane (EDC)	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Benzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichloropropane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromodichloromethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Dibromomethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
cis-1,3-Dichloropropene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Toluene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
trans-1,3-Dichloropropylene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,2-Trichloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3-Dichloropropane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Tetrachloroethene (PCE)	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Dibromochloromethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Chlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,1,2-Tetrachloroethane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Ethylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
m,p-Xylene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
o-Xylene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Styrene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Isopropylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromoform	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,1,2,2-Tetrachloroethane	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
n-Propylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Bromobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3,5-Trimethylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
2-Chlorotoluene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
4-Chlorotoluene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
tert-Butylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:15:00 PM

Project: Hoonah

Lab ID: 1908347-019

Matrix: Soil

Client Sample ID: TRB-6-11'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,4-Trichlorobenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
sec-Butylbenzene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
4-Isopropyltoluene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,3-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,4-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
n-Butylbenzene	ND	0.0118		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2-Dibromo-3-chloropropane	ND	0.236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,4-Trimethylbenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Naphthalene	ND	0.0236		mg/Kg-dry	1	8/30/2019 1:03:33 AM
1,2,3-Trichlorobenzene	ND	0.00944		mg/Kg-dry	1	8/30/2019 1:03:33 AM
Surr: Dibromofluoromethane	96.0	56.5 - 129		%Rec	1	8/30/2019 1:03:33 AM
Surr: Toluene-d8	92.5	64.5 - 151		%Rec	1	8/30/2019 1:03:33 AM
Surr: 1-Bromo-4-fluorobenzene	87.0	54.8 - 168		%Rec	1	8/30/2019 1:03:33 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00282	Q	mg/Kg-dry	1	9/4/2019 4:25:36 AM
Trichloroethene (TCE)	ND	0.00685		mg/Kg-dry	1	9/4/2019 4:25:36 AM
1,2-Dibromoethane (EDB)	ND	0.000689		mg/Kg-dry	1	9/4/2019 4:25:36 AM
Hexachloro-1,3-butadiene	ND	0.00375		mg/Kg-dry	1	9/4/2019 4:25:36 AM
Surr: Dibromofluoromethane	96.2	54.7 - 128		%Rec	1	9/4/2019 4:25:36 AM
Surr: Toluene-d8	95.8	74.2 - 139		%Rec	1	9/4/2019 4:25:36 AM
Surr: 1-Bromo-4-fluorobenzene	68.9	73.5 - 127	S	%Rec	1	9/4/2019 4:25:36 AM

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	17.4	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	32.5	19.5		mg/Kg-dry	1	8/28/2019 6:38:48 AM
Residual Range Organics (C25-C36)	ND	48.7		mg/Kg-dry	1	8/28/2019 6:38:48 AM
Surr: 2-Fluorobiphenyl	85.9	50 - 150		%Rec	1	8/28/2019 6:38:48 AM
Surr: o-Terphenyl	94.0	50 - 150		%Rec	1	8/28/2019 6:38:48 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
2-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
1-Methylnaphthalene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Acenaphthylene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Acenaphthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Fluorene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Phenanthrene	48.7	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benz(a)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Chrysene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(b)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(k)fluoranthene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(a)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Indeno(1,2,3-cd)pyrene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Dibenz(a,h)anthracene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Benzo(g,h,i)perylene	ND	42.3		µg/Kg-dry	1	8/28/2019 8:30:24 PM
Surr: 2-Fluorobiphenyl	95.4	24.4 - 151		%Rec	1	8/28/2019 8:30:24 PM
Surr: Terphenyl-d14 (surr)	120	31.4 - 162		%Rec	1	8/28/2019 8:30:24 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	302	52.0	D	mg/Kg-dry	10	9/5/2019 8:58:46 AM
Surr: 1,4-Difluorobenzene	105	50 - 150	D	%Rec	10	9/5/2019 8:58:46 AM
Surr: 4-Bromofluorobenzene	99.5	50 - 150	D	%Rec	10	9/5/2019 8:58:46 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloromethane	ND	0.0520	Q	mg/Kg-dry	1	8/29/2019 3:59:02 PM
Vinyl chloride	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Trichlorofluoromethane (CFC-11)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloroethane	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Methylene chloride	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
trans-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Methyl tert-butyl ether (MTBE)	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
cis-1,2-Dichloroethene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chloroform	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,1-Trichloroethane (TCA)	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1-Dichloropropene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Carbon tetrachloride	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichloroethane (EDC)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Benzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Trichloroethene (TCE)	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichloropropane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromodichloromethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Dibromomethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
cis-1,3-Dichloropropene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Toluene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
trans-1,3-Dichloropropylene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,2-Trichloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3-Dichloropropane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Tetrachloroethene (PCE)	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Dibromochloromethane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dibromoethane (EDB)	ND	0.00520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Chlorobenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,1,2-Tetrachloroethane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Ethylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
m,p-Xylene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
o-Xylene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Styrene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Isopropylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromoform	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,1,2,2-Tetrachloroethane	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
n-Propylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Bromobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3,5-Trimethylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 6:30:00 PM

Project: Hoonah

Lab ID: 1908347-020

Matrix: Soil

Client Sample ID: TRB-6-14'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
4-Chlorotoluene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
tert-Butylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,3-Trichloropropane	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,4-Trichlorobenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
sec-Butylbenzene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
4-Isopropyltoluene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,3-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,4-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
n-Butylbenzene	ND	0.0260		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2-Dibromo-3-chloropropane	ND	0.520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,4-Trimethylbenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Hexachloro-1,3-butadiene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Naphthalene	ND	0.0520		mg/Kg-dry	1	8/29/2019 3:59:02 PM
1,2,3-Trichlorobenzene	ND	0.0208		mg/Kg-dry	1	8/29/2019 3:59:02 PM
Surr: Dibromofluoromethane	97.8	56.5 - 129		%Rec	1	8/29/2019 3:59:02 PM
Surr: Toluene-d8	96.0	64.5 - 151		%Rec	1	8/29/2019 3:59:02 PM
Surr: 1-Bromo-4-fluorobenzene	112	54.8 - 168		%Rec	1	8/29/2019 3:59:02 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	9.53	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25634

Analyst: DW

Diesel Range Organics (C10-C25)	1,850	19.6		mg/Kg-dry	1	8/28/2019 7:08:36 AM
Residual Range Organics (C25-C36)	ND	49.1		mg/Kg-dry	1	8/28/2019 7:08:36 AM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	8/28/2019 7:08:36 AM
Surr: o-Terphenyl	103	50 - 150		%Rec	1	8/28/2019 7:08:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25635

Analyst: SB

Naphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
2-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
1-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Acenaphthylene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Acenaphthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Fluorene	553	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Phenanthrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Pyrene	96.9	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benz(a)anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Chrysene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(b)fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(k)fluoranthene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(a)pyrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Indeno(1,2,3-cd)pyrene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Dibenz(a,h)anthracene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Benzo(g,h,i)perylene	ND	43.6		µg/Kg-dry	1	8/28/2019 8:51:10 PM
Surr: 2-Fluorobiphenyl	109	24.4 - 151		%Rec	1	8/28/2019 8:51:10 PM
Surr: Terphenyl-d14 (surr)	86.2	31.4 - 162		%Rec	1	8/28/2019 8:51:10 PM

Gasoline Range Organics by AK101

Batch ID: 25663

Analyst: CR

Gasoline Range Organics (C6-C10)	146	42.3	D	mg/Kg-dry	10	9/5/2019 9:40:04 AM
Surr: 1,4-Difluorobenzene	115	50 - 150	D	%Rec	10	9/5/2019 9:40:04 AM
Surr: 4-Bromofluorobenzene	99.9	50 - 150	D	%Rec	10	9/5/2019 9:40:04 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloromethane	ND	0.0423	Q	mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromomethane	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloroethane	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Methylene chloride	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
trans-1,2-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
cis-1,2-Dichloroethene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chloroform	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,1-Trichloroethane (TCA)	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1-Dichloropropene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Carbon tetrachloride	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichloroethane (EDC)	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Benzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichloropropane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromodichloromethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Dibromomethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
cis-1,3-Dichloropropene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Toluene	0.0590	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
trans-1,3-Dichloropropylene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,2-Trichloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3-Dichloropropane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Tetrachloroethene (PCE)	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Dibromochloromethane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Chlorobenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,1,2-Tetrachloroethane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Ethylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
m,p-Xylene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
o-Xylene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Styrene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Isopropylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromoform	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,1,2,2-Tetrachloroethane	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
n-Propylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Bromobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3,5-Trimethylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
2-Chlorotoluene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
4-Chlorotoluene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
tert-Butylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:15:00 AM

Project: Hoonah

Lab ID: 1908347-022

Matrix: Soil

Client Sample ID: TRB-7-8'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,4-Trichlorobenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
sec-Butylbenzene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
4-Isopropyltoluene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,3-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,4-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
n-Butylbenzene	ND	0.0211		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2-Dibromo-3-chloropropane	ND	0.423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,4-Trimethylbenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Naphthalene	ND	0.0423		mg/Kg-dry	1	8/29/2019 4:29:36 PM
1,2,3-Trichlorobenzene	ND	0.0169		mg/Kg-dry	1	8/29/2019 4:29:36 PM
Surr: Dibromofluoromethane	95.5	56.5 - 129		%Rec	1	8/29/2019 4:29:36 PM
Surr: Toluene-d8	93.2	64.5 - 151		%Rec	1	8/29/2019 4:29:36 PM
Surr: 1-Bromo-4-fluorobenzene	103	54.8 - 168		%Rec	1	8/29/2019 4:29:36 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00505	Q	mg/Kg-dry	1	9/4/2019 5:32:35 AM
Trichloroethene (TCE)	ND	0.0123		mg/Kg-dry	1	9/4/2019 5:32:35 AM
1,2-Dibromoethane (EDB)	ND	0.00123		mg/Kg-dry	1	9/4/2019 5:32:35 AM
Hexachloro-1,3-butadiene	ND	0.00672		mg/Kg-dry	1	9/4/2019 5:32:35 AM
Surr: Dibromofluoromethane	101	54.7 - 128		%Rec	1	9/4/2019 5:32:35 AM
Surr: Toluene-d8	100	74.2 - 139		%Rec	1	9/4/2019 5:32:35 AM
Surr: 1-Bromo-4-fluorobenzene	88.7	73.5 - 127		%Rec	1	9/4/2019 5:32:35 AM

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	14.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25642

Analyst: DW

Diesel Range Organics (C10-C25)	30.4	19.8		mg/Kg-dry	1	8/29/2019 4:09:36 AM
Residual Range Organics (C25-C36)	ND	49.5		mg/Kg-dry	1	8/29/2019 4:09:36 AM
Surr: 2-Fluorobiphenyl	73.8	50 - 150		%Rec	1	8/29/2019 4:09:36 AM
Surr: o-Terphenyl	81.7	50 - 150		%Rec	1	8/29/2019 4:09:36 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
2-Methylnaphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
1-Methylnaphthalene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Acenaphthylene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Acenaphthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Fluorene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Phenanthrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benz(a)anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Chrysene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(b)fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(k)fluoranthene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(a)pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Indeno(1,2,3-cd)pyrene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Dibenz(a,h)anthracene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Benzo(g,h,i)perylene	ND	42.7		µg/Kg-dry	1	8/29/2019 7:46:43 PM
Surr: 2-Fluorobiphenyl	83.5	24.4 - 151		%Rec	1	8/29/2019 7:46:43 PM
Surr: Terphenyl-d14 (surr)	97.8	31.4 - 162		%Rec	1	8/29/2019 7:46:43 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	2.59	2.57		mg/Kg-dry	1	9/5/2019 7:35:14 PM
Surr: 1,4-Difluorobenzene	109	50 - 150		%Rec	1	9/5/2019 7:35:14 PM
Surr: 4-Bromofluorobenzene	97.7	50 - 150		%Rec	1	9/5/2019 7:35:14 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloromethane	ND	0.0257	Q	mg/Kg-dry	1	8/29/2019 5:00:07 PM
Vinyl chloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Trichlorofluoromethane (CFC-11)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloroethane	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Methylene chloride	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
trans-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Methyl tert-butyl ether (MTBE)	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
cis-1,2-Dichloroethene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chloroform	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,1-Trichloroethane (TCA)	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Carbon tetrachloride	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichloroethane (EDC)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Benzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Trichloroethene (TCE)	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichloropropane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromodichloromethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Dibromomethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
cis-1,3-Dichloropropene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Toluene	0.0274	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
trans-1,3-Dichloropropylene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,2-Trichloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3-Dichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Tetrachloroethene (PCE)	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Dibromochloromethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dibromoethane (EDB)	ND	0.00257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Chlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,1,2-Tetrachloroethane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Ethylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
m,p-Xylene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
o-Xylene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Styrene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Isopropylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromoform	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,1,2,2-Tetrachloroethane	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
n-Propylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Bromobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3,5-Trimethylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 10:35:00 AM

Project: Hoonah

Lab ID: 1908347-023

Matrix: Soil

Client Sample ID: TRB-7-9'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
4-Chlorotoluene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
tert-Butylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,3-Trichloropropane	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,4-Trichlorobenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
sec-Butylbenzene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
4-Isopropyltoluene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,3-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,4-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
n-Butylbenzene	ND	0.0129		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2-Dibromo-3-chloropropane	ND	0.257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,4-Trimethylbenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Hexachloro-1,3-butadiene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Naphthalene	ND	0.0257		mg/Kg-dry	1	8/29/2019 5:00:07 PM
1,2,3-Trichlorobenzene	ND	0.0103		mg/Kg-dry	1	8/29/2019 5:00:07 PM
Surr: Dibromofluoromethane	95.8	56.5 - 129		%Rec	1	8/29/2019 5:00:07 PM
Surr: Toluene-d8	92.4	64.5 - 151		%Rec	1	8/29/2019 5:00:07 PM
Surr: 1-Bromo-4-fluorobenzene	94.3	54.8 - 168		%Rec	1	8/29/2019 5:00:07 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	10.5	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25642

Analyst: DW

Diesel Range Organics (C10-C25)	ND	21.4		mg/Kg-dry	1	8/29/2019 4:39:24 AM
Residual Range Organics (C25-C36)	ND	53.6		mg/Kg-dry	1	8/29/2019 4:39:24 AM
Surr: 2-Fluorobiphenyl	64.9	50 - 150		%Rec	1	8/29/2019 4:39:24 AM
Surr: o-Terphenyl	72.4	50 - 150		%Rec	1	8/29/2019 4:39:24 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
2-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
1-Methylnaphthalene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Acenaphthylene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Acenaphthene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Fluorene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Phenanthrene	118	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Anthracene	50.0	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Fluoranthene	332	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Pyrene	334	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benz(a)anthracene	161	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Chrysene	155	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(b)fluoranthene	109	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(k)fluoranthene	99.1	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(a)pyrene	180	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Indeno(1,2,3-cd)pyrene	79.8	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Dibenz(a,h)anthracene	ND	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Benzo(g,h,i)perylene	93.6	40.9		µg/Kg-dry	1	8/29/2019 9:09:21 PM
Surr: 2-Fluorobiphenyl	85.4	24.4 - 151		%Rec	1	8/29/2019 9:09:21 PM
Surr: Terphenyl-d14 (surr)	108	31.4 - 162		%Rec	1	8/29/2019 9:09:21 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	3.32		mg/Kg-dry	1	9/5/2019 8:16:48 PM
Surr: 1,4-Difluorobenzene	112	50 - 150		%Rec	1	9/5/2019 8:16:48 PM
Surr: 4-Bromofluorobenzene	99.2	50 - 150		%Rec	1	9/5/2019 8:16:48 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloromethane	ND	0.0332	Q	mg/Kg-dry	1	8/29/2019 5:30:38 PM
Vinyl chloride	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Bromomethane	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Trichlorofluoromethane (CFC-11)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloroethane	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Methylene chloride	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
trans-1,2-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Methyl tert-butyl ether (MTBE)	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
cis-1,2-Dichloroethene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chloroform	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,1-Trichloroethane (TCA)	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1-Dichloropropene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Carbon tetrachloride	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichloroethane (EDC)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Benzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Trichloroethene (TCE)	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichloropropane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromodichloromethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Dibromomethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
cis-1,3-Dichloropropene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Toluene	0.0303	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
trans-1,3-Dichloropropylene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,2-Trichloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3-Dichloropropane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Tetrachloroethene (PCE)	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Dibromochloromethane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dibromoethane (EDB)	ND	0.00332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Chlorobenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,1,2-Tetrachloroethane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Ethylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
m,p-Xylene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
o-Xylene	0.0170	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Styrene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Isopropylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromoform	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,1,2,2-Tetrachloroethane	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
n-Propylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Bromobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3,5-Trimethylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:30:00 AM

Project: Hoonah

Lab ID: 1908347-024

Matrix: Soil

Client Sample ID: TRB-8-6'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

2-Chlorotoluene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
4-Chlorotoluene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
tert-Butylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,3-Trichloropropane	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,4-Trichlorobenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
sec-Butylbenzene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
4-Isopropyltoluene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,3-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,4-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
n-Butylbenzene	ND	0.0166		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2-Dibromo-3-chloropropane	ND	0.332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,4-Trimethylbenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Hexachloro-1,3-butadiene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Naphthalene	ND	0.0332		mg/Kg-dry	1	8/29/2019 5:30:38 PM
1,2,3-Trichlorobenzene	ND	0.0133		mg/Kg-dry	1	8/29/2019 5:30:38 PM
Surr: Dibromofluoromethane	95.4	56.5 - 129		%Rec	1	8/29/2019 5:30:38 PM
Surr: Toluene-d8	91.7	64.5 - 151		%Rec	1	8/29/2019 5:30:38 PM
Surr: 1-Bromo-4-fluorobenzene	96.2	54.8 - 168		%Rec	1	8/29/2019 5:30:38 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	8.14	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25660

Analyst: DW

Diesel Range Organics (C10-C25)	113	20.8		mg/Kg-dry	1	8/29/2019 8:10:51 PM
Residual Range Organics (C25-C36)	ND	51.9		mg/Kg-dry	1	8/29/2019 8:10:51 PM
Surr: 2-Fluorobiphenyl	69.6	50 - 150		%Rec	1	8/29/2019 8:10:51 PM
Surr: o-Terphenyl	76.8	50 - 150		%Rec	1	8/29/2019 8:10:51 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25641

Analyst: SB

Naphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
2-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
1-Methylnaphthalene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Acenaphthylene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Acenaphthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Fluorene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Phenanthrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benz(a)anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Chrysene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(b)fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(k)fluoranthene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(a)pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Indeno(1,2,3-cd)pyrene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Dibenz(a,h)anthracene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Benzo(g,h,i)perylene	ND	43.6		µg/Kg-dry	1	8/29/2019 9:29:59 PM
Surr: 2-Fluorobiphenyl	92.4	24.4 - 151		%Rec	1	8/29/2019 9:29:59 PM
Surr: Terphenyl-d14 (surr)	114	31.4 - 162		%Rec	1	8/29/2019 9:29:59 PM

Gasoline Range Organics by AK101

Batch ID: 25719

Analyst: CR

Gasoline Range Organics (C6-C10)	16.0	3.25		mg/Kg-dry	1	9/5/2019 8:58:26 PM
Surr: 1,4-Difluorobenzene	114	50 - 150		%Rec	1	9/5/2019 8:58:26 PM
Surr: 4-Bromofluorobenzene	104	50 - 150		%Rec	1	9/5/2019 8:58:26 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Dichlorodifluoromethane (CFC-12)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloromethane	ND	0.0325	Q	mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromomethane	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

Trichlorofluoromethane (CFC-11)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloroethane	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Methylene chloride	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
trans-1,2-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
cis-1,2-Dichloroethene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chloroform	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,1-Trichloroethane (TCA)	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1-Dichloropropene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Carbon tetrachloride	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichloroethane (EDC)	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Benzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichloropropane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromodichloromethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Dibromomethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
cis-1,3-Dichloropropene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Toluene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
trans-1,3-Dichloropropylene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,2-Trichloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3-Dichloropropane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Tetrachloroethene (PCE)	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Dibromochloromethane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Chlorobenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,1,2-Tetrachloroethane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Ethylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
m,p-Xylene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
o-Xylene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Styrene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Isopropylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromoform	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,1,2,2-Tetrachloroethane	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
n-Propylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Bromobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3,5-Trimethylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
2-Chlorotoluene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
4-Chlorotoluene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
tert-Butylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/22/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-025

Matrix: Soil

Client Sample ID: TRB-8-8.5'

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25656

Analyst: KT

1,2,3-Trichloropropane	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,4-Trichlorobenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
sec-Butylbenzene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
4-Isopropyltoluene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,3-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,4-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
n-Butylbenzene	ND	0.0162		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2-Dibromo-3-chloropropane	ND	0.325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,4-Trimethylbenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Naphthalene	ND	0.0325		mg/Kg-dry	1	8/29/2019 6:01:00 PM
1,2,3-Trichlorobenzene	ND	0.0130		mg/Kg-dry	1	8/29/2019 6:01:00 PM
Surr: Dibromofluoromethane	95.0	56.5 - 129		%Rec	1	8/29/2019 6:01:00 PM
Surr: Toluene-d8	91.0	64.5 - 151		%Rec	1	8/29/2019 6:01:00 PM
Surr: 1-Bromo-4-fluorobenzene	93.4	54.8 - 168		%Rec	1	8/29/2019 6:01:00 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25689

Analyst: KT

Vinyl chloride	ND	0.00387	Q	mg/Kg-dry	1	9/4/2019 6:06:04 AM
Trichloroethene (TCE)	ND	0.00943		mg/Kg-dry	1	9/4/2019 6:06:04 AM
1,2-Dibromoethane (EDB)	ND	0.000948		mg/Kg-dry	1	9/4/2019 6:06:04 AM
Hexachloro-1,3-butadiene	ND	0.00516		mg/Kg-dry	1	9/4/2019 6:06:04 AM
Surr: Dibromofluoromethane	97.7	54.7 - 128		%Rec	1	9/4/2019 6:06:04 AM
Surr: Toluene-d8	96.8	74.2 - 139		%Rec	1	9/4/2019 6:06:04 AM
Surr: 1-Bromo-4-fluorobenzene	72.1	73.5 - 127	S	%Rec	1	9/4/2019 6:06:04 AM

NOTES:

S - Outlying surrogate recovery(ies) observed.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample Moisture (Percent Moisture)

Batch ID: R53539

Analyst: SBM

Percent Moisture	13.2	0.500		wt%	1	8/28/2019 1:44:42 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	1,280	50.1		µg/L	1	8/28/2019 5:09:42 PM
Residual Range Organics (C25-C36)	135	100		µg/L	1	8/28/2019 5:09:42 PM
Surr: 2-Fluorobiphenyl	96.3	50 - 150		%Rec	1	8/28/2019 5:09:42 PM
Surr: o-Terphenyl	104	50 - 150		%Rec	1	8/28/2019 5:09:42 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Acenaphthene	0.165	0.100		µg/L	1	8/27/2019 2:14:50 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 2:14:50 PM
Surr: 2-Fluorobiphenyl	118	42.6 - 159		%Rec	1	8/27/2019 2:14:50 PM
Surr: Terphenyl-d14	99.0	8.99 - 147		%Rec	1	8/27/2019 2:14:50 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	120	50.0		µg/L	1	8/29/2019 5:19:12 AM
Surr: Toluene-d8	106	65 - 135		%Rec	1	8/29/2019 5:19:12 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	8/29/2019 5:19:12 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:19:12 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:19:12 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 10:30:00 AM

Project: Hoonah

Lab ID: 1908347-026

Matrix: Water

Client Sample ID: GPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:19:12 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:19:12 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 5:19:12 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:19:12 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	8/29/2019 5:19:12 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 5:19:12 AM
Surr: 1-Bromo-4-fluorobenzene	99.3	64.2 - 128		%Rec	1	8/29/2019 5:19:12 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	49.9		µg/L	1	8/28/2019 9:40:44 PM
Residual Range Organics (C25-C36)	ND	99.8		µg/L	1	8/28/2019 9:40:44 PM
Surr: 2-Fluorobiphenyl	89.6	50 - 150		%Rec	1	8/28/2019 9:40:44 PM
Surr: o-Terphenyl	98.6	50 - 150		%Rec	1	8/28/2019 9:40:44 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 3:17:16 PM
Surr: 2-Fluorobiphenyl	99.2	42.6 - 159		%Rec	1	8/27/2019 3:17:16 PM
Surr: Terphenyl-d14	87.2	8.99 - 147		%Rec	1	8/27/2019 3:17:16 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 5:49:49 AM
Surr: Toluene-d8	98.0	65 - 135		%Rec	1	8/29/2019 5:49:49 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	8/29/2019 5:49:49 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:49:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Chloroform	1.13	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:49:49 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:15:00 AM

Project: Hoonah

Lab ID: 1908347-027

Matrix: Water

Client Sample ID: GPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:49:49 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:49:49 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 5:49:49 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:49:49 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 5:49:49 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 5:49:49 AM
Surr: 1-Bromo-4-fluorobenzene	103	64.2 - 128		%Rec	1	8/29/2019 5:49:49 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	53.7	50.3		µg/L	1	8/28/2019 10:10:49 PM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/28/2019 10:10:49 PM
Surr: 2-Fluorobiphenyl	92.2	50 - 150		%Rec	1	8/28/2019 10:10:49 PM
Surr: o-Terphenyl	99.2	50 - 150		%Rec	1	8/28/2019 10:10:49 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
2-Methylnaphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
1-Methylnaphthalene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Acenaphthylene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Acenaphthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Fluorene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Phenanthrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benz(a)anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Chrysene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(b)fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(k)fluoranthene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(a)pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Indeno(1,2,3-cd)pyrene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Dibenz(a,h)anthracene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Benzo(g,h,i)perylene	ND	0.0996		µg/L	1	8/27/2019 3:38:06 PM
Surr: 2-Fluorobiphenyl	107	42.6 - 159		%Rec	1	8/27/2019 3:38:06 PM
Surr: Terphenyl-d14	96.1	8.99 - 147		%Rec	1	8/27/2019 3:38:06 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 6:20:24 AM
Surr: Toluene-d8	98.9	65 - 135		%Rec	1	8/29/2019 6:20:24 AM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	8/29/2019 6:20:24 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 6:20:24 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:45:00 PM

Project: Hoonah

Lab ID: 1908347-028

Matrix: Water

Client Sample ID: GPW-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 6:20:24 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:20:24 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 6:20:24 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 6:20:24 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 6:20:24 AM
Surr: Toluene-d8	99.6	40.1 - 139		%Rec	1	8/29/2019 6:20:24 AM
Surr: 1-Bromo-4-fluorobenzene	101	64.2 - 128		%Rec	1	8/29/2019 6:20:24 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 12:10:06 PM
Surr: Dibromofluoromethane	80.2	68 - 140		%Rec	1	8/30/2019 12:10:06 PM
Surr: Toluene-d8	89.6	63.5 - 144		%Rec	1	8/30/2019 12:10:06 PM
Surr: 4-Bromofluorobenzene	92.9	55 - 134		%Rec	1	8/30/2019 12:10:06 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632 Analyst: DW

Diesel Range Organics (C10-C25)	201	50.3		µg/L	1	8/28/2019 10:40:44 PM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/28/2019 10:40:44 PM
Surr: 2-Fluorobiphenyl	98.1	50 - 150		%Rec	1	8/28/2019 10:40:44 PM
Surr: o-Terphenyl	102	50 - 150		%Rec	1	8/28/2019 10:40:44 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 3:58:52 PM
Surr: 2-Fluorobiphenyl	87.0	42.6 - 159		%Rec	1	8/27/2019 3:58:52 PM
Surr: Terphenyl-d14	82.9	8.99 - 147		%Rec	1	8/27/2019 3:58:52 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline	ND	50.0		µg/L	1	8/29/2019 4:41:57 PM
Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 4:41:57 PM
Surr: Toluene-d8	100	65 - 135		%Rec	1	8/29/2019 4:41:57 PM
Surr: 4-Bromofluorobenzene	97.1	65 - 135		%Rec	1	8/29/2019 4:41:57 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 4:41:57 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 4:41:57 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Benzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Toluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 4:41:57 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 11:45:00 AM

Project: Hoonah

Lab ID: 1908347-029

Matrix: Water

Client Sample ID: GPW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 4:41:57 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	8/29/2019 4:41:57 PM
Naphthalene	ND	1.00		µg/L	1	8/29/2019 4:41:57 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 4:41:57 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 4:41:57 PM
Surr: Toluene-d8	103	40.1 - 139		%Rec	1	8/29/2019 4:41:57 PM
Surr: 1-Bromo-4-fluorobenzene	94.7	64.2 - 128		%Rec	1	8/29/2019 4:41:57 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	741	50.2		µg/L	1	8/28/2019 11:10:48 PM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/28/2019 11:10:48 PM
Surr: 2-Fluorobiphenyl	93.8	50 - 150		%Rec	1	8/28/2019 11:10:48 PM
Surr: o-Terphenyl	89.9	50 - 150		%Rec	1	8/28/2019 11:10:48 PM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627 Analyst: SB

Naphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
2-Methylnaphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
1-Methylnaphthalene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Acenaphthylene	0.108	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Acenaphthene	8.30	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Fluorene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Phenanthrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Anthracene	0.171	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Fluoranthene	0.781	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Pyrene	0.372	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benz(a)anthracene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Chrysene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(b)fluoranthene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(k)fluoranthene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(a)pyrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Indeno(1,2,3-cd)pyrene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Dibenz(a,h)anthracene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Benzo(g,h,i)perylene	ND	0.0994		µg/L	1	8/27/2019 4:19:37 PM
Surr: 2-Fluorobiphenyl	114	42.6 - 159		%Rec	1	8/27/2019 4:19:37 PM
Surr: Terphenyl-d14	85.8	8.99 - 147		%Rec	1	8/27/2019 4:19:37 PM

Gasoline by NWTPH-Gx

Batch ID: 25645 Analyst: CR

Gasoline	ND	50.0		µg/L	1	8/29/2019 5:13:15 PM
Gasoline Range Organics (C6-C10)	197	50.0		µg/L	1	8/29/2019 5:13:15 PM
Surr: Toluene-d8	107	65 - 135		%Rec	1	8/29/2019 5:13:15 PM
Surr: 4-Bromofluorobenzene	99.4	65 - 135		%Rec	1	8/29/2019 5:13:15 PM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645 Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:13:15 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 5:13:15 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Benzene	6.40	1.00		µg/L	1	8/29/2019 5:13:15 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Toluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 5:13:15 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Isopropylbenzene	2.07	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
n-Propylbenzene	2.11	1.00		µg/L	1	8/29/2019 5:13:15 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 12:20:00 PM

Project: Hoonah

Lab ID: 1908347-030

Matrix: Water

Client Sample ID: GPW-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:13:15 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
Hexachloro-1,3-butadiene	ND	4.00		µg/L	1	8/29/2019 5:13:15 PM
Naphthalene	ND	1.00		µg/L	1	8/29/2019 5:13:15 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:13:15 PM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 5:13:15 PM
Surr: Toluene-d8	98.5	40.1 - 139		%Rec	1	8/29/2019 5:13:15 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	64.2 - 128		%Rec	1	8/29/2019 5:13:15 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:30:00 PM

Project: Hoonah

Lab ID: 1908347-031

Matrix: Water

Client Sample ID: GPW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
<u>Diesel and Heavy Oil by AK102-AK103</u>				Batch ID: 25632		Analyst: DW
Diesel Range Organics (C10-C25)	6,850	502	D	µg/L	10	8/29/2019 9:40:52 AM
Residual Range Organics (C25-C36)	138	100		µg/L	1	8/28/2019 11:40:41 PM
Surr: 2-Fluorobiphenyl	100	50 - 150		%Rec	1	8/28/2019 11:40:41 PM
Surr: o-Terphenyl	66.2	50 - 150		%Rec	1	8/28/2019 11:40:41 PM

<u>Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)</u>				Batch ID: 25627		Analyst: SB
Naphthalene	29.6	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
2-Methylnaphthalene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
1-Methylnaphthalene	37.1	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
Acenaphthylene	0.746	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Acenaphthene	13.1	0.989	D	µg/L	10	8/28/2019 9:02:56 AM
Fluorene	4.88	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Phenanthrene	2.77	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Anthracene	0.289	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Fluoranthene	0.461	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Pyrene	0.377	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benz(a)anthracene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Chrysene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(b)fluoranthene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(k)fluoranthene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(a)pyrene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Indeno(1,2,3-cd)pyrene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Dibenz(a,h)anthracene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Benzo(g,h,i)perylene	ND	0.0989		µg/L	1	8/27/2019 4:40:27 PM
Surr: 2-Fluorobiphenyl	102	42.6 - 159		%Rec	1	8/27/2019 4:40:27 PM
Surr: Terphenyl-d14	58.0	8.99 - 147		%Rec	1	8/27/2019 4:40:27 PM

<u>Gasoline by NWTPH-Gx</u>				Batch ID: 25645		Analyst: CR
Gasoline	ND	50.0		µg/L	1	8/29/2019 5:44:20 PM
Gasoline Range Organics (C6-C10)	4,760	50.0	E	µg/L	1	8/29/2019 5:44:20 PM
Surr: Toluene-d8	104	65 - 135		%Rec	1	8/29/2019 5:44:20 PM
Surr: 4-Bromofluorobenzene	106	65 - 135		%Rec	1	8/29/2019 5:44:20 PM

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:30:00 PM

Project: Hoonah

Lab ID: 1908347-031

Matrix: Water

Client Sample ID: GPW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 5:44:20 PM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chloroform	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Benzene	13.2	1.00		µg/L	1	8/29/2019 5:44:20 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Toluene	15.1	1.00		µg/L	1	8/29/2019 5:44:20 PM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Ethylbenzene	171	1.00		µg/L	1	8/29/2019 5:44:20 PM
m,p-Xylene	14.2	1.00		µg/L	1	8/29/2019 5:44:20 PM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Styrene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
Isopropylbenzene	35.9	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromoform	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
n-Propylbenzene	69.3	1.00		µg/L	1	8/29/2019 5:44:20 PM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/19/2019 2:30:00 PM

Project: Hoonah

Lab ID: 1908347-031

Matrix: Water

Client Sample ID: GPW-6

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
tert-Butylbenzene	1.65	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 5:44:20 PM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
4-Isopropyltoluene	1.65	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,4-Trimethylbenzene	58.3	1.00		µg/L	1	8/29/2019 5:44:20 PM
Naphthalene	68.4	1.00		µg/L	1	8/29/2019 5:44:20 PM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 5:44:20 PM
Surr: Dibromofluoromethane	93.7	45.4 - 152		%Rec	1	8/29/2019 5:44:20 PM
Surr: Toluene-d8	94.1	40.1 - 139		%Rec	1	8/29/2019 5:44:20 PM
Surr: 1-Bromo-4-fluorobenzene	106	64.2 - 128		%Rec	1	8/29/2019 5:44:20 PM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
1,2-Dibromoethane (EDB)	0.246	0.0100		µg/L	1	8/30/2019 4:15:33 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 4:15:33 PM
Surr: Dibromofluoromethane	105	68 - 140		%Rec	1	8/30/2019 4:15:33 PM
Surr: Toluene-d8	98.9	63.5 - 144		%Rec	1	8/30/2019 4:15:33 PM
Surr: 4-Bromofluorobenzene	111	55 - 134		%Rec	1	8/30/2019 4:15:33 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	1,630	50.4		µg/L	1	8/29/2019 12:10:38 AM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/29/2019 12:10:38 AM
Surr: 2-Fluorobiphenyl	88.0	50 - 150		%Rec	1	8/29/2019 12:10:38 AM
Surr: o-Terphenyl	89.9	50 - 150		%Rec	1	8/29/2019 12:10:38 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	0.129	0.0998		µg/L	1	8/27/2019 5:01:12 PM
2-Methylnaphthalene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
1-Methylnaphthalene	0.132	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Acenaphthylene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Acenaphthene	0.939	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Fluorene	0.122	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Phenanthrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Fluoranthene	0.116	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benz(a)anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Chrysene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(b)fluoranthene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(k)fluoranthene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(a)pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Indeno(1,2,3-cd)pyrene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Dibenz(a,h)anthracene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Benzo(g,h,i)perylene	ND	0.0998		µg/L	1	8/27/2019 5:01:12 PM
Surr: 2-Fluorobiphenyl	104	42.6 - 159		%Rec	1	8/27/2019 5:01:12 PM
Surr: Terphenyl-d14	67.7	8.99 - 147		%Rec	1	8/27/2019 5:01:12 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	175	50.0		µg/L	1	8/29/2019 6:51:07 AM
Surr: Toluene-d8	105	65 - 135		%Rec	1	8/29/2019 6:51:07 AM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	8/29/2019 6:51:07 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 6:51:07 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
n-Propylbenzene	1.61	1.00		µg/L	1	8/29/2019 6:51:07 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:50:00 PM

Project: Hoonah

Lab ID: 1908347-032

Matrix: Water

Client Sample ID: GPW-7

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 6:51:07 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 6:51:07 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 6:51:07 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 6:51:07 AM
Surr: Dibromofluoromethane	103	45.4 - 152		%Rec	1	8/29/2019 6:51:07 AM
Surr: Toluene-d8	99.7	40.1 - 139		%Rec	1	8/29/2019 6:51:07 AM
Surr: 1-Bromo-4-fluorobenzene	98.5	64.2 - 128		%Rec	1	8/29/2019 6:51:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
1,1,2-Trichloroethane	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
1,2-Dibromoethane (EDB)	ND	0.0100	I	µg/L	1	8/30/2019 12:44:54 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 12:44:54 PM
Surr: Dibromofluoromethane	0	68 - 140	S	%Rec	1	8/30/2019 12:44:54 PM
Surr: Toluene-d8	0	63.5 - 144	S	%Rec	1	8/30/2019 12:44:54 PM
Surr: 4-Bromofluorobenzene	116	55 - 134		%Rec	1	8/30/2019 12:44:54 PM

NOTES:

S - Outlying surrogate recovery(ies) observed, attributed to matrix.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	244	50.0		µg/L	1	8/29/2019 12:40:30 AM
Residual Range Organics (C25-C36)	ND	99.9		µg/L	1	8/29/2019 12:40:30 AM
Surr: 2-Fluorobiphenyl	93.3	50 - 150		%Rec	1	8/29/2019 12:40:30 AM
Surr: o-Terphenyl	94.5	50 - 150		%Rec	1	8/29/2019 12:40:30 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Acenaphthene	0.396	0.100		µg/L	1	8/27/2019 5:22:01 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 5:22:01 PM
Surr: 2-Fluorobiphenyl	106	42.6 - 159		%Rec	1	8/27/2019 5:22:01 PM
Surr: Terphenyl-d14	95.0	8.99 - 147		%Rec	1	8/27/2019 5:22:01 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 7:21:48 AM
Surr: Toluene-d8	99.0	65 - 135		%Rec	1	8/29/2019 7:21:48 AM
Surr: 4-Bromofluorobenzene	105	65 - 135		%Rec	1	8/29/2019 7:21:48 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 7:21:48 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:30:00 PM

Project: Hoonah

Lab ID: 1908347-033

Matrix: Water

Client Sample ID: GPW-8

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 7:21:48 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:21:48 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 7:21:48 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 7:21:48 AM
Surr: Dibromofluoromethane	104	45.4 - 152		%Rec	1	8/29/2019 7:21:48 AM
Surr: Toluene-d8	99.1	40.1 - 139		%Rec	1	8/29/2019 7:21:48 AM
Surr: 1-Bromo-4-fluorobenzene	102	64.2 - 128		%Rec	1	8/29/2019 7:21:48 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 1:19:51 PM
Surr: Dibromofluoromethane	105	68 - 140		%Rec	1	8/30/2019 1:19:51 PM
Surr: Toluene-d8	100	63.5 - 144		%Rec	1	8/30/2019 1:19:51 PM
Surr: 4-Bromofluorobenzene	103	55 - 134		%Rec	1	8/30/2019 1:19:51 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	49.6		µg/L	1	8/29/2019 1:10:31 AM
Residual Range Organics (C25-C36)	ND	99.2		µg/L	1	8/29/2019 1:10:31 AM
Surr: 2-Fluorobiphenyl	94.4	50 - 150		%Rec	1	8/29/2019 1:10:31 AM
Surr: o-Terphenyl	97.6	50 - 150		%Rec	1	8/29/2019 1:10:31 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
2-Methylnaphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
1-Methylnaphthalene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Acenaphthylene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Acenaphthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Fluorene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Phenanthrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benz(a)anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Chrysene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(b)fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(k)fluoranthene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(a)pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Indeno(1,2,3-cd)pyrene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Dibenz(a,h)anthracene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Benzo(g,h,i)perylene	ND	0.0993		µg/L	1	8/27/2019 5:42:54 PM
Surr: 2-Fluorobiphenyl	115	42.6 - 159		%Rec	1	8/27/2019 5:42:54 PM
Surr: Terphenyl-d14	99.3	8.99 - 147		%Rec	1	8/27/2019 5:42:54 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 7:52:29 AM
Surr: Toluene-d8	98.1	65 - 135		%Rec	1	8/29/2019 7:52:29 AM
Surr: 4-Bromofluorobenzene	98.8	65 - 135		%Rec	1	8/29/2019 7:52:29 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 7:52:29 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Bromomethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 7:52:29 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/21/2019 5:00:00 PM

Project: Hoonah

Lab ID: 1908347-034

Matrix: Water

Client Sample ID: GPW-9

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 7:52:29 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 7:52:29 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 7:52:29 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 7:52:29 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 7:52:29 AM
Surr: Toluene-d8	102	40.1 - 139		%Rec	1	8/29/2019 7:52:29 AM
Surr: 1-Bromo-4-fluorobenzene	96.4	64.2 - 128		%Rec	1	8/29/2019 7:52:29 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	249	50.0		µg/L	1	8/29/2019 1:40:23 AM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/29/2019 1:40:23 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/29/2019 1:40:23 AM
Surr: o-Terphenyl	97.5	50 - 150		%Rec	1	8/29/2019 1:40:23 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Acenaphthene	0.380	0.100		µg/L	1	8/27/2019 6:03:41 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:03:41 PM
Surr: 2-Fluorobiphenyl	102	42.6 - 159		%Rec	1	8/27/2019 6:03:41 PM
Surr: Terphenyl-d14	89.0	8.99 - 147		%Rec	1	8/27/2019 6:03:41 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 8:23:07 AM
Surr: Toluene-d8	97.2	65 - 135		%Rec	1	8/29/2019 8:23:07 AM
Surr: 4-Bromofluorobenzene	100	65 - 135		%Rec	1	8/29/2019 8:23:07 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 8:23:07 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 12:35:00 PM

Project: Hoonah

Lab ID: 1908347-035

Matrix: Water

Client Sample ID: GPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 8:23:07 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:23:07 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 8:23:07 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 8:23:07 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 8:23:07 AM
Surr: Toluene-d8	98.2	40.1 - 139		%Rec	1	8/29/2019 8:23:07 AM
Surr: 1-Bromo-4-fluorobenzene	97.6	64.2 - 128		%Rec	1	8/29/2019 8:23:07 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
1,1,2-Trichloroethane	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
1,2-Dibromoethane (EDB)	ND	0.0100	I	µg/L	1	8/30/2019 1:54:49 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 1:54:49 PM
Surr: Dibromofluoromethane	0	68 - 140	S	%Rec	1	8/30/2019 1:54:49 PM
Surr: Toluene-d8	0	63.5 - 144	S	%Rec	1	8/30/2019 1:54:49 PM
Surr: 4-Bromofluorobenzene	120	55 - 134		%Rec	1	8/30/2019 1:54:49 PM

NOTES:

S - Outlying surrogate recovery(ies) observed, attributed to matrix.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	50.0		µg/L	1	8/29/2019 2:10:14 AM
Residual Range Organics (C25-C36)	ND	100		µg/L	1	8/29/2019 2:10:14 AM
Surr: 2-Fluorobiphenyl	93.1	50 - 150		%Rec	1	8/29/2019 2:10:14 AM
Surr: o-Terphenyl	95.4	50 - 150		%Rec	1	8/29/2019 2:10:14 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:24:26 PM
Surr: 2-Fluorobiphenyl	114	42.6 - 159		%Rec	1	8/27/2019 6:24:26 PM
Surr: Terphenyl-d14	110	8.99 - 147		%Rec	1	8/27/2019 6:24:26 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 8:53:43 AM
Surr: Toluene-d8	97.7	65 - 135		%Rec	1	8/29/2019 8:53:43 AM
Surr: 4-Bromofluorobenzene	99.7	65 - 135		%Rec	1	8/29/2019 8:53:43 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 8:53:43 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:00:00 AM

Project: Hoonah

Lab ID: 1908347-036

Matrix: Water

Client Sample ID: TRPW-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 8:53:43 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 8:53:43 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 8:53:43 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 8:53:43 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 8:53:43 AM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	8/29/2019 8:53:43 AM
Surr: 1-Bromo-4-fluorobenzene	97.3	64.2 - 128		%Rec	1	8/29/2019 8:53:43 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 2:29:56 PM
Surr: Dibromofluoromethane	97.8	68 - 140		%Rec	1	8/30/2019 2:29:56 PM
Surr: Toluene-d8	90.0	63.5 - 144		%Rec	1	8/30/2019 2:29:56 PM
Surr: 4-Bromofluorobenzene	99.7	55 - 134		%Rec	1	8/30/2019 2:29:56 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	49.9		µg/L	1	8/29/2019 2:40:04 AM
Residual Range Organics (C25-C36)	ND	99.7		µg/L	1	8/29/2019 2:40:04 AM
Surr: 2-Fluorobiphenyl	92.6	50 - 150		%Rec	1	8/29/2019 2:40:04 AM
Surr: o-Terphenyl	95.8	50 - 150		%Rec	1	8/29/2019 2:40:04 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
2-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
1-Methylnaphthalene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Acenaphthylene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Acenaphthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Fluorene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Phenanthrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benz(a)anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Chrysene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(b)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(k)fluoranthene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(a)pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Indeno(1,2,3-cd)pyrene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Dibenz(a,h)anthracene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Benzo(g,h,i)perylene	ND	0.100		µg/L	1	8/27/2019 6:45:15 PM
Surr: 2-Fluorobiphenyl	105	42.6 - 159		%Rec	1	8/27/2019 6:45:15 PM
Surr: Terphenyl-d14	99.7	8.99 - 147		%Rec	1	8/27/2019 6:45:15 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 9:24:21 AM
Surr: Toluene-d8	101	65 - 135		%Rec	1	8/29/2019 9:24:21 AM
Surr: 4-Bromofluorobenzene	103	65 - 135		%Rec	1	8/29/2019 9:24:21 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 9:24:21 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:30:00 AM

Project: Hoonah

Lab ID: 1908347-037

Matrix: Water

Client Sample ID: TRPW-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 9:24:21 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:24:21 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 9:24:21 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 9:24:21 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 9:24:21 AM
Surr: Toluene-d8	100	40.1 - 139		%Rec	1	8/29/2019 9:24:21 AM
Surr: 1-Bromo-4-fluorobenzene	100	64.2 - 128		%Rec	1	8/29/2019 9:24:21 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 3:05:09 PM
Surr: Dibromofluoromethane	91.5	68 - 140		%Rec	1	8/30/2019 3:05:09 PM
Surr: Toluene-d8	89.8	63.5 - 144		%Rec	1	8/30/2019 3:05:09 PM
Surr: 4-Bromofluorobenzene	94.7	55 - 134		%Rec	1	8/30/2019 3:05:09 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Diesel and Heavy Oil by AK102-AK103

Batch ID: 25632

Analyst: DW

Diesel Range Organics (C10-C25)	ND	50.4		µg/L	1	8/29/2019 3:09:55 AM
Residual Range Organics (C25-C36)	ND	101		µg/L	1	8/29/2019 3:09:55 AM
Surr: 2-Fluorobiphenyl	103	50 - 150		%Rec	1	8/29/2019 3:09:55 AM
Surr: o-Terphenyl	110	50 - 150		%Rec	1	8/29/2019 3:09:55 AM

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Batch ID: 25627

Analyst: SB

Naphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
2-Methylnaphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
1-Methylnaphthalene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Acenaphthylene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Acenaphthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Fluorene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Phenanthrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benz(a)anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Chrysene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(b)fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(k)fluoranthene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(a)pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Indeno(1,2,3-cd)pyrene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Dibenz(a,h)anthracene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Benzo(g,h,i)perylene	ND	0.0999		µg/L	1	8/27/2019 7:05:57 PM
Surr: 2-Fluorobiphenyl	99.7	42.6 - 159		%Rec	1	8/27/2019 7:05:57 PM
Surr: Terphenyl-d14	103	8.99 - 147		%Rec	1	8/27/2019 7:05:57 PM

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics (C6-C10)	ND	50.0		µg/L	1	8/29/2019 9:55:02 AM
Surr: Toluene-d8	97.9	65 - 135		%Rec	1	8/29/2019 9:55:02 AM
Surr: 4-Bromofluorobenzene	102	65 - 135		%Rec	1	8/29/2019 9:55:02 AM

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 9:55:02 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM

Original



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/20/2019 8:45:00 AM

Project: Hoonah

Lab ID: 1908347-038

Matrix: Water

Client Sample ID: TRPW-A

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 9:55:02 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 9:55:02 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 9:55:02 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 9:55:02 AM
Surr: Dibromofluoromethane	105	45.4 - 152		%Rec	1	8/29/2019 9:55:02 AM
Surr: Toluene-d8	99.6	40.1 - 139		%Rec	1	8/29/2019 9:55:02 AM
Surr: 1-Bromo-4-fluorobenzene	99.2	64.2 - 128		%Rec	1	8/29/2019 9:55:02 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Volatile Organic Compounds by EPA Method 8260D SIM

Batch ID: 25673

Analyst: KT

Vinyl chloride	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
1,1,2-Trichloroethane	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
1,2-Dibromoethane (EDB)	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
Hexachlorobutadiene	ND	0.0100		µg/L	1	8/30/2019 3:40:22 PM
Surr: Dibromofluoromethane	92.1	68 - 140		%Rec	1	8/30/2019 3:40:22 PM
Surr: Toluene-d8	90.2	63.5 - 144		%Rec	1	8/30/2019 3:40:22 PM
Surr: 4-Bromofluorobenzene	99.0	55 - 134		%Rec	1	8/30/2019 3:40:22 PM



Analytical Report

Work Order: 1908347
Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908347-039

Matrix: Water

Client Sample ID: Trip Blank W1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Gasoline by NWTPH-Gx

Batch ID: 25645

Analyst: CR

Gasoline Range Organics C6-C10	ND	50.0		µg/L	1	8/29/2019 1:12:23 AM
Surr: Toluene-d8	97.6	65 - 135		%Rec	1	8/29/2019 1:12:23 AM
Surr: 4-Bromofluorobenzene	95.4	65 - 135		%Rec	1	8/29/2019 1:12:23 AM

NOTES:

GRO - Indicates the presence of unresolved compounds eluting from hexane to dodecane (~C6-C12).

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

Dichlorodifluoromethane (CFC-12)	ND	1.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Chloromethane	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
Vinyl chloride	ND	0.200		µg/L	1	8/29/2019 1:12:23 AM
Bromomethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Trichlorofluoromethane (CFC-11)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Chloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Methylene chloride	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Methyl tert-butyl ether (MTBE)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Chloroform	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,1-Trichloroethane (TCA)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Carbon tetrachloride	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichloroethane (EDC)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Benzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Trichloroethene (TCE)	ND	0.500		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromodichloromethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Dibromomethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
cis-1,3-Dichloropropene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Toluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
trans-1,3-Dichloropropylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3-Dichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Dibromochloromethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dibromoethane (EDB)	ND	0.250		µg/L	1	8/29/2019 1:12:23 AM
Chlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM

Original



Analytical Report

Work Order: 1908347

Date Reported: 9/12/2019

Client: G-Logics

Collection Date: 8/15/2019 10:00:00 AM

Project: Hoonah

Lab ID: 1908347-039

Matrix: Water

Client Sample ID: Trip Blank W1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed

Volatile Organic Compounds by EPA Method 8260D

Batch ID: 25645

Analyst: CR

1,1,1,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Ethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
m,p-Xylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
o-Xylene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Styrene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Isopropylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromoform	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
n-Propylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Bromobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3,5-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
2-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
4-Chlorotoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
tert-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,3-Trichloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,4-Trichlorobenzene	ND	2.00		µg/L	1	8/29/2019 1:12:23 AM
sec-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
4-Isopropyltoluene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,3-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
n-Butylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
1,2,4-Trimethylbenzene	ND	1.00		µg/L	1	8/29/2019 1:12:23 AM
Hexachloro-1,3-butadiene	ND	4.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Naphthalene	ND	1.00	Q	µg/L	1	8/29/2019 1:12:23 AM
1,2,3-Trichlorobenzene	ND	4.00	Q	µg/L	1	8/29/2019 1:12:23 AM
Surr: Dibromofluoromethane	102	45.4 - 152		%Rec	1	8/29/2019 1:12:23 AM
Surr: Toluene-d8	101	40.1 - 139		%Rec	1	8/29/2019 1:12:23 AM
Surr: 1-Bromo-4-fluorobenzene	93.0	64.2 - 128		%Rec	1	8/29/2019 1:12:23 AM

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25634		SampType: MBLK		Units: mg/Kg		Prep Date: 8/27/2019			RunNo: 53548			
Client ID: MBLKS		Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059903		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	16.6		20.00		82.8	60	120				
Surr: o-Terphenyl	18.1		20.00		90.4	60	120				

Sample ID: LCS-25634		SampType: LCS			Units: mg/Kg		Prep Date: 8/27/2019			RunNo: 53548		
Client ID: LCSS		Batch ID: 25634			Analysis Date: 8/27/2019			SeqNo: 1059904				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	459	20.0	500.0	0	91.9	75	125				
Surr: 2-Fluorobiphenyl	19.2		20.00		95.8	60	120				
Surr: o-Terphenyl	19.2		20.00		96.2	60	120				

Sample ID: 1908347-003ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-19-4'		Batch ID: 25634			Analysis Date: 8/27/2019			SeqNo: 1059906				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.6						0		30	
Residual Range Organics (C25-C36)	ND	51.6						0		30	
Surr: 2-Fluorobiphenyl	16.9		20.63		81.8	50	150		0		
Surr: o-Terphenyl	18.7		20.63		90.7	50	150		0		

Sample ID: 1908347-003AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/27/2019		RunNo: 53548		
Client ID: GLB-19-4'		Batch ID: 25634			Analysis Date: 8/27/2019				SeqNo: 1059907		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	540	20.5	512.8	11.97	103	75	125				
Surr: 2-Fluorobiphenyl	21.0		20.51		103	50	150				
Surr: o-Terphenyl	21.7		20.51		106	50	150				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908347-003AMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/27/2019		RunNo: 53548			
Client ID: GLB-19-4'		Batch ID: 25634				Analysis Date: 8/27/2019		SeqNo: 1059907			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1908347-003AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-19-4'	Batch ID: 25634					Analysis Date: 8/27/2019			SeqNo: 1059908		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	476	19.0	474.3	11.97	97.8	75	125	540.0	12.6	30	
Surr: 2-Fluorobiphenyl	18.5		18.97		97.4	50	150		0		
Surr: o-Terphenyl	18.6		18.97		98.0	50	150		0		

Sample ID: 1908347-013ADUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 8/27/2019			RunNo: 53548		
Client ID: GLB-23-5'	Batch ID: 25634					Analysis Date: 8/28/2019			SeqNo: 1059919		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	226	22.8						377.2	50.2	30	R
Residual Range Organics (C25-C36)	ND	57.0						0		30	
Surr: 2-Fluorobiphenyl	19.6		22.80		85.9	50	150		0		
Surr: o-Terphenyl	20.9		22.80		91.7	50	150		0		

NOTES:

R - High RPD observed. The method is in control as indicated by the LCS.

Sample ID: MB-25642		SampType: MBLK		Units: mg/Kg		Prep Date: 8/28/2019			RunNo: 53575		
Client ID: MBLKS		Batch ID: 25642					Analysis Date: 8/28/2019			SeqNo: 1060628	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	13.4		20.00		67.0	60	120				
Surr: o-Terphenyl	14.8		20.00		73.8	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: LCS-25642		SampType: LCS			Units: mg/Kg		Prep Date: 8/28/2019			RunNo: 53575		
Client ID: LCSS		Batch ID: 25642			Analysis Date: 8/28/2019			SeqNo: 1060629				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

474

20.0

500.0

0

94.7

75

125

Surr: 2-Fluorobiphenyl

15.4

20.00

76.8

60

120

Surr: o-Terphenyl

15.8

20.00

78.9

60

120

Sample ID: 1908347-024ADUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53575		
Client ID: TRB-8-6'		Batch ID: 25642					Analysis Date: 8/29/2019			SeqNo: 1060632	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

ND

21.7

0

30

Residual Range Organics (C25-C36)

ND

54.2

0

30

Surr: 2-Fluorobiphenyl

14.3

21.66

66.1

50

150

0

Surr: o-Terphenyl

16.1

21.66

74.4

50

150

0

Sample ID: 1908347-024AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/28/2019		RunNo: 53575		
Client ID: TRB-8-6'		Batch ID: 25642			Analysis Date: 8/29/2019				SeqNo: 1060633		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

511

20.2

504.5

16.35

98.1

75

125

Surr: 2-Fluorobiphenyl

14.7

20.18

72.8

50

150

Surr: o-Terphenyl

15.2

20.18

75.5

50

150

Sample ID: 1908347-024AMSD		SampType: MSD			Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53575		
Client ID: TRB-8-6'		Batch ID: 25642			Analysis Date: 8/29/2019			SeqNo: 1060634				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

524

21.0

523.9

16.35

96.8

75

125

511.1

2.44

30

Surr: 2-Fluorobiphenyl

15.4

20.96

73.5

50

150

0

Surr: o-Terphenyl

16.1

20.96

76.8

50

150

0

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25660		SampType: MBLK		Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588			
Client ID: MBLKS		Batch ID: 25660					Analysis Date: 8/29/2019			SeqNo: 1060875		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	14.4		20.00		71.8	60	120				
Surr: o-Terphenyl	16.2		20.00		80.8	60	120				

Sample ID: LCS-25660		SampType: LCS			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: LCSS		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060876				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	489	20.0	500.0	0	97.7	75	125				
Surr: 2-Fluorobiphenyl	14.7		20.00		73.7	60	120				
Surr: o-Terphenyl	16.5		20.00		82.5	60	120				

Sample ID: 1908382-001ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019					SeqNo: 1060878		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	19.7						0		30	
Residual Range Organics (C25-C36)	ND	49.1						0		30	
Surr: 2-Fluorobiphenyl	13.5		19.66		68.8	50	150		0		
Surr: o-Terphenyl	15.2		19.66		77.4	50	150		0		

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019				SeqNo: 1060879		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)	475	19.5	488.7	8.611	95.4	75	125				
Surr: 2-Fluorobiphenyl	15.9		19.55		81.2	50	150				
Surr: o-Terphenyl	16.1		19.55		82.1	50	150				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908382-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH		Batch ID: 25660			Analysis Date: 8/29/2019			SeqNo: 1060879				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: 1908382-001AMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/29/2019			RunNo: 53588		
Client ID: BATCH	Batch ID: 25660					Analysis Date: 8/29/2019			SeqNo: 1060880		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	512	19.6	490.0	8.611	103	75	125	474.7	7.55	30	
Surr: 2-Fluorobiphenyl	14.9		19.60		76.1	50	150		0		
Surr: o-Terphenyl	16.2		19.60		82.7	50	150		0		

Sample ID: 1908349-009ADUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53588			
Client ID: BATCH	Batch ID: 25660				Analysis Date: 8/29/2019			SeqNo: 1060883			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	22.6						0		30	
Residual Range Organics (C25-C36)	ND	56.4						0		30	
Surr: 2-Fluorobiphenyl	21.5		22.55		95.3	50	150		0		
Surr: o-Terphenyl	23.9		22.55		106	50	150		0		

Sample ID: MB-25727	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53760			
Client ID: MBLKS	Batch ID: 25727				Analysis Date: 9/9/2019			SeqNo: 1064007			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	ND	20.0									
Residual Range Organics (C25-C36)	ND	50.0									
Surr: 2-Fluorobiphenyl	19.5		20.00		97.7	60	120				
Surr: o-Terphenyl	20.2		20.00		101	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: LCS-25727		SampType: LCS			Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53760		
Client ID: LCSS		Batch ID: 25727			Analysis Date: 9/9/2019					SeqNo: 1064008		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)

606

20.0

500.0

0

121

75

125

Surr: 2-Fluorobiphenyl

24.1

20.00

120

60

120

Surr: o-Terphenyl

23.2

20.00

116

60

120

Sample ID: 1908347-002ADUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53760		
Client ID: GLB-19-2'		Batch ID: 25727			Analysis Date: 9/9/2019				SeqNo: 1064010		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

54.5

21.0

32.43

50.7

30

RH

Residual Range Organics (C25-C36)

ND

52.4

0

30

H

Surr: 2-Fluorobiphenyl

22.2

20.98

106

50

150

0

H

Surr: o-Terphenyl

23.1

20.98

110

50

150

0

H

NOTES:

R - High RPD due to suspected sample inhomogeneity.

Sample ID: 1909007-001AMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53760		
Client ID: BATCH		Batch ID: 25727			Analysis Date: 9/9/2019				SeqNo: 1064012		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C25)

5,170

23.9

598.0

5,513

-56.5

75

125

SE

Surr: 2-Fluorobiphenyl

79.3

23.92

331

50

150

S

Surr: o-Terphenyl

37.6

23.92

157

50

150

S

NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1909007-001AMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53760		
Client ID: BATCH		Batch ID: 25727		Analysis Date: 9/9/2019					SeqNo: 1064013		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C25)	4,040	23.4	585.4	5,513	-251	75	125	5,175	24.6	30	SE
Surr: 2-Fluorobiphenyl	61.2		23.42		261	50	150		0		S
Surr: o-Terphenyl	27.4		23.42		117	50	150		0		

NOTES:

S - Analyte concentration was too high for accurate spike recovery(ies).

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

E - Estimated value. The amount exceeds the linear working range of the instrument.



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: MB-25632		SampType: MBLK			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: MBLKW		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060156				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	ND	49.5									
Residual Range Organics (C25-C36)	ND	99.1									
Surr: 2-Fluorobiphenyl	71.5		79.26		90.2	60	120				
Surr: o-Terphenyl	76.4		79.26		96.4	60	120				

Sample ID: LCS-25632		SampType: LCS			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: LCSW		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060157				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	1,130	50.3	1,007	0	112	75	125				
Surr: 2-Fluorobiphenyl	86.3		80.55		107	60	120				
Surr: o-Terphenyl	82.9		80.55		103	60	120				

Sample ID: 1908325-001ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: BATCH		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060159				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	214	56.4						150.3	35.1	30	R
Residual Range Organics (C25-C36)	118	113						78.02	40.5	30	
Surr: 2-Fluorobiphenyl	56.5		90.18		62.7	50	150		0		
Surr: o-Terphenyl	18.6		90.18		20.6	50	150		0		S

NOTES:

R - High RPD observed.

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908347-026BDUP		SampType: DUP			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632						Analysis Date: 8/28/2019			SeqNo: 1060161	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	1,150	49.8						1,276	10.7	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Diesel and Heavy Oil by AK102-AK103

Sample ID: 1908347-026BDUP		SampType: DUP		Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560			
Client ID: GPW-1		Batch ID: 25632					Analysis Date: 8/28/2019			SeqNo: 1060161		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Residual Range Organics (C25-C36)	ND	99.5						135.3	43.9	30	
Surr: 2-Fluorobiphenyl	66.3		79.63		83.2	50	150		0		
Surr: o-Terphenyl	67.1		79.63		84.3	50	150		0		

Sample ID: 1908347-026BMS		SampType: MS			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060162				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	2,090	50.2	1,005	1,276	81.1	75	125				
Surr: 2-Fluorobiphenyl	75.8		80.37		94.3	50	150				
Surr: o-Terphenyl	71.5		80.37		88.9	50	150				

Sample ID: 1908347-026BMSD		SampType: MSD			Units: µg/L		Prep Date: 8/27/2019			RunNo: 53560		
Client ID: GPW-1		Batch ID: 25632			Analysis Date: 8/28/2019			SeqNo: 1060163				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Diesel Range Organics (C10-C25)	2,130	49.5	990.2	1,276	86.3	75	125	2,090	1.91	30	
Surr: 2-Fluorobiphenyl	76.4		79.22		96.5	50	150		0	0	
Surr: o-Terphenyl	68.8		79.22		86.8	50	150		0	0	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: LCS-25663		SampType: LCS			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: LCSS		Batch ID: 25663			Analysis Date: 9/3/2019					SeqNo: 1062663		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

108

25.0

125.0

0

86.8

60

120

Surr: 1,4-Difluorobenzene

13.5

12.50

108

60

120

Surr: 4-Bromofluorobenzene

12.5

12.50

99.8

60

120

Sample ID: MB-25663		SampType: MBLK			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: MBLKS		Batch ID: 25663			Analysis Date: 9/3/2019					SeqNo: 1062664		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

ND

25.0

Surr: 1,4-Difluorobenzene

12.7

12.50

102

60

120

Surr: 4-Bromofluorobenzene

12.8

12.50

103

60

120

Sample ID: 1908347-007BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: GLB-20-4'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062642	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)

ND

2.29

0

20

Surr: 1,4-Difluorobenzene

1.16

1.145

101

50

150

0

Surr: 4-Bromofluorobenzene

3.03

3.436

88.2

50

150

0

Sample ID: 1908347-017BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53676		
Client ID: TRB-5-11'		Batch ID: 25663			Analysis Date: 9/4/2019				SeqNo: 1062653		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)

296

24.9

278.9

6.04

20

D

Surr: 1,4-Difluorobenzene

13.1

12.44

105

50

150

0

D

Surr: 4-Bromofluorobenzene

15.0

14.93

101

50

150

0

D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: 1908347-022BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: TRB-7-8'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062658	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	173	4.23	21.14	145.9	127	60	120				SE
Surr: 1,4-Difluorobenzene	2.42		2.114		114	60	120				
Surr: 4-Bromofluorobenzene	6.77		6.343		107	60	120				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: 1908347-022BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53676		
Client ID: TRB-7-8'		Batch ID: 25663					Analysis Date: 9/4/2019			SeqNo: 1062659	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10)	170	4.23	21.14	145.9	113	60	120	172.8	1.77	20	E
Surr: 1,4-Difluorobenzene	2.42		2.114		115	60	120		0		
Surr: 4-Bromofluorobenzene	6.64		6.343		105	60	120		0		

NOTES:

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: LCS-25719		SampType: LCS			Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: LCSS		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063235				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)	28.2	5.00	25.00	0	113	60	120				
Surr: 1,4-Difluorobenzene	2.66		2.500		106	60	120				
Surr: 4-Bromofluorobenzene	2.56		2.500		102	60	120				

Sample ID: MB-25719		SampType: MBLK		Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713			
Client ID: MBLKS		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063236		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)	ND	5.00									
Surr: 1,4-Difluorobenzene	2.90		2.500		116	60	120				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: MB-25719		SampType: MBLK		Units: mg/Kg		Prep Date: 9/5/2019			RunNo: 53713			
Client ID: MBLKS		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063236		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Surr: 4-Bromofluorobenzene 2.78 2.500 111 60 120

Sample ID: 1908347-002BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: GLB-19-2'		Batch ID: 25719					Analysis Date: 9/5/2019			SeqNo: 1063210	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline Range Organics (C6-C10) ND 2.55 0 20

Surr: 1,4-Difluorobenzene 1.47 1.274 115 50 150 0

Surr: 4-Bromofluorobenzene 3.68 3.822 96.4 50 150 0

Sample ID: 1908349-005BDUP		SampType: DUP			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH		Batch ID: 25719			Analysis Date: 9/5/2019			SeqNo: 1063219				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 4.18 3.37 4.786 13.5 20

Surr: 1,4-Difluorobenzene 1.82 1.685 108 50 150 0

Surr: 4-Bromofluorobenzene 4.53 5.055 89.5 50 150 0

Sample ID: 1908349-020BMS		SampType: MS			Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH		Batch ID: 25719			Analysis Date: 9/6/2019			SeqNo: 1063231				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10) 31.4 3.90 19.48 7.691 122 60 120 S

Surr: 1,4-Difluorobenzene 2.45 1.948 126 60 120 S

Surr: 4-Bromofluorobenzene 6.56 5.845 112 60 120

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed and recovered within range.

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: 1908349-020BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/5/2019			RunNo: 53713		
Client ID: BATCH		Batch ID: 25719		Analysis Date: 9/6/2019					SeqNo: 1063232		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (C6-C10)	29.6	3.90	19.48	7.691	112	60	120	31.44	6.06	20	
Surr: 1,4-Difluorobenzene	2.67		1.948		137	60	120		0		S
Surr: 4-Bromofluorobenzene	6.20		5.845		106	60	120		0		

NOTES:

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline Range Organics by AK101

Sample ID: LCS-25714		SampType: LCS			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: LCSW		Batch ID: 25714			Analysis Date: 9/4/2019			SeqNo: 1062590				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

485

50.0

500.0

0

97.1

60

120

Surr: 1,4-Difluorobenzene

53.9

50.00

108

60

120

Surr: 4-Bromofluorobenzene

49.6

50.00

99.3

60

120

Sample ID: LCSD-25714		SampType: LCSD			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: LCSW02		Batch ID: 25714			Analysis Date: 9/4/2019			SeqNo: 1062591				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

431

50.0

500.0

0

86.1

60

120

485.3

12.0

20

Surr: 1,4-Difluorobenzene

54.3

50.00

109

60

120

0

Surr: 4-Bromofluorobenzene

48.4

50.00

96.8

60

120

0

Sample ID: MB-25714		SampType: MBLK			Units: µg/L		Prep Date: 9/5/2019			RunNo: 53675		
Client ID: MBLKW		Batch ID: 25714			Analysis Date: 9/4/2019					SeqNo: 1062592		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline Range Organics (C6-C10)

ND

50.0

Surr: 1,4-Difluorobenzene

49.9

50.00

99.8

60

120

Surr: 4-Bromofluorobenzene

47.2

50.00

94.4

60

120

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25635	SampType: MBLK	Units: µg/Kg			Prep Date: 8/27/2019			RunNo: 53572			
Client ID: MBLKS	Batch ID: 25635	Analysis Date: 8/28/2019						SeqNo: 1060557			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	540		500.0		108	24.4	151				
Surr: Terphenyl-d14 (surr)	680		500.0		136	31.4	162				

Sample ID: LCS-25635	SampType: LCS	Units: µg/Kg			Prep Date: 8/27/2019			RunNo: 53572			
Client ID: LCSS	Batch ID: 25635				Analysis Date: 8/28/2019			SeqNo: 1060558			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	874	40.0	1,000	0	87.4	63.6	135				
2-Methylnaphthalene	895	40.0	1,000	0	89.5	61.5	140				
1-Methylnaphthalene	852	40.0	1,000	0	85.2	59.6	140				
Acenaphthylene	842	40.0	1,000	0	84.2	61.2	141				
Acenaphthene	874	40.0	1,000	0	87.4	62.3	134				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25635	SampType: LCS	Units: µg/Kg				Prep Date: 8/27/2019			RunNo: 53572		
Client ID: LCSS	Batch ID: 25635	Analysis Date: 8/28/2019							SeqNo: 1060558		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	908	40.0	1,000	0	90.8	64.1	134				
Phenanthrene	854	40.0	1,000	0	85.4	63.2	132				
Anthracene	907	40.0	1,000	0	90.7	61.5	136				
Fluoranthene	922	40.0	1,000	0	92.2	63.1	140				
Pyrene	914	40.0	1,000	0	91.4	63.4	140				
Benz(a)anthracene	932	40.0	1,000	0	93.2	62.7	148				
Chrysene	899	40.0	1,000	0	89.9	60.5	142				
Benzo(b)fluoranthene	913	40.0	1,000	0	91.3	55.8	158				
Benzo(k)fluoranthene	948	40.0	1,000	0	94.8	64	136				
Benzo(a)pyrene	940	40.0	1,000	0	94.0	61.9	151				
Indeno(1,2,3-cd)pyrene	792	40.0	1,000	0	79.2	48.3	147				
Dibenz(a,h)anthracene	797	40.0	1,000	0	79.7	47.9	150				
Benzo(g,h,i)perylene	753	40.0	1,000	0	75.3	44.4	144				
Surr: 2-Fluorobiphenyl	535		500.0		107	24.4	151				
Surr: Terphenyl-d14 (surr)	671		500.0		134	31.4	162				

Sample ID: 1908347-003ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060579	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	41.5						0		30	
2-Methylnaphthalene	ND	41.5						0		30	
1-Methylnaphthalene	ND	41.5						0		30	
Acenaphthylene	ND	41.5						0		30	
Acenaphthene	ND	41.5						0		30	
Fluorene	ND	41.5						0		30	
Phenanthrene	ND	41.5						0		30	
Anthracene	ND	41.5						0		30	
Fluoranthene	ND	41.5						0		30	
Pyrene	ND	41.5						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060579	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	41.5						0		30	
Chrysene	ND	41.5						0		30	
Benzo(b)fluoranthene	ND	41.5						0		30	
Benzo(k)fluoranthene	ND	41.5						0		30	
Benzo(a)pyrene	ND	41.5						0		30	
Indeno(1,2,3-cd)pyrene	ND	41.5						0		30	
Dibenz(a,h)anthracene	ND	41.5						0		30	
Benzo(g,h,i)perylene	ND	41.5						0		30	
Surr: 2-Fluorobiphenyl	500		519.1		96.4	24.4	151		0		
Surr: Terphenyl-d14 (surr)	624		519.1		120	31.4	162		0		

Sample ID: 1908347-003AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060580	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	738	40.5	1,012	9.546	72.0	37	127				
2-Methylnaphthalene	790	40.5	1,012	5.648	77.5	38.9	128				
1-Methylnaphthalene	745	40.5	1,012	0	73.6	36.2	129				
Acenaphthylene	765	40.5	1,012	0	75.5	39	132				
Acenaphthene	731	40.5	1,012	1.763	72.0	39.5	124				
Fluorene	778	40.5	1,012	4.186	76.5	38.3	128				
Phenanthrene	739	40.5	1,012	12.24	71.8	29.2	132				
Anthracene	753	40.5	1,012	6.758	73.7	38.8	128				
Fluoranthene	861	40.5	1,012	15.64	83.5	38.4	135				
Pyrene	836	40.5	1,012	9.499	81.7	37.8	134				
Benz(a)anthracene	880	40.5	1,012	14.14	85.6	39.2	143				
Chrysene	777	40.5	1,012	15.31	75.2	35.9	131				
Benzo(b)fluoranthene	777	40.5	1,012	19.07	74.9	36.3	148				
Benzo(k)fluoranthene	821	40.5	1,012	16.35	79.5	31.2	133				
Benzo(a)pyrene	848	40.5	1,012	10.53	82.8	35.9	144				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003AMS	SampType: MS	Units: µg/Kg-dry				Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'	Batch ID: 25635					Analysis Date: 8/28/2019			SeqNo: 1060580		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	657	40.5	1,012	7.456	64.1	25.3	131				
Dibenz(a,h)anthracene	634	40.5	1,012	0	62.6	27.4	132				
Benzo(g,h,i)perylene	604	40.5	1,012	7.024	58.9	20.1	128				
Surr: 2-Fluorobiphenyl	559		506.1		111	24.4	151				
Surr: Terphenyl-d14 (surr)	629		506.1		124	31.4	162				

Sample ID: 1908347-003AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572			
Client ID: GLB-19-4'		Batch ID: 25635		Analysis Date: 8/28/2019							SeqNo: 1060581	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	793	43.0	1,075	9.546	72.8	37	127	738.3	7.09	30		
2-Methylnaphthalene	767	43.0	1,075	5.648	70.8	38.9	128	789.9	2.88	30		
1-Methylnaphthalene	800	43.0	1,075	0	74.4	36.2	129	745.1	7.08	30		
Acenaphthylene	836	43.0	1,075	0	77.8	39	132	764.5	8.94	30		
Acenaphthene	811	43.0	1,075	1.763	75.3	39.5	124	730.8	10.4	30		
Fluorene	849	43.0	1,075	4.186	78.6	38.3	128	778.0	8.77	30		
Phenanthrene	779	43.0	1,075	12.24	71.3	29.2	132	739.4	5.26	30		
Anthracene	855	43.0	1,075	6.758	78.9	38.8	128	752.7	12.7	30		
Fluoranthene	901	43.0	1,075	15.64	82.3	38.4	135	860.5	4.57	30		
Pyrene	884	43.0	1,075	9.499	81.3	37.8	134	836.0	5.53	30		
Benz(a)anthracene	928	43.0	1,075	14.14	85.0	39.2	143	880.4	5.23	30		
Chrysene	836	43.0	1,075	15.31	76.3	35.9	131	776.6	7.38	30		
Benzo(b)fluoranthene	801	43.0	1,075	19.07	72.7	36.3	148	777.3	2.95	30		
Benzo(k)fluoranthene	870	43.0	1,075	16.35	79.4	31.2	133	820.6	5.81	30		
Benzo(a)pyrene	878	43.0	1,075	10.53	80.6	35.9	144	848.1	3.41	30		
Indeno(1,2,3-cd)pyrene	674	43.0	1,075	7.456	62.0	25.3	131	656.7	2.56	30		
Dibenz(a,h)anthracene	663	43.0	1,075	0	61.6	27.4	132	633.7	4.44	30		
Benzo(g,h,i)perylene	662	43.0	1,075	7.024	60.9	20.1	128	603.6	9.15	30		
Surr: 2-Fluorobiphenyl	587		537.6		109	24.4	151		0			
Surr: Terphenyl-d14 (surr)	676		537.6		126	31.4	162		0			

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-003AMSD		SampType: MSD			Units: µg/Kg-dry		Prep Date: 8/27/2019			RunNo: 53572		
Client ID: GLB-19-4'		Batch ID: 25635			Analysis Date: 8/28/2019			SeqNo: 1060581				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: MB-25641		SampType: MBLK		Units: µg/Kg		Prep Date: 8/28/2019			RunNo: 53586			
Client ID: MBLKS		Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060814		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	567		500.0		113	24.4	151				
Surr: Terphenyl-d14 (surr)	630		500.0		126	31.4	162				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25641	SampType: LCS	Units: µg/Kg				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: LCSS	Batch ID: 25641	Analysis Date: 8/29/2019						SeqNo: 1060815			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	826	40.0	1,000	0	82.6	63.6	135				
2-Methylnaphthalene	827	40.0	1,000	0	82.7	61.5	140				
1-Methylnaphthalene	792	40.0	1,000	0	79.2	59.6	140				
Acenaphthylene	830	40.0	1,000	0	83.0	61.2	141				
Acenaphthene	809	40.0	1,000	0	80.9	62.3	134				
Fluorene	860	40.0	1,000	0	86.0	64.1	134				
Phenanthrene	800	40.0	1,000	0	80.0	63.2	132				
Anthracene	846	40.0	1,000	0	84.6	61.5	136				
Fluoranthene	879	40.0	1,000	0	87.9	63.1	140				
Pyrene	867	40.0	1,000	0	86.7	63.4	140				
Benz(a)anthracene	819	40.0	1,000	0	81.9	62.7	148				
Chrysene	865	40.0	1,000	0	86.5	60.5	142				
Benzo(b)fluoranthene	877	40.0	1,000	0	87.7	55.8	158				
Benzo(k)fluoranthene	820	40.0	1,000	0	82.0	64	136				
Benzo(a)pyrene	900	40.0	1,000	0	90.0	61.9	151				
Indeno(1,2,3-cd)pyrene	820	40.0	1,000	0	82.0	48.3	147				
Dibenz(a,h)anthracene	806	40.0	1,000	0	80.6	47.9	150				
Benzo(g,h,i)perylene	782	40.0	1,000	0	78.2	44.4	144				
Surr: 2-Fluorobiphenyl	610		500.0		122	24.4	151				
Surr: Terphenyl-d14 (surr)	699		500.0		140	31.4	162				

Sample ID: 1908347-023ADUP		SampType: DUP		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'		Batch ID: 25641				Analysis Date: 8/29/2019			SeqNo: 1060817		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	44.4						0		30	
2-Methylnaphthalene	ND	44.4						0		30	
1-Methylnaphthalene	ND	44.4						0		30	
Acenaphthylene	ND	44.4						0		30	
Acenaphthene	ND	44.4						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023ADUP	SampType: DUP	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641	Analysis Date: 8/29/2019						SeqNo: 1060817			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	ND	44.4						0		30	
Phenanthrene	ND	44.4						0		30	
Anthracene	ND	44.4						0		30	
Fluoranthene	ND	44.4						0		30	
Pyrene	ND	44.4						0		30	
Benz(a)anthracene	ND	44.4						0		30	
Chrysene	ND	44.4						0		30	
Benzo(b)fluoranthene	ND	44.4						0		30	
Benzo(k)fluoranthene	ND	44.4						0		30	
Benzo(a)pyrene	ND	44.4						0		30	
Indeno(1,2,3-cd)pyrene	ND	44.4						0		30	
Dibenz(a,h)anthracene	ND	44.4						0		30	
Benzo(g,h,i)perylene	ND	44.4						0		30	
Surr: 2-Fluorobiphenyl	559		555.2		101	24.4	151		0		
Surr: Terphenyl-d14 (surr)	711		555.2		128	31.4	162		0		

Sample ID: 1908347-023AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53586			
Client ID: TRB-7-9'		Batch ID: 25641		Analysis Date: 8/29/2019							SeqNo: 1060818	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	839	44.5	1,111	10.92	74.5	37	127					
2-Methylnaphthalene	770	44.5	1,111	3.841	69.0	38.9	128					
1-Methylnaphthalene	794	44.5	1,111	0	71.5	36.2	129					
Acenaphthylene	833	44.5	1,111	0	74.9	39	132					
Acenaphthene	825	44.5	1,111	0	74.3	39.5	124					
Fluorene	904	44.5	1,111	6.373	80.8	38.3	128					
Phenanthrene	852	44.5	1,111	25.14	74.4	29.2	132					
Anthracene	877	44.5	1,111	7.251	78.3	38.8	128					
Fluoranthene	935	44.5	1,111	0	84.1	38.4	135					
Pyrene	898	44.5	1,111	0	80.8	37.8	134					

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMS	SampType: MS	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060818		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	865	44.5	1,111	5.310	77.4	39.2	143				
Chrysene	888	44.5	1,111	6.013	79.3	35.9	131				
Benzo(b)fluoranthene	905	44.5	1,111	0	81.4	36.3	148				
Benzo(k)fluoranthene	780	44.5	1,111	10.16	69.3	31.2	133				
Benzo(a)pyrene	874	44.5	1,111	0	78.6	35.9	144				
Indeno(1,2,3-cd)pyrene	834	44.5	1,111	0	75.1	25.3	131				
Dibenz(a,h)anthracene	829	44.5	1,111	0	74.6	27.4	132				
Benzo(g,h,i)perylene	792	44.5	1,111	0	71.3	20.1	128				
Surr: 2-Fluorobiphenyl	592		555.7		106	24.4	151				
Surr: Terphenyl-d14 (surr)	720		555.7		130	31.4	162				

Sample ID: 1908347-023AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641	Analysis Date: 8/29/2019							SeqNo: 1060819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	615	38.8	969.6	10.92	62.3	37	127	839.4	30.9	30	R
2-Methylnaphthalene	626	38.8	969.6	3.841	64.2	38.9	128	770.4	20.7	30	
1-Methylnaphthalene	611	38.8	969.6	0	63.0	36.2	129	794.2	26.0	30	
Acenaphthylene	646	38.8	969.6	0	66.6	39	132	832.9	25.3	30	
Acenaphthene	616	38.8	969.6	0	63.5	39.5	124	825.4	29.1	30	
Fluorene	656	38.8	969.6	6.373	67.0	38.3	128	904.4	31.8	30	R
Phenanthrene	616	38.8	969.6	25.14	60.9	29.2	132	851.6	32.2	30	R
Anthracene	668	38.8	969.6	7.251	68.2	38.8	128	877.2	27.0	30	
Fluoranthene	682	38.8	969.6	0	70.3	38.4	135	934.7	31.2	30	R
Pyrene	660	38.8	969.6	0	68.0	37.8	134	898.1	30.6	30	R
Benz(a)anthracene	623	38.8	969.6	5.310	63.7	39.2	143	865.4	32.6	30	R
Chrysene	678	38.8	969.6	6.013	69.3	35.9	131	887.9	26.8	30	
Benzo(b)fluoranthene	624	38.8	969.6	0	64.3	36.3	148	904.9	36.8	30	R
Benzo(k)fluoranthene	711	38.8	969.6	10.16	72.3	31.2	133	780.5	9.31	30	
Benzo(a)pyrene	704	38.8	969.6	0	72.6	35.9	144	873.8	21.5	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-023AMSD	SampType: MSD	Units: µg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53586		
Client ID: TRB-7-9'	Batch ID: 25641					Analysis Date: 8/29/2019			SeqNo: 1060819		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	563	38.8	969.6	0	58.0	25.3	131	834.4	38.9	30	R
Dibenz(a,h)anthracene	564	38.8	969.6	0	58.1	27.4	132	829.2	38.1	30	R
Benzo(g,h,i)perylene	530	38.8	969.6	0	54.6	20.1	128	792.0	39.7	30	R
Surr: 2-Fluorobiphenyl	449		484.8		92.5	24.4	151		0		
Surr: Terphenyl-d14 (surr)	533		484.8		110	31.4	162		0		

NOTES:

R - High RPD observed, spike recovery is within range.

Sample ID: MB-25728	SampType: MBLK	Units: µg/Kg			Prep Date: 9/6/2019			RunNo: 53737			
Client ID: MBLKS	Batch ID: 25728				Analysis Date: 9/6/2019			SeqNo: 1063667			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	40.0									
2-Methylnaphthalene	ND	40.0									
1-Methylnaphthalene	ND	40.0									
Acenaphthylene	ND	40.0									
Acenaphthene	ND	40.0									
Fluorene	ND	40.0									
Phenanthrene	ND	40.0									
Anthracene	ND	40.0									
Fluoranthene	ND	40.0									
Pyrene	ND	40.0									
Benz(a)anthracene	ND	40.0									
Chrysene	ND	40.0									
Benzo(b)fluoranthene	ND	40.0									
Benzo(k)fluoranthene	ND	40.0									
Benzo(a)pyrene	ND	40.0									
Indeno(1,2,3-cd)pyrene	ND	40.0									
Dibenz(a,h)anthracene	ND	40.0									
Benzo(g,h,i)perylene	ND	40.0									
Surr: 2-Fluorobiphenyl	326		500.0		65.2	24.4	151				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25728		SampType: MBLK		Units: µg/Kg		Prep Date: 9/6/2019		RunNo: 53737			
Client ID: MBLKS		Batch ID: 25728				Analysis Date: 9/6/2019		SeqNo: 1063667			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Terphenyl-d14 (surr)	483		500.0		96.7	31.4	162				

Sample ID: LCS-25728	SampType: LCS	Units: µg/Kg			Prep Date: 9/6/2019			RunNo: 53737			
Client ID: LCSS	Batch ID: 25728	Analysis Date: 9/6/2019						SeqNo: 1063668			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	896	40.0	1,000	0	89.6	63.6	135				
2-Methylnaphthalene	889	40.0	1,000	0	88.9	61.5	140				
1-Methylnaphthalene	871	40.0	1,000	0	87.1	59.6	140				
Acenaphthylene	904	40.0	1,000	0	90.4	61.2	141				
Acenaphthene	894	40.0	1,000	0	89.4	62.3	134				
Fluorene	901	40.0	1,000	0	90.1	64.1	134				
Phenanthrene	892	40.0	1,000	0	89.2	63.2	132				
Anthracene	903	40.0	1,000	0	90.3	61.5	136				
Fluoranthene	882	40.0	1,000	0	88.2	63.1	140				
Pyrene	898	40.0	1,000	0	89.8	63.4	140				
Benz(a)anthracene	990	40.0	1,000	0	99.0	62.7	148				
Chrysene	903	40.0	1,000	0	90.3	60.5	142				
Benzo(b)fluoranthene	954	40.0	1,000	0	95.4	55.8	158				
Benzo(k)fluoranthene	958	40.0	1,000	0	95.8	64	136				
Benzo(a)pyrene	1,030	40.0	1,000	0	103	61.9	151				
Indeno(1,2,3-cd)pyrene	974	40.0	1,000	0	97.4	48.3	147				
Dibenz(a,h)anthracene	974	40.0	1,000	0	97.4	47.9	150				
Benzo(g,h,i)perylene	958	40.0	1,000	0	95.8	44.4	144				
Surr: 2-Fluorobiphenyl	399		500.0		79.7	24.4	151				
Surr: Terphenyl-d14 (surr)	473		500.0		94.6	31.4	162				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-001AMS		SampType: MS		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728		Analysis Date: 9/6/2019						SeqNo: 1063670	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,310	42.9	1,073	456.4	79.6	37	127				
2-Methylnaphthalene	1,080	42.9	1,073	194.0	82.3	38.9	128				
1-Methylnaphthalene	934	42.9	1,073	92.17	78.4	36.2	129				
Acenaphthylene	955	42.9	1,073	34.22	85.8	39	132				
Acenaphthene	979	42.9	1,073	109.8	81.0	39.5	124				
Fluorene	1,090	42.9	1,073	176.1	85.0	38.3	128				
Phenanthrene	1,730	42.9	1,073	655.3	99.7	29.2	132				
Anthracene	1,560	42.9	1,073	277.5	120	38.8	128				
Fluoranthene	2,570	42.9	1,073	977.1	149	38.4	135				S
Pyrene	3,550	42.9	1,073	1,363	204	37.8	134				S
Benz(a)anthracene	2,850	42.9	1,073	915.9	180	39.2	143				S
Chrysene	3,560	42.9	1,073	1,021	236	35.9	131				S
Benzo(b)fluoranthene	3,870	42.9	1,073	1,244	245	36.3	148				S
Benzo(k)fluoranthene	2,120	42.9	1,073	578.5	144	31.2	133				S
Benzo(a)pyrene	3,370	42.9	1,073	1,299	193	35.9	144				S
Indeno(1,2,3-cd)pyrene	1,800	42.9	1,073	533.0	118	25.3	131				
Dibenz(a,h)anthracene	1,270	42.9	1,073	207.3	99.2	27.4	132				
Benzo(g,h,i)perylene	1,830	42.9	1,073	540.5	120	20.1	128				
Surr: 2-Fluorobiphenyl	438		536.6		81.7	24.4	151				
Surr: Terphenyl-d14 (surr)	471		536.6		87.8	31.4	162				

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: 1909007-001AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728				Analysis Date: 9/6/2019			SeqNo: 1063671		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	1,660	44.9	1,121	456.4	108	37	127	1,311	23.8	30	
2-Methylnaphthalene	1,210	44.9	1,121	194.0	90.4	38.9	128	1,077	11.5	30	
1-Methylnaphthalene	982	44.9	1,121	92.17	79.4	36.2	129	933.5	5.08	30	
Acenaphthylene	934	44.9	1,121	34.22	80.2	39	132	954.8	2.23	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-001AMSD		SampType: MSD		Units: µg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH		Batch ID: 25728					Analysis Date: 9/6/2019			SeqNo: 1063671	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	1,030	44.9	1,121	109.8	81.7	39.5	124	978.9	4.67	30	
Fluorene	1,200	44.9	1,121	176.1	90.9	38.3	128	1,088	9.40	30	
Phenanthrene	2,190	44.9	1,121	655.3	137	29.2	132	1,726	23.6	30	S
Anthracene	2,730	44.9	1,121	277.5	219	38.8	128	1,561	54.5	30	RS
Fluoranthene	2,940	44.9	1,121	977.1	175	38.4	135	2,574	13.3	30	S
Pyrene	3,930	44.9	1,121	1,363	229	37.8	134	3,550	10.2	30	S
Benz(a)anthracene	3,330	44.9	1,121	915.9	215	39.2	143	2,845	15.6	30	S
Chrysene	5,080	44.9	1,121	1,021	362	35.9	131	3,555	35.2	30	RS
Benzo(b)fluoranthene	4,430	44.9	1,121	1,244	285	36.3	148	3,874	13.5	30	S
Benzo(k)fluoranthene	2,600	44.9	1,121	578.5	181	31.2	133	2,121	20.4	30	S
Benzo(a)pyrene	3,870	44.9	1,121	1,299	229	35.9	144	3,369	13.9	30	S
Indeno(1,2,3-cd)pyrene	2,020	44.9	1,121	533.0	133	25.3	131	1,796	11.8	30	S
Dibenz(a,h)anthracene	1,360	44.9	1,121	207.3	103	27.4	132	1,272	6.53	30	
Benzo(g,h,i)perylene	2,020	44.9	1,121	540.5	132	20.1	128	1,830	9.97	30	S
Surr: 2-Fluorobiphenyl	463		560.7		82.5	24.4	151		0		
Surr: Terphenyl-d14 (surr)	495		560.7		88.4	31.4	162		0		

NOTES:

S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

R - High RPD due to suspected sample inhomogeneity. The method is in control as indicated by the Laboratory Control Sample (LCS).

Sample ID: 1909007-002ADUP	SampType: DUP	Units: µg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH	Batch ID: 25728	Analysis Date: 9/6/2019							SeqNo: 1063673		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	47.1						0		30	
2-Methylnaphthalene	ND	47.1						0		30	
1-Methylnaphthalene	ND	47.1						0		30	
Acenaphthylene	ND	47.1						0		30	
Acenaphthene	ND	47.1						0		30	
Fluorene	ND	47.1						0		30	
Phenanthrene	ND	47.1						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1909007-002ADUP	SampType: DUP	Units: µg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53737		
Client ID: BATCH	Batch ID: 25728	Analysis Date: 9/6/2019							SeqNo: 1063673		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Anthracene	ND	47.1						0		30	
Fluoranthene	ND	47.1						0		30	
Pyrene	ND	47.1						0		30	
Benz(a)anthracene	ND	47.1						0		30	
Chrysene	ND	47.1						0		30	
Benzo(b)fluoranthene	ND	47.1						0		30	
Benzo(k)fluoranthene	ND	47.1						0		30	
Benzo(a)pyrene	ND	47.1						0		30	
Indeno(1,2,3-cd)pyrene	ND	47.1						0		30	
Dibenz(a,h)anthracene	ND	47.1						0		30	
Benzo(g,h,i)perylene	ND	47.1						0		30	
Surr: 2-Fluorobiphenyl	527		588.3		89.6	24.4	151		0		
Surr: Terphenyl-d14 (surr)	603		588.3		102	31.4	162		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: MB-25627	SampType: MBLK	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: MBLKW	Batch ID: 25627	Analysis Date: 8/27/2019						SeqNo: 1059447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.100									
2-Methylnaphthalene	ND	0.100									
1-Methylnaphthalene	ND	0.100									
Acenaphthylene	ND	0.100									
Acenaphthene	ND	0.100									
Fluorene	ND	0.100									
Phenanthrene	ND	0.100									
Anthracene	ND	0.100									
Fluoranthene	ND	0.100									
Pyrene	ND	0.100									
Benz(a)anthracene	ND	0.100									
Chrysene	ND	0.100									
Benzo(b)fluoranthene	ND	0.100									
Benzo(k)fluoranthene	ND	0.100									
Benzo(a)pyrene	ND	0.100									
Indeno(1,2,3-cd)pyrene	ND	0.100									
Dibenz(a,h)anthracene	ND	0.100									
Benzo(g,h,i)perylene	ND	0.100									
Surr: 2-Fluorobiphenyl	1.99		2.004		99.1	42.6	159				
Surr: Terphenyl-d14	2.08		2.004		104	8.99	147				

Sample ID: LCS-25627	SampType: LCS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: LCSW	Batch ID: 25627				Analysis Date: 8/27/2019			SeqNo: 1059448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.84	0.0993	3.970	0	71.5	50.6	120				
2-Methylnaphthalene	2.89	0.0993	3.970	0	72.8	54.8	128				
1-Methylnaphthalene	3.05	0.0993	3.970	0	76.9	52.4	129				
Acenaphthylene	3.24	0.0993	3.970	0	81.7	57.2	130				
Acenaphthene	3.15	0.0993	3.970	0	79.4	56.1	128				

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CLIENT: G-Logics

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QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: LCS-25627	SampType: LCS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: LCSW	Batch ID: 25627	Analysis Date: 8/27/2019						SeqNo: 1059448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluorene	3.48	0.0993	3.970	0	87.5	57.8	133				
Phenanthrene	3.34	0.0993	3.970	0	84.2	57.8	132				
Anthracene	3.00	0.0993	3.970	0	75.7	46.3	125				
Fluoranthene	3.55	0.0993	3.970	0	89.4	54.1	139				
Pyrene	3.51	0.0993	3.970	0	88.4	57.9	134				
Benz(a)anthracene	3.11	0.0993	3.970	0	78.4	35.8	133				
Chrysene	2.72	0.0993	3.970	0	68.6	32.3	120				
Benzo(b)fluoranthene	2.22	0.0993	3.970	0	55.8	22.7	130				
Benzo(k)fluoranthene	2.17	0.0993	3.970	0	54.6	21	112				
Benzo(a)pyrene	2.20	0.0993	3.970	0	55.3	24.7	115				
Indeno(1,2,3-cd)pyrene	1.61	0.0993	3.970	0	40.5	16.3	105				
Dibenz(a,h)anthracene	1.53	0.0993	3.970	0	38.5	16.3	106				
Benzo(g,h,i)perylene	1.61	0.0993	3.970	0	40.6	14.8	103				
Surr: 2-Fluorobiphenyl	2.26		1.985		114	42.6	159				
Surr: Terphenyl-d14	1.98		1.985		99.7	8.99	147				

Sample ID: 1908343-001CDUP		SampType: DUP		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531		
Client ID: BATCH		Batch ID: 25627					Analysis Date: 8/27/2019			SeqNo: 1059450	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	ND	0.101						0		30	
2-Methylnaphthalene	ND	0.101						0		30	
1-Methylnaphthalene	ND	0.101						0		30	
Acenaphthylene	ND	0.101						0		30	
Acenaphthene	ND	0.101						0		30	
Fluorene	ND	0.101						0		30	
Phenanthrene	ND	0.101						0		30	
Anthracene	ND	0.101						0		30	
Fluoranthene	ND	0.101						0		30	
Pyrene	ND	0.101						0		30	

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908343-001CDUP		SampType: DUP		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531		
Client ID: BATCH		Batch ID: 25627					Analysis Date: 8/27/2019			SeqNo: 1059450	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benz(a)anthracene	ND	0.101						0		30	
Chrysene	ND	0.101						0		30	
Benzo(b)fluoranthene	ND	0.101						0		30	
Benzo(k)fluoranthene	ND	0.101						0		30	
Benzo(a)pyrene	ND	0.101						0		30	
Indeno(1,2,3-cd)pyrene	ND	0.101						0		30	
Dibenz(a,h)anthracene	ND	0.101						0		30	
Benzo(g,h,i)perylene	ND	0.101						0		30	
Surr: 2-Fluorobiphenyl	2.17		2.012		108	42.6	159		0		
Surr: Terphenyl-d14	2.03		2.012		101	8.99	147		0		

Sample ID: 1908347-026CMS	SampType: MS	Units: µg/L			Prep Date: 8/26/2019			RunNo: 53531			
Client ID: GPW-1	Batch ID: 25627				Analysis Date: 8/27/2019			SeqNo: 1059456			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Naphthalene	2.75	0.101	4.032	0	68.2	45.5	119				
2-Methylnaphthalene	3.02	0.101	4.032	0	75.0	50.3	118				
1-Methylnaphthalene	3.08	0.101	4.032	0	76.3	43.9	125				
Acenaphthylene	3.39	0.101	4.032	0	84.1	52.8	105				
Acenaphthene	3.35	0.101	4.032	0.1648	79.0	44.2	117				
Fluorene	3.44	0.101	4.032	0	85.2	44.4	122				
Phenanthrene	3.44	0.101	4.032	0	85.4	30	124				
Anthracene	3.20	0.101	4.032	0	79.4	17.8	117				
Fluoranthene	3.33	0.101	4.032	0.06290	80.9	5	140				
Pyrene	3.22	0.101	4.032	0.05275	78.6	5	134				
Benz(a)anthracene	2.52	0.101	4.032	0.02461	62.0	5	131				
Chrysene	2.26	0.101	4.032	0	56.0	5	132				
Benzo(b)fluoranthene	1.93	0.101	4.032	0	47.9	5	129				
Benzo(k)fluoranthene	1.59	0.101	4.032	0	39.3	5	111				
Benzo(a)pyrene	1.92	0.101	4.032	0	47.7	5	116				

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-026CMS	SampType: MS	Units: µg/L				Prep Date: 8/26/2019			RunNo: 53531		
Client ID: GPW-1	Batch ID: 25627					Analysis Date: 8/27/2019			SeqNo: 1059456		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Indeno(1,2,3-cd)pyrene	1.25	0.101	4.032	0.007247	30.7	5	108				
Dibenz(a,h)anthracene	1.21	0.101	4.032	0.004867	29.8	5	110				
Benzo(g,h,i)perylene	1.19	0.101	4.032	0	29.5	5	106				
Surr: 2-Fluorobiphenyl	2.08		2.016		103	42.6	159				
Surr: Terphenyl-d14	1.47		2.016		73.0	8.99	147				

Sample ID: 1908347-026CMSD		SampType: MSD		Units: µg/L		Prep Date: 8/26/2019			RunNo: 53531			
Client ID: GPW-1		Batch ID: 25627		Analysis Date: 8/27/2019							SeqNo: 1059457	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Naphthalene	2.69	0.101	4.024	0	66.9	45.5	119	2.748	2.11	30		
2-Methylnaphthalene	2.70	0.101	4.024	0	67.0	50.3	118	3.025	11.5	30		
1-Methylnaphthalene	2.84	0.101	4.024	0	70.6	43.9	125	3.077	7.99	30		
Acenaphthylene	2.98	0.101	4.024	0	74.1	52.8	105	3.391	12.9	30		
Acenaphthene	2.99	0.101	4.024	0.1648	70.3	44.2	117	3.349	11.3	30		
Fluorene	3.05	0.101	4.024	0	75.7	44.4	122	3.435	12.0	30		
Phenanthrene	3.00	0.101	4.024	0	74.6	30	124	3.441	13.7	30		
Anthracene	2.73	0.101	4.024	0	67.9	17.8	117	3.201	15.8	30		
Fluoranthene	2.83	0.101	4.024	0.06290	68.7	5	140	3.325	16.1	30		
Pyrene	2.74	0.101	4.024	0.05275	66.7	5	134	3.222	16.3	30		
Benz(a)anthracene	2.11	0.101	4.024	0.02461	51.8	5	131	2.524	18.0	30		
Chrysene	1.90	0.101	4.024	0	47.3	5	132	2.256	16.9	30		
Benzo(b)fluoranthene	1.66	0.101	4.024	0	41.3	5	129	1.933	14.9	30		
Benzo(k)fluoranthene	1.37	0.101	4.024	0	34.0	5	111	1.586	14.6	30		
Benzo(a)pyrene	1.64	0.101	4.024	0	40.7	5	116	1.921	15.9	30		
Indeno(1,2,3-cd)pyrene	1.08	0.101	4.024	0.007247	26.6	5	108	1.246	14.4	30		
Dibenz(a,h)anthracene	1.04	0.101	4.024	0.004867	25.7	5	110	1.207	15.0	30		
Benzo(g,h,i)perylene	1.02	0.101	4.024	0	25.4	5	106	1.188	15.2	30		
Surr: 2-Fluorobiphenyl	2.17		2.012		108	42.6	159		0	0		
Surr: Terphenyl-d14	1.42		2.012		70.5	8.99	147		0	0		



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Polyaromatic Hydrocarbons by EPA Method 8270 (SIM)

Sample ID: 1908347-026CMSD	SampType: MSD	Units: µg/L	Prep Date: 8/26/2019	RunNo: 53531							
Client ID: GPW-1	Batch ID: 25627		Analysis Date: 8/27/2019	SeqNo: 1059457							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: LCS-25645		SampType: LCS			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: LCSW		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1061384				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	521	50.0	500.0	0	104	65	135				
Surr: Toluene-d8	24.9		25.00		99.5	65	135				
Surr: 4-Bromofluorobenzene	24.4		25.00		97.7	65	135				

Sample ID: LCS-25645		SampType: LCS			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062541				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0	500.0	0	0	65	135				
Gasoline Range Organics (C6-C10)	511	50.0	500.0	0	102	65	135				
Surr: Toluene-d8	24.9		25.00		99.5	65	135				
Surr: 4-Bromofluorobenzene	24.4		25.00		97.7	65	135				

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1061385				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	503	50.0	500.0	0	101	65	135	521.1	3.55	20	
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	24.3		25.00		97.0	65	135		0		

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062542				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0	500.0	0	0	65	135	0		20	
Gasoline Range Organics (C6-C10)	494	50.0	500.0	0	98.8	65	135	510.7	3.38	20	
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	24.3		25.00		97.0	65	135		0		

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: LCSD-25645		SampType: LCSD			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: LCSW02		Batch ID: 25645			Analysis Date: 8/28/2019			SeqNo: 1062542				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID: MB-25645		SampType: MBLK		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: MBLKW		Batch ID: 25645					Analysis Date: 8/28/2019			SeqNo: 1061386	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Surr: Toluene-d8	25.1		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	23.8		25.00		95.2	65	135				

Sample ID: MB-25645		SampType: MBLK		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: MBLKW		Batch ID: 25645					Analysis Date: 8/28/2019			SeqNo: 1062543	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	50.0									
Gasoline Range Organics (C6-C10)	ND	50.0									
Surr: Toluene-d8	25.1		25.00		100	65	135				
Surr: 4-Bromofluorobenzene	23.8		25.00		95.2	65	135				

Sample ID: 1908367-001ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1061380				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.5		25.00		97.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.8		25.00		99.3	65	135		0		

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CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: 1908367-001ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1062536				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Gasoline Range Organics (C6-C10)	ND	50.0						0		30	
Surr: Toluene-d8	24.5		25.00		97.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.8		25.00		99.3	65	135		0		

Sample ID: 1908355-003ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53607		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1061378				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Surr: Toluene-d8	24.7		25.00		98.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.4		25.00		97.4	65	135		0		

Sample ID: 1908355-003ADUP		SampType: DUP			Units: µg/L		Prep Date: 8/28/2019			RunNo: 53671		
Client ID: BATCH		Batch ID: 25645			Analysis Date: 8/29/2019			SeqNo: 1062534				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Gasoline	ND	50.0						0		30	
Gasoline Range Organics (C6-C10)	ND	50.0						0		30	
Surr: Toluene-d8	24.7		25.00		98.9	65	135		0		
Surr: 4-Bromofluorobenzene	24.4		25.00		97.4	65	135		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25646	SampType: LCS	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: LCSS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060215			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.782	0.0200	1.000	0	78.2	14.3	167				
Chloromethane	0.885	0.0500	1.000	0	88.5	32	156				
Vinyl chloride	0.852	0.0250	1.000	0	85.2	43.4	151				
Bromomethane	1.49	0.0500	1.000	0	149	35	155				
Trichlorofluoromethane (CFC-11)	0.928	0.0200	1.000	0	92.8	33.8	156				
Chloroethane	1.09	0.0500	1.000	0	109	33.1	147				
1,1-Dichloroethene	0.919	0.0200	1.000	0	91.9	30.9	145				
Methylene chloride	0.894	0.0200	1.000	0	89.4	46.3	140				
trans-1,2-Dichloroethene	0.946	0.0200	1.000	0	94.6	68	130				
Methyl tert-butyl ether (MTBE)	0.856	0.0500	1.000	0	85.6	44.1	152				
1,1-Dichloroethane	0.890	0.0200	1.000	0	89.0	61.9	137				
cis-1,2-Dichloroethene	0.925	0.0200	1.000	0	92.5	71.3	135				
Chloroform	0.923	0.0200	1.000	0	92.3	69	145				
1,1,1-Trichloroethane (TCA)	0.888	0.0250	1.000	0	88.8	69	132				
1,1-Dichloropropene	0.925	0.0200	1.000	0	92.5	72.7	131				
Carbon tetrachloride	0.891	0.0250	1.000	0	89.1	63.4	137				
1,2-Dichloroethane (EDC)	0.879	0.0200	1.000	0	87.9	50.9	162				
Benzene	0.933	0.0200	1.000	0	93.3	64.3	133				
Trichloroethene (TCE)	0.994	0.0200	1.000	0	99.4	65.5	137				
1,2-Dichloropropane	0.892	0.0200	1.000	0	89.2	63.2	142				
Bromodichloromethane	0.878	0.0200	1.000	0	87.8	53.4	131				
Dibromomethane	0.935	0.0200	1.000	0	93.5	60.1	146				
cis-1,3-Dichloropropene	0.849	0.0200	1.000	0	84.9	59.1	143				
Toluene	0.942	0.0200	1.000	0	94.2	67	144				
trans-1,3-Dichloropropylene	0.825	0.0200	1.000	0	82.5	49.2	149				
1,1,2-Trichloroethane	0.944	0.0200	1.000	0	94.4	56.9	147				
1,3-Dichloropropane	0.925	0.0250	1.000	0	92.5	56.1	153				
Tetrachloroethene (PCE)	1.00	0.0250	1.000	0	100	52.7	150				
Dibromochloromethane	0.870	0.0250	1.000	0	87.0	70.6	144				
1,2-Dibromoethane (EDB)	0.935	0.00500	1.000	0	93.5	50.5	154				
Chlorobenzene	0.967	0.0250	1.000	0	96.7	84.9	125				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25646	SampType: LCS	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: LCSS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060215			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.918	0.0250	1.000	0	91.8	65.9	141				
Ethylbenzene	0.960	0.0250	1.000	0	96.0	74	129				
m,p-Xylene	1.93	0.0500	2.000	0	96.5	70	124				
o-Xylene	0.938	0.0250	1.000	0	93.8	68.1	139				
Styrene	0.951	0.0250	1.000	0	95.1	73.3	146				
Isopropylbenzene	0.960	0.0250	1.000	0	96.0	70	130				
Bromoform	0.801	0.0500	1.000	0	80.1	44.3	130				
1,1,2,2-Tetrachloroethane	0.803	0.0200	1.000	0	80.3	44.8	165				
n-Propylbenzene	0.959	0.0250	1.000	0	95.9	75.8	139				
Bromobenzene	0.968	0.0200	1.000	0	96.8	49.2	144				
1,3,5-Trimethylbenzene	0.950	0.0250	1.000	0	95.0	76.5	135				
2-Chlorotoluene	0.933	0.0250	1.000	0	93.3	76.7	129				
4-Chlorotoluene	0.934	0.0250	1.000	0	93.4	77.5	125				
tert-Butylbenzene	0.937	0.0250	1.000	0	93.7	66.2	130				
1,2,3-Trichloropropane	0.828	0.0250	1.000	0	82.8	67.9	136				
1,2,4-Trichlorobenzene	0.972	0.0250	1.000	0	97.2	65.5	150				
sec-Butylbenzene	0.957	0.0500	1.000	0	95.7	75.6	133				
4-Isopropyltoluene	0.960	0.0500	1.000	0	96.0	76.8	131				
1,3-Dichlorobenzene	1.01	0.0200	1.000	0	101	48.6	144				
1,4-Dichlorobenzene	0.999	0.0200	1.000	0	99.9	72.6	126				
n-Butylbenzene	0.974	0.0250	1.000	0	97.4	78.4	140				
1,2-Dichlorobenzene	1.00	0.0200	1.000	0	100	72.8	126				
1,2-Dibromo-3-chloropropane	0.730	0.500	1.000	0	73.0	40.2	155				
1,2,4-Trimethylbenzene	0.954	0.0200	1.000	0	95.4	77.5	129				
Hexachloro-1,3-butadiene	0.944	0.0500	1.000	0	94.4	42	151				
Naphthalene	0.924	0.0500	1.000	0	92.4	46.5	167				
1,2,3-Trichlorobenzene	0.969	0.0200	1.000	0	96.9	64.5	149				
Surr: Dibromofluoromethane	1.24		1.250		99.0	56.5	129				
Surr: Toluene-d8	1.24		1.250		99.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.18		1.250		94.0	54.8	168				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg	Prep Date: 8/28/2019	RunNo: 53562							
Client ID: MBLKS	Batch ID: 25646		Analysis Date: 8/28/2019	SeqNo: 1060216							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									Q
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: MBLKS	Batch ID: 25646	Analysis Date: 8/28/2019						SeqNo: 1060216			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									Q
1,1,1,2-Tetrachloroethane	ND	0.0200									Q
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									Q
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									Q
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.18		1.250		94.4	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.16		1.250		93.0	54.8	168				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25646	SampType: MBLK	Units: mg/Kg			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: MBLKS	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060216			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-001BDUP	SampType: DUP	Units: mg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019							SeqNo: 1060199		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200						0		30	
Chloromethane	ND	0.0500						0		30	
Vinyl chloride	ND	0.0250						0		30	
Bromomethane	ND	0.0500						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0200						0		30	
Chloroethane	ND	0.0500						0		30	
1,1-Dichloroethene	ND	0.0200						0		30	
Methylene chloride	ND	0.0200						0		30	
trans-1,2-Dichloroethene	ND	0.0200						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0500						0		30	
1,1-Dichloroethane	ND	0.0200						0		30	
cis-1,2-Dichloroethene	ND	0.0200						0		30	
Chloroform	ND	0.0200						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0250						0		30	
1,1-Dichloropropene	ND	0.0200						0		30	
Carbon tetrachloride	ND	0.0250						0		30	
1,2-Dichloroethane (EDC)	ND	0.0200						0		30	
Benzene	ND	0.0200						0		30	
Trichloroethene (TCE)	ND	0.0200						0		30	
1,2-Dichloropropane	ND	0.0200						0		30	
Bromodichloromethane	ND	0.0200						0		30	
Dibromomethane	ND	0.0200						0		30	
cis-1,3-Dichloropropene	ND	0.0200						0		30	
Toluene	ND	0.0200						0		30	



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019		RunNo: 53562			
Client ID: BATCH		Batch ID: 25646		Analysis Date: 8/28/2019						SeqNo: 1060199	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	0.0200						0		30	Q
1,1,2-Trichloroethane	ND	0.0200						0		30	
1,3-Dichloropropane	ND	0.0250						0		30	
Tetrachloroethene (PCE)	ND	0.0250						0		30	
Dibromochloromethane	ND	0.0250						0		30	
1,2-Dibromoethane (EDB)	ND	0.00500						0		30	
Chlorobenzene	ND	0.0250						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0250						0		30	
Ethylbenzene	ND	0.0250						0		30	
m,p-Xylene	ND	0.0500						0		30	
o-Xylene	ND	0.0250						0		30	
Styrene	ND	0.0250						0		30	
Isopropylbenzene	ND	0.0250						0		30	
Bromoform	ND	0.0500						0		30	Q
1,1,2,2-Tetrachloroethane	ND	0.0200						0		30	Q
n-Propylbenzene	ND	0.0250						0		30	
Bromobenzene	ND	0.0200						0		30	
1,3,5-Trimethylbenzene	ND	0.0250						0		30	
2-Chlorotoluene	ND	0.0250						0		30	
4-Chlorotoluene	ND	0.0250						0		30	
tert-Butylbenzene	ND	0.0250						0		30	
1,2,3-Trichloropropane	ND	0.0250						0		30	Q
1,2,4-Trichlorobenzene	ND	0.0250						0		30	
sec-Butylbenzene	ND	0.0500						0		30	
4-Isopropyltoluene	ND	0.0500						0		30	
1,3-Dichlorobenzene	ND	0.0200						0		30	
1,4-Dichlorobenzene	ND	0.0200						0		30	
n-Butylbenzene	ND	0.0250						0		30	
1,2-Dichlorobenzene	ND	0.0200						0		30	
1,2-Dibromo-3-chloropropane	ND	0.500						0		30	Q
1,2,4-Trimethylbenzene	ND	0.0200						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060199	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500						0		30	
Naphthalene	ND	0.0500						0		30	
1,2,3-Trichlorobenzene	ND	0.0200						0		30	
Surr: Dibromofluoromethane	1.18		1.250		94.4	56.5	129		0		
Surr: Toluene-d8	1.22		1.250		97.6	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.18		1.250		94.7	54.8	168		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-003BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060204	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0316						0		30	
Chloromethane	ND	0.0791						0		30	
Vinyl chloride	ND	0.0395						0		30	
Bromomethane	ND	0.0791						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0316						0		30	
Chloroethane	ND	0.0791						0		30	
1,1-Dichloroethene	ND	0.0316						0		30	
Methylene chloride	ND	0.0316						0		30	
trans-1,2-Dichloroethene	ND	0.0316						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0791						0		30	
1,1-Dichloroethane	ND	0.0316						0		30	
cis-1,2-Dichloroethene	ND	0.0316						0		30	
Chloroform	ND	0.0316						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0395						0		30	
1,1-Dichloropropene	ND	0.0316						0		30	
Carbon tetrachloride	ND	0.0395						0		30	
1,2-Dichloroethane (EDC)	ND	0.0316						0		30	
Benzene	ND	0.0316						0		30	



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-003BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060204			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Trichloroethene (TCE)	ND	0.0316						0		30	
1,2-Dichloropropane	ND	0.0316						0		30	
Bromodichloromethane	ND	0.0316						0		30	
Dibromomethane	ND	0.0316						0		30	
cis-1,3-Dichloropropene	ND	0.0316						0		30	
Toluene	ND	0.0316						0		30	
trans-1,3-Dichloropropylene	ND	0.0316						0		30	Q
1,1,2-Trichloroethane	ND	0.0316						0		30	
1,3-Dichloropropane	ND	0.0395						0		30	
Tetrachloroethene (PCE)	ND	0.0395						0		30	
Dibromochloromethane	ND	0.0395						0		30	
1,2-Dibromoethane (EDB)	ND	0.00791						0		30	
Chlorobenzene	ND	0.0395						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0395						0		30	
Ethylbenzene	ND	0.0395						0		30	
m,p-Xylene	ND	0.0791						0		30	
o-Xylene	ND	0.0395						0		30	
Styrene	ND	0.0395						0		30	
Isopropylbenzene	ND	0.0395						0		30	
Bromoform	ND	0.0791						0		30	Q
1,1,2,2-Tetrachloroethane	ND	0.0316						0		30	Q
n-Propylbenzene	ND	0.0395						0		30	
Bromobenzene	ND	0.0316						0		30	
1,3,5-Trimethylbenzene	ND	0.0395						0		30	
2-Chlorotoluene	ND	0.0395						0		30	
4-Chlorotoluene	ND	0.0395						0		30	
tert-Butylbenzene	ND	0.0395						0		30	
1,2,3-Trichloropropane	ND	0.0395						0		30	Q
1,2,4-Trichlorobenzene	ND	0.0395						0		30	
sec-Butylbenzene	ND	0.0791						0		30	
4-Isopropyltoluene	ND	0.0791						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-003BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060204			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0316						0		30	
1,4-Dichlorobenzene	ND	0.0316						0		30	
n-Butylbenzene	ND	0.0395						0		30	
1,2-Dichlorobenzene	ND	0.0316						0		30	
1,2-Dibromo-3-chloropropane	ND	0.791						0		30	Q
1,2,4-Trimethylbenzene	ND	0.0316						0		30	
Hexachloro-1,3-butadiene	ND	0.0791						0		30	
Naphthalene	ND	0.0791						0		30	
1,2,3-Trichlorobenzene	ND	0.0316						0		30	
Surr: Dibromofluoromethane	1.86		1.976		94.1	56.5	129		0		
Surr: Toluene-d8	1.95		1.976		98.7	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.83		1.976		92.6	54.8	168		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908368-002BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/28/2019			RunNo: 53562			
Client ID: BATCH	Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060201			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.691	0.0190	0.9513	0	72.7	43.5	121				S
Chloromethane	0.793	0.0476	0.9513	0	83.4	45	130				
Vinyl chloride	0.820	0.0238	0.9513	0	86.2	43.6	150				
Bromomethane	1.43	0.0476	0.9513	0	150	21.3	120				
Trichlorofluoromethane (CFC-11)	0.906	0.0190	0.9513	0	95.2	35	131				
Chloroethane	0.976	0.0476	0.9513	0	103	31.9	123				
1,1-Dichloroethene	0.912	0.0190	0.9513	0	95.9	47.3	147				
Methylene chloride	0.852	0.0190	0.9513	0	89.5	54.7	142				
trans-1,2-Dichloroethene	0.915	0.0190	0.9513	0	96.2	52	136				
Methyl tert-butyl ether (MTBE)	0.853	0.0476	0.9513	0	89.7	58.5	167				
1,1-Dichloroethane	0.865	0.0190	0.9513	0	90.9	51.8	141				
cis-1,2-Dichloroethene	0.898	0.0190	0.9513	0	94.4	58.6	136				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646					Analysis Date: 8/28/2019			SeqNo: 1060201	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Chloroform	0.881	0.0190	0.9513	0	92.7	53.2	129				
1,1,1-Trichloroethane (TCA)	0.862	0.0238	0.9513	0	90.6	58.3	145				
1,1-Dichloropropene	0.883	0.0190	0.9513	0	92.8	55.1	138				
Carbon tetrachloride	0.854	0.0238	0.9513	0	89.8	53.3	144				
1,2-Dichloroethane (EDC)	0.871	0.0190	0.9513	0	91.5	51.3	139				
Benzene	0.903	0.0190	0.9513	0	94.9	63.5	133				
Trichloroethene (TCE)	0.966	0.0190	0.9513	0	102	61.6	147				
1,2-Dichloropropane	0.864	0.0190	0.9513	0	90.8	59	136				
Bromodichloromethane	0.835	0.0190	0.9513	0	87.8	50.7	141				
Dibromomethane	0.921	0.0190	0.9513	0	96.8	50.6	137				
cis-1,3-Dichloropropene	0.791	0.0190	0.9513	0	83.1	50.4	138				
Toluene	0.917	0.0190	0.9513	0	96.4	63.4	132				
trans-1,3-Dichloropropylene	0.764	0.0190	0.9513	0	80.4	44.1	147				
1,1,2-Trichloroethane	0.942	0.0190	0.9513	0	99.0	51.6	137				
1,3-Dichloropropane	0.910	0.0238	0.9513	0	95.6	53.1	134				
Tetrachloroethene (PCE)	0.945	0.0238	0.9513	0	99.3	35.6	158				
Dibromochloromethane	0.832	0.0238	0.9513	0	87.5	55.3	140				
1,2-Dibromoethane (EDB)	0.915	0.00476	0.9513	0	96.1	50.4	136				
Chlorobenzene	0.931	0.0238	0.9513	0	97.8	60	133				
1,1,1,2-Tetrachloroethane	0.870	0.0238	0.9513	0	91.5	53.1	142				
Ethylbenzene	0.927	0.0238	0.9513	0	97.4	54.5	134				
m,p-Xylene	1.85	0.0476	1.903	0	97.3	53.1	132				
o-Xylene	0.892	0.0238	0.9513	0	93.8	53.3	139				
Styrene	0.915	0.0238	0.9513	0	96.2	51.1	132				
Isopropylbenzene	0.928	0.0238	0.9513	0	97.5	58.9	138				
Bromoform	0.780	0.0476	0.9513	0	82.0	57.9	130				
1,1,1,2,2-Tetrachloroethane	0.809	0.0190	0.9513	0	85.1	51.9	131				
n-Propylbenzene	0.922	0.0238	0.9513	0	97.0	53.6	140				
Bromobenzene	0.927	0.0190	0.9513	0	97.5	54.2	140				
1,3,5-Trimethylbenzene	0.900	0.0238	0.9513	0	94.6	51.8	136				
2-Chlorotoluene	0.902	0.0238	0.9513	0	94.8	51.6	136				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646		Analysis Date: 8/28/2019					SeqNo: 1060201		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	0.900	0.0238	0.9513	0	94.6	50.1	139				
tert-Butylbenzene	0.911	0.0238	0.9513	0	95.8	50.5	135				
1,2,3-Trichloropropane	0.839	0.0238	0.9513	0	88.2	50.5	131				
1,2,4-Trichlorobenzene	0.938	0.0238	0.9513	0	98.6	50.8	130				
sec-Butylbenzene	0.923	0.0476	0.9513	0	97.0	52.6	141				
4-Isopropyltoluene	0.915	0.0476	0.9513	0	96.2	52.9	134				
1,3-Dichlorobenzene	0.948	0.0190	0.9513	0	99.7	52.6	131				
1,4-Dichlorobenzene	0.956	0.0190	0.9513	0	101	52.9	129				
n-Butylbenzene	0.915	0.0238	0.9513	0	96.1	52.6	130				
1,2-Dichlorobenzene	0.964	0.0190	0.9513	0	101	55.8	129				
1,2-Dibromo-3-chloropropane	0.776	0.476	0.9513	0	81.6	40.5	131				
1,2,4-Trimethylbenzene	0.907	0.0190	0.9513	0	95.3	50.6	137				
Hexachloro-1,3-butadiene	0.878	0.0476	0.9513	0	92.3	40.6	158				
Naphthalene	0.980	0.0476	0.9513	0	103	52.3	124				
1,2,3-Trichlorobenzene	0.974	0.0190	0.9513	0	102	54.4	124				
Surr: Dibromofluoromethane	1.16		1.189		97.9	56.5	129				
Surr: Toluene-d8	1.18		1.189		98.8	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.14		1.189		95.9	54.8	168				

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: 1908368-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH		Batch ID: 25646				Analysis Date: 8/28/2019			SeqNo: 1060202		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.666	0.0190	0.9513	0	70.0	43.5	121	0.6912	3.75	30	
Chloromethane	0.798	0.0476	0.9513	0	83.9	45	130	0.7935	0.580	30	
Vinyl chloride	0.798	0.0238	0.9513	0	83.8	43.6	150	0.8197	2.74	30	
Bromomethane	1.38	0.0476	0.9513	0	145	21.3	120	1.425	3.10	30	S
Trichlorofluoromethane (CFC-11)	0.892	0.0190	0.9513	0	93.8	35	131	0.9056	1.52	30	
Chloroethane	0.992	0.0476	0.9513	0	104	31.9	123	0.9759	1.59	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019							SeqNo: 1060202		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	0.887	0.0190	0.9513	0	93.3	47.3	147	0.9123	2.76	30	
Methylene chloride	0.858	0.0190	0.9513	0	90.1	54.7	142	0.8515	0.702	30	
trans-1,2-Dichloroethene	0.913	0.0190	0.9513	0	96.0	52	136	0.9148	0.201	30	
Methyl tert-butyl ether (MTBE)	0.835	0.0476	0.9513	0	87.7	58.5	167	0.8529	2.17	30	
1,1-Dichloroethane	0.852	0.0190	0.9513	0	89.5	51.8	141	0.8649	1.56	30	
cis-1,2-Dichloroethene	0.888	0.0190	0.9513	0	93.4	58.6	136	0.8981	1.10	30	
Chloroform	0.878	0.0190	0.9513	0	92.3	53.2	129	0.8814	0.336	30	
1,1,1-Trichloroethane (TCA)	0.859	0.0238	0.9513	0	90.3	58.3	145	0.8619	0.326	30	
1,1-Dichloropropene	0.903	0.0190	0.9513	0	94.9	55.1	138	0.8828	2.24	30	
Carbon tetrachloride	0.849	0.0238	0.9513	0	89.3	53.3	144	0.8543	0.599	30	
1,2-Dichloroethane (EDC)	0.857	0.0190	0.9513	0	90.0	51.3	139	0.8707	1.65	30	
Benzene	0.895	0.0190	0.9513	0	94.1	63.5	133	0.9032	0.879	30	
Trichloroethene (TCE)	0.987	0.0190	0.9513	0	104	61.6	147	0.9663	2.14	30	
1,2-Dichloropropane	0.853	0.0190	0.9513	0	89.7	59	136	0.8642	1.30	30	
Bromodichloromethane	0.832	0.0190	0.9513	0	87.5	50.7	141	0.8350	0.360	30	
Dibromomethane	0.892	0.0190	0.9513	0	93.7	50.6	137	0.9206	3.20	30	
cis-1,3-Dichloropropene	0.784	0.0190	0.9513	0	82.4	50.4	138	0.7907	0.910	30	
Toluene	0.911	0.0190	0.9513	0	95.8	63.4	132	0.9172	0.683	30	
trans-1,3-Dichloropropylene	0.761	0.0190	0.9513	0	80.0	44.1	147	0.7645	0.401	30	
1,1,2-Trichloroethane	0.916	0.0190	0.9513	0	96.3	51.6	137	0.9416	2.73	30	
1,3-Dichloropropane	0.898	0.0238	0.9513	0	94.4	53.1	134	0.9097	1.32	30	
Tetrachloroethene (PCE)	0.950	0.0238	0.9513	0	99.8	35.6	158	0.9446	0.538	30	
Dibromochloromethane	0.822	0.0238	0.9513	0	86.4	55.3	140	0.8320	1.25	30	
1,2-Dibromoethane (EDB)	0.906	0.00476	0.9513	0	95.3	50.4	136	0.9146	0.917	30	
Chlorobenzene	0.944	0.0238	0.9513	0	99.2	60	133	0.9308	1.37	30	
1,1,1,2-Tetrachloroethane	0.885	0.0238	0.9513	0	93.1	53.1	142	0.8704	1.71	30	
Ethylbenzene	0.931	0.0238	0.9513	0	97.8	54.5	134	0.9268	0.424	30	
m,p-Xylene	1.87	0.0476	1.903	0	98.3	53.1	132	1.851	1.01	30	
o-Xylene	0.899	0.0238	0.9513	0	94.5	53.3	139	0.8923	0.796	30	
Styrene	0.912	0.0238	0.9513	0	95.9	51.1	132	0.9148	0.269	30	
Isopropylbenzene	0.931	0.0238	0.9513	0	97.9	58.9	138	0.9276	0.352	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908368-002BMSD	SampType: MSD	Units: mg/Kg-dry				Prep Date: 8/28/2019			RunNo: 53562		
Client ID: BATCH	Batch ID: 25646	Analysis Date: 8/28/2019							SeqNo: 1060202		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromoform	0.783	0.0476	0.9513	0	82.3	57.9	130	0.7802	0.337	30	
1,1,2,2-Tetrachloroethane	0.757	0.0190	0.9513	0	79.6	51.9	131	0.8093	6.63	30	
n-Propylbenzene	0.930	0.0238	0.9513	0	97.7	53.6	140	0.9224	0.773	30	
Bromobenzene	0.930	0.0190	0.9513	0	97.7	54.2	140	0.9273	0.251	30	
1,3,5-Trimethylbenzene	0.908	0.0238	0.9513	0	95.5	51.8	136	0.8998	0.926	30	
2-Chlorotoluene	0.903	0.0238	0.9513	0	94.9	51.6	136	0.9019	0.0793	30	
4-Chlorotoluene	0.893	0.0238	0.9513	0	93.9	50.1	139	0.8997	0.763	30	
tert-Butylbenzene	0.914	0.0238	0.9513	0	96.0	50.5	135	0.9109	0.292	30	
1,2,3-Trichloropropane	0.827	0.0238	0.9513	0	87.0	50.5	131	0.8390	1.39	30	
1,2,4-Trichlorobenzene	0.945	0.0238	0.9513	0	99.3	50.8	130	0.9382	0.670	30	
sec-Butylbenzene	0.927	0.0476	0.9513	0	97.4	52.6	141	0.9228	0.437	30	
4-Isopropyltoluene	0.922	0.0476	0.9513	0	97.0	52.9	134	0.9148	0.830	30	
1,3-Dichlorobenzene	0.969	0.0190	0.9513	0	102	52.6	131	0.9480	2.16	30	
1,4-Dichlorobenzene	0.959	0.0190	0.9513	0	101	52.9	129	0.9562	0.333	30	
n-Butylbenzene	0.930	0.0238	0.9513	0	97.7	52.6	130	0.9146	1.65	30	
1,2-Dichlorobenzene	0.962	0.0190	0.9513	0	101	55.8	129	0.9638	0.141	30	
1,2-Dibromo-3-chloropropane	0.757	0.476	0.9513	0	79.6	40.5	131	0.7764	2.51	30	
1,2,4-Trimethylbenzene	0.911	0.0190	0.9513	0	95.8	50.6	137	0.9065	0.498	30	
Hexachloro-1,3-butadiene	0.904	0.0476	0.9513	0	95.0	40.6	158	0.8782	2.88	30	
Naphthalene	0.968	0.0476	0.9513	0	102	52.3	124	0.9799	1.21	30	
1,2,3-Trichlorobenzene	0.969	0.0190	0.9513	0	102	54.4	124	0.9741	0.492	30	
Surr: Dibromofluoromethane	1.15		1.189		96.8	56.5	129		0		
Surr: Toluene-d8	1.17		1.189		98.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.14		1.189		95.9	54.8	168		0		

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	1.19	0.0200	1.000	0	119	14.3	167				
Chloromethane	1.05	0.0500	1.000	0	105	32	156				
Vinyl chloride	1.08	0.0250	1.000	0	108	43.4	151				
Bromomethane	1.82	0.0500	1.000	0	182	35	155				S
Trichlorofluoromethane (CFC-11)	1.45	0.0200	1.000	0	145	33.8	156				
Chloroethane	1.31	0.0500	1.000	0	131	33.1	147				
1,1-Dichloroethene	1.09	0.0200	1.000	0	109	30.9	145				
Methylene chloride	1.09	0.0200	1.000	0	109	46.3	140				
trans-1,2-Dichloroethene	1.08	0.0200	1.000	0	108	68	130				
Methyl tert-butyl ether (MTBE)	1.10	0.0500	1.000	0	110	44.1	152				
1,1-Dichloroethane	1.10	0.0200	1.000	0	110	61.9	137				
cis-1,2-Dichloroethene	1.06	0.0200	1.000	0	106	71.3	135				
Chloroform	1.08	0.0200	1.000	0	108	69	145				
1,1,1-Trichloroethane (TCA)	1.06	0.0250	1.000	0	106	69	132				
1,1-Dichloropropene	1.06	0.0200	1.000	0	106	72.7	131				
Carbon tetrachloride	1.04	0.0250	1.000	0	104	63.4	137				
1,2-Dichloroethane (EDC)	1.07	0.0200	1.000	0	107	50.9	162				
Benzene	1.08	0.0200	1.000	0	108	64.3	133				
Trichloroethene (TCE)	1.08	0.0200	1.000	0	108	65.5	137				
1,2-Dichloropropane	1.05	0.0200	1.000	0	105	63.2	142				
Bromodichloromethane	1.03	0.0200	1.000	0	103	53.4	131				
Dibromomethane	1.09	0.0200	1.000	0	109	60.1	146				
cis-1,3-Dichloropropene	1.03	0.0200	1.000	0	103	59.1	143				
Toluene	1.02	0.0200	1.000	0	102	67	144				
trans-1,3-Dichloropropylene	1.02	0.0200	1.000	0	102	49.2	149				
1,1,2-Trichloroethane	1.10	0.0200	1.000	0	110	56.9	147				
1,3-Dichloropropane	1.04	0.0250	1.000	0	104	56.1	153				
Tetrachloroethene (PCE)	1.02	0.0250	1.000	0	102	52.7	150				
Dibromochloromethane	1.01	0.0250	1.000	0	101	70.6	144				
1,2-Dibromoethane (EDB)	0.961	0.00500	1.000	0	96.1	50.5	154				
Chlorobenzene	1.04	0.0250	1.000	0	104	84.9	125				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: LCSS	Batch ID: 25656	Analysis Date: 8/29/2019						SeqNo: 1061447			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	1.03	0.0250	1.000	0	103	65.9	141				
Ethylbenzene	1.00	0.0250	1.000	0	100	74	129				
m,p-Xylene	2.05	0.0500	2.000	0	103	70	124				
o-Xylene	0.995	0.0250	1.000	0	99.5	68.1	139				
Styrene	1.04	0.0250	1.000	0	104	73.3	146				
Isopropylbenzene	0.992	0.0250	1.000	0	99.2	70	130				
Bromoform	1.02	0.0500	1.000	0	102	44.3	130				
1,1,2,2-Tetrachloroethane	1.15	0.0200	1.000	0	115	44.8	165				
n-Propylbenzene	1.05	0.0250	1.000	0	105	75.8	139				
Bromobenzene	1.05	0.0200	1.000	0	105	49.2	144				
1,3,5-Trimethylbenzene	1.05	0.0250	1.000	0	105	76.5	135				
2-Chlorotoluene	1.05	0.0250	1.000	0	105	76.7	129				
4-Chlorotoluene	1.08	0.0250	1.000	0	108	77.5	125				
tert-Butylbenzene	1.00	0.0250	1.000	0	100	66.2	130				
1,2,3-Trichloropropane	1.09	0.0250	1.000	0	109	67.9	136				
1,2,4-Trichlorobenzene	0.978	0.0250	1.000	0	97.8	65.5	150				
sec-Butylbenzene	1.03	0.0500	1.000	0	103	75.6	133				
4-Isopropyltoluene	1.03	0.0500	1.000	0	103	76.8	131				
1,3-Dichlorobenzene	1.02	0.0200	1.000	0	102	48.6	144				
1,4-Dichlorobenzene	1.05	0.0200	1.000	0	105	72.6	126				
n-Butylbenzene	0.979	0.0250	1.000	0	97.9	78.4	140				
1,2-Dichlorobenzene	1.04	0.0200	1.000	0	104	72.8	126				
1,2-Dibromo-3-chloropropane	1.03	0.500	1.000	0	103	40.2	155				
1,2,4-Trimethylbenzene	1.06	0.0200	1.000	0	106	77.5	129				
Hexachloro-1,3-butadiene	1.05	0.0500	1.000	0	105	42	151				
Naphthalene	1.03	0.0500	1.000	0	103	46.5	167				
1,2,3-Trichlorobenzene	1.09	0.0200	1.000	0	109	64.5	149				
Surr: Dibromofluoromethane	1.33		1.250		107	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	54.8	168				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25656	SampType: LCS	Units: mg/Kg			Prep Date: 8/29/2019				RunNo: 53612		
Client ID: LCSS	Batch ID: 25656				Analysis Date: 8/29/2019				SeqNo: 1061447		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

S - Outlying spike recovery observed (high bias). Samples are non-detect for this analyte; no further action required.

Sample ID: MB-25656		SampType: MBLK			Units: mg/Kg		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: MBLKS		Batch ID: 25656			Analysis Date: 8/29/2019			SeqNo: 1061448				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									Q
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									
1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019				RunNo: 53612		
Client ID: MBLKS	Batch ID: 25656				Analysis Date: 8/29/2019				SeqNo: 1061448		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25656	SampType: MBLK	Units: mg/Kg			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: MBLKS	Batch ID: 25656				Analysis Date: 8/29/2019			SeqNo: 1061448			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.29		1.250		103	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.3	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.13		1.250		90.6	54.8	168				

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-2'		Batch ID: 25656					Analysis Date: 8/29/2019			SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0488						0		30	D
Chloromethane	ND	0.122						0		30	DQ
Vinyl chloride	ND	0.0610						0		30	D
Bromomethane	ND	0.122						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0488						0		30	D
Chloroethane	ND	0.122						0		30	D
1,1-Dichloroethene	ND	0.0488						0		30	D
Methylene chloride	ND	0.0488						0		30	D
trans-1,2-Dichloroethene	ND	0.0488						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.122						0		30	D
1,1-Dichloroethane	ND	0.0488						0		30	D
cis-1,2-Dichloroethene	ND	0.0488						0		30	D
Chloroform	ND	0.0488						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.0610						0		30	D
1,1-Dichloropropene	ND	0.0488						0		30	D
Carbon tetrachloride	ND	0.0610						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0488						0		30	D
Benzene	ND	0.0488						0		30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-2'		Batch ID: 25656		Analysis Date: 8/29/2019						SeqNo: 1061422	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	ND	0.0488						0		30	D
1,2-Dichloropropane	ND	0.0488						0		30	D
Bromodichloromethane	ND	0.0488						0		30	D
Dibromomethane	ND	0.0488						0		30	D
cis-1,3-Dichloropropene	ND	0.0488						0		30	D
Toluene	ND	0.0488						0		30	D
trans-1,3-Dichloropropylene	ND	0.0488						0		30	D
1,1,2-Trichloroethane	ND	0.0488						0		30	D
1,3-Dichloropropane	ND	0.0610						0		30	D
Tetrachloroethene (PCE)	ND	0.0610						0		30	D
Dibromochloromethane	ND	0.0610						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0122						0		30	D
Chlorobenzene	ND	0.0610						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.0610						0		30	D
Ethylbenzene	1.80	0.0610						2.248	22.4	30	D
m,p-Xylene	6.72	0.122						8.559	24.0	30	DE
o-Xylene	0.677	0.0610						0.8378	21.3	30	D
Styrene	ND	0.0610						0		30	D
Isopropylbenzene	0.394	0.0610						0.4877	21.4	30	D
Bromoform	ND	0.122						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0488						0		30	D
n-Propylbenzene	1.35	0.0610						1.709	23.5	30	D
Bromobenzene	ND	0.0488						0		30	D
1,3,5-Trimethylbenzene	2.43	0.0610						3.113	24.7	30	D
2-Chlorotoluene	ND	0.0610						0		30	D
4-Chlorotoluene	ND	0.0610						0		30	D
tert-Butylbenzene	ND	0.0610						0		30	D
1,2,3-Trichloropropane	ND	0.0610						0		30	D
1,2,4-Trichlorobenzene	ND	0.0610						0		30	D
sec-Butylbenzene	0.248	0.122						0.3202	25.5	30	D
4-Isopropyltoluene	0.173	0.122						0	200	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-012BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-2'	Batch ID: 25656				Analysis Date: 8/29/2019			SeqNo: 1061422			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	0.0488						0		30	D
1,4-Dichlorobenzene	ND	0.0488						0		30	D
n-Butylbenzene	ND	0.0610						0		30	D
1,2-Dichlorobenzene	ND	0.0488						0		30	D
1,2-Dibromo-3-chloropropane	ND	1.22						0		30	D
1,2,4-Trimethylbenzene	8.37	0.0488						9.823	16.0	30	DE
Hexachloro-1,3-butadiene	ND	0.122						0		30	D
Naphthalene	2.19	0.122						2.510	13.6	30	DQ
1,2,3-Trichlorobenzene	ND	0.0488						0		30	D
Surr: Dibromofluoromethane	3.07		3.049		101	56.5	129		0		D
Surr: Toluene-d8	3.05		3.049		100	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	3.50		3.659		95.6	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

E - Estimated value. The amount exceeds the linear working range of the instrument.

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0920						0		30	D
Chloromethane	ND	0.230						0		30	DQ
Vinyl chloride	ND	0.115						0		30	D
Bromomethane	ND	0.230						0		30	D
Trichlorofluoromethane (CFC-11)	ND	0.0920						0		30	D
Chloroethane	ND	0.230						0		30	D
1,1-Dichloroethene	ND	0.0920						0		30	D
Methylene chloride	ND	0.0920						0		30	D
trans-1,2-Dichloroethene	ND	0.0920						0		30	D
Methyl tert-butyl ether (MTBE)	ND	0.230						0		30	D
1,1-Dichloroethane	ND	0.0920						0		30	D



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656	Analysis Date: 8/30/2019						SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	ND	0.0920						0		30	D
Chloroform	ND	0.0920						0		30	D
1,1,1-Trichloroethane (TCA)	ND	0.115						0		30	D
1,1-Dichloropropene	ND	0.0920						0		30	D
Carbon tetrachloride	ND	0.115						0		30	D
1,2-Dichloroethane (EDC)	ND	0.0920						0		30	D
Benzene	ND	0.0920						0		30	D
Trichloroethene (TCE)	ND	0.0920						0		30	D
1,2-Dichloropropane	ND	0.0920						0		30	D
Bromodichloromethane	ND	0.0920						0		30	D
Dibromomethane	ND	0.0920						0		30	D
cis-1,3-Dichloropropene	ND	0.0920						0		30	D
Toluene	ND	0.0920						0		30	D
trans-1,3-Dichloropropylene	ND	0.0920						0		30	D
1,1,2-Trichloroethane	ND	0.0920						0		30	D
1,3-Dichloropropane	ND	0.115						0		30	D
Tetrachloroethene (PCE)	ND	0.115						0		30	D
Dibromochloromethane	ND	0.115						0		30	D
1,2-Dibromoethane (EDB)	ND	0.0230						0		30	D
Chlorobenzene	ND	0.115						0		30	D
1,1,1,2-Tetrachloroethane	ND	0.115						0		30	D
Ethylbenzene	ND	0.115						0		30	D
m,p-Xylene	ND	0.230						0		30	D
o-Xylene	ND	0.115						0		30	D
Styrene	ND	0.115						0		30	D
Isopropylbenzene	1.53	0.115						1.562	1.77	30	D
Bromoform	ND	0.230						0		30	D
1,1,2,2-Tetrachloroethane	ND	0.0920						0		30	D
n-Propylbenzene	1.39	0.115						1.412	1.27	30	D
Bromobenzene	ND	0.0920						0		30	D
1,3,5-Trimethylbenzene	ND	0.115						0		30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908349-001BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: BATCH	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061437			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2-Chlorotoluene	ND	0.115						0		30	D
4-Chlorotoluene	ND	0.115						0		30	D
tert-Butylbenzene	ND	0.115						0		30	D
1,2,3-Trichloropropane	ND	0.115						0		30	D
1,2,4-Trichlorobenzene	ND	0.115						0		30	D
sec-Butylbenzene	1.60	0.230						1.620	0.997	30	D
4-Isopropyltoluene	ND	0.230						0		30	D
1,3-Dichlorobenzene	ND	0.0920						0		30	D
1,4-Dichlorobenzene	ND	0.0920						0		30	D
n-Butylbenzene	ND	0.115						0		30	D
1,2-Dichlorobenzene	ND	0.0920						0		30	D
1,2-Dibromo-3-chloropropane	ND	2.30						0		30	D
1,2,4-Trimethylbenzene	0.395	0.0920						0.3993	1.07	30	D
Hexachloro-1,3-butadiene	ND	0.230						0		30	D
Naphthalene	ND	0.230						0		30	D
1,2,3-Trichlorobenzene	ND	0.0920						0		30	D
Surr: Dibromofluoromethane	5.54		5.749		96.3	56.5	129		0		D
Surr: Toluene-d8	5.43		5.749		94.5	64.5	151		0		D
Surr: 1-Bromo-4-fluorobenzene	7.69		8.048		95.5	54.8	168		0		D

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Diluted due to matrix.

Sample ID: 1908347-013BMS	SampType: MS	Units: mg/Kg-dry			Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-5'	Batch ID: 25656				Analysis Date: 8/30/2019			SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.736	0.0149	0.7465	0	98.5	43.5	121				
Chloromethane	0.625	0.0373	0.7465	0	83.7	45	130				
Vinyl chloride	0.689	0.0187	0.7465	0	92.3	43.6	150				
Bromomethane	1.01	0.0373	0.7465	0	136	21.3	120				S

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019		RunNo: 53612			
Client ID: GLB-23-5'		Batch ID: 25656				Analysis Date: 8/30/2019		SeqNo: 1061424			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichlorofluoromethane (CFC-11)	0.904	0.0149	0.7465	0	121	35	131				S
Chloroethane	0.965	0.0373	0.7465	0	129	31.9	123				
1,1-Dichloroethene	0.727	0.0149	0.7465	0	97.4	47.3	147				
Methylene chloride	0.798	0.0149	0.7465	0	107	54.7	142				
trans-1,2-Dichloroethene	0.741	0.0149	0.7465	0	99.3	52	136				
Methyl tert-butyl ether (MTBE)	0.763	0.0373	0.7465	0	102	58.5	167				
1,1-Dichloroethane	0.701	0.0149	0.7465	0	93.9	51.8	141				
cis-1,2-Dichloroethene	0.731	0.0149	0.7465	0	98.0	58.6	136				
Chloroform	0.760	0.0149	0.7465	0	102	53.2	129				
1,1,1-Trichloroethane (TCA)	0.729	0.0187	0.7465	0	97.7	58.3	145				
1,1-Dichloropropene	0.773	0.0149	0.7465	0	104	55.1	138				
Carbon tetrachloride	0.734	0.0187	0.7465	0	98.3	53.3	144				
1,2-Dichloroethane (EDC)	0.751	0.0149	0.7465	0	101	51.3	139				
Benzene	0.908	0.0149	0.7465	0.1888	96.3	63.5	133				
Trichloroethene (TCE)	0.881	0.0149	0.7465	0	118	61.6	147				
1,2-Dichloropropane	0.720	0.0149	0.7465	0	96.5	59	136				
Bromodichloromethane	0.760	0.0149	0.7465	0	102	50.7	141				
Dibromomethane	0.773	0.0149	0.7465	0	104	50.6	137				
cis-1,3-Dichloropropene	0.699	0.0149	0.7465	0	93.7	50.4	138				
Toluene	0.783	0.0149	0.7465	0.03415	100	63.4	132				
trans-1,3-Dichloropropylene	0.681	0.0149	0.7465	0	91.2	44.1	147				
1,1,2-Trichloroethane	0.811	0.0149	0.7465	0	109	51.6	137				
1,3-Dichloropropane	0.726	0.0187	0.7465	0	97.3	53.1	134				
Tetrachloroethene (PCE)	0.777	0.0187	0.7465	0	104	35.6	158				
Dibromochloromethane	0.720	0.0187	0.7465	0	96.5	55.3	140				
1,2-Dibromoethane (EDB)	0.762	0.00373	0.7465	0	102	50.4	136				
Chlorobenzene	0.765	0.0187	0.7465	0	102	60	133				
1,1,1,2-Tetrachloroethane	0.749	0.0187	0.7465	0	100	53.1	142				
Ethylbenzene	1.51	0.0187	0.7465	0.8306	90.4	54.5	134				
m,p-Xylene	2.74	0.0373	1.493	1.322	95.2	53.1	132				
o-Xylene	0.835	0.0187	0.7465	0.06496	103	53.3	139				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061424	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	0.785	0.0187	0.7465	0	105	51.1	132				
Isopropylbenzene	0.932	0.0187	0.7465	0.1574	104	58.9	138				
Bromoform	0.742	0.0373	0.7465	0	99.4	57.9	130				
1,1,2,2-Tetrachloroethane	1.31	0.0149	0.7465	0	176	51.9	131				S
n-Propylbenzene	1.25	0.0187	0.7465	0.5136	99.1	53.6	140				
Bromobenzene	0.823	0.0149	0.7465	0	110	54.2	140				
1,3,5-Trimethylbenzene	1.19	0.0187	0.7465	0.3997	106	51.8	136				
2-Chlorotoluene	0.997	0.0187	0.7465	0	134	51.6	136				
4-Chlorotoluene	0.780	0.0187	0.7465	0	105	50.1	139				
tert-Butylbenzene	0.829	0.0187	0.7465	0	111	50.5	135				
1,2,3-Trichloropropane	0.762	0.0187	0.7465	0	102	50.5	131				
1,2,4-Trichlorobenzene	0.930	0.0187	0.7465	0	125	50.8	130				
sec-Butylbenzene	0.998	0.0373	0.7465	0	134	52.6	141				
4-Isopropyltoluene	0.957	0.0373	0.7465	0	128	52.9	134				
1,3-Dichlorobenzene	0.806	0.0149	0.7465	0	108	52.6	131				
1,4-Dichlorobenzene	0.801	0.0149	0.7465	0	107	52.9	129				
n-Butylbenzene	1.27	0.0187	0.7465	0	170	52.6	130				S
1,2-Dichlorobenzene	0.813	0.0149	0.7465	0	109	55.8	129				
1,2-Dibromo-3-chloropropane	1.12	0.373	0.7465	0	150	40.5	131				S
1,2,4-Trimethylbenzene	2.86	0.0149	0.7465	2.693	21.7	50.6	137				S
Hexachloro-1,3-butadiene	1.03	0.0373	0.7465	0	138	40.6	158				
Naphthalene	1.57	0.0373	0.7465	0.6422	124	52.3	124				S
1,2,3-Trichlorobenzene	0.997	0.0149	0.7465	0	134	54.4	124				S
Surr: Dibromofluoromethane	0.913		0.9331		97.8	56.5	129				
Surr: Toluene-d8	0.893		0.9331		95.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	4.29		4.665		91.9	54.8	168				

NOTES:

S - Outlying spike recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.679	0.0149	0.7465	0	91.0	43.5	121	0.7356	7.97	30	
Chloromethane	0.634	0.0373	0.7465	0	84.9	45	130	0.6248	1.47	30	
Vinyl chloride	0.671	0.0187	0.7465	0	89.9	43.6	150	0.6887	2.59	30	
Bromomethane	1.08	0.0373	0.7465	0	144	21.3	120	1.014	5.85	30	S
Trichlorofluoromethane (CFC-11)	0.866	0.0149	0.7465	0	116	35	131	0.9037	4.27	30	
Chloroethane	0.944	0.0373	0.7465	0	126	31.9	123	0.9654	2.24	30	S
1,1-Dichloroethene	0.698	0.0149	0.7465	0	93.6	47.3	147	0.7268	3.99	30	
Methylene chloride	0.767	0.0149	0.7465	0	103	54.7	142	0.7983	3.99	30	
trans-1,2-Dichloroethene	0.719	0.0149	0.7465	0	96.4	52	136	0.7411	2.99	30	
Methyl tert-butyl ether (MTBE)	0.758	0.0373	0.7465	0	102	58.5	167	0.7627	0.624	30	
1,1-Dichloroethane	0.683	0.0149	0.7465	0	91.5	51.8	141	0.7013	2.64	30	
cis-1,2-Dichloroethene	0.716	0.0149	0.7465	0	95.9	58.6	136	0.7312	2.14	30	
Chloroform	0.735	0.0149	0.7465	0	98.4	53.2	129	0.7598	3.36	30	
1,1,1-Trichloroethane (TCA)	0.701	0.0187	0.7465	0	93.9	58.3	145	0.7293	3.93	30	
1,1-Dichloropropene	0.732	0.0149	0.7465	0	98.1	55.1	138	0.7729	5.41	30	
Carbon tetrachloride	0.702	0.0187	0.7465	0	94.1	53.3	144	0.7341	4.43	30	
1,2-Dichloroethane (EDC)	0.740	0.0149	0.7465	0	99.2	51.3	139	0.7512	1.48	30	
Benzene	0.870	0.0149	0.7465	0.1888	91.3	63.5	133	0.9078	4.20	30	
Trichloroethene (TCE)	0.845	0.0149	0.7465	0	113	61.6	147	0.8815	4.20	30	
1,2-Dichloropropane	0.704	0.0149	0.7465	0	94.3	59	136	0.7204	2.36	30	
Bromodichloromethane	0.732	0.0149	0.7465	0	98.1	50.7	141	0.7604	3.82	30	
Dibromomethane	0.749	0.0149	0.7465	0	100	50.6	137	0.7731	3.17	30	
cis-1,3-Dichloropropene	0.684	0.0149	0.7465	0	91.6	50.4	138	0.6992	2.28	30	
Toluene	0.753	0.0149	0.7465	0.03415	96.3	63.4	132	0.7834	3.96	30	
trans-1,3-Dichloropropylene	0.669	0.0149	0.7465	0	89.6	44.1	147	0.6811	1.82	30	
1,1,2-Trichloroethane	0.782	0.0149	0.7465	0	105	51.6	137	0.8112	3.66	30	
1,3-Dichloropropane	0.716	0.0187	0.7465	0	96.0	53.1	134	0.7260	1.33	30	
Tetrachloroethene (PCE)	0.735	0.0187	0.7465	0	98.5	35.6	158	0.7770	5.52	30	
Dibromochloromethane	0.702	0.0187	0.7465	0	94.0	55.3	140	0.7201	2.60	30	
1,2-Dibromoethane (EDB)	0.734	0.00373	0.7465	0	98.4	50.4	136	0.7624	3.77	30	
Chlorobenzene	0.741	0.0187	0.7465	0	99.3	60	133	0.7650	3.13	30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612		
Client ID: GLB-23-5'		Batch ID: 25656		Analysis Date: 8/30/2019						SeqNo: 1061425	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	0.721	0.0187	0.7465	0	96.6	53.1	142	0.7490	3.81	30	
Ethylbenzene	1.41	0.0187	0.7465	0.8306	77.1	54.5	134	1.506	6.82	30	
m,p-Xylene	2.56	0.0373	1.493	1.322	82.6	53.1	132	2.744	7.09	30	
o-Xylene	0.805	0.0187	0.7465	0.06496	99.1	53.3	139	0.8354	3.74	30	
Styrene	0.779	0.0187	0.7465	0	104	51.1	132	0.7851	0.780	30	
Isopropylbenzene	0.885	0.0187	0.7465	0.1574	97.5	58.9	138	0.9318	5.13	30	
Bromoform	0.738	0.0373	0.7465	0	98.8	57.9	130	0.7423	0.595	30	
1,1,2,2-Tetrachloroethane	1.18	0.0149	0.7465	0	158	51.9	131	1.311	10.6	30	S
n-Propylbenzene	1.17	0.0187	0.7465	0.5136	88.4	53.6	140	1.253	6.53	30	
Bromobenzene	0.803	0.0149	0.7465	0	108	54.2	140	0.8230	2.44	30	
1,3,5-Trimethylbenzene	1.13	0.0187	0.7465	0.3997	97.4	51.8	136	1.195	5.85	30	
2-Chlorotoluene	0.942	0.0187	0.7465	0	126	51.6	136	0.9973	5.66	30	
4-Chlorotoluene	0.738	0.0187	0.7465	0	98.9	50.1	139	0.7803	5.57	30	
tert-Butylbenzene	0.792	0.0187	0.7465	0	106	50.5	135	0.8292	4.63	30	
1,2,3-Trichloropropane	0.753	0.0187	0.7465	0	101	50.5	131	0.7624	1.22	30	
1,2,4-Trichlorobenzene	0.912	0.0187	0.7465	0	122	50.8	130	0.9301	2.01	30	
sec-Butylbenzene	0.946	0.0373	0.7465	0	127	52.6	141	0.9975	5.27	30	
4-Isopropyltoluene	0.911	0.0373	0.7465	0	122	52.9	134	0.9573	4.91	30	
1,3-Dichlorobenzene	0.793	0.0149	0.7465	0	106	52.6	131	0.8060	1.67	30	
1,4-Dichlorobenzene	0.797	0.0149	0.7465	0	107	52.9	129	0.8012	0.545	30	
n-Butylbenzene	1.21	0.0187	0.7465	0	163	52.6	130	1.273	4.74	30	S
1,2-Dichlorobenzene	0.802	0.0149	0.7465	0	107	55.8	129	0.8127	1.33	30	
1,2-Dibromo-3-chloropropane	1.11	0.373	0.7465	0	149	40.5	131	1.121	0.955	30	S
1,2,4-Trimethylbenzene	2.71	0.0149	0.7465	2.693	2.25	50.6	137	2.855	5.23	30	S
Hexachloro-1,3-butadiene	1.01	0.0373	0.7465	0	136	40.6	158	1.032	1.97	30	
Naphthalene	1.58	0.0373	0.7465	0.6422	125	52.3	124	1.569	0.556	30	S
1,2,3-Trichlorobenzene	1.01	0.0149	0.7465	0	136	54.4	124	0.9973	1.45	30	S
Surr: Dibromofluoromethane	0.919		0.9331		98.5	56.5	129		0		
Surr: Toluene-d8	0.886		0.9331		95.0	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	4.05		4.665		86.9	54.8	168		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-013BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 8/29/2019			RunNo: 53612			
Client ID: GLB-23-5'		Batch ID: 25656					Analysis Date: 8/30/2019			SeqNo: 1061425		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID: LCS-25737		SampType: LCS			Units: mg/Kg		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: LCSS		Batch ID: 25737			Analysis Date: 9/6/2019			SeqNo: 1063595				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Dichlorodifluoromethane (CFC-12)	0.870	0.0200	1.000	0	87.0	14.3	167				
Chloromethane	0.797	0.0500	1.000	0	79.7	32	156				
Vinyl chloride	0.904	0.0250	1.000	0	90.4	43.4	151				
Bromomethane	1.38	0.0500	1.000	0	138	35	155				
Trichlorofluoromethane (CFC-11)	1.43	0.0200	1.000	0	143	33.8	156				
Chloroethane	1.32	0.0500	1.000	0	132	33.1	147				
1,1-Dichloroethene	0.903	0.0200	1.000	0	90.3	30.9	145				
Methylene chloride	0.911	0.0200	1.000	0	91.1	46.3	140				
trans-1,2-Dichloroethene	0.969	0.0200	1.000	0	96.9	68	130				
Methyl tert-butyl ether (MTBE)	0.933	0.0500	1.000	0	93.3	44.1	152				
1,1-Dichloroethane	0.934	0.0200	1.000	0	93.4	61.9	137				
cis-1,2-Dichloroethene	0.909	0.0200	1.000	0	90.9	71.3	135				
Chloroform	0.902	0.0200	1.000	0	90.2	69	145				
1,1,1-Trichloroethane (TCA)	0.946	0.0250	1.000	0	94.6	69	132				
1,1-Dichloropropene	0.956	0.0200	1.000	0	95.6	72.7	131				
Carbon tetrachloride	0.953	0.0250	1.000	0	95.3	63.4	137				
1,2-Dichloroethane (EDC)	0.890	0.0200	1.000	0	89.0	50.9	162				
Benzene	1.00	0.0200	1.000	0	100	64.3	133				
Trichloroethene (TCE)	0.913	0.0200	1.000	0	91.3	65.5	137				
1,2-Dichloropropane	0.919	0.0200	1.000	0	91.9	63.2	142				
Bromodichloromethane	0.878	0.0200	1.000	0	87.8	53.4	131				
Dibromomethane	0.852	0.0200	1.000	0	85.2	60.1	146				
cis-1,3-Dichloropropene	0.867	0.0200	1.000	0	86.7	59.1	143				
Toluene	0.954	0.0200	1.000	0	95.4	67	144				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25737	SampType: LCS	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: LCSS	Batch ID: 25737	Analysis Date: 9/6/2019						SeqNo: 1063595			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	0.831	0.0200	1.000	0	83.1	49.2	149				
1,1,2-Trichloroethane	0.821	0.0200	1.000	0	82.1	56.9	147				
1,3-Dichloropropane	0.838	0.0250	1.000	0	83.8	56.1	153				
Tetrachloroethene (PCE)	0.870	0.0250	1.000	0	87.0	52.7	150				
Dibromochloromethane	0.809	0.0250	1.000	0	80.9	70.6	144				
1,2-Dibromoethane (EDB)	0.811	0.00500	1.000	0	81.1	50.5	154				
Chlorobenzene	0.943	0.0250	1.000	0	94.3	84.9	125				
1,1,1,2-Tetrachloroethane	0.950	0.0250	1.000	0	95.0	65.9	141				
Ethylbenzene	1.04	0.0250	1.000	0	104	74	129				
m,p-Xylene	2.06	0.0500	2.000	0	103	70	124				
o-Xylene	1.01	0.0250	1.000	0	101	68.1	139				
Styrene	0.909	0.0250	1.000	0	90.9	73.3	146				
Isopropylbenzene	0.925	0.0250	1.000	0	92.5	70	130				
Bromoform	0.858	0.0500	1.000	0	85.8	44.3	130				
1,1,2,2-Tetrachloroethane	0.833	0.0200	1.000	0	83.3	44.8	165				
n-Propylbenzene	0.917	0.0250	1.000	0	91.7	75.8	139				
Bromobenzene	0.906	0.0200	1.000	0	90.6	49.2	144				
1,3,5-Trimethylbenzene	0.885	0.0250	1.000	0	88.5	76.5	135				
2-Chlorotoluene	1.09	0.0250	1.000	0	109	76.7	129				
4-Chlorotoluene	0.873	0.0250	1.000	0	87.3	77.5	125				
tert-Butylbenzene	0.910	0.0250	1.000	0	91.0	66.2	130				
1,2,3-Trichloropropane	0.849	0.0250	1.000	0	84.9	67.9	136				
1,2,4-Trichlorobenzene	0.967	0.0250	1.000	0	96.7	65.5	150				
sec-Butylbenzene	0.882	0.0500	1.000	0	88.2	75.6	133				
4-Isopropyltoluene	0.910	0.0500	1.000	0	91.0	76.8	131				
1,3-Dichlorobenzene	0.986	0.0200	1.000	0	98.6	48.6	144				
1,4-Dichlorobenzene	0.978	0.0200	1.000	0	97.8	72.6	126				
n-Butylbenzene	0.968	0.0250	1.000	0	96.8	78.4	140				
1,2-Dichlorobenzene	0.964	0.0200	1.000	0	96.4	72.8	126				
1,2-Dibromo-3-chloropropane	0.882	0.500	1.000	0	88.2	40.2	155				
1,2,4-Trimethylbenzene	0.884	0.0200	1.000	0	88.4	77.5	129				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25737	SampType: LCS	Units: mg/Kg				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: LCSS	Batch ID: 25737	Analysis Date: 9/6/2019							SeqNo: 1063595		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.943	0.0500	1.000	0	94.3	42	151				
Naphthalene	0.900	0.0500	1.000	0	90.0	46.5	167				
1,2,3-Trichlorobenzene	0.969	0.0200	1.000	0	96.9	64.5	149				
Surr: Dibromofluoromethane	1.26		1.250		101	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.5	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.28		1.250		103	54.8	168				

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0200									
Chloromethane	ND	0.0500									
Vinyl chloride	ND	0.0250									
Bromomethane	ND	0.0500									
Trichlorofluoromethane (CFC-11)	ND	0.0200									
Chloroethane	ND	0.0500									
1,1-Dichloroethene	ND	0.0200									
Methylene chloride	ND	0.0200									
trans-1,2-Dichloroethene	ND	0.0200									
Methyl tert-butyl ether (MTBE)	ND	0.0500									
1,1-Dichloroethane	ND	0.0200									
cis-1,2-Dichloroethene	ND	0.0200									
Chloroform	ND	0.0200									
1,1,1-Trichloroethane (TCA)	ND	0.0250									
1,1-Dichloropropene	ND	0.0200									
Carbon tetrachloride	ND	0.0250									
1,2-Dichloroethane (EDC)	ND	0.0200									
Benzene	ND	0.0200									
Trichloroethene (TCE)	ND	0.0200									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,2-Dichloropropane	ND	0.0200									
Bromodichloromethane	ND	0.0200									
Dibromomethane	ND	0.0200									
cis-1,3-Dichloropropene	ND	0.0200									
Toluene	ND	0.0200									
trans-1,3-Dichloropropylene	ND	0.0200									
1,1,2-Trichloroethane	ND	0.0200									
1,3-Dichloropropane	ND	0.0250									
Tetrachloroethene (PCE)	ND	0.0250									
Dibromochloromethane	ND	0.0250									
1,2-Dibromoethane (EDB)	ND	0.00500									
Chlorobenzene	ND	0.0250									
1,1,1,2-Tetrachloroethane	ND	0.0250									
Ethylbenzene	ND	0.0250									
m,p-Xylene	ND	0.0500									
o-Xylene	ND	0.0250									
Styrene	ND	0.0250									
Isopropylbenzene	ND	0.0250									
Bromoform	ND	0.0500									
1,1,1,2,2-Tetrachloroethane	ND	0.0200									
n-Propylbenzene	ND	0.0250									
Bromobenzene	ND	0.0200									
1,3,5-Trimethylbenzene	ND	0.0250									
2-Chlorotoluene	ND	0.0250									
4-Chlorotoluene	ND	0.0250									
tert-Butylbenzene	ND	0.0250									
1,2,3-Trichloropropane	ND	0.0250									
1,2,4-Trichlorobenzene	ND	0.0250									
sec-Butylbenzene	ND	0.0500									
4-Isopropyltoluene	ND	0.0500									
1,3-Dichlorobenzene	ND	0.0200									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25737	SampType: MBLK	Units: mg/Kg			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: MBLKS	Batch ID: 25737				Analysis Date: 9/7/2019			SeqNo: 1063596			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dichlorobenzene	ND	0.0200									
n-Butylbenzene	ND	0.0250									
1,2-Dichlorobenzene	ND	0.0200									
1,2-Dibromo-3-chloropropane	ND	0.500									
1,2,4-Trimethylbenzene	ND	0.0200									
Hexachloro-1,3-butadiene	ND	0.0500									
Naphthalene	ND	0.0500									
1,2,3-Trichlorobenzene	ND	0.0200									
Surr: Dibromofluoromethane	1.21		1.250		97.1	56.5	129				
Surr: Toluene-d8	1.19		1.250		94.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.15		1.250		91.9	54.8	168				

Sample ID: 1909070-002BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: BATCH		Batch ID: 25737		Analysis Date: 9/7/2019					SeqNo: 1063591		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	0.0176						0		30	
Chloromethane	ND	0.0439						0		30	
Vinyl chloride	ND	0.0219						0		30	
Bromomethane	ND	0.0439						0		30	
Trichlorofluoromethane (CFC-11)	ND	0.0176						0		30	
Chloroethane	ND	0.0439						0		30	
1,1-Dichloroethene	ND	0.0176						0		30	
Methylene chloride	ND	0.0176						0		30	
trans-1,2-Dichloroethene	ND	0.0176						0		30	
Methyl tert-butyl ether (MTBE)	ND	0.0439						0		30	
1,1-Dichloroethane	ND	0.0176						0		30	
cis-1,2-Dichloroethene	ND	0.0176						0		30	
Chloroform	ND	0.0176						0		30	
1,1,1-Trichloroethane (TCA)	ND	0.0219						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1909070-002BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: BATCH		Batch ID: 25737		Analysis Date: 9/7/2019						SeqNo: 1063591	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.0176						0		30	
Carbon tetrachloride	ND	0.0219						0		30	
1,2-Dichloroethane (EDC)	ND	0.0176						0		30	
Benzene	ND	0.0176						0		30	
Trichloroethene (TCE)	ND	0.0176						0		30	
1,2-Dichloropropane	ND	0.0176						0		30	
Bromodichloromethane	ND	0.0176						0		30	
Dibromomethane	ND	0.0176						0		30	
cis-1,3-Dichloropropene	ND	0.0176						0		30	
Toluene	ND	0.0176						0		30	
trans-1,3-Dichloropropylene	ND	0.0176						0		30	
1,1,2-Trichloroethane	ND	0.0176						0		30	
1,3-Dichloropropane	ND	0.0219						0		30	
Tetrachloroethene (PCE)	ND	0.0219						0		30	
Dibromochloromethane	ND	0.0219						0		30	
1,2-Dibromoethane (EDB)	ND	0.00439						0		30	
Chlorobenzene	ND	0.0219						0		30	
1,1,1,2-Tetrachloroethane	ND	0.0219						0		30	
Ethylbenzene	ND	0.0219						0		30	
m,p-Xylene	ND	0.0439						0		30	
o-Xylene	ND	0.0219						0		30	
Styrene	ND	0.0219						0		30	
Isopropylbenzene	ND	0.0219						0		30	
Bromoform	ND	0.0439						0		30	
1,1,2,2-Tetrachloroethane	ND	0.0176						0		30	
n-Propylbenzene	ND	0.0219						0		30	
Bromobenzene	ND	0.0176						0		30	
1,3,5-Trimethylbenzene	ND	0.0219						0		30	
2-Chlorotoluene	ND	0.0219						0		30	
4-Chlorotoluene	ND	0.0219						0		30	
tert-Butylbenzene	ND	0.0219						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1909070-002BDUP	SampType: DUP	Units: mg/Kg-dry			Prep Date: 9/6/2019			RunNo: 53732			
Client ID: BATCH	Batch ID: 25737	Analysis Date: 9/7/2019						SeqNo: 1063591			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,3-Trichloropropane	ND	0.0219						0		30	
1,2,4-Trichlorobenzene	ND	0.0219						0		30	
sec-Butylbenzene	ND	0.0439						0		30	
4-Isopropyltoluene	ND	0.0439						0		30	
1,3-Dichlorobenzene	ND	0.0176						0		30	
1,4-Dichlorobenzene	ND	0.0176						0		30	
n-Butylbenzene	ND	0.0219						0		30	
1,2-Dichlorobenzene	ND	0.0176						0		30	
1,2-Dibromo-3-chloropropane	ND	0.439						0		30	
1,2,4-Trimethylbenzene	ND	0.0176						0		30	
Hexachloro-1,3-butadiene	ND	0.0439						0		30	
Naphthalene	ND	0.0439						0		30	
1,2,3-Trichlorobenzene	ND	0.0176						0		30	
Surr: Dibromofluoromethane	1.06		1.097		97.0	56.5	129		0		
Surr: Toluene-d8	1.05		1.097		95.9	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.01		1.097		91.9	54.8	168		0		

Sample ID: 1908347-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53732			
Client ID: GLB-19-2'		Batch ID: 25737				Analysis Date: 9/7/2019		SeqNo: 1063587			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.508	0.0102	0.5095	0	99.6	43.5	121				H
Chloromethane	0.480	0.0255	0.5095	0	94.1	45	130				H
Vinyl chloride	0.583	0.0127	0.5095	0	114	43.6	150				H
Bromomethane	0.839	0.0255	0.5095	0	165	21.3	120				SH
Trichlorofluoromethane (CFC-11)	0.903	0.0102	0.5095	0	177	35	131				SH
Chloroethane	0.994	0.0255	0.5095	0	195	31.9	123				SH
1,1-Dichloroethene	0.402	0.0102	0.5095	0	78.8	47.3	147				H
Methylene chloride	0.491	0.0102	0.5095	0	96.4	54.7	142				H
trans-1,2-Dichloroethene	0.496	0.0102	0.5095	0	97.3	52	136				H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMS	SampType: MS	Units: mg/Kg-dry				Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'	Batch ID: 25737	Analysis Date: 9/7/2019							SeqNo: 1063587		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	0.442	0.0255	0.5095	0	86.8	58.5	167				H
1,1-Dichloroethane	0.518	0.0102	0.5095	0	102	51.8	141				H
cis-1,2-Dichloroethene	0.502	0.0102	0.5095	0	98.6	58.6	136				H
Chloroform	0.512	0.0102	0.5095	0	100	53.2	129				H
1,1,1-Trichloroethane (TCA)	0.511	0.0127	0.5095	0	100	58.3	145				H
1,1-Dichloropropene	0.506	0.0102	0.5095	0	99.3	55.1	138				H
Carbon tetrachloride	0.505	0.0127	0.5095	0	99.2	53.3	144				H
1,2-Dichloroethane (EDC)	0.486	0.0102	0.5095	0	95.5	51.3	139				H
Benzene	0.523	0.0102	0.5095	0	103	63.5	133				H
Trichloroethene (TCE)	0.646	0.0102	0.5095	0	127	61.6	147				H
1,2-Dichloropropane	0.505	0.0102	0.5095	0	99.1	59	136				H
Bromodichloromethane	0.497	0.0102	0.5095	0	97.5	50.7	141				H
Dibromomethane	0.479	0.0102	0.5095	0	94.1	50.6	137				H
cis-1,3-Dichloropropene	0.486	0.0102	0.5095	0	95.4	50.4	138				H
Toluene	0.547	0.0102	0.5095	0.02502	102	63.4	132				H
trans-1,3-Dichloropropylene	0.471	0.0102	0.5095	0	92.3	44.1	147				H
1,1,2-Trichloroethane	0.468	0.0102	0.5095	0	91.9	51.6	137				H
1,3-Dichloropropane	0.481	0.0127	0.5095	0	94.4	53.1	134				H
Tetrachloroethene (PCE)	0.512	0.0127	0.5095	0	100	35.6	158				H
Dibromochloromethane	0.478	0.0127	0.5095	0	93.8	55.3	140				H
1,2-Dibromoethane (EDB)	0.469	0.00255	0.5095	0	92.1	50.4	136				H
Chlorobenzene	0.511	0.0127	0.5095	0	100	60	133				H
1,1,1,2-Tetrachloroethane	0.504	0.0127	0.5095	0	99.0	53.1	142				H
Ethylbenzene	0.524	0.0127	0.5095	0.01067	101	54.5	134				H
m,p-Xylene	1.05	0.0255	1.019	0.02443	101	53.1	132				H
o-Xylene	0.525	0.0127	0.5095	0.01216	101	53.3	139				H
Styrene	0.489	0.0127	0.5095	0	95.9	51.1	132				H
Isopropylbenzene	0.507	0.0127	0.5095	0	99.5	58.9	138				H
Bromoform	0.434	0.0255	0.5095	0	85.1	57.9	130				H
1,1,2,2-Tetrachloroethane	0.278	0.0102	0.5095	0	54.6	51.9	131				H
n-Propylbenzene	0.511	0.0127	0.5095	0	100	53.6	140				H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53732			
Client ID: GLB-19-2'		Batch ID: 25737				Analysis Date: 9/7/2019		SeqNo: 1063587			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromobenzene	0.502	0.0102	0.5095	0	98.6	54.2	140				H
1,3,5-Trimethylbenzene	0.490	0.0127	0.5095	0	96.2	51.8	136				H
2-Chlorotoluene	0.519	0.0127	0.5095	0	102	51.6	136				H
4-Chlorotoluene	0.494	0.0127	0.5095	0	96.9	50.1	139				H
tert-Butylbenzene	0.501	0.0127	0.5095	0	98.3	50.5	135				H
1,2,3-Trichloropropane	0.421	0.0127	0.5095	0	82.6	50.5	131				H
1,2,4-Trichlorobenzene	0.511	0.0127	0.5095	0	100	50.8	130				H
sec-Butylbenzene	0.495	0.0255	0.5095	0	97.2	52.6	141				H
4-Isopropyltoluene	0.501	0.0255	0.5095	0	98.3	52.9	134				H
1,3-Dichlorobenzene	0.507	0.0102	0.5095	0	99.6	52.6	131				H
1,4-Dichlorobenzene	0.526	0.0102	0.5095	0	103	52.9	129				H
n-Butylbenzene	0.508	0.0127	0.5095	0	99.8	52.6	130				H
1,2-Dichlorobenzene	0.504	0.0102	0.5095	0	98.9	55.8	129				H
1,2-Dibromo-3-chloropropane	0.422	0.255	0.5095	0	82.9	40.5	131				H
1,2,4-Trimethylbenzene	0.507	0.0102	0.5095	0	99.5	50.6	137				H
Hexachloro-1,3-butadiene	0.533	0.0255	0.5095	0	105	40.6	158				H
Naphthalene	0.506	0.0255	0.5095	0.02468	94.5	52.3	124				H
1,2,3-Trichlorobenzene	0.511	0.0102	0.5095	0	100	54.4	124				H
Surr: Dibromofluoromethane	0.652		0.6369		102	56.5	129				H
Surr: Toluene-d8	0.668		0.6369		105	64.5	151				H
Surr: 1-Bromo-4-fluorobenzene	3.98		3.185		125	54.8	168				H

NOTES:

S - Outlying spike recovery(ies) observed.

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019		RunNo: 53732			
Client ID: GLB-19-2'		Batch ID: 25737				Analysis Date: 9/7/2019		SeqNo: 1063588			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	0.544	0.0102	0.5095	0	107	43.5	121	0.5077	6.90	30	H
Chloromethane	0.517	0.0255	0.5095	0	101	45	130	0.4795	7.54	30	H
Vinyl chloride	0.637	0.0127	0.5095	0	125	43.6	150	0.5830	8.90	30	H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'		Batch ID: 25737		Analysis Date: 9/7/2019						SeqNo: 1063588	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromomethane	0.914	0.0255	0.5095	0	179	21.3	120	0.8387	8.61	30	SH
Trichlorofluoromethane (CFC-11)	0.924	0.0102	0.5095	0	181	35	131	0.9032	2.26	30	SH
Chloroethane	1.12	0.0255	0.5095	0	220	31.9	123	0.9936	11.9	30	SH
1,1-Dichloroethene	0.377	0.0102	0.5095	0	74.0	47.3	147	0.4017	6.36	30	H
Methylene chloride	0.476	0.0102	0.5095	0	93.4	54.7	142	0.4914	3.20	30	H
trans-1,2-Dichloroethene	0.475	0.0102	0.5095	0	93.3	52	136	0.4956	4.17	30	H
Methyl tert-butyl ether (MTBE)	0.426	0.0255	0.5095	0	83.6	58.5	167	0.4425	3.76	30	H
1,1-Dichloroethane	0.502	0.0102	0.5095	0	98.5	51.8	141	0.5184	3.26	30	H
cis-1,2-Dichloroethene	0.490	0.0102	0.5095	0	96.2	58.6	136	0.5023	2.43	30	H
Chloroform	0.499	0.0102	0.5095	0	97.9	53.2	129	0.5117	2.59	30	H
1,1,1-Trichloroethane (TCA)	0.501	0.0127	0.5095	0	98.3	58.3	145	0.5109	1.97	30	H
1,1-Dichloropropene	0.500	0.0102	0.5095	0	98.0	55.1	138	0.5059	1.25	30	H
Carbon tetrachloride	0.508	0.0127	0.5095	0	99.8	53.3	144	0.5053	0.591	30	H
1,2-Dichloroethane (EDC)	0.479	0.0102	0.5095	0	94.1	51.3	139	0.4864	1.43	30	H
Benzene	0.513	0.0102	0.5095	0	101	63.5	133	0.5230	1.92	30	H
Trichloroethene (TCE)	0.634	0.0102	0.5095	0	124	61.6	147	0.6464	1.91	30	H
1,2-Dichloropropane	0.495	0.0102	0.5095	0	97.2	59	136	0.5049	1.91	30	H
Bromodichloromethane	0.497	0.0102	0.5095	0	97.5	50.7	141	0.4970	0.0536	30	H
Dibromomethane	0.475	0.0102	0.5095	0	93.2	50.6	137	0.4794	0.914	30	H
cis-1,3-Dichloropropene	0.479	0.0102	0.5095	0	94.0	50.4	138	0.4860	1.49	30	H
Toluene	0.540	0.0102	0.5095	0.02502	101	63.4	132	0.5468	1.22	30	H
trans-1,3-Dichloropropylene	0.466	0.0102	0.5095	0	91.5	44.1	147	0.4705	0.943	30	H
1,1,2-Trichloroethane	0.455	0.0102	0.5095	0	89.3	51.6	137	0.4683	2.89	30	H
1,3-Dichloropropane	0.470	0.0127	0.5095	0	92.2	53.1	134	0.4811	2.40	30	H
Tetrachloroethene (PCE)	0.511	0.0127	0.5095	0	100	35.6	158	0.5120	0.279	30	H
Dibromochloromethane	0.472	0.0127	0.5095	0	92.6	55.3	140	0.4779	1.32	30	H
1,2-Dibromoethane (EDB)	0.461	0.00255	0.5095	0	90.4	50.4	136	0.4693	1.83	30	H
Chlorobenzene	0.504	0.0127	0.5095	0	98.9	60	133	0.5106	1.31	30	H
1,1,1,2-Tetrachloroethane	0.490	0.0127	0.5095	0	96.2	53.1	142	0.5043	2.83	30	H
Ethylbenzene	0.519	0.0127	0.5095	0.01067	99.7	54.5	134	0.5242	1.04	30	H
m,p-Xylene	1.04	0.0255	1.019	0.02443	100	53.1	132	1.051	0.672	30	H

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908347-002BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/6/2019			RunNo: 53732		
Client ID: GLB-19-2'		Batch ID: 25737					Analysis Date: 9/7/2019			SeqNo: 1063588	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	0.521	0.0127	0.5095	0.01216	100	53.3	139	0.5254	0.751	30	H
Styrene	0.488	0.0127	0.5095	0	95.7	51.1	132	0.4889	0.253	30	H
Isopropylbenzene	0.512	0.0127	0.5095	0	100	58.9	138	0.5071	0.891	30	H
Bromoform	0.224	0.0255	0.5095	0	43.9	57.9	130	0.4338	63.8	30	RSH
1,1,2,2-Tetrachloroethane	0.266	0.0102	0.5095	0	52.3	51.9	131	0.2783	4.39	30	H
n-Propylbenzene	0.515	0.0127	0.5095	0	101	53.6	140	0.5108	0.738	30	H
Bromobenzene	0.497	0.0102	0.5095	0	97.5	54.2	140	0.5024	1.15	30	H
1,3,5-Trimethylbenzene	0.486	0.0127	0.5095	0	95.5	51.8	136	0.4903	0.799	30	H
2-Chlorotoluene	0.508	0.0127	0.5095	0	99.7	51.6	136	0.5185	2.09	30	H
4-Chlorotoluene	0.485	0.0127	0.5095	0	95.2	50.1	139	0.4935	1.75	30	H
tert-Butylbenzene	0.495	0.0127	0.5095	0	97.1	50.5	135	0.5010	1.28	30	H
1,2,3-Trichloropropane	0.416	0.0127	0.5095	0	81.7	50.5	131	0.4208	1.14	30	H
1,2,4-Trichlorobenzene	0.530	0.0127	0.5095	0	104	50.8	130	0.5112	3.64	30	H
sec-Butylbenzene	0.486	0.0255	0.5095	0	95.4	52.6	141	0.4951	1.82	30	H
4-Isopropyltoluene	0.495	0.0255	0.5095	0	97.1	52.9	134	0.5010	1.28	30	H
1,3-Dichlorobenzene	0.515	0.0102	0.5095	0	101	52.6	131	0.5075	1.44	30	H
1,4-Dichlorobenzene	0.533	0.0102	0.5095	0	105	52.9	129	0.5262	1.19	30	H
n-Butylbenzene	0.525	0.0127	0.5095	0	103	52.6	130	0.5083	3.15	30	H
1,2-Dichlorobenzene	0.509	0.0102	0.5095	0	99.8	55.8	129	0.5040	0.923	30	H
1,2-Dibromo-3-chloropropane	0.414	0.255	0.5095	0	81.2	40.5	131	0.4224	2.02	30	H
1,2,4-Trimethylbenzene	0.494	0.0102	0.5095	0	96.9	50.6	137	0.5068	2.64	30	H
Hexachloro-1,3-butadiene	0.564	0.0255	0.5095	0	111	40.6	158	0.5331	5.60	30	H
Naphthalene	0.517	0.0255	0.5095	0.02468	96.5	52.3	124	0.5062	2.03	30	H
1,2,3-Trichlorobenzene	0.524	0.0102	0.5095	0	103	54.4	124	0.5110	2.47	30	H
Surr: Dibromofluoromethane	0.653		0.6369		103	56.5	129		0		H
Surr: Toluene-d8	0.669		0.6369		105	64.5	151		0		H
Surr: 1-Bromo-4-fluorobenzene	3.91		3.185		123	54.8	168		0		H

NOTES:

S - Outlying spike recovery observed.

R - High RPD observed. The method is in control as indicated by the LCS.



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: LCS-25689	SampType: LCS	Units: mg/Kg			Prep Date: 9/3/2019			RunNo: 53631			
Client ID: LCSS	Batch ID: 25689	Analysis Date: 9/3/2019						SeqNo: 1061776			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.234	0.00597	0.2500	0	93.5	56.1	130				
Trichloroethene (TCE)	0.246	0.0145	0.2500	0	98.6	67.4	133				
1,2-Dibromoethane (EDB)	0.240	0.00146	0.2500	0	96.1	70	130				
Hexachloro-1,3-butadiene	0.250	0.00795	0.2500	0	100	42	151				
Surr: Dibromofluoromethane	0.499		0.5000		99.8	54.7	128				
Surr: Toluene-d8	0.501		0.5000		100	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.505		0.5000		101	73.5	127				

Sample ID: MB-25689		SampType: MBLK		Units: mg/Kg		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: MBLKS		Batch ID: 25689					Analysis Date: 9/3/2019			SeqNo: 1061777	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00597									Q
Trichloroethene (TCE)	ND	0.0145									
1,2-Dibromoethane (EDB)	ND	0.00146									
Hexachloro-1,3-butadiene	ND	0.00795									
Surr: Dibromofluoromethane	0.512		0.5000		102	54.7	128				
Surr: Toluene-d8	0.495		0.5000		99.1	74.2	139				
Surr: 1-Bromo-4-fluorobenzene	0.491		0.5000		98.3	73.5	127				

NOTES:

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061768	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.00274						0		30	Q
Trichloroethene (TCE)	ND	0.00668						0		30	
1,2-Dibromoethane (EDB)	ND	0.000671						0		30	
Hexachloro-1,3-butadiene	ND	0.00365						0		30	I
Surr: Dibromofluoromethane	0.205		0.2299		89.3	54.7	128		0		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-001BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061768	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Surr: Toluene-d8	0.145		0.2299		63.0	74.2	139		0		S
Surr: 1-Bromo-4-fluorobenzene	1.46		2.529		57.6	73.5	127		0		SI

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed and recovered within range.

I - Indicates an analyte with an internal standard that does not meet established acceptance criteria.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908347-019BDUP		SampType: DUP		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: TRB-6-11'		Batch ID: 25689		Analysis Date: 9/4/2019						SeqNo: 1061764	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	ND	0.00282						0		30	Q
Trichloroethene (TCE)	ND	0.00685						0		30	
1,2-Dibromoethane (EDB)	ND	0.000689						0		30	
Hexachloro-1,3-butadiene	ND	0.00375						0		30	
Surr: Dibromofluoromethane	0.242		0.2360		103	54.7	128		0		
Surr: Toluene-d8	0.240		0.2360		102	74.2	139		0		
Surr: 1-Bromo-4-fluorobenzene	1.82		2.596		70.2	73.5	127		0		S

NOTES:

S - Outlying surrogate recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Q - Indicates an analyte with an initial calibration verification that does not meet established acceptance criteria

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689					Analysis Date: 9/4/2019			SeqNo: 1061771	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	0.117	0.00322	0.1079	0	109	51.2	146				
Trichloroethene (TCE)	0.119	0.00783	0.1079	0	110	68.6	132				
1,2-Dibromoethane (EDB)	0.117	0.000788	0.1079	0	108	50.4	136				
Hexachloro-1,3-butadiene	0.115	0.00429	0.1079	0	106	40.6	158				
Surr: Dibromofluoromethane	0.260		0.2698		96.4	54.7	128				
Surr: Toluene-d8	0.289		0.2698		107	74.2	139				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: 1908349-010BMS		SampType: MS		Units: mg/Kg-dry		Prep Date: 9/3/2019		RunNo: 53631			
Client ID: BATCH		Batch ID: 25689				Analysis Date: 9/4/2019		SeqNo: 1061771			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 1-Bromo-4-fluorobenzene	2.14		2.968		71.9	73.5	127				S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Sample ID: 1908349-010BMSD		SampType: MSD		Units: mg/Kg-dry		Prep Date: 9/3/2019			RunNo: 53631		
Client ID: BATCH		Batch ID: 25689		Analysis Date: 9/4/2019					SeqNo: 1061772		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	0.134	0.00322	0.1079	0	124	51.2	146	0.1172	13.2	30	
Trichloroethene (TCE)	0.130	0.00783	0.1079	0	120	68.6	132	0.1185	8.94	30	
1,2-Dibromoethane (EDB)	0.126	0.000788	0.1079	0	116	50.4	136	0.1170	7.04	30	
Hexachloro-1,3-butadiene	0.121	0.00429	0.1079	0	112	40.6	158	0.1148	5.49	30	
Surr: Dibromofluoromethane	0.260		0.2698		96.4	54.7	128		0		
Surr: Toluene-d8	0.290		0.2698		108	74.2	139		0		
Surr: 1-Bromo-4-fluorobenzene	2.18		2.968		73.4	73.5	127		0		S

NOTES:

S - Outlying surrogate recovery(ies) observed.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25645	SampType: LCS	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: LCSW	Batch ID: 25645	Analysis Date: 8/28/2019						SeqNo: 1061374			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	16.5	1.00	20.00	0	82.7	18.7	171				
Chloromethane	16.6	2.00	20.00	0	83.1	38.5	171				
Vinyl chloride	17.6	0.200	20.00	0	88.0	48	145				
Bromomethane	19.4	1.00	20.00	0	97.2	32.5	184				
Trichlorofluoromethane (CFC-11)	18.9	1.00	20.00	0	94.6	43.5	149				
Chloroethane	17.8	1.00	20.00	0	89.2	43.8	168				
1,1-Dichloroethene	20.3	1.00	20.00	0	102	57.5	150				
Methylene chloride	19.7	1.00	20.00	0	98.6	67.1	131				
trans-1,2-Dichloroethene	19.9	1.00	20.00	0	99.3	71.7	129				
Methyl tert-butyl ether (MTBE)	20.5	1.00	20.00	0	102	58	138				
1,1-Dichloroethane	19.8	1.00	20.00	0	99.2	67.9	134				
cis-1,2-Dichloroethene	19.7	1.00	20.00	0	98.3	70.2	139				
Chloroform	19.7	1.00	20.00	0	98.7	66.3	131				
1,1,1-Trichloroethane (TCA)	19.4	1.00	20.00	0	97.1	63	140				
1,1-Dichloropropene	19.7	1.00	20.00	0	98.5	69.9	124				
Carbon tetrachloride	19.1	1.00	20.00	0	95.6	66.2	134				
1,2-Dichloroethane (EDC)	19.9	1.00	20.00	0	99.6	67	126				
Benzene	19.7	1.00	20.00	0	98.7	69.3	132				
Trichloroethene (TCE)	20.1	0.500	20.00	0	100	65.2	136				
1,2-Dichloropropane	19.5	1.00	20.00	0	97.7	70.5	130				
Bromodichloromethane	19.7	1.00	20.00	0	98.5	67.2	137				
Dibromomethane	20.6	1.00	20.00	0	103	69.3	143				
cis-1,3-Dichloropropene	19.9	1.00	20.00	0	99.7	62.6	137				
Toluene	19.6	1.00	20.00	0	97.9	61.3	145				
trans-1,3-Dichloropropylene	20.4	1.00	20.00	0	102	56.5	163				
1,1,2-Trichloroethane	20.5	1.00	20.00	0	103	71.7	131				
1,3-Dichloropropane	20.1	1.00	20.00	0	100	73.5	127				
Tetrachloroethene (PCE)	19.2	1.00	20.00	0	96.1	47.5	147				
Dibromochloromethane	19.0	1.00	20.00	0	95.1	67.2	134				
1,2-Dibromoethane (EDB)	19.9	0.250	20.00	0	99.3	73.6	125				
Chlorobenzene	18.8	1.00	20.00	0	94.0	73.9	126				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: LCS-25645	SampType: LCS	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: LCSW	Batch ID: 25645	Analysis Date: 8/28/2019						SeqNo: 1061374			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	19.5	1.00	20.00	0	97.3	76.8	124				
Ethylbenzene	19.3	1.00	20.00	0	96.6	72	130				
m,p-Xylene	37.3	1.00	40.00	0	93.2	70.3	134				
o-Xylene	18.0	1.00	20.00	0	90.2	62	125				
Styrene	17.8	1.00	20.00	0	89.0	64.3	140				
Isopropylbenzene	17.9	1.00	20.00	0	89.4	73.9	128				
Bromoform	19.1	2.00	20.00	0	95.7	55.3	141				
1,1,2,2-Tetrachloroethane	20.2	1.00	20.00	0	101	62.9	132				
n-Propylbenzene	17.6	1.00	20.00	0	87.9	74.5	127				
Bromobenzene	17.6	1.00	20.00	0	87.8	71	131				
1,3,5-Trimethylbenzene	17.3	1.00	20.00	0	86.5	73.1	128				
2-Chlorotoluene	17.6	1.00	20.00	0	88.0	70.8	130				
4-Chlorotoluene	17.8	1.00	20.00	0	88.8	70.1	131				
tert-Butylbenzene	17.7	1.00	20.00	0	88.6	68.2	131				
1,2,3-Trichloropropane	21.4	1.00	20.00	0	107	67.7	131				
1,2,4-Trichlorobenzene	15.3	2.00	20.00	0	76.6	41	139				
sec-Butylbenzene	17.4	1.00	20.00	0	86.8	72	129				
4-Isopropyltoluene	17.7	1.00	20.00	0	88.6	69.2	130				
1,3-Dichlorobenzene	19.9	1.00	20.00	0	99.4	69.5	128				
1,4-Dichlorobenzene	19.8	1.00	20.00	0	99.2	66.8	119				
n-Butylbenzene	20.6	1.00	20.00	0	103	73.8	127				
1,2-Dichlorobenzene	20.5	1.00	20.00	0	103	69.7	119				
1,2-Dibromo-3-chloropropane	24.7	1.00	20.00	0	124	63.1	136				
1,2,4-Trimethylbenzene	17.4	1.00	20.00	0	86.8	73.4	127				
Hexachloro-1,3-butadiene	14.2	4.00	20.00	0	71.1	58.6	138				
Naphthalene	16.1	1.00	20.00	0	80.3	41.8	165				
1,2,3-Trichlorobenzene	14.5	4.00	20.00	0	72.5	35.8	155				
Surr: Dibromofluoromethane	25.9		25.00		104	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	24.6		25.00		98.3	64.2	128				



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: MBLKW	Batch ID: 25645				Analysis Date: 8/28/2019			SeqNo: 1061375			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00									Q
Chloromethane	ND	2.00									Q
Vinyl chloride	ND	0.200									
Bromomethane	ND	1.00									Q
Trichlorofluoromethane (CFC-11)	ND	1.00									
Chloroethane	ND	1.00									
1,1-Dichloroethene	ND	1.00									
Methylene chloride	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
Methyl tert-butyl ether (MTBE)	ND	1.00									
1,1-Dichloroethane	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
Chloroform	ND	1.00									
1,1,1-Trichloroethane (TCA)	ND	1.00									
1,1-Dichloropropene	ND	1.00									
Carbon tetrachloride	ND	1.00									
1,2-Dichloroethane (EDC)	ND	1.00									
Benzene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
1,2-Dichloropropane	ND	1.00									
Bromodichloromethane	ND	1.00									
Dibromomethane	ND	1.00									
cis-1,3-Dichloropropene	ND	1.00									
Toluene	ND	1.00									
trans-1,3-Dichloropropylene	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,3-Dichloropropane	ND	1.00									
Tetrachloroethene (PCE)	ND	1.00									
Dibromochloromethane	ND	1.00									
1,2-Dibromoethane (EDB)	ND	0.250									
Chlorobenzene	ND	1.00									

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: MBLKW	Batch ID: 25645	Analysis Date: 8/28/2019						SeqNo: 1061375			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	1.00									
Ethylbenzene	ND	1.00									
m,p-Xylene	ND	1.00									
o-Xylene	ND	1.00									
Styrene	ND	1.00									
Isopropylbenzene	ND	1.00									
Bromoform	ND	2.00									
1,1,2,2-Tetrachloroethane	ND	1.00									
n-Propylbenzene	ND	1.00									
Bromobenzene	ND	1.00									
1,3,5-Trimethylbenzene	ND	1.00									
2-Chlorotoluene	ND	1.00									
4-Chlorotoluene	ND	1.00									
tert-Butylbenzene	ND	1.00									
1,2,3-Trichloropropane	ND	1.00									
1,2,4-Trichlorobenzene	ND	2.00									Q
sec-Butylbenzene	ND	1.00									
4-Isopropyltoluene	ND	1.00									
1,3-Dichlorobenzene	ND	1.00									
1,4-Dichlorobenzene	ND	1.00									
n-Butylbenzene	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2,4-Trimethylbenzene	ND	1.00									
Hexachloro-1,3-butadiene	ND	4.00									Q
Naphthalene	ND	1.00									
1,2,3-Trichlorobenzene	ND	4.00									Q
Surr: Dibromofluoromethane	25.6		25.00		103	45.4	152				
Surr: Toluene-d8	25.4		25.00		102	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	23.2		25.00		92.9	64.2	128				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: MB-25645	SampType: MBLK	Units: µg/L	Prep Date: 8/28/2019	RunNo: 53606							
Client ID: MBLKW	Batch ID: 25645		Analysis Date: 8/28/2019	SeqNo: 1061375							
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908367-001ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061369	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
1,2-Dichloropropane	ND	1.00						0		30	
Bromodichloromethane	ND	1.00						0		30	
Dibromomethane	ND	1.00						0		30	
cis-1,3-Dichloropropene	ND	1.00						0		30	
Toluene	ND	1.00						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908367-001ADUP	SampType: DUP	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645				Analysis Date: 8/29/2019			SeqNo: 1061369			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,3-Dichloropropylene	ND	1.00						0		30	
1,1,2-Trichloroethane	ND	1.00						0		30	
1,3-Dichloropropane	ND	1.00						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Dibromochloromethane	ND	1.00						0		30	
1,2-Dibromoethane (EDB)	ND	0.250						0		30	
Chlorobenzene	ND	1.00						0		30	
1,1,1,2-Tetrachloroethane	ND	1.00						0		30	
Ethylbenzene	ND	1.00						0		30	
m,p-Xylene	ND	1.00						0		30	
o-Xylene	ND	1.00						0		30	
Styrene	ND	1.00						0		30	
Isopropylbenzene	ND	1.00						0		30	
Bromoform	ND	2.00						0		30	
1,1,2,2-Tetrachloroethane	ND	1.00						0		30	
n-Propylbenzene	ND	1.00						0		30	
Bromobenzene	ND	1.00						0		30	
1,3,5-Trimethylbenzene	ND	1.00						0		30	
2-Chlorotoluene	ND	1.00						0		30	
4-Chlorotoluene	ND	1.00						0		30	
tert-Butylbenzene	ND	1.00						0		30	
1,2,3-Trichloropropane	ND	1.00						0		30	
1,2,4-Trichlorobenzene	ND	2.00						0		30	
sec-Butylbenzene	ND	1.00						0		30	
4-Isopropyltoluene	ND	1.00						0		30	
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	



Date: 9/12/2019

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908367-001ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061369	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	ND	4.00						0		30	Q
Naphthalene	ND	1.00						0		30	Q
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q
Surr: Dibromofluoromethane	25.9		25.00		103	45.4	152		0		
Surr: Toluene-d8	25.1		25.00		100	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	24.2		25.00		96.9	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908355-003ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061365	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	ND	1.00						0		30	Q
Chloromethane	ND	2.00						0		30	
Vinyl chloride	ND	0.200						0		30	
Bromomethane	ND	1.00						0		30	
Trichlorofluoromethane (CFC-11)	ND	1.00						0		30	
Chloroethane	ND	1.00						0		30	
1,1-Dichloroethene	ND	1.00						0		30	
Methylene chloride	ND	1.00						0		30	
trans-1,2-Dichloroethene	ND	1.00						0		30	
Methyl tert-butyl ether (MTBE)	ND	1.00						0		30	
1,1-Dichloroethane	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Chloroform	ND	1.00						0		30	
1,1,1-Trichloroethane (TCA)	ND	1.00						0		30	
1,1-Dichloropropene	ND	1.00						0		30	
Carbon tetrachloride	ND	1.00						0		30	
1,2-Dichloroethane (EDC)	ND	1.00						0		30	
Benzene	ND	1.00						0		30	

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-003ADUP		SampType: DUP		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH		Batch ID: 25645					Analysis Date: 8/29/2019			SeqNo: 1061365		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Trichloroethene (TCE)	ND	0.500						0		30		
1,2-Dichloropropane	ND	1.00						0		30		
Bromodichloromethane	ND	1.00						0		30		
Dibromomethane	ND	1.00						0		30		
cis-1,3-Dichloropropene	ND	1.00						0		30		
Toluene	ND	1.00						0		30		
trans-1,3-Dichloropropylene	ND	1.00						0		30		
1,1,2-Trichloroethane	ND	1.00						0		30		
1,3-Dichloropropane	ND	1.00						0		30		
Tetrachloroethene (PCE)	ND	1.00						0		30		
Dibromochloromethane	ND	1.00						0		30		
1,2-Dibromoethane (EDB)	ND	0.250						0		30		
Chlorobenzene	ND	1.00						0		30		
1,1,1,2-Tetrachloroethane	ND	1.00						0		30		
Ethylbenzene	ND	1.00						0		30		
m,p-Xylene	ND	1.00						0		30		
o-Xylene	ND	1.00						0		30		
Styrene	ND	1.00						0		30		
Isopropylbenzene	ND	1.00						0		30		
Bromoform	ND	2.00						0		30		
1,1,2,2-Tetrachloroethane	ND	1.00						0		30		
n-Propylbenzene	ND	1.00						0		30		
Bromobenzene	ND	1.00						0		30		
1,3,5-Trimethylbenzene	ND	1.00						0		30		
2-Chlorotoluene	ND	1.00						0		30		
4-Chlorotoluene	ND	1.00						0		30		
tert-Butylbenzene	ND	1.00						0		30		
1,2,3-Trichloropropane	ND	1.00						0		30		
1,2,4-Trichlorobenzene	ND	2.00						0		30		
sec-Butylbenzene	ND	1.00						0		30		
4-Isopropyltoluene	ND	1.00						0		30		

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-003ADUP	SampType: DUP	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645				Analysis Date: 8/29/2019			SeqNo: 1061365			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3-Dichlorobenzene	ND	1.00						0		30	
1,4-Dichlorobenzene	ND	1.00						0		30	
n-Butylbenzene	ND	1.00						0		30	
1,2-Dichlorobenzene	ND	1.00						0		30	
1,2-Dibromo-3-chloropropane	ND	1.00						0		30	
1,2,4-Trimethylbenzene	ND	1.00						0		30	
Hexachloro-1,3-butadiene	ND	4.00						0		30	Q
Naphthalene	ND	1.00						0		30	Q
1,2,3-Trichlorobenzene	ND	4.00						0		30	Q
Surr: Dibromofluoromethane	26.1		25.00		104	45.4	152		0		
Surr: Toluene-d8	25.3		25.00		101	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	23.8		25.00		95.0	64.2	128		0		

NOTES:

Q - Indicates an analyte with a continuing calibration that does not meet established acceptance criteria

Sample ID: 1908355-001AMS	SampType: MS	Units: µg/L			Prep Date: 8/28/2019			RunNo: 53606			
Client ID: BATCH	Batch ID: 25645				Analysis Date: 8/29/2019			SeqNo: 1061361			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	198	10.0	200.0	0	99.0	33.3	122				D
Chloromethane	212	20.0	200.0	0	106	39.7	143				D
Vinyl chloride	211	2.00	200.0	0	105	41	165				D
Bromomethane	232	10.0	200.0	0	116	31.5	135				D
Trichlorofluoromethane (CFC-11)	221	10.0	200.0	0	111	54.7	138				D
Chloroethane	227	10.0	200.0	0	114	49.9	143				D
1,1-Dichloroethene	233	10.0	200.0	0	117	51.6	164				D
Methylene chloride	228	10.0	200.0	0	114	61.6	135				D
trans-1,2-Dichloroethene	225	10.0	200.0	0	113	63.5	138				D
Methyl tert-butyl ether (MTBE)	228	10.0	200.0	0	114	60.9	132				D
1,1-Dichloroethane	228	10.0	200.0	0	114	55.7	151				D
cis-1,2-Dichloroethene	223	10.0	200.0	0	111	60	154				D



Date: 9/12/2019

Work Order: 1908347
 CLIENT: G-Logics
 Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMS		SampType: MS		Units: µg/L		Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH		Batch ID: 25645		Analysis Date: 8/29/2019						SeqNo: 1061361	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloroform	226	10.0	200.0	0	113	48.1	140				D
1,1,1-Trichloroethane (TCA)	223	10.0	200.0	0	112	64.2	146				D
1,1-Dichloropropene	217	10.0	200.0	0	109	73.8	136				D
Carbon tetrachloride	218	10.0	200.0	0	109	62.7	146				D
1,2-Dichloroethane (EDC)	227	10.0	200.0	0	113	63.4	137				D
Benzene	236	10.0	200.0	8.655	114	65.4	138				D
Trichloroethene (TCE)	216	5.00	200.0	0	108	60.4	134				D
1,2-Dichloropropane	227	10.0	200.0	0	113	62.6	138				D
Bromodichloromethane	227	10.0	200.0	0	113	59.4	139				D
Dibromomethane	233	10.0	200.0	0	116	58.7	148				D
cis-1,3-Dichloropropene	212	10.0	200.0	0	106	63.8	132				D
Toluene	283	10.0	200.0	43.86	120	52	147				D
trans-1,3-Dichloropropylene	219	10.0	200.0	0	110	57.7	125				D
1,1,2-Trichloroethane	235	10.0	200.0	0	118	57.5	153				D
1,3-Dichloropropane	234	10.0	200.0	0	117	54.1	157				D
Tetrachloroethene (PCE)	226	10.0	200.0	0	113	50.3	133				D
Dibromochloromethane	227	10.0	200.0	0	113	61.6	139				D
1,2-Dibromoethane (EDB)	232	2.50	200.0	0	116	63.2	134				D
Chlorobenzene	215	10.0	200.0	0	107	65.8	134				D
1,1,1,2-Tetrachloroethane	218	10.0	200.0	0	109	65.4	135				D
Ethylbenzene	248	10.0	200.0	22.34	113	64.5	136				D
m,p-Xylene	567	10.0	400.0	112.1	114	63.3	135				D
o-Xylene	306	10.0	200.0	78.94	114	64.8	150				D
Styrene	209	10.0	200.0	0	105	52.9	163				D
Isopropylbenzene	205	10.0	200.0	2.711	101	56	147				D
Bromoform	213	20.0	200.0	0	107	57.7	139				D
1,1,2,2-Tetrachloroethane	243	10.0	200.0	0	122	59.8	146				D
n-Propylbenzene	200	10.0	200.0	10.95	94.7	57.6	142				D
Bromobenzene	197	10.0	200.0	0	98.4	69.3	157				D
1,3,5-Trimethylbenzene	222	10.0	200.0	28.52	96.6	59.9	136				D
2-Chlorotoluene	205	10.0	200.0	0	102	61.7	134				D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMS		SampType: MS		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061361			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Chlorotoluene	204	10.0	200.0	0	102	58.4	134				D
tert-Butylbenzene	202	10.0	200.0	0	101	66.8	141				D
1,2,3-Trichloropropane	222	10.0	200.0	0	111	62.4	129				D
1,2,4-Trichlorobenzene	162	20.0	200.0	0	81.2	50.9	133				D
sec-Butylbenzene	196	10.0	200.0	0	98.0	56	146				D
4-Isopropyltoluene	202	10.0	200.0	0	101	56.4	136				D
1,3-Dichlorobenzene	221	10.0	200.0	0	111	58.2	128				D
1,4-Dichlorobenzene	220	10.0	200.0	0	110	60.1	123				D
n-Butylbenzene	229	10.0	200.0	0	115	54.6	135				D
1,2-Dichlorobenzene	226	10.0	200.0	0	113	65.4	133				D
1,2-Dibromo-3-chloropropane	276	10.0	200.0	0	138	51.8	142				D
1,2,4-Trimethylbenzene	250	10.0	200.0	49.50	100	63.7	132				D
Hexachloro-1,3-butadiene	161	40.0	200.0	0	80.5	58.1	130				D
Naphthalene	237	10.0	200.0	52.36	92.1	50.7	154				D
1,2,3-Trichlorobenzene	165	40.0	200.0	0	82.6	57	131				D
Surr: Dibromofluoromethane	262		250.0		105	45.4	152				D
Surr: Toluene-d8	262		250.0		105	40.1	139				D
Surr: 1-Bromo-4-fluorobenzene	249		250.0		99.7	64.2	128				D

Sample ID: 1908355-001AMSD		SampType: MSD		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061362			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane (CFC-12)	182	10.0	200.0	0	90.9	33.3	122	197.9	8.48	30	D
Chloromethane	214	20.0	200.0	0	107	39.7	143	211.8	1.04	30	D
Vinyl chloride	211	2.00	200.0	0	105	41	165	211.0	0.155	30	D
Bromomethane	255	10.0	200.0	0	127	31.5	135	232.4	9.14	30	D
Trichlorofluoromethane (CFC-11)	217	10.0	200.0	0	109	54.7	138	221.2	1.90	30	D
Chloroethane	217	10.0	200.0	0	108	49.9	143	227.3	4.82	30	D
1,1-Dichloroethene	230	10.0	200.0	0	115	51.6	164	233.1	1.29	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMSD	SampType: MSD	Units: µg/L				Prep Date: 8/28/2019			RunNo: 53606		
Client ID: BATCH	Batch ID: 25645	Analysis Date: 8/29/2019							SeqNo: 1061362		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methylene chloride	227	10.0	200.0	0	113	61.6	135	228.3	0.731	30	D
trans-1,2-Dichloroethene	227	10.0	200.0	0	113	63.5	138	225.4	0.607	30	D
Methyl tert-butyl ether (MTBE)	239	10.0	200.0	0	119	60.9	132	227.5	4.84	30	D
1,1-Dichloroethane	227	10.0	200.0	0	114	55.7	151	227.6	0.113	30	D
cis-1,2-Dichloroethene	226	10.0	200.0	0	113	60	154	222.7	1.40	30	D
Chloroform	228	10.0	200.0	0	114	48.1	140	225.6	1.03	30	D
1,1,1-Trichloroethane (TCA)	224	10.0	200.0	0	112	64.2	146	223.3	0.311	30	D
1,1-Dichloropropene	221	10.0	200.0	0	110	73.8	136	217.2	1.59	30	D
Carbon tetrachloride	220	10.0	200.0	0	110	62.7	146	218.3	0.612	30	D
1,2-Dichloroethane (EDC)	231	10.0	200.0	0	115	63.4	137	227.0	1.64	30	D
Benzene	237	10.0	200.0	8.655	114	65.4	138	235.9	0.662	30	D
Trichloroethene (TCE)	214	5.00	200.0	0	107	60.4	134	216.0	0.788	30	D
1,2-Dichloropropane	228	10.0	200.0	0	114	62.6	138	226.6	0.685	30	D
Bromodichloromethane	229	10.0	200.0	0	114	59.4	139	226.8	0.794	30	D
Dibromomethane	235	10.0	200.0	0	117	58.7	148	232.8	0.865	30	D
cis-1,3-Dichloropropene	215	10.0	200.0	0	108	63.8	132	211.6	1.81	30	D
Toluene	282	10.0	200.0	43.86	119	52	147	283.4	0.386	30	D
trans-1,3-Dichloropropylene	224	10.0	200.0	0	112	57.7	125	219.5	2.26	30	D
1,1,2-Trichloroethane	238	10.0	200.0	0	119	57.5	153	235.3	0.955	30	D
1,3-Dichloropropane	240	10.0	200.0	0	120	54.1	157	233.8	2.59	30	D
Tetrachloroethene (PCE)	217	10.0	200.0	0	109	50.3	133	225.5	3.71	30	D
Dibromochloromethane	233	10.0	200.0	0	116	61.6	139	226.7	2.60	30	D
1,2-Dibromoethane (EDB)	239	2.50	200.0	0	120	63.2	134	232.1	3.10	30	D
Chlorobenzene	211	10.0	200.0	0	105	65.8	134	214.9	2.05	30	D
1,1,1,2-Tetrachloroethane	214	10.0	200.0	0	107	65.4	135	218.1	2.13	30	D
Ethylbenzene	244	10.0	200.0	22.34	111	64.5	136	247.7	1.41	30	D
m,p-Xylene	563	10.0	400.0	112.1	113	63.3	135	567.4	0.823	30	D
o-Xylene	302	10.0	200.0	78.94	111	64.8	150	306.0	1.42	30	D
Styrene	211	10.0	200.0	0	105	52.9	163	209.3	0.651	30	D
Isopropylbenzene	206	10.0	200.0	2.711	102	56	147	205.1	0.518	30	D
Bromoform	217	20.0	200.0	0	108	57.7	139	213.1	1.79	30	D

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D

Sample ID: 1908355-001AMSD		SampType: MSD		Units: µg/L		Prep Date: 8/28/2019		RunNo: 53606			
Client ID: BATCH		Batch ID: 25645				Analysis Date: 8/29/2019		SeqNo: 1061362			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	250	10.0	200.0	0	125	59.8	146	243.4	2.57	30	D
n-Propylbenzene	198	10.0	200.0	10.95	93.6	57.6	142	200.4	1.11	30	D
Bromobenzene	196	10.0	200.0	0	97.9	69.3	157	196.8	0.517	30	D
1,3,5-Trimethylbenzene	215	10.0	200.0	28.52	93.4	59.9	136	221.7	2.86	30	D
2-Chlorotoluene	203	10.0	200.0	0	101	61.7	134	204.9	1.12	30	D
4-Chlorotoluene	201	10.0	200.0	0	100	58.4	134	204.2	1.59	30	D
tert-Butylbenzene	200	10.0	200.0	0	99.9	66.8	141	202.0	1.14	30	D
1,2,3-Trichloropropane	238	10.0	200.0	0	119	62.4	129	222.4	6.65	30	D
1,2,4-Trichlorobenzene	224	20.0	200.0	0	112	50.9	133	162.5	31.9	30	DR
sec-Butylbenzene	191	10.0	200.0	0	95.5	56	146	196.0	2.58	30	D
4-Isopropyltoluene	200	10.0	200.0	0	99.9	56.4	136	202.0	1.14	30	D
1,3-Dichlorobenzene	222	10.0	200.0	0	111	58.2	128	221.5	0.246	30	D
1,4-Dichlorobenzene	218	10.0	200.0	0	109	60.1	123	220.0	0.745	30	D
n-Butylbenzene	223	10.0	200.0	0	112	54.6	135	229.1	2.48	30	D
1,2-Dichlorobenzene	229	10.0	200.0	0	115	65.4	133	225.8	1.50	30	D
1,2-Dibromo-3-chloropropane	288	10.0	200.0	0	144	51.8	142	275.7	4.40	30	DS
1,2,4-Trimethylbenzene	244	10.0	200.0	49.50	97.0	63.7	132	249.9	2.56	30	D
Hexachloro-1,3-butadiene	163	40.0	200.0	0	81.3	58.1	130	161.1	0.904	30	D
Naphthalene	245	10.0	200.0	52.36	96.4	50.7	154	236.6	3.54	30	D
1,2,3-Trichlorobenzene	167	40.0	200.0	0	83.6	57	131	165.1	1.30	30	D
Surr: Dibromofluoromethane	264		250.0		105	45.4	152		0		D
Surr: Toluene-d8	261		250.0		104	40.1	139		0		D
Surr: 1-Bromo-4-fluorobenzene	250		250.0		99.9	64.2	128		0		D

NOTES:

S - Outlying spike recovery observed (high bias).

R - High RPD observed, spike recovery is within range.

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: LCS-25673	SampType: LCS	Units: µg/L			Prep Date: 8/30/2019			RunNo: 53616			
Client ID: LCSW	Batch ID: 25673				Analysis Date: 8/30/2019			SeqNo: 1061518			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	4.37	0.0100	5.000	0	87.5	56.3	134				
1,1,2-Trichloroethane	4.84	0.0100	5.000	0	96.7	61.8	133				
1,2-Dibromoethane (EDB)	4.68	0.0100	5.000	0	93.6	63.2	128				
Hexachlorobutadiene	6.53	0.0100	5.000	0	131	71.8	138				
Surr: Dibromofluoromethane	9.31		10.00		93.1	68	140				
Surr: Toluene-d8	8.91		10.00		89.1	63.5	144				
Surr: 4-Bromofluorobenzene	10.6		10.00		106	55	134				

Sample ID: LCSD-25673	SampType: LCSD	Units: µg/L				Prep Date: 8/30/2019			RunNo: 53616		
Client ID: LCSW02	Batch ID: 25673	Analysis Date: 8/30/2019							SeqNo: 1061519		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	4.23	0.0100	5.000	0	84.6	56.3	134	4.374	3.35	20	
1,1,2-Trichloroethane	4.84	0.0100	5.000	0	96.9	61.8	133	4.837	0.132	20	
1,2-Dibromoethane (EDB)	4.73	0.0100	5.000	0	94.7	63.2	128	4.681	1.14	20	
Hexachlorobutadiene	6.28	0.0100	5.000	0	126	71.8	138	6.535	3.90	20	
Surr: Dibromofluoromethane	9.36		10.00		93.6	68	140		0		
Surr: Toluene-d8	8.93		10.00		89.3	63.5	144		0		
Surr: 4-Bromofluorobenzene	10.2		10.00		102	55	134		0		

Sample ID: MB-25673		SampType: MBLK		Units: µg/L		Prep Date: 8/30/2019			RunNo: 53616		
Client ID: MBLKW		Batch ID: 25673					Analysis Date: 8/30/2019			SeqNo: 1061520	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.0100									
1,1,2-Trichloroethane	ND	0.0100									
1,2-Dibromoethane (EDB)	ND	0.0100									
Hexachlorobutadiene	ND	0.0100									
Surr: Dibromofluoromethane	8.86		10.00		88.6	68	140				
Surr: Toluene-d8	9.07		10.00		90.7	63.5	144				



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260D SIM

Sample ID: MB-25673	SampType: MBLK	Units: µg/L			Prep Date: 8/30/2019			RunNo: 53616			
Client ID: MBLKW	Batch ID: 25673				Analysis Date: 8/30/2019			SeqNo: 1061520			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.26		10.00		92.6	55	134				

Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1908318-016ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53527		
Client ID: BATCH		Batch ID: R53527			Analysis Date: 8/28/2019			SeqNo: 1059356				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	8.27	0.500						7.749	6.45	20	

Sample ID: 1908348-024ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53527		
Client ID: BATCH		Batch ID: R53527			Analysis Date: 8/28/2019			SeqNo: 1059370				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	6.97	0.500						6.577	5.87	20	

Sample ID: 1908347-012ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53539		
Client ID: GLB-23-2'		Batch ID: R53539			Analysis Date: 8/28/2019			SeqNo: 1059668				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	18.2	0.500						19.73	8.26	20	

Sample ID: 1908347-024ADUP		SampType: DUP			Units: wt%		Prep Date: 8/28/2019			RunNo: 53539		
Client ID: TRB-8-6'		Batch ID: R53539			Analysis Date: 8/28/2019			SeqNo: 1059680				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	8.27	0.500						8.143	1.60	20	

Sample ID: 1909040-002ADUP		SampType: DUP			Units: wt%		Prep Date: 9/6/2019			RunNo: 53712		
Client ID: BATCH		Batch ID: R53712			Analysis Date: 9/6/2019			SeqNo: 1063160				
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Percent Moisture	3.19	0.500						3.207	0.485	20	



Work Order: 1908347

CLIENT: G-Logics

Project: Hoonah

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID: 1909037-004ADUP	SampType: DUP	Units: wt%			Prep Date: 9/6/2019				RunNo: 53712			
Client ID: BATCH	Batch ID: R53712					Analysis Date: 9/6/2019				SeqNo: 1063167		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Percent Moisture	26.1	0.500						26.78	2.72	20		

Client Name: **GL**
 Logged by: **Brianna Barnes**

Work Order Number: **1908347**
 Date Received: **8/26/2019 12:30:00 PM**

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
 2. How was the sample delivered? Client

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
 4. Shipping container/cooler in good condition? Yes ☒ No ☐
 5. Custody Seals present on shipping container/cooler?
 (Refer to comments for Custody Seals not intact) Yes ☒ No ☐ Not Required ☐
 6. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
 7. Were all items received at a temperature of >0°C to 10.0°C * Yes ☒ No ☐ NA ☐
 8. Sample(s) in proper container(s)? Yes ☒ No ☐
 9. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
 10. Are samples properly preserved? Yes ☒ No ☐
 11. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
 12. Is there headspace in the VOA vials? Yes ☐ No ☒ NA ☐
 13. Did all samples containers arrive in good condition(unbroken)? Yes ☒ No ☐
 14. Does paperwork match bottle labels? Yes ☒ No ☐
 15. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
 16. Is it clear what analyses were requested? Yes ☒ No ☐
 17. Were all holding times able to be met? Yes ☐ No ☒

Special Handling (if applicable)

18. Was client notified of all discrepancies with this order? Yes ☒ No ☐ NA ☐

Person Notified: Zak Wall Date: 8/26/2019
 By Whom: Brianna Barnes Via: ☒ eMail ☐ Phone ☐ Fax ☐ In Person
 Regarding: Confirmation of methods, low volume.
 Client Instructions: See Additional Remarks.

19. Additional remarks:

NWTPH-Gx okay for Trip Blank W1 due to low volume. Prioritize AK101 and 8260 scan for low volume water samples.

Item Information

Item #	Temp °C
Cooler 1	5.1
Cooler 2	5.6
Cooler 3	4.9
Cooler 4	5.6

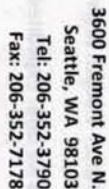
* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Sample Log-In Check List

Client Name: **GL**Work Order Number: **1908347**Logged by: **Brianna Barnes**Date Received: **8/26/2019 12:30:00 PM**

Item #	Temp °C
Cooler 5	5.3
Cooler 6	7.8
Sample 1	3.3
Sample 2	3.3
Sample 3	5.7
Sample 4	3.6
Sample 5	3.3
Sample 6	1.9
Temp Blank 1	3.4
Temp Blank 2	2.3
Temp Blank 3	4.4
Temp Blank 4	5.1

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C



Date: ~~7/2/11~~ 8/2/11 Page: 11 of 7

Laboratory Project No (internal): 908541

190854

Client: La-logics

Address: 40 1st Ave SE

City, State, zip: Issaquah WA 98027

Telephone: 405-391-6874

Fax:

PM Email: Zedaryn Celosics

Report To (PM): Zah Wah

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

AK Methods AL(01/10)/103
ASOL 8260 SIM: EDB, TCE, Vinyl Chloride
 Hexachlorobutadiene
Water 8260 SIM: via Trichloroethane, EDB
 Hexachlorobutadiene, Vinyl Chloride

Page 212

Page 212 of 216

[illegible]

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time

Date/Time

☐ 2 Day☐ Next Day

Relinquished	Date/Time

Date/Time

10

COC 1.2-2.22.17

www.fremontanalytical.com



3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 2 of 4

Project Name: Houch

Project No: 01-0294-H

Laboratory Project No (Internal): 1908347

Sec P5 1

Client: G-Logics

Collected by:

Location:

Report To (PM):

PM Email:

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

City, State, Zip:
Telephone:

Fax:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DOX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8270 - SIM)	Metals** (EPA 8082 / 608)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	WIS 8260 SIM*	Comments

1	GLB-22-5'	8/24/19	1030	S	X		X	X	X	X	X	X	X	X	X	X	X		
2	GLB-23-2'		1330		X		X	X	X	X	X	X	X	X	X	X	X		
3	GLB-23-5'		1340		X		X	X	X	X	X	X	X	X	X	X	X		
4	GLB-24-4'		1400		X		X	X	X	X	X	X	X	X	X	X	X		
5	GLB-24-5'		1415		X		X	X	X	X	X	X	X	X	X	X	X		
6	TRB-5-10'		1625		X		X	X	X	X	X	X	X	X	X	X	X		
7	TRB-5-11'		1635		X		X	X	X	X	X	X	X	X	X	X	X		
8	TRB-11-D		1630		X		X	X	X	X	X	X	X	X	X	X	X		
9	TRB-6-11'		1815		X		X	X	X	X	X	X	X	X	X	X	X		
10	TRB-6-14'		1830		X		X	X	X	X	X	X	X	X	X	X	X		

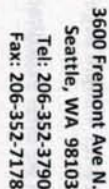
*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MICA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
<i>[Signature]</i>	8/26/19 1230	<i>[Signature]</i>	8/26/19 1230
Relinquished	Date/Time	Received	Date/Time
x		x	



Date: 10/11/11 Page: 5 of 5

Laboratory Project No (internal): 19087
Special Remarks: 8/20

Client: 62-104185

Project No: 81-0294-H

See pg 1

Page 214 of 216

Address:

Collected by:

City, State, Zip:

Location:

Telephone:

Report To (PM):

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax:	
PM Email:	

[illegible]

I represent that I am authorized to enter into this Agreement on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time

Received

Date/Time

****Matrix:** A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

****Metals (Circle):** MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

☒ Standard

Polina W. K.

Date/Time:

1

Period

Cost/Unit

1999

☐ 2 Day

Relinquished

Date/Time

1

Received

Date/Time



Fremont

Analytical

3600 Fremont Ave. N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 4 of 4

Project Name: Mounch

Project No: 01-029444

Laboratory Project No (Internal): 1908347

Special Remarks: See P5

Client: G-Legies

Address:

Collected by:

City, State, Zip:

Location:

Telephone:

Report To (PM):

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax:

PM Email:

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	YOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (GX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) Dissolved (D)	Anions (IC)***	EDB (8011)	Water 8260/517*	Comments

1	GPW-6	8/19/19	1430	X	X	X	X	X	X	X	X	X	X	X	X	X		
2	GPW-7	8/20/19	1250	X	X	X	X	X	X	X	X	X	X	X	X	X		
3	GPW-8	8/20/19	1330	X	X	X	X	X	X	X	X	X	X	X	X	X		
4	GPW-9	8/21/19	1700	X	X	X	X	X	X	X	X	X	X	X	X	X		
5	GPW-A	8/20/19	1335	X	X	X	X	X	X	X	X	X	X	X	X	X		
6	TRPW-1	8/20/19	0800	X	X	X	X	X	X	X	X	X	X	X	X	X		
7	TRPW-2	8/20/19	0830	X	X	X	X	X	X	X	X	X	X	X	X	X		
8	TRPW-A	8/20/19	0845	X	X	X	X	X	X	X	X	X	X	X	X	X		
9	TRPW-B	8/15/19	1000	X	X	X	X	X	X	X	X	X	X	X	X	X		
10																		

Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Tl Ti U V Zn

Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Relinquished Date/Time 8/28/19 1230 Received Date/Time 8/26/19 1250

Relinquished Date/Time 8/28/19 1230 Received Date/Time 8/26/19 1250

Turn-around Time: ☒ Standard ☐ 3 Day ☐ 2 Day ☐ Next Day ☐ Same Day (specify)



Fremont

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 8/24/19 Page: 1 of 4

Project Name: Hoonah

Project No: 01-0294-H

Collected by: SH/EL

Location: Hoonah, AK

Report To (PM): Fal Wal

PM Email: zadarym@geologies

Laboratory Project No (Internal): 1908247

Special Remarks:

AK Methods AL61/10/103
Soil 8260 SIM: EDB, TCE, Vinyl Chloride
Water 8260 SIM: 400 Trichloroethylene, EDB, Hexachlorobenzene, Vinyl Chloride

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)	VOCs (EPA 8260 / 624)	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCD)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) / Dissolved (D)	Anions (IC)**	EDB (8011)	Comments
1 Trip Blank 2	7/31/19	1637	S	X	X	X	X	X	X	X	X	X	X	
2 GLB-19-2'	0845	8/21/19		X	X	X	X	X	X	X	X	X	X	Hold off Hold 9/5
3 GLB-19-4'	0855			X	X	X	X	X	X	X	X	X	X	8/24/19
4 GLB-19-5'	0915			X	X	X	X	X	X	X	X	X	X	
5 GLB-19-5'	0850			X	X	X	X	X	X	X	X	X	X	
6 GLB-20-2'	0940			X	X	X	X	X	X	X	X	X	X	
7 GLB-20-4'	0956			X	X	X	X	X	X	X	X	X	X	
8 GLB-21-2'	01/21/19	1005		X	X	X	X	X	X	X	X	X	X	
9 GLB-21-3'		1010		X	X	X	X	X	X	X	X	X	X	
10 GLB-22-4'		1025		X	X	X	X	X	X	X	X	X	X	

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL Individual: Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Si Sn Ti U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

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Relinquished Date/Time

8/26/19 1230

Received

8/26/19 1230

Date/Time

8/26/19 1230

Standard

3 Day

2 Day

Next Day

Same Day

(specify)

Laboratory Data Review Checklist

Completed by:	Zackary Wall		
Title:	Project Geologist	Date:	Oct 9, 2019
CS Report Name:	Additional Environmental Exploration Report and Focused Feasibility Study	Report Date:	May 15, 2020
Consultant Firm:	G-Logics, Inc.		
Laboratory Name:	Fremont Analytical	Laboratory Report Number:	1908349, 1908347
ADEC File Number:	1510.38.011, 1510.38.012	ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

☒ Yes ☐ No ☐ NA (Please explain.) 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 ☒ NA (Please explain) Comments:

Samples were not transferred

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

b. Correct analyses requested?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

5 of the 6 cooler temps were within the accepted range. The temp in cool 6 was documented at 7.8 C

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

c. Were all corrective actions documented?

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

No corrective actions were taken.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality / usability not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

b. All applicable holding times met?

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

Hold times were exceeded for select analyses on 2 samples (GLB-19-2, TRB-2-8) and one trip blank.

c. All soils reported on a dry weight basis?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected. See report text for discussion.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

v. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

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 ☐ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

vii. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No ☒ NA (Please explain) Comments:

No failed recoveries.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

Data quality was not affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

iii. All results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality was not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(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 ☐ NA (Please explain.)

Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

☐ Yes

☒ No

☐ NA (Please explain)

Comments:

RPD exceedances were observed in sediment/soil samples. These exceedances were likely due to matrix interference (i.e. heterogeneity of sample particle sizes) in the shoreline sediments. RPDs also were more common for analytes detected at low concentrations.

f. Decontamination or Equipment Blank (if applicable)

☐ Yes

☒ No

☐ NA (Please explain)

Comments:

i. All results less than PQL?

☐ Yes

☐ No

☐ NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

Reset Form

Laboratory Data Review Checklist

Completed by:	Zackary Wall		
Title:	Project Geologist	Date:	Oct 9, 2019
CS Report Name:	Additional Environmental Exploration Report and Focused Feasibility Study	Report Date:	May 4, 2020
Consultant Firm:	G-Logics, Inc.		
Laboratory Name:	Fremont Analytical	Laboratory Report Number:	1908349, 1908347
ADEC File Number:	1510.38.011, 1510.38.012	ADEC RecKey Number:	

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

☒ Yes ☐ No ☐ NA (Please explain.) 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 ☒ NA (Please explain) Comments:

Samples were not transferred

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

b. Correct analyses requested?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

5 of the 6 cooler temps were within the accepted range. The temp in cool 6 was documented at 7.8 C

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

c. Were all corrective actions documented?

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

No corrective actions were taken.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality / usability not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

b. All applicable holding times met?

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

Hold times were exceeded for select analyses on 2 samples (GLB-19-2, TRB-2-8) and one trip blank.

c. All soils reported on a dry weight basis?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected. See report text for discussion.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

iii. If above PQL, what samples are affected?

Comments:

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

v. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

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 ☐ NA (Please explain) Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iv. Precision - All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/DMSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined?

☐ Yes ☒ No ☐ NA (Please explain) Comments:

vii. Data quality or usability affected? (Please explain)

Comments:

Data quality was not affected.

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses - field, QC and laboratory samples?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

☐ Yes ☐ No ☒ NA (Please explain) Comments:

No failed recoveries.

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

Data quality was not affected.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

☒ Yes ☐ No ☐ NA (Please explain.) 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 ☐ NA (Please explain.) Comments:

iii. All results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality was not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(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 ☐ NA (Please explain.)

Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

☐ Yes

☒ No

☐ NA (Please explain)

Comments:

RPD exceedances were observed in sediment/soil samples. These exceedances were likely due to matrix interference (i.e. heterogeneity of sample particle sizes) in the shoreline sediments. RPDs also were more common for analytes detected at low concentrations.

f. Decontamination or Equipment Blank (if applicable)

☐ Yes

☒ No

☐ NA (Please explain)

Comments:

i. All results less than PQL?

☐ Yes

☐ No

☐ NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

Reset Form

APPENDIX F

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Former Chevron Truck-Loading Rack, Truck-Loading Rack Area

File Number: 26601

Completed by: Zackary S. Wall, G-Logics

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)*

☐ USTs ☐ ASTs ☒ Dispensers/fuel loading racks ☐ Drums	☐ Vehicles ☐ Landfills ☐ Transformers ☐ Other:

Release Mechanisms *(check potential release mechanisms at the site)*

☒ Spills ☐ Leaks	☐ Direct discharge ☐ Burning ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

☐ Surface soil (0-2 feet bgs*) ☒ Subsurface soil (>2 feet bgs) ☐ Air ☐ Sediment	☐ Groundwater ☐ Surface water ☐ Biota ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

☐ Residents (adult or child) ☐ Commercial or industrial worker ☒ Construction worker ☐ Subsistence harvester (i.e. gathers wild foods) ☐ Subsistence consumer (i.e. eats wild foods)	☐ Site visitor ☐ Trespasser ☐ Recreational user ☐ Farmer ☐ Other:

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:

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:

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 ground-
water 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:

Incomplete

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:

Incomplete

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:

Incomplete

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:

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:

Incomplete

Comments:

A retail grocery store exists within 30 vertical and horizontal feet of petroleum-contaminated soil, however this building is located on top of pilings, and is elevated above the ground surface. Accordingly, the vapor intrusion pathway to this building is considered incomplete.

A storage building also exists within the horizontal and vertical inclusion zone, however the building is unoccupied and is not reasonably expected to become occupied in the future.



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 - PM₁₀). 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:

The top two feet of contaminated soil has been removed and replaced with clean, imported fill material.

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: Former Chevron Truck-Loading Rack, Truck-Loading Rack Area

Completed By: Zackary S. Wall, G-Logics

Date Completed: Updated 5/14/2020

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Media	(2) Transport Mechanisms
☐ Surface Soil (0-2 ft bgs)	☒ Direct release to surface soil <i>check soil</i> ☐ Migration to subsurface <i>check soil</i> ☐ Migration to groundwater <i>check groundwater</i> ☐ Volatilization <i>check air</i> ☐ Runoff or erosion <i>check surface water</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____
☒ Subsurface Soil (2-15 ft bgs)	☐ Direct release to subsurface soil <i>check soil</i> ☐ Migration to groundwater <i>check groundwater</i> ☒ Volatilization <i>check air</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____
☐ Ground-water	☐ Direct release to groundwater <i>check groundwater</i> ☐ Volatilization <i>check air</i> ☐ Flow to surface water body <i>check surface water</i> ☐ Flow to sediment <i>check sediment</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____
☐ Surface Water	☐ Direct release to surface water <i>check surface water</i> ☐ Volatilization <i>check air</i> ☐ Sedimentation <i>check sediment</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____
☐ Sediment	☐ Direct release to sediment <i>check sediment</i> ☐ Resuspension, runoff, or erosion <i>check surface water</i> ☐ Uptake by plants or animals <i>check biota</i> ☐ Other (list): _____

(3)
Check all exposure media identified in (2).

(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.

(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

Exposure Media

Exposure Pathway/Route

Exposure Media	Exposure Pathway/Route	Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☒ soil	☒ Incidental Soil Ingestion	I	I	I	F	I	I	I
	☒ Dermal Absorption of Contaminants from Soil	I	I	I	F	I	I	I
	☐ Inhalation of Fugitive Dust							
☐ groundwater	☐ Ingestion of Groundwater							
	☐ Dermal Absorption of Contaminants in Groundwater							
	☐ Inhalation of Volatile Compounds in Tap Water							
☒ air	☒ Inhalation of Outdoor Air	I	I	I	I	I	I	I
	☐ Inhalation of Indoor Air							
	☐ Inhalation of Fugitive Dust							
☐ surface water	☐ Ingestion of Surface Water							
	☐ Dermal Absorption of Contaminants in Surface Water							
	☐ Inhalation of Volatile Compounds in Tap Water							
☐ sediment	☐ Direct Contact with Sediment							
☐ biota	☐ Ingestion of Wild or Farmed Foods							

APPENDIX G

Appendix A - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name: Former Chevron Truck-Loading Rack, Fuel Loading Rack Area

File Number: 26601

Completed by: Zackary S. Wall, G-Logics

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)*

☐ USTs ☒ ASTs ☒ Dispensers/fuel loading racks ☐ Drums	☐ Vehicles ☐ Landfills ☐ Transformers ☒ Other: Piping

Release Mechanisms *(check potential release mechanisms at the site)*

☒ Spills ☒ Leaks	☐ Direct discharge ☐ Burning ☐ Other:

Impacted Media *(check potentially-impacted media at the site)*

☒ Surface soil (0-2 feet bgs*) ☒ Subsurface soil (>2 feet bgs) ☐ Air ☒ Sediment	☐ Groundwater ☒ Surface water ☒ Biota ☐ Other:

Receptors *(check receptors that could be affected by contamination at the site)*

☐ Residents (adult or child) ☐ Commercial or industrial worker ☒ Construction worker ☐ Subsistence harvester (i.e. gathers wild foods) ☐ Subsistence consumer (i.e. eats wild foods)	☐ Site visitor ☒ Trespasser ☐ Recreational user ☐ Farmer ☐ Other:

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:

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:

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 ground-
water 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:

Incomplete

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:

Incomplete

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:

Incomplete

Comments:

Due to the use as a harbor and the many storm drains that discharge along the beach in this area, harvesting on or near the Property (or near the City of Hoonah) generally does not occur.

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:

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:

Incomplete

Comments:

Retail grocery store exists within 30 vertical and 30 horizontal feet of petroleum contaminated soil, however this building is located on top of pilings and is elevated above the ground surface. Accordingly, the vapor intrusion pathway to this building is considered incomplete.

A storage building also exists within the horizontal and vertical inclusion zone, however the building is unoccupied and is not reasonably expected to become occupied in the future.



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 - PM₁₀). 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:

The top two feet of contaminated soil has been removed and replaced with clean, imported fill material.

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: Former Chevron Truck-Loading Rack, Truck-Loading Rack Area

Completed By: Zackary S. Wall, G-Logics

Date Completed: Updated 5/14/2020

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1) Media	(2) Transport Mechanisms
☒ Surface Soil (0-2 ft bgs)	☒ Direct release to surface soil <i>check soil</i>
	☒ Migration to subsurface <i>check soil</i>
	☐ Migration to groundwater <i>check groundwater</i>
	☒ Volatilization <i>check air</i>
	☒ Runoff or erosion <i>check surface water</i>
	☒ Uptake by plants or animals <i>check biota</i>
☐ Subsurface Soil (2-15 ft bgs)	☒ Direct release to subsurface soil <i>check soil</i>
	☐ Migration to groundwater <i>check groundwater</i>
	☒ Volatilization <i>check air</i>
	☒ Uptake by plants or animals <i>check biota</i>
☐ Ground-water	☐ Direct release to groundwater <i>check groundwater</i>
	☐ Volatilization <i>check air</i>
	☐ Flow to surface water body <i>check surface water</i>
	☐ Flow to sediment <i>check sediment</i>
	☐ Uptake by plants or animals <i>check biota</i>
	☐ Other (list):
☒ Surface Water	☒ Direct release to surface water <i>check surface water</i>
	☒ Volatilization <i>check air</i>
	☒ Sedimentation <i>check sediment</i>
	☒ Uptake by plants or animals <i>check biota</i>
	☐ Other (list):
☒ Sediment	☒ Direct release to sediment <i>check sediment</i>
	☒ Resuspension, runoff, or erosion <i>check surface water</i>
	☒ Uptake by plants or animals <i>check biota</i>
	☐ Other (list):

(3)
Check all exposure media identified in (2).

(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.

(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

Exposure Media

Exposure Pathway/Route

	Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
☒ soil							
☒ Incidental Soil Ingestion	I	I	C/F	F	I	I	I
☒ Dermal Absorption of Contaminants from Soil	I	I	C/F	F	I	I	I
☐ Inhalation of Fugitive Dust							
☐ groundwater							
☐ Ingestion of Groundwater							
☐ Dermal Absorption of Contaminants in Groundwater							
☐ Inhalation of Volatile Compounds in Tap Water							
☒ air							
☒ Inhalation of Outdoor Air	I	I	C/F	F	I	I	I
☐ Inhalation of Indoor Air							
☐ Inhalation of Fugitive Dust							
☐ surface water							
☐ Ingestion of Surface Water							
☒ Dermal Absorption of Contaminants in Surface Water	I	I	I	I	I	I	I
☐ Inhalation of Volatile Compounds in Tap Water							
☐ sediment							
☒ Direct Contact with Sediment	I	I	C/F	F	I	I	I
☐ biota							
☒ Ingestion of Wild or Farmed Foods	I	I	I	I	I	I	I

APPENDIX H



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE

Contaminated Sites and Prevention and Emergency Response Programs

Transport, Treatment, & Disposal Approval Form for Contaminated Media

DEC HAZARD/SPILL ID #		NAME OF SPILL OR CONTAMINATED SITE	
26601		Former Chevron Truck-Loading Rack	
SITE OR SPILL LOCATION			
147 Front Street, Hoonah, AK, 99829			
CURRENT LOCATION AND TYPE OF CONTAMINATED MEDIA		SOURCE OF THE CONTAMINATION	
Hoonah, AK		Releases from fueling equipment	
COMPOUNDS OF CONCERN	ESTIMATED VOLUME	DATE(S) GENERATED	
Diesel Range Organics	11 cubic yards	November, 2016; August, 2019	
POST TREATMENT ANALYSIS REQUIRED (such as GRO, DRO, RRO, BTEX, and/or Chlorinated Solvents)			
N/A			
COMMENTS			
Material is being transported directly to disposal facility in Oregon.			

Facility Accepting the Contaminated Media

NAME OF THE FACILITY	PHYSICAL ADDRESS/PHONE NUMBER
Columbia Ridge Landfill	18177 Cedar Springs Ln, Arlington, OR 97812

Responsible Party and Contractor Information

BUSINESS/NAME	ADDRESS/PHONE NUMBER
Wards Cove Packing Company	2510 W Casino Road, Everett, WA, 98204, 206-323-3200
G-Logics, Inc (consultant)	40 2nd Ave SE, Issaquah, WA, 98027, 425-391-6874

Zackary Wall

Name of the Person Requesting Approval (printed)

Zackary Wall

Signature

Project Geologist, G-Logics

Title/Association

10/2/2019

Date

425-391-6874

Phone Number

-----DEC USE ONLY-----

Based on the information provided, ADEC approves transport of the above-described media for treatment in accordance with the approved facility operations plan. The Responsible Party or their consultant must submit to the DEC Project Manager a copy of weight/volume receipts of the loads transported to the facility and a post treatment analytical report. If the media is contaminated soil, it shall be transported as a covered load in compliance with 18 AAC 60.015.

DEC Project Manager Name (printed)

Project Manager Title

Signature

Date

Phone Number



DR0005227320



Location TTNU269570

Consignee COLUMBI.144 | COLUMBIA
RIDGE LANDFILL & RECYCLING CENTER

Customer Signature

Print Name

10/21/19 [Signature]

Date

Time

Lynden Rep

KT

52

Truck Company

Truck #

All shipments on this delivery document were received in good order and in the quantities listed except as noted below.

480216

OSD

FL

Bill To COLUMBI.144

Total Freight Units: FL

473767

CWMi

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number V S Q G	2. Page 1 of 3	3. Emergency Response Phone (800) 424-9300	4. Waste Tracking Number WCPC 103019	
5. Generator's Name and Mailing Address WARDS COVE PACKING COMPANY 147 FRONT STREET HOONAH AK 99829				Generator's Site Address (if different than mailing address)		
Generator's Phone (206) 323-3200				U.S. EPA ID Number WAD991281809		
6. Transporter 1 Company Name ALASKA MARINE LINES				U.S. EPA ID Number		
7. Transporter 2 Company Name HIGHLANDS				U.S. EPA ID Number		
8. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC. 17629 CEDAR SPRINGS LANE ARLINGTON OR 97812-9709				U.S. EPA ID Number ORD089452353		
Facility's Phone (541) 454-2843						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. MATERIAL NOT REGULATED BY DOT- FUEL OIL IMPACTED WATER		001	DM	440	P	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information 1. OR343233- STAB01- FUEL OIL IMPACTED WATER						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's Offeror's Printed/Typed Name Vemava Ship on behalf of Wards Cove				Signature 		Month Day Year 10 2 19
15. International Shipments ☐ Import to U.S. ☐ Export from U.S.				Port of entry/exit: Date leaving U.S.:		
16. Transporter Acknowledgment of Receipt of Materials				Signature 		Month Day Year 10 30 19
Transporter 1 Printed/Typed Name Kindra McCracken				Signature 		Month Day Year 10 30 19
Transporter 2 Printed/Typed Name Ben Seaver						
17. Discrepancy						
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection						
17b. Alternate Facility (or Generator)				Manifest Reference Number: U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name Devin Dunlop				Signature 		Month Day Year 11 11 19

478767

CWM

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)		19. Generator ID Number	20. Page 2 of 3	21. Waste Tracking Number WCPC 103019	
22. Generator's Name WARDS COVE PACKING COMPANY		VSQG			
23. Transporter <u>3</u> Company Name CWM NW		U.S. EPA ID Number ORD089452353			
24. Transporter <u>4</u> Company Name UNION PACIFIC RAILROAD		U.S. EPA ID Number NED001792910			
25. Waste Shipping Name and Description	26. Containers		27. Total Quantity	28. Unit Wt/Vol.	
	No.	Type			
29. Special Handling Instructions and Additional Information					
WMA 970871					
TRANSPORTER	30. Transporter <u>3</u> Acknowledgment of Receipt of Materials		Signature <u>[Signature]</u>		
	Printed/Typed Name <u>9Pmaka</u>		Month <u>10</u> Day <u>30</u> Year <u>19</u>		
TRANSPORTER	31. Transporter <u>4</u> Acknowledgment of Receipt of Materials		Signature <u>[Signature]</u>		
	Printed/Typed Name <u>JR</u>		Month <u>11</u> Day <u>1</u> Year <u>19</u>		
DESIGNATED FACILITY	32. Discrepancy				

CVM!

DESIGNATED FACILITY TO GENERATOR

ATTACHMENTS

Permission and Conditions for Use and Copying Form

Additional Environmental Exploration Report and Focused Feasibility Study Former Chevron Truck-Loading Rack and Fuel-Pipe area 147 Front Street, Hoonah, AK 99829

G-Logics Project 01-0294-H February 9, 2021

G-Logics prepared the above-identified Document only for our Client and/or other user(s), as identified in the Document, for the purposes stated and subject to any identified and contractual limitations. Regulatory agencies may make additional “fair use” copies for internal and public use based on state and federal laws that do not violate copyright laws.

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- I understand and accept that there may be limitations to the reliability of the Document’s findings due to circumstances beyond the control of G-Logics, the limited scope of funding, and/or limitations inherent in the nature of the performed services.
- I agree not to rely on the Document as being comprehensive or inclusive of all possible site hazards and agree to defend, indemnify, and hold G-Logics harmless from and against any and all claims, damages, or liability which arise from or which are alleged to arise from my use of the Document. I also will compensate G-Logics for any time spent or expenses incurred by G-Logics in defense of any such claim.
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Contact Name & Title	_____
Signature & Date	_____
Telephone & Fax Numbers	_____
Planned Use of Document	_____

With your information and signature above, please fax to G-Logics (425-313-3074) for approval review. G-Logics will share your request with our Client for their approval.

Client Review and Acknowledgment of Use and Copying Request

Per the notification of G-Logics, I, the Client, have reviewed this request for copying/use of this Document, have discussed the request with G-Logics, and grant my consent as indicated by my signature below.

Client Company	_____
Client Contact Name & Title	_____
Signature & Date	_____
Telephone & Fax Numbers	_____

G-Logics review and Acknowledgment of Use and Copying Request

Based on your concurrence with the above-presented conditions, approval of our Client, and our review of the information, G-Logics allows the Requestor to copy/use the above referenced Document for purposes stated. Additional fees may apply.

G-Logics Signature	_____
Title	_____
Date	_____

ADEC Comment Tracking Matrix

Additional Environmental Exploration Report and Focused Feasibility Study

Ward Cove Hoonah Truck Rack

Hoonah, Alaska

ADEC File No. 1510.38.012

ADEC Reviewer: Erin Gleason

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
1	General	General	Please add information to your introduction section stating that you are working on two source areas, the tank farm and the fuel dock area downgradient of the tank farm.	Both of these areas are described in the second paragraph of the Introduction section. The work that we conducted was performed in the “Truck-Loading Rack” and “Fuel-Pipe” areas. Chevron is conducting the work in the Tank Farm. You are correct that the former fuel-distribution island (fuel dock?) is located downgradient of the tank farm and downgradient of the Fuel-Pipe area. Figure 2 has been revised to show the different source areas.	Accept
2	14	3.3.	How did you clean the non-dedicated sampling equipment? Please add details on cleaning to the report narrative.	Equipment-cleaning methods are discussed in the attached Appendix A.	Noted. Accept.
3	20	4.3.3	Were volatile organic compound (VOC) samples in the cooler that was 7.8 degrees? Please add information to section 4.3.3. If yes, please flag all VOC data associated with that cooler as biased.	Cooler 6 (the last cooler to be filled and shipped) contained 1 L ambers (no VOC samples). Additionally, Fremont Analytical measured temperatures of several individual samples and of temperature blank vials (included in the coolers). All of the measured sample and blank temperatures were below 6 C. Accordingly, no flags are needed, but G-Logics will add an explanation to the report text.	Accept.

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
4	21	5.1.1.2	Sediment at the site has petroleum impacts. This pathway is complete. Please revise conceptual site model and associated section.	As stated in Section 5.1.1.2, based on the conducted sample analyses in the area of the Truck-Loading Rack, sediment contamination was not found in the shoreline areas. Accordingly, we do not believe that sediment has been contaminated in this area and therefore this pathway is not complete.	Agree. ADEC notes that sediment was impact at the fuel dock, which is associated with the tank farm site.

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
5	22	5.1.1.5	The vapor intrusion pathway is complete due to the presence of VOC. Please revise the conceptual site model and associated section. If no buildings are currently being used on site, the potential receptors can be marked as “future exposure”.	As discussed in Section 5.1.1.5, the only building where vapor intrusion could occur is used for short periods of time and only for equipment maintenance. While we agree that VOCs are present, sub-slab (soil gas) screening levels were not exceeded (Table 2, G-Logics 2019 <i>Technical Assistance Report</i>). Accordingly, the CSM would not need to be modified.	ADEC notes that there are two CSM as part of this report. VOCs are present at the tank farm site above screening level and the pathway is complete. No receptors are currently present at the tank farm site and it can be marked as “future” exposure. ADEC concurs with the CSM for the truck rack site. Although buildings are present at the truck rack, VOCs are below the screening levels at GL-VP-1 and GL-VP-2 in the March 27 th , 2019 Report.
6	24	5.1.4	Contamination was documented 8-10 feet below ground surface (bgs) near the maintenance building and covered parking area. Please include this area of contamination in your analysis in section 5.1.4	This contamination already is described in Section 5.1.4, as shown below. <i>“...the recent sampling has identified a deeper layer of contaminants (8 to 10.5 feet deep) extending to the east and northeast beneath the maintenance building. This deeper layer could be associated with the surface spills but more likely appears to be related to releases from the adjacent Tank Farm property...”</i>	Noted. Accept.
7			Contamination remains in soil at the Tank Farm above ADEC maximum allowable cleanup levels (18 AAC. 75.341 Table B2). The petroleum saturated soil in the tank farm area is a source of contamination to down gradient property. Please include in section 5.2	This already is included in Section 5.2, as shown below. <i>“...analytical data also now indicates the contaminants more likely originated from the upslope Tank-Farm property (160 Front St) and/or the fuel pipes associated with this tank farm...”</i>	Please include information in your report about the source area soils being above ADEC maximum allowable cleanup levels.
8	25	5.2.1.2	Due to the presence of ecological exposure ADEC requests that you include an ecological scoping form as an appendix to this report (see attached).	A copy of this form has been completed and is attached.	Accept.

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
9	25	5.2.1.4	Pore water is above Alaska Surface Water Criteria listed in 18 AAC 70 at GPW-5 and GPW-6. Surface water pathway is complete. Please revise conceptual site model and associated section to note this pathway as complete. Because the water is marine, the ingestion of surface water pathway can be marked as incomplete.	A similar wording already exists: <i>“Surface water in this area is saline and is not a current or potential future source of drinking water...accordingly, surface-water pathway for human health currently is incomplete...”</i> <i>However, the surface-water pathway is complete for protection of aquatic life.”</i> Is this language acceptable?	Accept.
10	25	5.2.1.6	The property does not have any controls preventing receptors for accessing the area where outdoor air inhalation is a complete exposure pathway. Please delete last two sentences of section 5.2.1.6 and note that no site controls are present.	You are correct, there aren't any controls for this area. However, actual air concentrations would be minimal given that the area is under a dock. Additionally, receptors, if any, are very infrequent given the daily tidal inundations.	Noted. Please add a sentence in section 5.2.1.6 stating the no formal controls have been placed on the site.
11	27	5.3	Please review the ADEC conceptual site model (CSM) guidance (dated January 2017) and ensure that the both CSMs adhere to the guidance.	We have reviewed the guidance document and believe that our CSMs are in compliance.	Accept. ADEC now understands that there are two CSM, one for the fuel dock and one for the truck rack.
12	26	5.2.3	Please include chromatograms for DRO and RRO analysis around the pilings (figure 4). Compare the chromatograms for these samples to known creosote signatures to determine if creosote may be contributing to DRO and RRO concentrations at the site.	To address your comment, we have included Chromatograms for samples GLB-14, GLB-17, GLB-18, GLB-19, GLB-22, GLB-23, and GLB-24. Based on our review and given the distribution of the detected DRO/RRO contaminants, the treated pilings do not appear to be contributing to elevated concentrations.	Accept.
13	32	7	The migration to groundwater pathway is complete. Please revise section 7, bullet 2.	In our two areas (Truck-Loading Rack/Fuel-Pipe Area), groundwater has not been encountered. Even if the small amounts of perched pore water were considered to be “groundwater”, the identified volumes are too low to be considered a viable source of potable water. Furthermore, water is supplied by city. Therefore, we believe the current presentation is correct.	Accept. Due to the layer of bedrock directly beneath the site ADEC considered the migration to groundwater pathway incomplete.

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
14	32	7	Contamination was found above ADEC cleanup levels in the Fuel-Pipe area. This does not constitute “dispersing rapidly”. Please revise bullet four.	Sorry for the confusion. The word “rapidly” was meant to describe the spatial decrease in contaminant concentration. To address this imprecise terminology, we have replaced the word “rapidly” with the phrase “over a short distance”.	Accept.
15	32	7	The site does not have any control and is located within the town of Hoonah. Exposure to contamination is a risk. Please delete bullet six.	Changed the sixth bullet to: “Based on the low contaminant concentrations, limited extent of contamination, and infrequent access, the risk of exposure to Site contaminants is considered to be minimal.”	Disagree. This report includes two sites, one of which has contamination above ADEC maximum allowable cleanup levels. Can you change the sixth bullet to make a statement about the truck rack and a separate statement about the tank farm? The sentence you include here seems appropriate for the truck rack, but not the tank farm.
16	36	Figure 1	Please revise figure 1 to include the truck rack area and the fuel pipe area.	G-Logics has changed the subtitle to “Former Chevron Fuel-Pipe and Truck-Loading Rack Areas”. We also added clarification to Figure 2.	Accept.
17	44	Figure 6-1	The extent of total aqueous hydrocarbon contamination (TAQH) has not been laterally determined beyond GPW-5. Please submit a work plan to ADEC that includes complete delineation of pore water contamination in the fuel pipe area.	While we agree that the lateral extent of TAQH in porewater has not been assessed beyond GPW-5, it appears that contaminants do not extend significantly beyond this area based on the results of previous sampling efforts, notably sediment-sample results in the area. Additionally, additional sampling results likely will not change the overall conclusions and recommendations for this area.	Accept. ADEC notes that this is a data gap for the tank farm site. Once the upgradient source area has been removed, further delineation of contamination around GPW-5 will be necessary to close the site.
18	38	Figure 3	Please revise figure three to include the structures next to/north of TRB-6 and TRB-7.	This figure has been revised. The building that has been added is a mobile home (double-wide).	Accept.

Comment Number	Page	Section	ADEC Comment / Recommendation October 27 th , 2020	G-logic Response December 9 th , 2020	ADEC Response February 2 nd , 2021
19	15	4.1.1	TRB-6 and TRB-7 soil samples are above the ADEC migration to groundwater cleanup levels (18 AAC 75.341 table B2). Is it feasible to take samples to the north of those sample locations so as to fully delineate the extent of petroleum contamination in those locations?	While it might be feasible to collect soil samples in this area (with significant brush clearing and access work), groundwater is not present in this area. Accordingly, cleanup levels based on protection of groundwater are not applicable and direct contact cleanup levels are more appropriate. Given this understanding, additional soil samples likely will not change the overall conclusions and recommendations for this area.	Accept. Due to the layer of bedrock directly beneath the site ADEC considered the migration to groundwater pathway incomplete.
20	26	5.2.3	Per section 2.2.2 of the June 2019 ADEC approved Work Plan pore water sample GPW-9 was going to be collected to assess the contribution of the dock pilings to the pore water contamination concentrations. Please include discussion of GPW-9 results in the report narrative.	G-Logics has revised Sections 3.2.2 and 5.2.4 to include discussions of background porewater and sediment-sample collection and results.	Accept.