

BGES, INC.

ENVIRONMENTAL CONSULTANTS

**FORMER HANNA CAR CARE CENTER
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA**

**GROUNDWATER MONITORING REPORT (2020 – 2022)
ADEC File Number: 2100.26.274**

December 2022

Submitted to: Curt Nading/Commercial Real Estate Alaska, LLC

Submitted by: BGES, INC.

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ACRONYMS

AAC	-	Alaska Administrative Code
ADEC	-	Alaska Department of Environmental Conservation
AK	-	Alaska Method
bg	-	Below Grade
BGES	-	Braunstein Geological and Environmental Services
BTEX	-	Benzene, Toluene, Ethylbenzene, and Xylenes
CSM	-	Conceptual Site Model
DL	-	Detection Limit
DNAPL	-	Dense Non-Aqueous Phase Liquid
DRO	-	Diesel Range Organics
EPA	-	Environmental Protection Agency
GRO	-	Gasoline Range Organics
IDW	-	Investigation-Derived Waste
LNAPL	-	Light Non-Aqueous Phase Liquid
LOQ	-	Limit of Quantitation
MS	-	Matrix Spike
MSD	-	Matrix Spike Duplicate
MRL	-	Method Reporting Limit
mg/L	-	Milligrams per Liter
ml/min	-	Milliliters per Minute
PAH	-	polynuclear aromatic hydrocarbons
PVC	-	Polyvinyl Chloride
QC	-	Quality Control
QEP	-	Qualified Environmental Professional
RPD	-	Relative Percent Difference
RRO	-	Residual Range Organics
SGS	-	SGS Environmental Services Inc.
UST	-	Underground Storage Tank
VOC	-	Volatile Organic Compound

1.0 INTRODUCTION

BGES, Inc. (BGES) was retained by Curt Nading of Commercial Real Estate Alaska, LLC to conduct groundwater monitoring activities at the former Hanna Dimond Car Care Center, located at 2201 West Dimond Boulevard in Anchorage, Alaska; hereafter referred to as the subject property (Figure 1).

Mr. James Fish, the Alaska Department of Environmental Conservation (ADEC) Project Manager (at the time), requested the collection of additional groundwater monitoring samples from Monitoring Wells MW-6, MW-7, and MW-8 and performing quarterly evaluations for the potential presence of dense non-aqueous phase liquid (DNAPL) near the bottom of each well in correspondence dated May 4, 2020. The field activities were conducted in accordance with the *Work Plan for Groundwater Monitoring Activities* (dated July 7, 2020) and conditionally approved by James Fish on July 11, 2020. This report presents the activities completed between July of 2020 and May of 2022 that were performed in general accordance with this work plan.

2.0 BACKGROUND

The subject property is located on the site of the former Texaco/Hanna Car Care Center; an ADEC-listed Contaminated Site with a status of “Active”. The ADEC Hazard Identification Number is 23025 and the ADEC File Number is 2100.26.274 for the subject property. The site is a former car wash facility that was established in 1984. The property had also been utilized as a fueling station; three underground storage tanks (USTs) and four dispenser islands were previously located beneath a canopy within the southern portion of the property.

Soil and groundwater contamination was discovered at the site during a facility upgrade in 1998. Four monitoring wells were installed at the site (MW-1 through MW-4), and were sampled on a quarterly basis for petroleum hydrocarbon contaminants to evaluate the presence of contaminant constituents in the groundwater at the site. During the quarterly sampling events, the groundwater at the subject property persistently exhibited contaminant constituents associated with diesel and gasoline fuel, at concentrations exceeding their applicable ADEC cleanup criteria.

In 2007, BGES was retained to observe the decommissioning via removal of three USTs from the property. The USTs were located to the west of the former canopy; with capacities of

approximately 5,000 gallons (diesel UST), 11,200 gallons (gasoline UST) and 11,200 gallons (gasoline UST). Work related to the decommissioning of the USTs, dispensers, and associated piping at the site was conducted first, followed by contaminated soils excavations associated with wash water and oil/water separator pits that were discovered after the demolition of the car wash building.

During the excavation activities, contaminated groundwater was pumped into storage tanks for treatment and eventual discharge. Contaminated soils at the subject property were removed to the extent feasible, and the excavations were subsequently backfilled after nutrients were added to promote biological degradation of any potential remaining contamination.

In February of 2009, BGES was retained to install and sample four flush-grade monitoring wells (MW-5 through MW-8) throughout the southern portion of the subject property (Figure 2). After installation, the wells were appropriately developed and sampled to evaluate the presence of contaminant constituents. The results of the sampling effort indicated that Monitoring Well MW-6 contained concentrations of benzene and residual range organics (RRO) which exceeded ADEC cleanup criteria; additionally, water samples collected from Monitoring Well MW-7 exhibited concentrations of gasoline range organics (GRO), diesel range organics (DRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX) that exceeded ADEC cleanup criteria.

Two groundwater monitoring events were conducted in 2010. During these groundwater monitoring events, BGES sampled Monitoring Wells MW-5 through MW-8. All water samples from the June 2010 groundwater sampling event exhibited concentrations of contaminants below the laboratory's method reporting limits (MRLs) and/or below ADEC cleanup criteria. Similar results were recorded during the sampling event that took place in November of 2010. During this event, samples collected from MW-5, MW-6 and MW-8 all exhibited concentrations of contaminants below the laboratory's MRLs and/or below ADEC cleanup criteria. However, a water sample and duplicate sample collected from MW-7 exhibited a maximum concentration of 0.0295 milligram per liter (mg/L) of benzene, which exceeded the ADEC cleanup criterion of 0.005 mg/L that was in effect at that time. All remaining analytes in MW-7 exhibited concentrations of contaminants below the laboratory's MRLs and/or below ADEC cleanup criteria.

Two groundwater monitoring events were conducted in 2012. In February of 2012, BGES personnel were onsite to collect groundwater samples from MW-6 and MW-7. Water Sample MW-7 exhibited concentrations of GRO, benzene, and DRO at 6.61 mg/L, 0.254 mg/L, and 2.55 mg/L, respectively; all of which exceeded the respective ADEC cleanup criteria and were significantly greater than the previous sampling event. Sample MW6 exhibited concentrations of contaminants below the laboratory's limits of quantitation (LOQs) and/or below ADEC cleanup criteria. BGES personnel were onsite again in November of 2012 to collect samples from Monitoring Wells MW-6 and MW-7, and to decommission Monitoring Well MW-5. Water Sample MW7 exhibited a concentration of benzene at 0.00664 mg/L which exceeded the ADEC cleanup criterion. All remaining analytes in MW7 exhibited concentrations of contaminants below the laboratory's LOQs and/or below ADEC cleanup criteria. Sample MW-6 also exhibited concentrations of contaminants below the laboratory's LOQs and/or below ADEC cleanup criteria. Monitoring Well MW-5 was decommissioned on November 8, 2012.

Two groundwater samples, including a duplicate sample, were collected from Monitoring Well MW-7 on March 5, 2013. Concentrations of GRO, benzene, ethylbenzene, DRO, RRO, trichloroethene, vinyl chloride, benzo(a)anthracene, benzo[a]pyrene, and benzo[b]fluoranthene were present within Monitoring Well MW-7 above the applicable ADEC cleanup criteria for these analytes.

Three groundwater samples, including a duplicate sample, were collected from two onsite groundwater monitoring wells on May 4, 2016. Concentrations of benzene and RRO were detected below their respective ADEC cleanup criteria in MW-7. RRO was detected in MW-6 below the respective ADEC cleanup criterion.

Three groundwater samples, including a duplicate sample, were collected from two onsite groundwater monitoring wells on March 23, 2017. MW-6 exhibited detectable concentrations of RRO, benzo[g,h,i]perylene, and pyrene which were below the applicable ADEC cleanup criteria. MW7 and MW9 (duplicate of MW7) exhibited concentrations of GRO, 1,2,4-trimethylbenzene, benzene, ethylbenzene, naphthalene, vinyl chloride, total xylenes, benzo(a)anthracene, benzo[a]pyrene, and benzo[b]fluoranthene that exceeded their applicable ADEC cleanup criteria.

In summary, the contaminant concentrations within Monitoring Wells MW-6 through MW-8 have decreased over time. The historical groundwater monitoring data for Monitoring Wells MW-5

through MW-8 is presented in Table 1.

The greatest contaminant concentrations within MW-7 have been observed during late winter months; therefore, additional groundwater monitoring was requested by the ADEC during this time period. The results of the ongoing groundwater monitoring activities between July of 2020 and May of 2022 are presented in the sections below.

3.0 SITE ACTIVITIES

All field work was conducted by and/or under the supervision of a Qualified Environmental Professional (QEP) as defined by the ADEC. The field work was completed in general accordance with the ADEC-approved work plan mentioned above.

During the initial monitoring activities conducted in July of 2020, damage was observed in all three monitoring wells. Randy Guintu, ADEC Project Manager (at the time), approved on February 24, 2021, a work plan amendment to repair Monitoring Wells MW-6 and MW-8, and to replace MW-7 and to continue the quarterly monitoring for free product [light non-aqueous phase liquid (LNAPL) and DNAPL] in these monitoring wells.

3.1 Quarterly Free Product and Water Level Monitoring

July 21, 2020 Activities. BGES mobilized to the site on July 21, 2020 to check for the presence of LNAPL and DNAPL in Monitoring Wells MW-6, MW-7, and MW-8 and to resurvey these wells. An oil/water interface probe was utilized to check for free product at the top and bottom of the water column in each monitoring well and to measure the depths to water and total depths of each well. The depth to groundwater was not measured in MW-7 because it was determined that the well was broken/damaged at an approximate depth of 1.6 feet below the top of casing. MW-6 was also broken/damaged at approximately 3 inches below the top of casing; however, this did not impede the oil/water interface probe and obtaining measurements. MW-8 was free of obstructions within the polyvinyl chloride (PVC) casing. The steel well covers and the expandable well plugs for MW-6 and MW-8 were also damaged and required repair of the covers and replacement of the well plugs. Because of the depth of the break of the well casing within MW-7, this well required over drilling the existing MW-7 and then installing a new well within the same borehole. Monitoring Well MW-7 was replaced in April of 2021 and these activities are described below in Section 3.2.

The interface probe was decontaminated prior to use in each well by washing it in an Alconox (laboratory grade detergent) solution, followed by a distilled water rinse. Free product was not identified by the oil/water interface probe within Monitoring Wells MW-6 and MW-8. All field notes were recorded in the field notebook and included in Appendix A.

April 2, 2021 Activities. Monitoring Wells MW-6 and MW-8 were repaired and MW-7 was replaced on April 2, 2021. These activities are described below in Section 3.2.

September 20, 2021 Activities. BGES mobilized to the site on September 20, 2021 to evaluate the monitoring wells for LNAPL and DNAPL and to resurvey MW-6, MW-7, and MW-8 using the method described above. In addition, a soil sample was collected from the 55-gallon drums that contained soil cuttings from the replacement of MW-7. Collection of the soil sample from the drums is described below in Section 3.4. The water level and free product measurements were completed as described above. Free product was not identified within MW6, MW7 or MW8 during these field activities.

January 24, 2022 Activities. BGES mobilized to the site on January 24, 2022 to evaluate the monitoring wells for LNAPL and DNAPL utilizing the methods described above. However, all monitoring wells were obstructed with ice at approximately 1 to 3 inches below the top of casing.

May 10, 2022 Activities. BGES mobilized to the site on May 10, 2022 to check for free product in MW-6, MW-7, and MW-8 utilizing the methods described above. Free product was not identified by the oil/water interface probe within MW-6, MW-7 or MW-8. All field notes were recorded in the field notebook and included in Appendix A.

3.2 Monitoring Well, Repairs, Decommissioning and Installation

On April 2, 2021, BGES mobilized to the site to repair the flush-mounted steel covers for MW-6 and MW-8, and to replace Monitoring Well MW-7 because the well was broken at approximately 1.6 feet below the ground surface. As mentioned above, a work plan amendment for these activities was approved by Randy Guintu on February 24, 2021.

The repairs of the flush-mounted steel covers and the replacement of MW-8 were conducted by Discovery Drilling, Inc. personnel. Monitoring Well MW-7 was over drilled and then replaced within the same borehole utilizing a truck-mounted drilling rig equipped with hollow-stem augers.

Monitoring Well MW-7 was over drilled to approximately 22 feet below grade (bg), and then 2 feet of sand placed in the bottom of the borehole so the well could be set at approximately 20 feet bg. The replacement well for MW7 was completed as follows: 15-feet of, 2-inch diameter, 0.010-inch machine slotted PVC pre-packed well screen was placed within the borehole such that the top of the screen would be approximately five feet above the water table to allow for potential water level fluctuations. The well screen was coupled to 2-inch diameter PVC well casing, which extended from the top of the screen to just below the ground surface and a locking, expandable plug was placed on top of the well casing. The top of the borehole was finished with a flush-grade protective cover. The borehole was completed by adding clean, 10-20 silica sand to the annular space until the sand level was 3.5 feet, followed by hydrated bentonite chips to create a seal to approximately 0.5 foot below grade; and finally, asphalt was placed above the bentonite and around the flush-grade steel monitoring well cover at the ground surface.

Soil cuttings (with excess water) that were generated during the replacement of MW-7 are being temporarily stored in two, 55-gallon drums onsite. The 55-gallon drums were clearly labeled with the monitoring well identification number, owner's contact information, and a description of the contents. A copy of the field notes is included in Appendix A.

3.3 Groundwater Monitoring Activities

BGES mobilized to the site from April 26 through April 28, 2021 to collect groundwater samples from MW-6, MW-7, and MW-8.

Prior to sample collection, the depths to water and the bottom of each well were measured using an oil/water interface probe. In addition, each monitoring well was also checked for the presence of LNAPL near the top of the water column and DNAPL near the bottom of each well. These measurements were recorded in the field book (Appendix A). The oil/water interface probe was decontaminated prior to use in each well by washing it in an Alconox (laboratory grade detergent) solution, followed by a potable water rinse. The volume of water in each well was then calculated. Free product was not detected with the oil/water interface probe within any of the three wells.

Monitoring Wells MW-6, MW-7, and MW-8 were purged utilizing a submersible positive displacement bladder pump until a minimum of three well volumes had been removed or the wells purged dry, in accordance with the ADEC Field Sampling Guidance (October 2019) and the

ADEC-approved work plan. Approximately three well volumes were removed from MW-7 prior to collection of the groundwater sample. Monitoring Wells MW-6 and MW-8 were purged dry prior to collection of the groundwater samples.

During the purging activities, groundwater quality parameters pH, conductivity, oxidation reduction potential, and temperature were monitored utilizing a YSI Professional Pro Multi-Parameter water quality meter equipped with a flow-through cell; these measurements were recorded on groundwater monitoring logs, which are presented in Table 2. During the purging and sampling activities, the bladder pump intake was set within six inches of the groundwater surface and the pumping rate utilized during the purging activities ranged from 250 to 480 milliliters per minute (ml/min).

The groundwater samples were collected utilizing a low-flow sampling technique with a flow rate of approximately 100 ml/min. Prior to collecting groundwater samples, the flow-through cell was removed from the sample chain in accordance with the ADEC Field Sampling Guidance. Groundwater was pumped directly into the laboratory-supplied sample jars, and the samples scheduled for volatiles analyses were collected first by filling laboratory-supplied containers that were preserved with hydrochloric acid. Care was taken during filling of the containers to ensure that no headspace was left within the vials and that none of the preservative was spilled. As a quality control measure, one duplicate water sample was collected from Monitoring Well MW-7 (and was identified as MW-5); and was submitted “blindly” to the laboratory for analyses.

The sample containers were labeled, placed in a chilled cooler, and delivered under chain of custody protocol to SGS North America, Inc. (SGS) in Anchorage on April 28, 2021. As a quality control measure, a trip blank sample accompanied the water samples scheduled for volatile analyses during the entire sampling and handling process. The depths to water and the total depth of each well are presented in Table 2 and copies of the groundwater monitoring logs are presented in Appendix A.

Investigation-derived waste (IDW) generated during sampling consisted of purge and decontamination water and was temporarily stored in a 55-gallon drum onsite. The 55-gallon drum was clearly labeled with the monitoring well identification numbers, owner’s contact information, and a description of the contents.

The groundwater flow direction and hydraulic gradient could not be calculated during the groundwater monitoring activities, because the survey data was inadvertently not recorded for MW-8. The direction of groundwater flow between 2010 and 2017 ranged from north to northwest and the calculated hydraulic gradient ranged from 0.035 to 0.078 foot per linear foot.

4.0 EVALUATION OF LABORATORY DATA

Laboratory analysis of groundwater and soil samples was performed by SGS, an ADEC-approved laboratory. The analytical results for the groundwater and soil samples are summarized in Tables 3 and 4, respectively, and copies of the laboratory data packages are included in Appendix B. The analytical results for groundwater samples were compared to the ADEC cleanup criteria listed in 18 Alaska Administrative Code (AAC) 75.345—Table C for groundwater (as revised on November 18, 2021). The analytical results for the soil sample were compared to the ADEC cleanup criteria listed in 18 AAC 75.341—Tables B1 and B2, Method 2 (as revised on November 18, 2021).

4.1 Monitoring Well Sampling (April 2021)

The groundwater samples were submitted to SGS and were analyzed for GRO by Alaska Method (AK) 101; volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method SW8260D; and polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270.

The water samples collected from the subject property were labeled, for example, MW6-42621. Where the prefix “MW6” indicates the monitoring well from which the water sample was collected; and “42621” indicates the month, the day, and the year the sample was collected. For brevity in the text and in the associated figures, these samples are referred to as “MW6” with the date omitted.

Four water samples, including a duplicate sample, were collected from Monitoring Wells MW-6, MW-7, and MW-8. No analytes within the samples were detected at concentrations that exceeded the laboratory’s LOQs or the ADEC cleanup criteria. The analytical results for the groundwater samples are listed in Table 3 and presented on Figure 2. A copy of the laboratory data package is included in Appendix B.

4.2 Soil – Waste Characterization Sample (September 2021)

A soil sample was collected from the drill cuttings and submitted to SGS for analysis. The soil sample was analyzed for GRO by AK 101; VOCs by EPA Method SW8260D; DRO by AK 102; RRO by AK 103; and lead by EPA Method 6020B.

The soil sample was labeled DWC1-0920, where the prefix “DWC1” indicates the sample was a drum waste characterization sample; and “0920” indicates the month and day the sample was collected.

Sample DWC1-0920 exhibited concentrations of DRO, ethylbenzene, and lead that were below ADEC’s cleanup criteria. All other analytes within this sample were non-detectable. The analytical results for the soil waste characterization sample are presented in Table 4. A copy of the laboratory data package is included in Appendix B.

5.0 LABORATORY DATA QUALITY REVIEW

Data quality was reviewed in accordance with ADEC guidance and standard industry practices. An ADEC laboratory data review checklist was completed for all laboratory work orders, and these checklists are included in Appendix C. The checklists provide an overview of the quality of the laboratory data. The following is a discussion of our evaluation of sample conditions and laboratory procedures for the groundwater and soil samples collected during these sampling activities.

5.1 SGS Laboratory Work Order Number 1211995

Sample analyses were provided by SGS, which is approved to conduct the specified analyses by the ADEC. The samples were hand-delivered to SGS by BGES personnel under chain of custody protocol.

The samples contained the proper preservatives for the requested analyses and no unusual sample conditions were noted by the laboratory. Trip blank samples accompanied the project samples through the entirety of the sampling process and delivery to the laboratory.

The temperature of the sample cooler that contained the groundwater samples was measured at the laboratory at the time of receipt to be 5.7 degrees Celsius; which is within the prescribed optimal temperature range of 0 to 6 degrees Celsius. No unusual sample conditions were noted by the

laboratory. A case narrative was included with the laboratory data package and identified the following quality control (QC) failures.

The recovery of surrogate fluoranthene-d10 associated with PAHs analysis in groundwater Samples MW-6 and MW-8 was below the acceptance criteria, indicating a potential for the laboratory results associated with PAHs, which are associated with surrogate fluoranthene-d10 to be biased low in these project samples. However, because the PAH analytes associated with surrogate fluoranthene-d10 were non-detectable in these samples, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

The recoveries for numerous PAH analytes were below the laboratory's acceptance ranges in the matrix spike duplicate (MSD) sample associated with Groundwater Sample MW-6; indicating a potential for the reported concentrations of these analytes within the associated field samples to be biased low. However, because these PAH analytes were non-detectable in the associated field sample MW-6, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

The relative percent differences (RPDs) for numerous PAH analytes in the matrix spike (MS)/MSD sample pair associated with analyses of PAHs for Sample MW-6 exceeded the laboratory's acceptance criteria, indicating poor laboratory precision for these analytes. However, because the MS and MSD samples were derived from soils from another project it is our opinion that these QC failures do not affect the interpretation of the data. Additionally, because these PAH analytes were non-detectable in the associated project Sample MW-6, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

Sample MW-5 was a duplicate of Sample MW-7 and was collected to evaluate field sampling precision. The RPDs between the reported concentrations in these sample could not be calculated because no analytes were detected above the LOQs.

The LOQ and the detection limit (DL) for 1,2,3-trichloropropane exceeded the ADEC cleanup criterion in Samples MW-5, MW-6, MW-7, and MW-8. This analyte is presented in *italics* and is underlined in Table 3. In these instances, where the analytes were not detected above the LOQ or

the DL, it cannot be determined if the actual concentrations of this analyte exceeds the applicable ADEC cleanup criterion.

A laboratory data quality checklist for this work order is included in Appendix C.

5.2 SGS Laboratory Work Order Number 1216183

Sample analyses were provided by SGS, which is approved to conduct the specified analyses by the ADEC. The samples were hand-delivered to SGS by BGES personnel under chain of custody protocol.

The samples contained the proper preservatives for the requested analyses and no unusual sample conditions were noted by the laboratory. Trip blank samples accompanied the project samples through the entirety of the sampling process and delivery to the laboratory.

The temperature of the sample cooler that contained the soil sample was measured at the laboratory at the time of receipt to be 3.2 degrees Celsius; which is within the prescribed optimal temperature range of 0 to 6 degrees Celsius. No unusual sample conditions were noted by the laboratory. A case narrative was included with the laboratory data package and identified the QC failure.

The recoveries for 1,2,3-trichlorobenzene and 2,2-dichloropropane exceeded the laboratory's acceptance ranges in the MSD sample associated with Sample DWC-0920; indicating a potential for the reported concentrations of these analytes within the associated field sample to be biased high. However, because this sample was derived from soil from another project site; it is our opinion that these QC failures are likely attributable to matrix effects inherent to soil from the other project, and they do not affect the acceptability of the data for their intended use.

The LOQs for 1,2-dibromoethane (EDB), 1,2,3-trichloropropane, and dibromochloromethane exceeded the ADEC cleanup criteria in Sample DWC-0920. These analytes are shown in *italics* in Table 4. In addition, DLs for 1,2-dibromoethane (EDB) and 1,2,3-trichloropropane exceeded the ADEC cleanup criteria in this sample. These analytes are also underlined in Table 4. In these instances, where the analytes were not detected above the LOQs, it cannot be determined if the actual concentrations of those analytes exceed the applicable ADEC cleanup criteria.

A duplicate sample was not collected during these waste characterization sampling activities. A

laboratory data quality checklist for this work order is included in Appendix C.

6.0 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) was previously prepared for this site and is included in BGES' *Monitoring Well Installation and Groundwater Monitoring Report* dated May, 2017. Based on the results of the April 28, 2021 groundwater monitoring event, no changes to the CSM are warranted at this time.

7.0 CONCLUSIONS AND RECOMMENDATIONS

On July 20, 2020, Monitoring Well MW-7 was determined to be damaged and required replacement. In addition, the flush-mounted well covers and expandable plug caps for MW-6 and MW-8 required repairs. On April 2, 2021, the well for MW-7 was over drilled and a new monitoring well was installed within the same borehole and MW-6 and MW-8 were repaired. Subsequently, all three monitoring wells were monitored for LNAPL and DNAPL for three quarters between April of 2021 and May of 2022. The presence of LNAPL and DNAPL were not observed in any of the wells during these quarterly monitoring events.

The groundwater flow direction and hydraulic gradient could not be calculated during these groundwater monitoring activities, because the survey data for MW-8 was inadvertently not recorded. The direction of groundwater flow between 2010 and 2017 ranged from north to northwest and the calculated hydraulic gradient ranged from 0.035 to 0.078 foot per linear foot.

On April 28, 2021, four groundwater samples (including a duplicate sample) were collected from Monitoring Wells MW-6, MW-7, and MW-8. As discussed above, all groundwater samples exhibited non-detectable concentrations.

The contaminant concentrations within groundwater samples from Monitoring Wells MW-6 through MW-8 have decreased over time. Contaminant concentrations within groundwater samples from MW-8 have never exceeded ADEC cleanup criteria. Contaminant concentrations within groundwater samples from MW-6 have been below ADEC cleanup criteria since 2009. Contaminant concentrations within groundwater sample MW7 exceeded ADEC cleanup criteria in 2013 and 2017 and were below ADEC cleanup criteria in 2021. The historical groundwater monitoring data for Monitoring Wells MW-5 through MW-8 is presented in Table 1. Graphs for Monitoring Well MW-7 depicting historical trends are included in Appendix D.

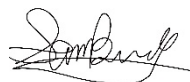
A significant decrease in contaminant concentrations in groundwater was observed during this sampling event in MW-7, as compared to the previous sampling event. Overall, a decreasing trend in contaminant concentrations in MW-7 is continuing. It is recommended that the ADEC be petitioned to allow a reduced sampling frequency for this site with just MW-7 to be monitored during March or February on a yearly cycle that is acceptable to the ADEC. We recommend that the IDW (two drums of soil) be disposed of at an appropriate disposal facility such as the Anchorage Regional Landfill and the one drum of water be disposed of by U.S. Ecology at an appropriate disposal facility. It is also recommended that a copy of this report be provided to the ADEC for review and approval.

8.0 EXCLUSIONS AND CONSIDERATIONS

This report presents facts, observations, and inferences based on conditions observed during the period of our project activities, and only those conditions that were evaluated as part of our scope of work. Our conclusions are based solely on our observations made and work conducted, and only apply to the general vicinities of the locations where groundwater samples were collected. In addition, changes to site conditions may have occurred since the completion of our project activities. These changes may be from the actions of man or nature. Changes in regulations may also impact the interpretation of site conditions. BGES will not disclose our findings to any parties other than our client as listed above, except as directed by our client, or as required by law.

Field work was completed by Carson Kent, Environmental Scientist II of BGES and a QEP and Sam Bundy, Environmental Scientist I of BGES. Mr. Kent and Mr. Bundy are both QEPs as defined by the ADEC. This report was prepared by Sam Bundy. Mr. Bundy has conducted numerous site characterization and remediation projects in Alaska. This report was reviewed by Jayne Martin, Senior Environmental Scientist of BGES and a QEP. Jayne Martin has more than 30 years of environmental consulting experience, and has conducted and managed hundreds of site characterization and remediation projects throughout Alaska and the lower 48 states.

Report Prepared by:

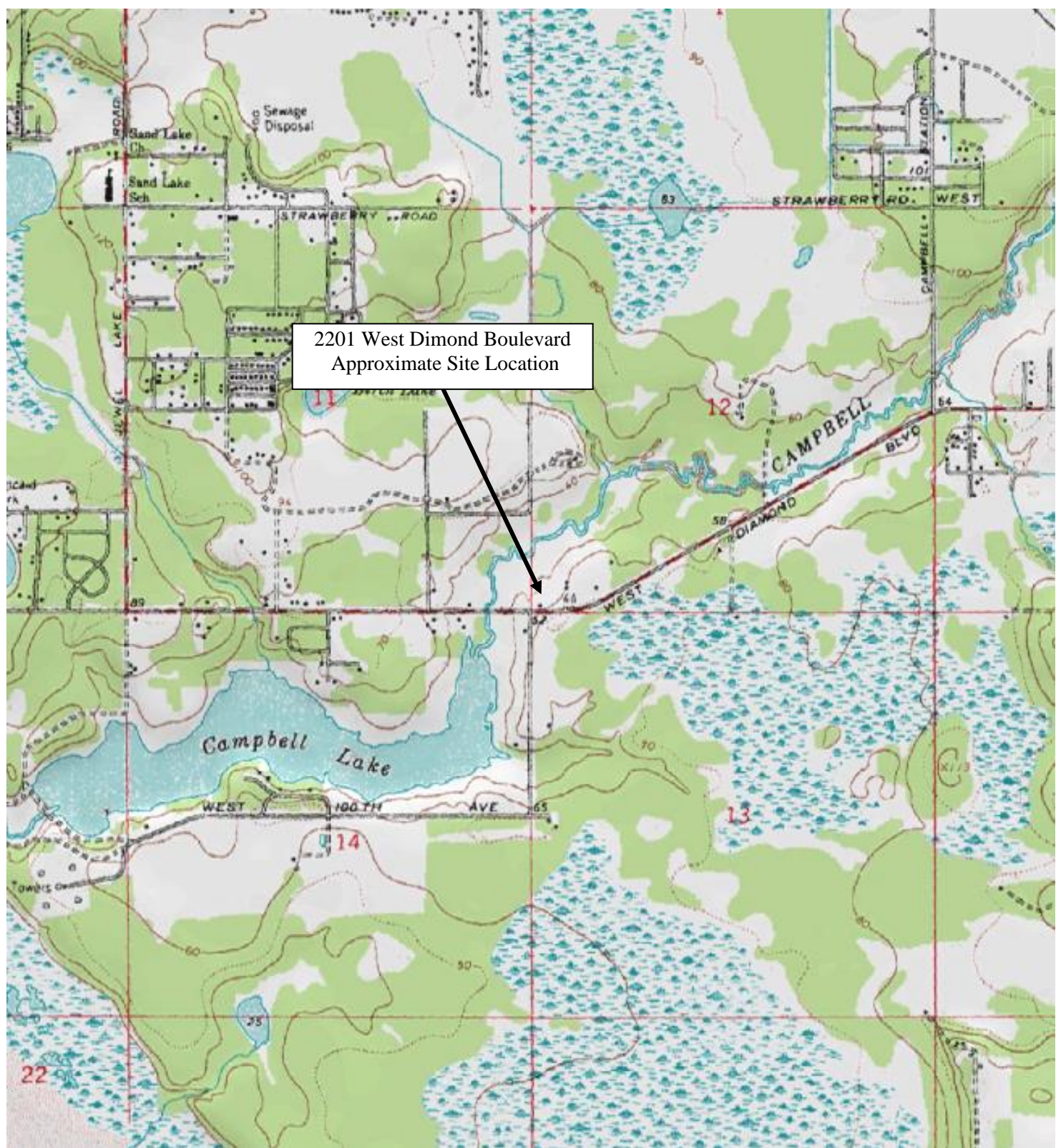


Sam Bundy
Environmental Scientist I

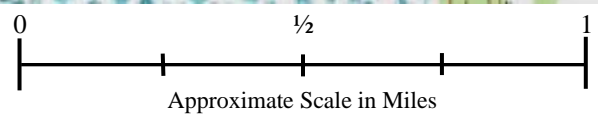
Report Reviewed by:



Jayne Martin
Senior Environmental Scientist



Source: Google Earth Pro ©; USGS DRG

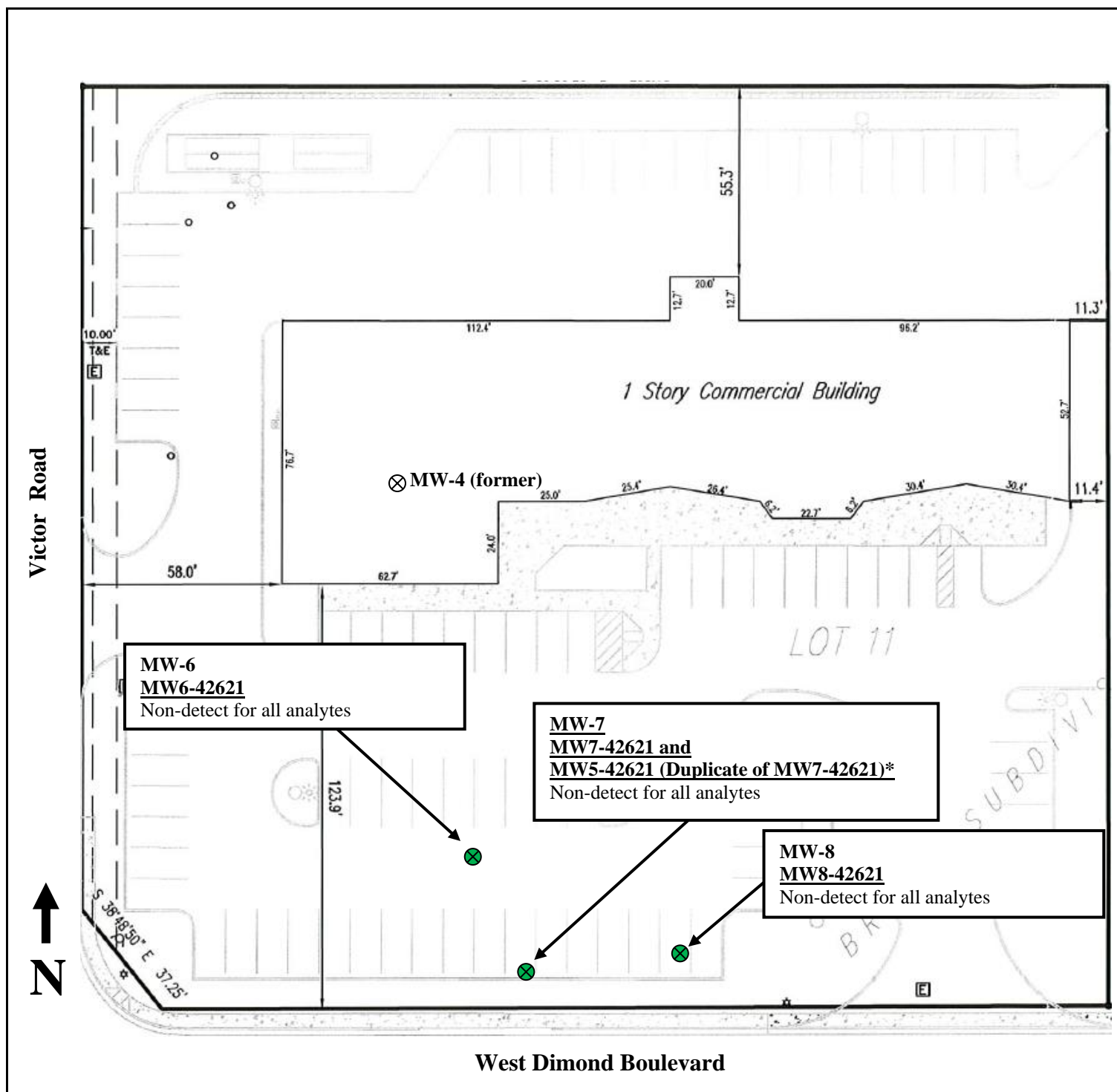


2201 West Dimond Boulevard
Anchorage, Alaska
Site Vicinity Map



December 2022

Figure 1



Legend

- ⊗ = Approximate Location of Decommissioned Monitoring Well
- ⊗ = Approximate Location of Monitoring Well (concentrations are below Alaska Department of Environmental Conservation cleanup criteria)
- * = Greatest Concentration Reported

2201 West Dimond Boulevard
Anchorage, Alaska
**Monitoring Well Locations
and Sample Results (April 2021)**

TABLE 1
2201 West Dimond Boulevard
Anchorage, Alaska
Historical Groundwater Monitoring Data

BGES, INC.

Sample Name	Parameter	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	ADEC Cleanup Level (mg/L) ¹	Analytical Method
Date Collected:		2/18/2009	11/13/2009	6/10/2010	11/17/2010	2/3/2012	11/8/2012	3/5/2013	5/4/2016	3/23/2017	4/28/2021		
MW-5 ^A	Gasoline Range Organics	ND	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	2.2	AK101
	Diesel Range Organics	0.475 J	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	1.5	AK102
	Residual Range Organics	<0.551	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	1.1	AK103
	Benzene	ND	0.00126	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	0.0046	EPA 8260B
	Toluene	ND	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	1.1	EPA 8260B
	Ethylbenzene	ND	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	0.015	EPA 8260B
	Total Xylenes	ND	ND	ND	ND	N/A	N/A	N/A	N/A	N/A	N/A	0.190	EPA 8260B
MW-6	Gasoline Range Organics	0.115	ND	ND	ND	N/A	ND	N/A	ND	ND	ND	2.2	AK101
	Diesel Range Organics	0.489 J	ND	ND	ND	N/A	ND	N/A	ND	ND	ND	1.5	AK102
	Residual Range Organics	ND	ND	ND	ND	N/A	ND	N/A	0.559	0.605	ND	1.1	AK103
	Benzene	0.02160	ND	ND	ND	0.00067	ND	N/A	ND	ND	ND	0.0046	EPA 8260B
	Toluene	0.00159	ND	ND	ND	0.00140	ND	N/A	ND	ND	ND	1.1	EPA 8260B
	Ethylbenzene	0.00055	ND	ND	ND	ND	ND	N/A	ND	ND	ND	0.015	EPA 8260B
	Total Xylenes	0.00665	ND	ND	ND	ND	ND	N/A	ND	ND	ND	0.190	EPA 8260B
MW-7	Gasoline Range Organics	44.100	0.553	ND	0.186	6.61	ND	9.53	ND	2.550	ND	2.2	AK101
	Diesel Range Organics	4.27 J	0.54	ND	0.438	2.55	0.922 J	3.54 J	ND	1.320	ND	1.5	AK102
	Residual Range Organics	ND	ND	ND	ND	N/A	0.707	1.87 J	0.683	0.515	ND	1.1	AK103
	Benzene	1.11900	0.04620	0.00393	0.0295	0.254	0.00664	0.601	0.00100	0.254	ND	0.0046	EPA 8260B
	Toluene	7.88000	0.01580	ND	0.000607	0.403	ND	0.330	ND	0.0204	ND	1.1	EPA 8260B
	Ethylbenzene	1.9700	0.0306	0.00256	0.0154	0.564	0.00455	0.834	ND	0.313	ND	0.015	EPA 8260B
	Total Xylenes	12.26	0.0929	0.00837	0.0144	2.309	ND	4.840	ND	0.829	ND	0.190	EPA 8260B
	1,2,4 Trimethylbenzene	0.7320	N/A	ND	ND	N/A	N/A	0.209	ND	0.0728	ND	0.015	EPA 8260B
	1,3,5 Trimethylbenzene	N/A	N/A	ND	ND	N/A	N/A	0.0500	ND	0.00623	ND	0.120	EPA 8260B
	4-Isopropyltoluene	N/A	N/A	ND	ND	N/A	N/A	0.00908	ND	0.00339	ND	NA	EPA 8260B
	cis-1,2-Dichloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00207	ND	ND	ND	0.036	EPA 8260B
	Isopropylbenzene (cumene)	N/A	N/A	ND	ND	N/A	N/A	0.0172	ND	0.00772	ND	0.450	EPA 8260B
	n-propylbenzene	N/A	N/A	ND	ND	N/A	N/A	0.0242	ND	0.0106	ND	0.660	EPA 8260B
	Naphthalene	N/A	N/A	0.000133	0.000329	N/A	N/A	0.0315	ND	0.0112	ND	0.0017	EPA 8260B

¹ = Groundwater cleanup criteria are based on ADEC 18AAC 75.345 Table C (November 6, 2016).
^A = Monitoring Well MW-5 was decommissioned on November 8, 2012.
Note: When duplicates are collected, the greater concentrations are listed.
ADEC = Alaska Department of Environmental Conservation; mg/L = milligrams per liter; PAHs = polynuclear aromatic hydrocarbons; GRO = gasoline range organics; DRO = diesel range organics; RRO = residual range organics;
VOCs = volatile organic compounds; N/A = not analyzed; ND = not detected; NA = not applicable

Bold	= Concentration exceeds the corresponding ADEC cleanup criterion
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TABLE 1
2201 West Dimond Boulevard
Anchorage, Alaska
Historical Groundwater Monitoring Data

BGES, INC.

Sample Name	Parameter	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	Results (mg/L)	ADEC Cleanup Level (mg/L) ¹	Analytical Method
Date Collected:		2/18/2009	11/13/2009	6/10/2010	11/17/2010	2/3/2012	11/8/2012	3/5/2013	5/4/2016	3/23/2017	4/28/2021		
MW-7 (cont.)	Tetrachloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00280	ND	ND	ND	0.041	EPA 8260B
	Trichloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00564	ND	0.00278	ND	0.0028	EPA 8260B
	Vinyl chloride	N/A	N/A	ND	ND	N/A	N/A	0.00293	ND	0.00276	ND	0.00019	EPA 8260B
	1,2-Dibromoethane	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	ND	0.000075	EPA 8260B
	1,2-Dibromo-3-chloropropane	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	ND	NA	EPA 8260B
	Methyl tert-butyl ether	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	ND	0.140	EPA 8260B
	1,2-Dichloroethane	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	ND	0.0017	EPA 8260B
	All other VOCs	ND	N/A	ND	ND	N/A	N/A	ND	ND	ND	ND	Varies	EPA 8260B
	Napthalene	N/A	N/A	ND	ND	N/A	N/A	0.0343	N/A	0.00979	ND	0.0017	EPA 8270M
	1-Methylnaphthalene	N/A	N/A	ND	ND	N/A	N/A	0.00541	N/A	0.00147	ND	0.011	EPA 8270M
	2-Methylnaphthalene	N/A	N/A	ND	0.0000952	N/A	N/A	0.00573	N/A	0.00112	ND	0.036	EPA 8270M
	Acenaphthene	N/A	N/A	ND	ND	N/A	N/A	0.0442	N/A	0.0184	ND	0.530	EPA 8270M
	Acenaphthylene	N/A	N/A	0.000474	0.000933	N/A	N/A	0.000112	N/A	ND	ND	0.260	EPA 8270M
	Anthracene	N/A	N/A	ND	0.000467	N/A	N/A	0.0184	N/A	0.00580	ND	0.043	EPA 8270M
	Benzo(a)Anthracene	N/A	N/A	ND	ND	N/A	N/A	0.00208	N/A	0.000807	ND	0.00012	EPA 8270M
	Benzo[a]pyrene	N/A	N/A	ND	ND	N/A	N/A	0.00110	N/A	0.000269	ND	0.000034	EPA 8270M
	Benzo[b]fluoranthene	N/A	N/A	ND	ND	N/A	N/A	0.00178	N/A	0.000374	ND	0.00034	EPA 8270M
	Benzo[g,h,i]perylene	N/A	N/A	ND	ND	N/A	N/A	0.000316	N/A	0.0000815	ND	0.00026	EPA 8270M
	Benzo[k]fluoranthene	N/A	N/A	ND	ND	N/A	N/A	ND	N/A	0.000119	ND	0.00080	EPA 8270M
	Chrysene	N/A	N/A	ND	ND	N/A	N/A	0.00172	N/A	0.000612	ND	0.0020	EPA 8270M
	Dibenzo[a,h]anthracene	N/A	N/A	ND	ND	N/A	N/A	0.0000885	N/A	0.0000218	ND	0.000034	EPA 8270M
	Fluorene	N/A	N/A	0.000246	0.000381	N/A	N/A	0.0302	N/A	0.0103	ND	0.290	EPA 8270M
	Indeno[1,2,3-c,d]pyrene	N/A	N/A	ND	ND	N/A	N/A	0.000293	N/A	0.0000737	ND	0.00019	EPA 8270M
	Phenanthrene	N/A	N/A	0.000123	0.000948	N/A	N/A	0.0759	N/A	0.0302	ND	0.170	EPA 8270M
	Fluoranthene	N/A	N/A	ND	0.000495	N/A	N/A	0.0203	N/A	0.00842	ND	0.260	EPA 8270M
	Pyrene	N/A	N/A	ND	0.000424	N/A	N/A	0.0154	N/A	0.00632	ND	0.120	EPA 8270M
MW-8	Gasoline Range Organics	<0.0500	<0.0500	<0.0500	<0.0800	N/A	N/A	N/A	N/A	N/A	ND	2.2	AK101
	Diesel Range Organics	0.553 J	0.385	1.31	<0.397	N/A	N/A	N/A	N/A	N/A	ND	1.5	AK102
	Residual Range Organics	<0.547	<0.385	0.441	<0.397	N/A	N/A	N/A	N/A	N/A	ND	1.1	AK103
	Benzene	<0.000500	<0.000500	<0.000500	<0.000500	N/A	N/A	N/A	N/A	N/A	ND	0.0046	EPA 8260B
	Toluene	<0.0005	<0.0010	0.000617	<0.000500	N/A	N/A	N/A	N/A	N/A	ND	1.1	EPA 8260B
	Ethylbenzene	<0.0005	<0.0010	<0.000500	<0.000500	N/A	N/A	N/A	N/A	N/A	ND	0.015	EPA 8260B
	Total Xylenes	<0.0015	<0.0030	0.00183	<0.00100	N/A	N/A	N/A	N/A	N/A	ND	0.190	EPA 8260B
¹ = Groundwater cleanup criteria are based on ADEC 18AAC 75.345 Table C (March 23, 2017). Note: When duplicates are collected, the greater concentrations are listed. ADEC = Alaska Department of Environmental Conservation; mg/L = milligrams per liter; PAHs = polynuclear aromatic hydrocarbons; GRO = gasoline range organics; DRO = diesel range organics; RRO = residual range organics; VOCs = volatile organic compounds; N/A = not analyzed; ND = not detected; NA = not applicable													
Bold	= Concentration exceeds the corresponding ADEC cleanup criterion												

TABLE 2
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA
MONITORING WELL SAMPLING DATA (APRIL 2021)

BGES, INC.

Well Number	MW-6	MW-7	MW-8
Date Sampled	04/26/21	04/26/21	04/28/21
Date of Depth and Elevation Measurement	04/26/21	04/26/21	04/26/21
Time of Depth to Water Measurement	11:45	11:48	11:39
Time Sample Collected	11:02	10:20	9:05
Top of Casing Elevation (feet)	not available	not available	not available
Depth to Water (feet below top of casing)	7.24	7.45	4.39
Water Elevation (feet)	not available	not available	not available
Total Depth of Well (feet below top of casing)	12.75	21.11	17.02
Ground Elevation	not available	not available	not available
Depth to Water (feet below top of ground surface)	7.24	7.45	4.39
Well Casing Diameter (Inches)	2	2	2
Standing Water Well Volume (gallons)	0.90	2.67	2.06
Purge Volume-Actual (gallons)	4.0	8.8	8.00
Temperature (degrees Celsius)	6.1/5.4/4.3/4.1	11.4/3.9/2.9/2.5/2.4	3.3/3.7/2.9/2.8
pH (standard units)	6.81/6.62/7.14/7.18	7.06/7.09/6.76/6.91/7.02	8.01/8.32/8.16/8.28
Conductivity (millisiemens per centimeter)	946/846/775/793	1156/984/721/666/656	373.8/809.0/587/700
Oxidation Reduction Potential (millivolts)	-35.4/-39.4/50.9/60.2	53.8/39.3/45.4/40.2	67/-6.2/-103.7/-113.5
<p>Notes:</p> <div> <div> <p>Samplers: C. Kent/S.Bundy</p> <p>Field parameters were measured with a YSI Professional Plus water quality meter equipped with a flow-through cell. Weather conditions on April 27, and April 28, 2021 were clear with an ambient temperature of 50 degrees Fahrenheit. Because the top of casing measurement was inadvertently not recorded for MW-8 during the survey, the water level elevations and hydraulic gradient could not be calculated for these activities.</p> </div> <div> <p>Because of low recharge, MW6 was pumped dry and allowed to recharge to at least 80 percent of the original well volume prior to sample collection.</p> </div> <div> <p>Duplicate Sample MW5-42621 was collected from MW-7</p> </div> <div> <p>Because of low recharge, MW8 was pumped dry and allowed to recharge to at least 80 percent of the original well volume prior to sample collection.</p> </div> </div>			

TABLE 3
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA
ANALYTICAL RESULTS - WATER SAMPLES (APRIL 2021)

BGES, INC.

Sample	Analyte	Result (µg/L)	LOQ (µg/L)	DL (µg/L)	ADEC Cleanup Criteria ¹ (µg/L)	Analytical Method
MW6-42621	GRO	ND	100	31	2,200	AK101
	<u>1,2,3-Trichloropropane</u>	<u>ND</u>	<u>1</u>	<u>0.31</u>	0.0075	SW8260D
	Benzene	ND	0.4	0.12	4.6	SW8260D
	Ethylbenzene	ND	1	0.31	15	SW8260D
	Toluene	ND	1	0.31	1,100	SW8260D
	Total Xylenes	ND	3	1	190	SW8260D
	All other VOCs	ND	varies	varies	varies	SW8260D
	All PAHs	ND	varies	varies	varies	8270D SIM LV (PAH)
MW7-42621	GRO	ND	100	31	2,200	AK101
	<u>1,2,3-Trichloropropane</u>	<u>ND</u>	<u>1</u>	<u>0.31</u>	0.0075	SW8260D
	Benzene	ND	0.4	0.12	4.6	SW8260D
	Ethylbenzene	ND	1	0.31	15	SW8260D
	Toluene	ND	1	0.31	1,100	SW8260D
	Total Xylenes	ND	3	1	190	SW8260D
	All other VOCs	ND	varies	varies	varies	SW8260D
	All PAHs	ND	varies	varies	varies	8270D SIM LV (PAH)
MW5-42621 (Duplicate of MW7-42621)	GRO	ND	100	31	2.2	AK101
	<u>1,2,3-Trichloropropane</u>	<u>ND</u>	<u>1</u>	<u>0.31</u>	0.0075	SW8260D
	Benzene	ND	0.4	0.12	4.6	SW8260D
	Ethylbenzene	ND	1	0.31	15	SW8260D
	Toluene	ND	1	0.31	1,100	SW8260D
	Total Xylenes	ND	3	1	190	SW8260D
	All other VOCs	ND	varies	varies	varies	SW8260D
	All PAHs	ND	varies	varies	varies	8270D SIM LV (PAH)
MW8-42621	GRO	ND	100	31	2,200	AK101
	<u>1,2,3-Trichloropropane</u>	<u>ND</u>	<u>1</u>	<u>0.31</u>	<u>0.0075</u>	SW8260D
	Benzene	ND	0.4	0.12	4.6	SW8260D
	Ethylbenzene	ND	1	0.31	15	SW8260D
	Toluene	ND	1	0.31	1,100	SW8260D
	Total Xylenes	ND	3	1	190	SW8260D
	All other VOCs	ND	varies	varies	varies	SW8260D
	All PAHs	ND	varies	varies	varies	8270D SIM LV (PAH)
¹ Groundwater cleanup criteria are obtained from ADEC 18 AAC 75.345, Table C (November 18, 2021). AAC = Alaska Administrative Code; AK = Alaska Method; ADEC = Alaska Department of Environmental Conservation; µg/L = microgram per liter; GRO = Gasoline Range Organics; VOCs = volatile organic compounds; PAHs = Polynuclear Aromatic Hydrocarbons; RL = reporting limit; DL = detection limit; ND = not detectable <u>Underline</u> = The LOQ and DL exceed the applicable ADEC cleanup criterion.						

TABLE 4
SOIL WASTE CHARACTERIZATION SAMPLE (SEPTEMBER 2021)
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA

BGES, INC.

Sample No.	Parameter	Results (mg/Kg)	LOQ (mg/Kg)	DL (mg/Kg)	ADEC Cleanup	Analytical Method
					Criteria (mg/Kg) ¹	
DWC1-0920 PID = 0 ppm	GRO	ND	2.28	0.684	300	AK101
	DRO	42.8	22.8	10.2	250	AK102
	RRO	ND	114	48.9	10,000	AK103
	<i>1,2-Dibromoethane</i>	<i>ND</i>	<i>0.00137</i>	<i>0.000684</i>	0.00024	SW8260D
	<i>1,2,3-Trichloropropane</i>	<i>ND</i>	<i>0.00182</i>	<i>0.000565</i>	0.000031	SW8260D
	Benzene	ND	0.0114	0.00355	0.022	SW8260D
	<i>Dibromochloromethane</i>	<i>ND</i>	<i>0.00456</i>	0.00137	0.0027	SW8260D
	Ethylbenzene	0.0285	0.0228	0.00711	0.13	SW8260D
	Toluene	ND	0.0228	0.00711	6.7	SW8260D
	Total Xylenes	ND	0.0684	0.0208	1.5	SW8260D
	All other VOCs	ND	varies	varies	varies	SW8260D
	Lead	5.33	1.11	0.345	800	SW6020B
¹ Soil cleanup criteria for VOCs and lead are obtained from ADEC 18 AAC 75.341, Table B1, Method 2, Migration to Groundwater values (November 18, 2021). Soil cleanup criteria for GRO and DRO are obtained from Table B2, Method 2, under 40-Inch Zone (referring to annual precipitation), Migration to Groundwater values. The soil cleanup criterion for RRO is obtained from the more stringent Ingestion pathway (November 18, 2021). ADEC = Alaska Department of Environmental Conservation; PID = photoionization detector; ppm = parts per million; DRO = diesel range organics; GRO = gasoline range organics; RRO = residual range organics; mg/Kg = milligrams per kilogram VOCs = volatile organic compounds; LOQ = limit of quantitation; DL = detection limit; ND = not detectable, AK = Alaska Method; <i>Italics</i> = The LOQ exceeds the applicable ADEC cleanup criterion. <u>Underline</u> = The LOQ and the DL exceed the applicable ADEC cleanup criterion.						

APPENDIX A
FIELD NOTES, WELL COMPLETION LOG,
AND GROUNDWATER MONITORING LOGS

7/21/2020

72°F, partly cloudy

9:30

BGES onsite to measure GW monitoring wells and survey monitoring wells

	(ft) TD	DTP	DTW (ft)
MW-6	13.4	—	— 2.84
MW-7	1.6	—	— —
MW-8	8.08	—	— 4.29

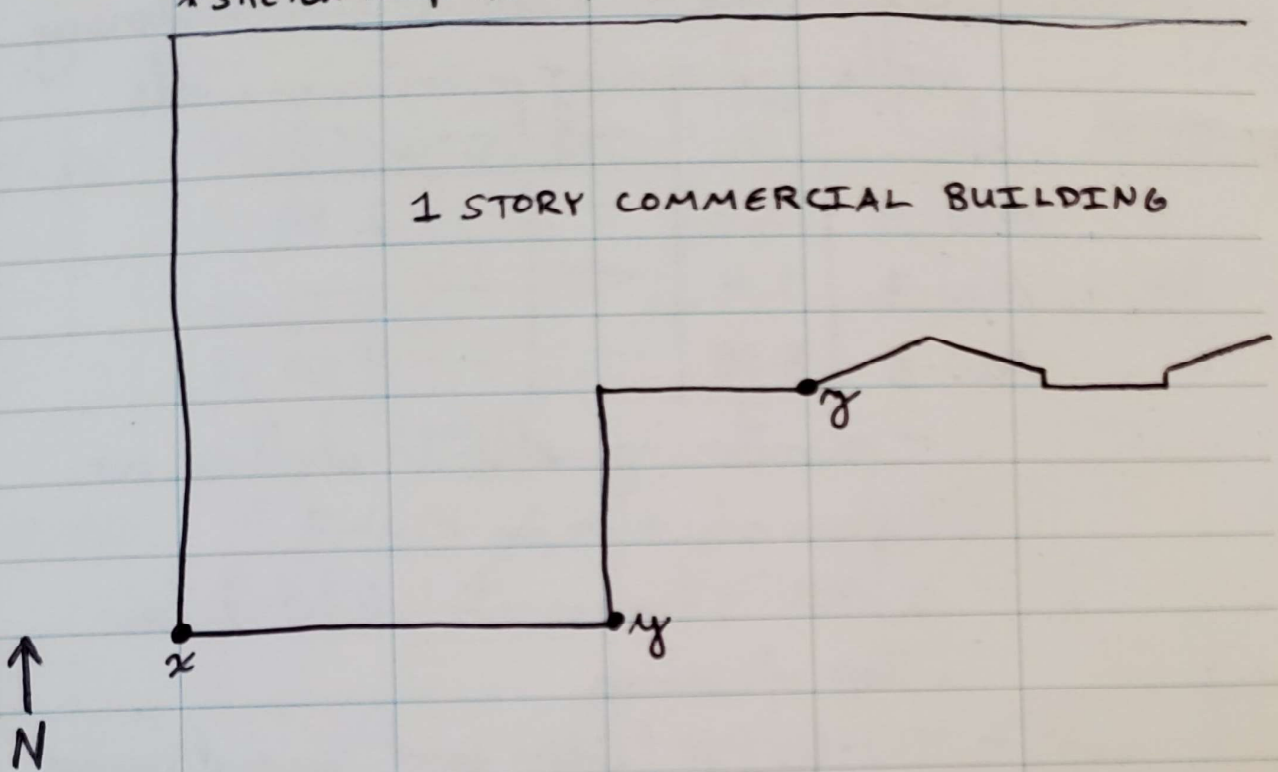
- monitoring well ~~is~~ too shallow, no groundwater in MW-7
- MW-7 broken at 1.6 feet below top of casing
- MW-6: PVC broken ~~several~~ several inches below the surface
- MW-8: monument cover loose - entire top pulls off; heaved up

SURVEY & SWING TIE INFORMATION

	ground	casing	x	y	z
MW-6	4.66	4.76	103.5	87.7	
MW-7	3.51	3.62	134.0	111.65	
MW-8	3.89	4.09	151.8	113.21	
tripod			0.78	0.78	34.36

- ground to bottom of tripod = 4.12 ft
- see sketch map on following page

*sketch map not to scale



MW-6
⊗

MW-7
⊗

MW-8
⊗

11:00 BGES offsite

04/02/2021

16° F Partly Cloudy

0805 BGES Onsite

0830 Met Enstar, Maked Gaslines

0900 Discovery Drilling onsite

0915 Safety Brief

* MW7 is incorrectly marked on map. MW7 is approximately 3' NE of location on map

0938 Depth to water: N/A 1 1/2" to Frozen water

0955 Drillers Report that they are unable to pull the well pipe. They will over drill the pipe to remove it.

1100 MW7 No water measurement at 20' bg

1120 MW8 Depth to water 8 1/2' bg bottom 17'

1130 Drillers Begin Insert 15' of 10-slot PVC Well screen and Begin packing well with Filter Sand

1305 Drillers Begin work repairing MW6 and MW8 monuments and end caps.

- 1331 Drillers complete filling
MW7 with filter sand to 3.5' bg
1340 Drillers fill MW7 w/ Bentonite
to approximately 1.5' bg
1345 Depth to water measured at
MW7 to approximately 10' bg
1450 2 55-gallon drums
filled with drill cuttings stored
by dumpsters behind building
1500 Repairs on MW6 and MW8
are complete
1505 BGES off site

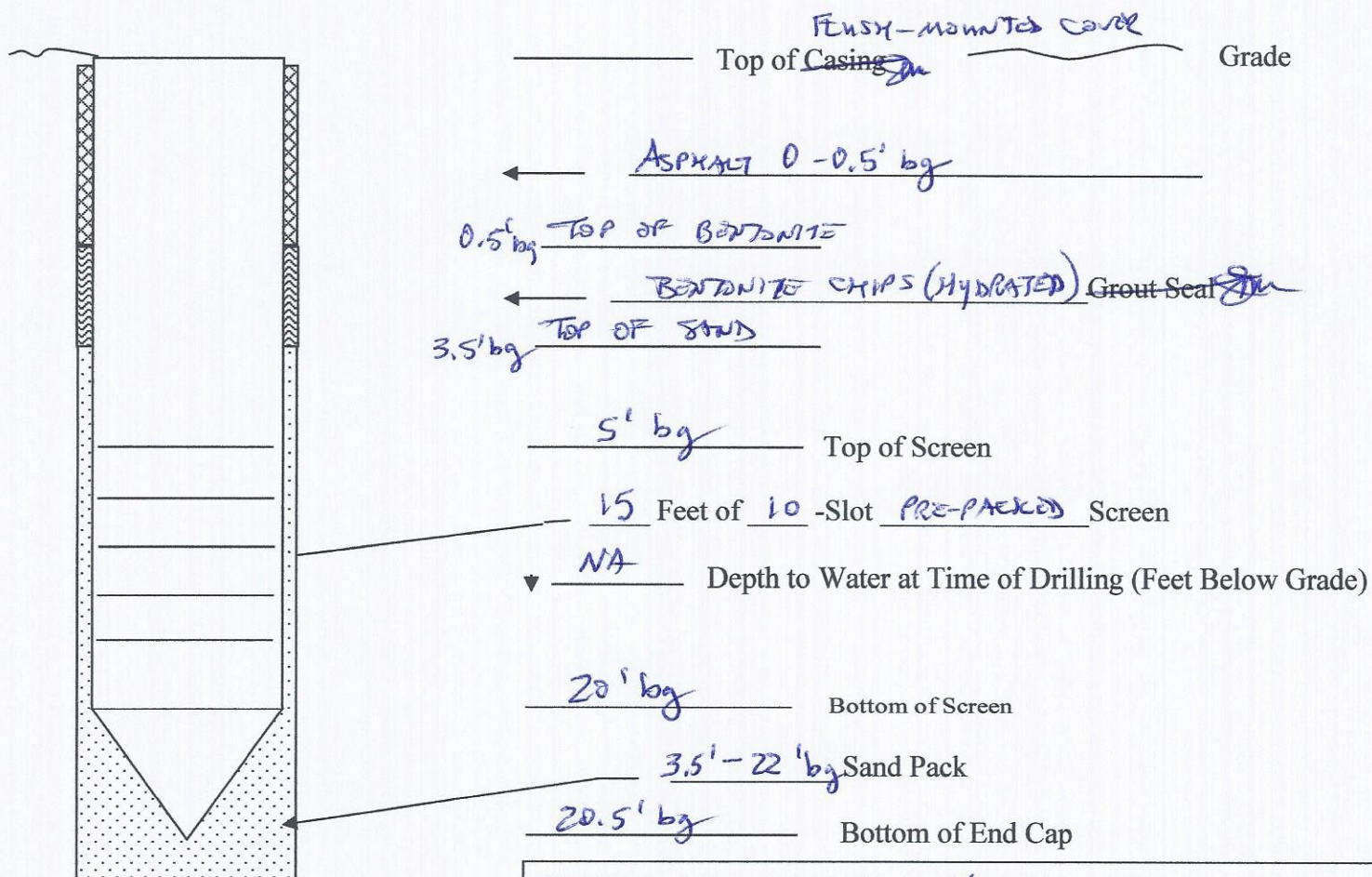
Sam Bundy

Steve Bundy

BGES, INC.
WELL COMPLETION LOG

PROJECT NAME: HANNA DIMOND
WELL NUMBER: MW-7 (REPLACEMENT)

Date: 4/2/2021 Weather Conditions: 16°F, Partly Cloudy
Time: 0930 Drilling Company/Rig Type: Discovery Drilling / Truck-Mounted
Observer: S. Bunday / J. March Drilling/Sampling Method: Hollow Stem Auger / ^{WD} Sampling



Well Completion – Flush Grade ☒ Stickup ☐

TOC Elevation: _____ Total Well Depth (Ft. BTOC): _____

Notes: NOT ABLE TO DETERMINE DEPTH TO WATER DURING DRILLING BECAUSE
WATER WAS SLOW TO FLOW INTO THE WELL

04/26/21 50°F/29.64" Hg Clear
 1130 BGES on site. Samples:
 C. Kent-QEP / S. Bundy-QES
 1139

	DTW	TDW	Time
MW6	7.24	12.75	1145
MW7	4.75	21.11	1148
MW8	4.39	17.02	1139

1212 Purging MW8
 Due low re-charge and high well volume, MW8 was allowed to pump dry and recharge to 80%.

1528 Began Purging MW6
 1626 Due to low Recharge MW6 was pumped dry and Allowed to recharge

1704 Began Purging MW7
 Due to high recharge Rate MW7 ~~was~~ had 3 well volumes pumped

1900 BGES off site

SB

04/26/21

04/27/21 51°F/Clear/29.64" Hg

0915 BGES Onsite. Samplers
C. Kent and S. Bundy

0920 MW8 DTW 13.8', MW6 DTW 9.6'
MW8 and MW6 have not yet recharged
to 80% volume.

1020 MW7 DTW 7.22'. Sampling
commences at MW7. Sample ID
MW7-42621 and Duplicate MW5-42621.
1120 BGES offsite.



~~04/27/21~~

04/28/21 43°F/ clear/ 29.73" Hg

0905 BGES onsite, Samplers:

S, Bundy.

0915: DTW

MW 8 | 12.7' - MW 8 has not

MW 6 | 7.8' Recharged to at least

80% after 24 hours.

0955 MW 8 Sampled Sample ID

MW 8 - 42621

1102 MW 6 Sampled Sample ID

MW 6 - 42621



04/28/21

Project Name: Hanna Diamond

Well Number: MW 6

Date of Sampling Event: 4-26-21

Weather Conditions

50° F 21.84° Hg

Time of Depth to Water Measurement:

1145

Date of Depth to Water Measurement:

4-26-21

Total Depth of Well (feet below TOC): 4.24 ^{ck} 12.75

Depth to Water (feet below TOC): 7.24

Water Column (feet): 5.51

Type of Sampling Equipment:

1.75" Bladder Pump

MP10 controller

YSS Pro Plus

Volume of well (gals)

0.90

Time Purging Began: 1528

Time of Sampling:

Volume purged

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C)

10.2

Conductivity

946

pH

6.81

ORP

-35.4

Volume Purged

0.1

Depth To Water

6.96

Time of Measurement

1530

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Depth of Bladder intake:

7.74'

Temperature (°C)

5.4

Conductivity

846

pH

6.62

ORP

-34.4

Volume Purged

1.9

Depth To Water

7.24

Time of Measurement

1542

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Purge Rate:

250 mL/min

Temperature (°C)

4.3

Conductivity

775

pH

7.14

ORP

50.9

Volume Purged

1.2

Depth To Water

7.55

Time of Measurement

1603

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Sample Rate:

100 mL/min

Sample ID:

MW6-42621

Temperature (°C)

4.1

Conductivity

793

pH

7.18

ORP

60.2

Volume Purged

4.94

Depth To Water

11.4

Time of Measurement

1700

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Additional Notes:

Due to low Recharge this well was pumped and Allowed to Recharge

Project Name: Henne Diamond

Well Number: MW7

Date of Sampling Event: 4-27-21

Weather Conditions 50°F 29.64" Hg

Time of Depth to Water Measurement: 11:48

Date of Depth to Water Measurement: 4-26-21

Total Depth of Well (feet below TOC): 21.11'

Depth to Water (feet below TOC): ~~6.45~~ 7.45

Water Column (feet): 16.36

Type of Sampling Equipment:
1.75" Bladder Pump
MP10 controller
YSI Pro Plus

Volume of well (gals) 2.67

=0.1632 X Water Column (For 2-inch well)

=0.6528 X Water Column (For 4-inch well)

=1.4688 X Water Column (For 6-inch well)

Time Purging Began: 1704

Time of Sampling: 8:45

Volume purged 8.75 gal

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 11.4

Conductivity 1156

pH 7.06

ORP 53.8

Volume Purged 172.7

Depth To Water 7.45'

Time of Measurement 0.25 gal

Temperature (°C) 2.4

Conductivity 656

pH 7.02

ORP 37.0

Volume Purged 8.75

Depth To Water 7.57'

Time of Measurement 1838

Depth of Bladder intake: 15.36

Temperature (°C) 3.9

Conductivity 984

pH 7.09

ORP 39.3

Volume Purged 1 gal

Depth To Water 7.69'

Time of Measurement 1738

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Purge Rate: 480/min
me

Temperature (°C) 2.9

Conductivity 721

pH 6.76

ORP 45.4

Volume Purged 2.78

Depth To Water 7.68

Time of Measurement 1750

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Sample Rate: 100 mL/min

Temperature (°C) 2.5

Conductivity 666

pH 6.91

ORP 40.2

Volume Purged 5.75

Depth To Water 1810

Time of Measurement 7.62'

Temperature (°C)

Conductivity

pH

ORP

Volume Purged

Depth To Water

Time of Measurement

Sample ID: MW7-42621
(MW5-42621)
duplicate.

Additional Notes: duplicate sample taken from this well

Project Name: Harris Diamond

Well Number: MW8

Date of Sampling Event: 4-26-21

Total Depth of Well (feet below TOC): 17.02

Depth to Water (feet below TOC): 4.99

Water Column (feet): 12.63

Volume of well (gals) 2.06

Time Purging Began: 1212

Time of Sampling: _____

Volume purged 8 gals

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 3.3

Conductivity 343.8

pH 8.01

ORP 67.0

Volume Purged 0.25

Depth To Water 4.80

Time of Measurement 1219

Temperature (°C) 3.70

Conductivity 809.0

pH 8.32

ORP -6.2

Volume Purged 1.5

Depth To Water 7.15

Time of Measurement 1253

Temperature (°C) 2.90

Conductivity 587

pH 8.16

ORP -103.9

Volume Purged 2.5

Depth To Water 4.15-8.45

Time of Measurement 1307

Temperature (°C) 2.8

Conductivity 200

pH 8.28

ORP -113.5

Volume Purged 3.5

Depth To Water 10.00

Time of Measurement 1322

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Weather Conditions 50°F 29.64% Hg

Time of Depth to Water Measurement: 11:39

Date of Depth to Water Measurement: 4-26-21

Type of Sampling Equipment: _____

1.75" Bladder Pump

MP10 controller

YSS Pro Plus

=0.1632 X Water Column (For 2-inch well)

=0.6528 X Water Column (For 4-inch well)

=1.4688 X Water Column (For 6-inch well)

Depth of Bladder intake: _____

4.89

Purge Rate: _____

250 mL/min

Sample Rate: _____

100 mL/min

Sample ID: _____

MW8-42621

Additional Notes:

Due to low recharge and high well volume this well was pumped dry and allowed to recharge at least 80% (at least 6 hrs) before sampling

9/20/21 50°F Overcast
 1420 S. Bundy onsite to
 collect Drum waste Composite
 Sample (DWC) and to measure
 groundwater and survey wells

1423 S. Bundy Begins sampling
 waste drums 1 and 2.

1424 G. Kent onsite to assist in
 surveying MW 6; MW 7, MW 8.

Well ID	Reading Height	Adjusted Elevation
MW 6	6.32'	100'
MW 7	5.60'	100.72'
MW 8		

Monitoring well Measurements

Well	Depth to Product	Depth to water	Depth to Product 2	Total Depth of well
MW 6	4.76'	4.76'		12.81'
MW 7		4.27'		21.13'
MW 8		4.59'		16.68'

1550 S. Bundy completes collecting
 DWCI-0920.

1610 S. Bundy off site

01/24/2022 38°F partly cloudy 31
0710 S. Bundy arrives to measure
groundwater and observe presence
or absence of LNAPL & DNAPL
S. Bundy blocks parking spaces
with wells. S. Bundy Departs
to collect gear.

0835 S. Bundy returns with
Sampling Equipment

Monitoring Well Measurements

Well ID	Depth to LNAPL	Depth to Water	Depth to DNAPL	Total Depth
MW6				
MW7				
MW8				

Ice Blockages in all
3 wells, at 6" bg in MW 6
and MW 8. Ice Blockage at
1' bg in MW 7.

A sheen was observed in the
meltwater collecting in the

01/24/22

Levers in all 3 wells but
not in the casings. likely
from surface runoff.
1012 S. Bundy off site

05/10/22 46°F partly cloudy 33
0900 S. Bundy airtie to collect
measurements from MW 6, MW 7
+ MW 8

Well ID	Depth to Product	Depth to water	Depth to Product 2	TDR
MW 6	—	2' 7.4"	—	12' 7.1"
MW 7	—	3' 2.1"	—	21' 1.2"
MW 8	—	3' 5.5"	—	16' 7"

0940 S. Bundy off site

APPENDIX B
LABORATORY ANALYTICAL DATA

Laboratory Report of Analysis

To: BGES Inc.
1042 E. 6th Ave.,
Anchorage, AK 99501
(907)644-2900

Report Number: **1211995**

Client Project: **Hanna Dimond**

Dear Jayne Martin,

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

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

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

Sincerely,
SGS North America Inc.



Alexandra Daniel
2021.05.06 16:57:48 -08'00'

Alexandra Daniel
Project Manager
Alexandra.Daniel@sgs.com

Date

Case Narrative

SGS Client: **BGES Inc.**
 SGS Project: **1211995**
 Project Name/Site: **Hanna Dimond**
 Project Contact: **Jayne Martin**

Refer to sample receipt form for information on sample condition.

MW6-42621 (1211995002) PS

8270D SIM - PAH surrogate recovery for Fluoranthene-d10 does not meet QC criteria due to sample matrix interference. The sample was re-extracted within hold time and results are confirmed for all associated analytes.

MW8-42621 (1211995004) PS

8270D SIM - PAH surrogate recovery for Fluoranthene-d10 does not meet QC criteria due to sample matrix interference. The sample was re-extracted within hold time and results are confirmed for all associated analytes.

1212085001MSD (1608378) MSD

8270D SIM - PAH MSD recoveries for multiple analytes do not meet QC criteria. Refer to the LCS for accuracy requirements.

8270D SIM - PAH MS/MSD RPD for multiple analytes do not meet QC criteria due to non-homogenous sample. Results for this analyte are considered estimated in the parent sample.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

Print Date: 05/06/2021 12:48:52PM

Laboratory Qualifiers

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

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

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

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

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

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

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
MW5-42621	1211995001	04/26/2021	04/28/2021	Water (Surface, Eff., Ground)
MW6-42621	1211995002	04/28/2021	04/28/2021	Water (Surface, Eff., Ground)
MW7-42621	1211995003	04/26/2021	04/28/2021	Water (Surface, Eff., Ground)
MW8-42621	1211995004	04/28/2021	04/28/2021	Water (Surface, Eff., Ground)
Trip Blank 1&2	1211995005	04/26/2021	04/28/2021	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270D SIM LV (PAH)	8270 PAH SIM GC/MS LV
AK101	Gasoline Range Organics (W)
SW8260D	Volatile Organic Compounds (W) FULL

Print Date: 05/06/2021 12:48:57PM

Results of MW5-42621

Client Sample ID: **MW5-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995001
 Lab Project ID: 1211995

Collection Date: 04/26/21 09:05
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
2-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Acenaphthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Acenaphthylene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Benzo(a)Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Benzo[a]pyrene	0.0181 U	0.0181	0.00562	ug/L	1		05/02/21 17:00
Benzo[b]Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Benzo[g,h,i]perylene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Benzo[k]fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Chrysene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Dibenzo[a,h]anthracene	0.0181 U	0.0181	0.00562	ug/L	1		05/02/21 17:00
Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Fluorene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Indeno[1,2,3-c,d] pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Naphthalene	0.0906 U	0.0906	0.0281	ug/L	1		05/02/21 17:00
Phenanthrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:00
Surrogates							
2-Methylnaphthalene-d10 (surr)	58.9	42-86		%	1		05/02/21 17:00
Fluoranthene-d10 (surr)	68.4	50-97		%	1		05/02/21 17:00

Batch Information

Analytical Batch: XMS12586
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: LAW
 Analytical Date/Time: 05/02/21 17:00
 Container ID: 1211995001-G

Prep Batch: XXX44704
 Prep Method: SW3535A
 Prep Date/Time: 04/30/21 14:55
 Prep Initial Wt./Vol.: 276 mL
 Prep Extract Vol: 1 mL

Results of MW5-42621

Client Sample ID: **MW5-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995001
 Lab Project ID: 1211995

Collection Date: 04/26/21 09:05
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		05/03/21 17:21
Surrogates							
4-Bromofluorobenzene (surr)	76.5	50-150		%	1		05/03/21 17:21

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Analyst: MDT
 Analytical Date/Time: 05/03/21 17:21
 Container ID: 1211995001-A

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW5-42621

Client Sample ID: **MW5-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995001
 Lab Project ID: 1211995

Collection Date: 04/26/21 09:05
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:17
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		04/30/21 17:17
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Benzene	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:17
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
Bromoform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Bromomethane	5.00 U	5.00	2.00	ug/L	1		04/30/21 17:17
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
Chloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17

Print Date: 05/06/2021 12:48:59PM

Results of MW5-42621

Client Sample ID: **MW5-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995001
 Lab Project ID: 1211995

Collection Date: 04/26/21 09:05
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Chloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:17
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Freon-113	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/30/21 17:17
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Styrene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Toluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:17
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:17
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		04/30/21 17:17
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/30/21 17:17
Surrogates							
1,2-Dichloroethane-D4 (surr)	108	81-118		%	1		04/30/21 17:17
4-Bromofluorobenzene (surr)	95.4	85-114		%	1		04/30/21 17:17
Toluene-d8 (surr)	99.3	89-112		%	1		04/30/21 17:17

Print Date: 05/06/2021 12:48:59PM

Results of **MW5-42621**

Client Sample ID: **MW5-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995001
 Lab Project ID: 1211995

Collection Date: 04/26/21 09:05
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Analyst: JMG
 Analytical Date/Time: 04/30/21 17:17
 Container ID: 1211995001-D

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW6-42621

Client Sample ID: **MW6-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995002
 Lab Project ID: 1211995

Collection Date: 04/28/21 11:02
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
2-Methylnaphthalene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Acenaphthene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Acenaphthylene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Anthracene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Benzo(a)Anthracene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Benzo[a]pyrene	0.0182 U	0.0182	0.00564	ug/L	1		05/06/21 00:06
Benzo[b]Fluoranthene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Benzo[g,h,i]perylene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Benzo[k]fluoranthene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Chrysene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Dibenzo[a,h]anthracene	0.0182 U	0.0182	0.00564	ug/L	1		05/06/21 00:06
Fluoranthene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Fluorene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Indeno[1,2,3-c,d] pyrene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Naphthalene	0.0909 U	0.0909	0.0282	ug/L	1		05/06/21 00:06
Phenanthrene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Pyrene	0.0455 U	0.0455	0.0136	ug/L	1		05/06/21 00:06
Surrogates							
2-Methylnaphthalene-d10 (surr)	61.2	42-86		%	1		05/06/21 00:06
Fluoranthene-d10 (surr)	30.3 *	50-97		%	1		05/06/21 00:06

Batch Information

Analytical Batch: XMS12591
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: LAW
 Analytical Date/Time: 05/06/21 00:06
 Container ID: 1211995002-G

Prep Batch: XXX44717
 Prep Method: SW3535A
 Prep Date/Time: 05/04/21 15:31
 Prep Initial Wt./Vol.: 275 mL
 Prep Extract Vol: 1 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW6-42621

Client Sample ID: **MW6-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995002
 Lab Project ID: 1211995

Collection Date: 04/28/21 11:02
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		05/03/21 17:39
Surrogates							
4-Bromofluorobenzene (surr)	80.7	50-150		%	1		05/03/21 17:39

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Analyst: MDT
 Analytical Date/Time: 05/03/21 17:39
 Container ID: 1211995002-A

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW6-42621

Client Sample ID: **MW6-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995002
 Lab Project ID: 1211995

Collection Date: 04/28/21 11:02
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:33
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		04/30/21 17:33
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Benzene	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:33
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
Bromoform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Bromomethane	5.00 U	5.00	2.00	ug/L	1		04/30/21 17:33
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
Chloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33

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Results of MW6-42621

Client Sample ID: **MW6-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995002
 Lab Project ID: 1211995

Collection Date: 04/28/21 11:02
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Chloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:33
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Freon-113	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/30/21 17:33
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Styrene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Toluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:33
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:33
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		04/30/21 17:33
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/30/21 17:33
Surrogates							
1,2-Dichloroethane-D4 (surr)	109	81-118		%	1		04/30/21 17:33
4-Bromofluorobenzene (surr)	98.5	85-114		%	1		04/30/21 17:33
Toluene-d8 (surr)	96.8	89-112		%	1		04/30/21 17:33

Print Date: 05/06/2021 12:48:59PM

Results of **MW6-42621**

Client Sample ID: **MW6-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995002
 Lab Project ID: 1211995

Collection Date: 04/28/21 11:02
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Analyst: JMG
 Analytical Date/Time: 04/30/21 17:33
 Container ID: 1211995002-D

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW7-42621

Client Sample ID: **MW7-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995003
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
2-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Acenaphthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Acenaphthylene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Benzo(a)Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Benzo[a]pyrene	0.0181 U	0.0181	0.00562	ug/L	1		05/02/21 17:41
Benzo[b]Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Benzo[g,h,i]perylene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Benzo[k]fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Chrysene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Dibenzo[a,h]anthracene	0.0181 U	0.0181	0.00562	ug/L	1		05/02/21 17:41
Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Fluorene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Indeno[1,2,3-c,d] pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Naphthalene	0.0906 U	0.0906	0.0281	ug/L	1		05/02/21 17:41
Phenanthrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 17:41
Surrogates							
2-Methylnaphthalene-d10 (surr)	57.3	42-86		%	1		05/02/21 17:41
Fluoranthene-d10 (surr)	66.4	50-97		%	1		05/02/21 17:41

Batch Information

Analytical Batch: XMS12586
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: LAW
 Analytical Date/Time: 05/02/21 17:41
 Container ID: 1211995003-G

Prep Batch: XXX44704
 Prep Method: SW3535A
 Prep Date/Time: 04/30/21 14:55
 Prep Initial Wt./Vol.: 276 mL
 Prep Extract Vol: 1 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW7-42621

Client Sample ID: **MW7-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995003
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		05/03/21 17:57
Surrogates							
4-Bromofluorobenzene (surr)	77.7	50-150		%	1		05/03/21 17:57

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Analyst: MDT
 Analytical Date/Time: 05/03/21 17:57
 Container ID: 1211995003-A

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW7-42621

Client Sample ID: **MW7-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995003
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:49
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		04/30/21 17:49
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Benzene	0.400 U	0.400	0.120	ug/L	1		04/30/21 17:49
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
Bromoform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Bromomethane	5.00 U	5.00	2.00	ug/L	1		04/30/21 17:49
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
Chloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49

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Results of MW7-42621

Client Sample ID: **MW7-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995003
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Chloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 17:49
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Freon-113	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/30/21 17:49
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Styrene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Toluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 17:49
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		04/30/21 17:49
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		04/30/21 17:49
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/30/21 17:49
Surrogates							
1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		04/30/21 17:49
4-Bromofluorobenzene (surr)	99.1	85-114		%	1		04/30/21 17:49
Toluene-d8 (surr)	99.5	89-112		%	1		04/30/21 17:49

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Results of **MW7-42621**

Client Sample ID: **MW7-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995003
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Analyst: JMG
 Analytical Date/Time: 04/30/21 17:49
 Container ID: 1211995003-D

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW8-42621

Client Sample ID: **MW8-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995004
 Lab Project ID: 1211995

Collection Date: 04/28/21 09:55
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Polynuclear Aromatics GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
2-Methylnaphthalene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Acenaphthene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Acenaphthylene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Benzo(a)Anthracene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Benzo[a]pyrene	0.0181 U	0.0181	0.00562	ug/L	1		05/03/21 19:22
Benzo[b]Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Benzo[g,h,i]perylene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Benzo[k]fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Chrysene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Dibenzo[a,h]anthracene	0.0181 U	0.0181	0.00562	ug/L	1		05/03/21 19:22
Fluoranthene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Fluorene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Indeno[1,2,3-c,d] pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Naphthalene	0.0906 U	0.0906	0.0281	ug/L	1		05/02/21 18:01
Phenanthrene	0.0453 U	0.0453	0.0136	ug/L	1		05/02/21 18:01
Pyrene	0.0453 U	0.0453	0.0136	ug/L	1		05/03/21 19:22
Surrogates							
2-Methylnaphthalene-d10 (surr)	49.6	42-86		%	1		05/02/21 18:01
Fluoranthene-d10 (surr)	48.6 *	50-97		%	1		05/03/21 19:22

Batch Information

Analytical Batch: XMS12586
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: LAW
 Analytical Date/Time: 05/02/21 18:01
 Container ID: 1211995004-G

Prep Batch: XXX44704
 Prep Method: SW3535A
 Prep Date/Time: 04/30/21 14:55
 Prep Initial Wt./Vol.: 276 mL
 Prep Extract Vol: 1 mL

Analytical Batch: XMS12588
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: LAW
 Analytical Date/Time: 05/03/21 19:22
 Container ID: 1211995004-G

Prep Batch: XXX44704
 Prep Method: SW3535A
 Prep Date/Time: 04/30/21 14:55
 Prep Initial Wt./Vol.: 276 mL
 Prep Extract Vol: 1 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW8-42621

Client Sample ID: **MW8-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995004
 Lab Project ID: 1211995

Collection Date: 04/28/21 09:55
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		05/03/21 18:14
Surrogates							
4-Bromofluorobenzene (surr)	77	50-150		%	1		05/03/21 18:14

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Analyst: MDT
 Analytical Date/Time: 05/03/21 18:14
 Container ID: 1211995004-A

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of MW8-42621

Client Sample ID: **MW8-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995004
 Lab Project ID: 1211995

Collection Date: 04/28/21 09:55
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		04/30/21 18:05
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		04/30/21 18:05
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Benzene	0.400 U	0.400	0.120	ug/L	1		04/30/21 18:05
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
Bromoform	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Bromomethane	5.00 U	5.00	2.00	ug/L	1		04/30/21 18:05
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
Chloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05

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Results of MW8-42621

Client Sample ID: **MW8-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995004
 Lab Project ID: 1211995

Collection Date: 04/28/21 09:55
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Chloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 18:05
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Freon-113	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/30/21 18:05
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Styrene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Toluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 18:05
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		04/30/21 18:05
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		04/30/21 18:05
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/30/21 18:05
Surrogates							
1,2-Dichloroethane-D4 (surr)	109	81-118		%	1		04/30/21 18:05
4-Bromofluorobenzene (surr)	94.6	85-114		%	1		04/30/21 18:05
Toluene-d8 (surr)	96	89-112		%	1		04/30/21 18:05

Print Date: 05/06/2021 12:48:59PM

Results of **MW8-42621**

Client Sample ID: **MW8-42621**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995004
 Lab Project ID: 1211995

Collection Date: 04/28/21 09:55
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Analyst: JMG
 Analytical Date/Time: 04/30/21 18:05
 Container ID: 1211995004-D

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of Trip Blank 1&2

Client Sample ID: **Trip Blank 1&2**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995005
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	0.100 U	0.100	0.0310	mg/L	1		05/03/21 15:51
Surrogates							
4-Bromofluorobenzene (surr)	81.1	50-150		%	1		05/03/21 15:51

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Analyst: MDT
 Analytical Date/Time: 05/03/21 15:51
 Container ID: 1211995005-A

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Results of Trip Blank 1&2

Client Sample ID: **Trip Blank 1&2**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995005
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		04/30/21 13:00
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		04/30/21 13:00
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Benzene	0.400 U	0.400	0.120	ug/L	1		04/30/21 13:00
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
Bromoform	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Bromomethane	5.00 U	5.00	2.00	ug/L	1		04/30/21 13:00
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
Chloroethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00

Print Date: 05/06/2021 12:48:59PM

Results of Trip Blank 1&2

Client Sample ID: **Trip Blank 1&2**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995005
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Parameter	Result Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroform	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Chloromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		04/30/21 13:00
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Freon-113	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Methylene chloride	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Naphthalene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
o-Xylene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		04/30/21 13:00
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Styrene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Toluene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		04/30/21 13:00
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		04/30/21 13:00
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		04/30/21 13:00
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		04/30/21 13:00
Surrogates							
1,2-Dichloroethane-D4 (surr)	109	81-118		%	1		04/30/21 13:00
4-Bromofluorobenzene (surr)	99.5	85-114		%	1		04/30/21 13:00
Toluene-d8 (surr)	98.7	89-112		%	1		04/30/21 13:00

Print Date: 05/06/2021 12:48:59PM

Results of Trip Blank 1&2

Client Sample ID: **Trip Blank 1&2**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1211995005
 Lab Project ID: 1211995

Collection Date: 04/26/21 10:20
 Received Date: 04/28/21 12:42
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Analyst: JMG
 Analytical Date/Time: 04/30/21 13:00
 Container ID: 1211995005-D

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/21 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:48:59PM

Method Blank

Blank ID: MB for HBN 1818652 [VXX/36990]
Blank Lab ID: 1607967

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	2.00	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.310	ug/L

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Method Blank

Blank ID: MB for HBN 1818652 [VXX/36990]
Blank Lab ID: 1607967

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	5.00U	10.0	3.10	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	0.500U	1.00	0.310	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	104	81-118		%
4-Bromofluorobenzene (surr)	98.3	85-114		%
Toluene-d8 (surr)	96.7	89-112		%

Method Blank

Blank ID: MB for HBN 1818652 [VXX/36990]
Blank Lab ID: 1607967

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS20679
Analytical Method: SW8260D
Instrument: VPA 780/5975 GC/MS
Analyst: JMG
Analytical Date/Time: 4/30/2021 11:23:00AM

Prep Batch: VXX36990
Prep Method: SW5030B
Prep Date/Time: 4/30/2021 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:49:01PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [VXX36990]

Blank Spike Lab ID: 1607968

Date Analyzed: 04/30/2021 11:39

Spike Duplicate ID: LCSD for HBN 1211995 [VXX36990]

Spike Duplicate Lab ID: 1607969

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	30	30.7	102	30	30.6	102	(78-124)	0.46	(< 20)
1,1,1-Trichloroethane	30	31.2	104	30	31.0	103	(74-131)	0.67	(< 20)
1,1,2,2-Tetrachloroethane	30	30.1	100	30	30.1	100	(71-121)	0.27	(< 20)
1,1,2-Trichloroethane	30	29.2	97	30	29.1	97	(80-119)	0.34	(< 20)
1,1-Dichloroethane	30	29.9	100	30	29.2	97	(77-125)	2.30	(< 20)
1,1-Dichloroethene	30	31.2	104	30	30.4	101	(71-131)	2.60	(< 20)
1,1-Dichloropropene	30	30.7	102	30	30.2	101	(79-125)	1.60	(< 20)
1,2,3-Trichlorobenzene	30	32.4	108	30	32.5	108	(69-129)	0.34	(< 20)
1,2,3-Trichloropropane	30	31.7	106	30	31.9	106	(73-122)	0.63	(< 20)
1,2,4-Trichlorobenzene	30	31.9	106	30	31.8	106	(69-130)	0.13	(< 20)
1,2,4-Trimethylbenzene	30	31.3	104	30	30.6	102	(79-124)	2.20	(< 20)
1,2-Dibromo-3-chloropropane	30	30.4	101	30	30.5	102	(62-128)	0.36	(< 20)
1,2-Dibromoethane	30	31.0	103	30	31.0	103	(77-121)	0.07	(< 20)
1,2-Dichlorobenzene	30	30.1	100	30	30.6	102	(80-119)	1.50	(< 20)
1,2-Dichloroethane	30	29.7	99	30	29.5	98	(73-128)	0.68	(< 20)
1,2-Dichloropropane	30	29.8	99	30	29.3	98	(78-122)	1.60	(< 20)
1,3,5-Trimethylbenzene	30	31.3	104	30	30.9	103	(75-124)	1.30	(< 20)
1,3-Dichlorobenzene	30	30.8	103	30	30.4	101	(80-119)	1.50	(< 20)
1,3-Dichloropropane	30	28.8	96	30	28.2	94	(80-119)	2.20	(< 20)
1,4-Dichlorobenzene	30	31.4	105	30	31.3	104	(79-118)	0.26	(< 20)
2,2-Dichloropropane	30	30.9	103	30	30.8	103	(60-139)	0.49	(< 20)
2-Butanone (MEK)	90	90.5	101	90	86.0	96	(56-143)	5.20	(< 20)
2-Chlorotoluene	30	31.2	104	30	30.6	102	(79-122)	2.00	(< 20)
2-Hexanone	90	89.4	99	90	86.6	96	(57-139)	3.20	(< 20)
4-Chlorotoluene	30	30.8	103	30	30.4	101	(78-122)	1.40	(< 20)
4-Isopropyltoluene	30	31.8	106	30	30.9	103	(77-127)	2.70	(< 20)
4-Methyl-2-pentanone (MIBK)	90	92.7	103	90	92.7	103	(67-130)	0.01	(< 20)
Benzene	30	29.5	98	30	29.0	97	(79-120)	1.70	(< 20)
Bromobenzene	30	31.0	103	30	30.7	102	(80-120)	1.00	(< 20)
Bromochloromethane	30	30.5	102	30	30.4	101	(78-123)	0.16	(< 20)
Bromodichloromethane	30	30.2	101	30	30.1	100	(79-125)	0.23	(< 20)
Bromoform	30	30.7	102	30	30.6	102	(66-130)	0.26	(< 20)
Bromomethane	30	28.8	96	30	29.4	98	(53-141)	2.10	(< 20)
Carbon disulfide	45	44.5	99	45	43.1	96	(64-133)	3.10	(< 20)

Print Date: 05/06/2021 12:49:04PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [VXX36990]
 Blank Spike Lab ID: 1607968
 Date Analyzed: 04/30/2021 11:39

Spike Duplicate ID: LCSD for HBN 1211995
 [VXX36990]
 Spike Duplicate Lab ID: 1607969
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	32.3	108	30	32.1	107	(72-136)	0.62	(< 20)
Chlorobenzene	30	30.5	102	30	29.1	97	(82-118)	4.40	(< 20)
Chloroethane	30	29.3	98	30	27.8	93	(60-138)	5.20	(< 20)
Chloroform	30	29.4	98	30	29.0	97	(79-124)	1.30	(< 20)
Chloromethane	30	27.1	90	30	25.3	84	(50-139)	6.80	(< 20)
cis-1,2-Dichloroethene	30	29.4	98	30	29.5	99	(78-123)	0.51	(< 20)
cis-1,3-Dichloropropene	30	30.3	101	30	30.3	101	(75-124)	0.03	(< 20)
Dibromochloromethane	30	31.0	103	30	31.0	103	(74-126)	0.00	(< 20)
Dibromomethane	30	29.8	99	30	29.2	97	(79-123)	2.20	(< 20)
Dichlorodifluoromethane	30	24.6	82	30	23.2	77	(32-152)	5.80	(< 20)
Ethylbenzene	30	31.1	104	30	29.2	97	(79-121)	6.30	(< 20)
Freon-113	45	48.2	107	45	47.3	105	(70-136)	1.90	(< 20)
Hexachlorobutadiene	30	33.1	110	30	32.5	108	(66-134)	1.80	(< 20)
Isopropylbenzene (Cumene)	30	31.1	104	30	29.8	99	(72-131)	4.10	(< 20)
Methylene chloride	30	29.0	97	30	28.0	93	(74-124)	3.50	(< 20)
Methyl-t-butyl ether	45	44.7	99	45	44.7	99	(71-124)	0.11	(< 20)
Naphthalene	30	30.4	101	30	30.7	102	(61-128)	0.85	(< 20)
n-Butylbenzene	30	31.7	106	30	30.7	102	(75-128)	3.20	(< 20)
n-Propylbenzene	30	30.6	102	30	30.1	100	(76-126)	1.50	(< 20)
o-Xylene	30	30.3	101	30	29.6	99	(78-122)	2.30	(< 20)
P & M -Xylene	60	60.5	101	60	58.4	97	(80-121)	3.50	(< 20)
sec-Butylbenzene	30	32.3	108	30	31.4	105	(77-126)	2.80	(< 20)
Styrene	30	30.4	101	30	30.2	101	(78-123)	0.89	(< 20)
tert-Butylbenzene	30	32.4	108	30	31.5	105	(78-124)	2.90	(< 20)
Tetrachloroethene	30	31.5	105	30	30.9	103	(74-129)	2.10	(< 20)
Toluene	30	28.6	95	30	27.6	92	(80-121)	3.50	(< 20)
trans-1,2-Dichloroethene	30	30.2	101	30	29.8	99	(75-124)	1.30	(< 20)
trans-1,3-Dichloropropene	30	28.6	95	30	27.6	92	(73-127)	3.60	(< 20)
Trichloroethene	30	30.4	101	30	30.0	100	(79-123)	1.10	(< 20)
Trichlorofluoromethane	30	31.8	106	30	31.2	104	(65-141)	1.80	(< 20)
Vinyl acetate	30	28.0	93	30	28.3	94	(54-146)	1.00	(< 20)
Vinyl chloride	30	28.3	94	30	26.5	88	(58-137)	6.50	(< 20)
Xylenes (total)	90	90.7	101	90	88.0	98	(79-121)	3.10	(< 20)

Print Date: 05/06/2021 12:49:04PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [VXX36990]
 Blank Spike Lab ID: 1607968
 Date Analyzed: 04/30/2021 11:39

Spike Duplicate ID: LCSD for HBN 1211995
 [VXX36990]
 Spike Duplicate Lab ID: 1607969
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by SW8260D

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Surrogates									
1,2-Dichloroethane-D4 (surr)	30		102	30		102	(81-118)	0.03	
4-Bromofluorobenzene (surr)	30		99	30		101	(85-114)	1.90	
Toluene-d8 (surr)	30		101	30		99	(89-112)	2.00	

Batch Information

Analytical Batch: VMS20679
 Analytical Method: SW8260D
 Instrument: VPA 780/5975 GC/MS
 Analyst: JMG

Prep Batch: VXX36990
 Prep Method: SW5030B
 Prep Date/Time: 04/30/2021 06:00
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 05/06/2021 12:49:04PM

Method Blank

Blank ID: MB for HBN 1818789 [VXX/36994]
Blank Lab ID: 1608227

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	81.1	50-150		%

Batch Information

Analytical Batch: VFC15563
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: MDT
Analytical Date/Time: 5/3/2021 9:41:00AM

Prep Batch: VXX36994
Prep Method: SW5030B
Prep Date/Time: 5/3/2021 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 05/06/2021 12:49:07PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [VXX36994]
 Blank Spike Lab ID: 1608228
 Date Analyzed: 05/03/2021 10:35

Spike Duplicate ID: LCSD for HBN 1211995
 [VXX36994]
 Spike Duplicate Lab ID: 1608229
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995001, 1211995002, 1211995003, 1211995004, 1211995005

Results by AK101

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	1.00	0.931	93	1.00	0.977	98	(60-120)	4.70	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500		84	0.0500		87	(50-150)	3.00	

Batch Information

Analytical Batch: VFC15563
 Analytical Method: AK101
 Instrument: Agilent 7890A PID/FID
 Analyst: MDT

Prep Batch: VXX36994
 Prep Method: SW5030B
 Prep Date/Time: 05/03/2021 06:00
 Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

Print Date: 05/06/2021 12:49:09PM

Method Blank

Blank ID: MB for HBN 1818658 [XXX/44704]
Blank Lab ID: 1607992

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995001, 1211995003, 1211995004

Results by 8270D SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	53.5	42-86		%
Fluoranthene-d10 (surr)	66.7	50-97		%

Batch Information

Analytical Batch: XMS12586
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: LAW
Analytical Date/Time: 5/2/2021 3:58:00PM

Prep Batch: XXX44704
Prep Method: SW3535A
Prep Date/Time: 4/30/2021 2:55:19PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [XXX44704]

Blank Spike Lab ID: 1607993

Date Analyzed: 05/02/2021 16:19

Spike Duplicate ID: LCSD for HBN 1211995 [XXX44704]

Spike Duplicate Lab ID: 1607994

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995001, 1211995003, 1211995004

Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.21	60	2	1.11	56	(41-115)	8.40	(< 20)
2-Methylnaphthalene	2	1.21	61	2	1.10	55	(39-114)	9.80	(< 20)
Acenaphthene	2	1.31	66	2	1.19	60	(48-114)	9.80	(< 20)
Acenaphthylene	2	1.36	68	2	1.23	61	(35-121)	10.60	(< 20)
Anthracene	2	1.42	71	2	1.27	64	(53-119)	11.10	(< 20)
Benzo(a)Anthracene	2	1.40	70	2	1.34	67	(59-120)	4.90	(< 20)
Benzo[a]pyrene	2	1.57	79	2	1.43	71	(53-120)	9.70	(< 20)
Benzo[b]Fluoranthene	2	1.54	77	2	1.43	71	(53-126)	7.30	(< 20)
Benzo[g,h,i]perylene	2	1.73	86	2	1.60	80	(44-128)	7.70	(< 20)
Benzo[k]fluoranthene	2	1.55	78	2	1.52	76	(54-125)	2.40	(< 20)
Chrysene	2	1.50	75	2	1.41	71	(57-120)	6.10	(< 20)
Dibenzo[a,h]anthracene	2	1.77	88	2	1.64	82	(44-131)	7.70	(< 20)
Fluoranthene	2	1.38	69	2	1.27	63	(58-120)	8.90	(< 20)
Fluorene	2	1.39	69	2	1.28	64	(50-118)	8.00	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.73	86	2	1.58	79	(48-130)	8.50	(< 20)
Naphthalene	2	1.26	63	2	1.11	56	(43-114)	12.80	(< 20)
Phenanthrene	2	1.44	72	2	1.30	65	(53-115)	10.00	(< 20)
Pyrene	2	1.38	69	2	1.28	64	(53-121)	7.20	(< 20)
Surrogates									
2-Methylnaphthalene-d10 (surr)	2		55	2		51	(42-86)	8.40	
Fluoranthene-d10 (surr)	2		66	2		63	(50-97)	5.50	

Batch Information

Analytical Batch: XMS12586

Analytical Method: 8270D SIM LV (PAH)

Instrument: SVA Agilent 780/5975 GC/MS

Analyst: LAW

Prep Batch: XXX44704

Prep Method: SW3535A

Prep Date/Time: 04/30/2021 14:55

Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Method Blank

Blank ID: MB for HBN 1818832 [XXX/44717]
Blank Lab ID: 1608374

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1211995002

Results by 8270D SIM LV (PAH)

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	56.7	42-86		%
Fluoranthene-d10 (surr)	66.7	50-97		%

Batch Information

Analytical Batch: XMS12591
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: LAW
Analytical Date/Time: 5/5/2021 7:19:00PM

Prep Batch: XXX44717
Prep Method: SW3535A
Prep Date/Time: 5/4/2021 3:31:20PM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1211995 [XXX44717]
 Blank Spike Lab ID: 1608375
 Date Analyzed: 05/05/2021 19:40

Spike Duplicate ID: LCSD for HBN 1211995
 [XXX44717]
 Spike Duplicate Lab ID: 1608376
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995002

Results by 8270D SIM LV (PAH)

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1-Methylnaphthalene	2	1.13	57	1.82	1.15	63	(41-115)	1.70	(< 20)
2-Methylnaphthalene	2	1.12	56	1.82	1.16	64	(39-114)	2.90	(< 20)
Acenaphthene	2	1.20	60	1.82	1.23	68	(48-114)	2.00	(< 20)
Acenaphthylene	2	1.19	60	1.82	1.24	68	(35-121)	4.00	(< 20)
Anthracene	2	1.25	63	1.82	1.27	70	(53-119)	1.40	(< 20)
Benzo(a)Anthracene	2	1.26	63	1.82	1.20	66	(59-120)	5.50	(< 20)
Benzo[a]pyrene	2	1.34	67	1.82	1.26	69	(53-120)	6.40	(< 20)
Benzo[b]Fluoranthene	2	1.33	67	1.82	1.29	71	(53-126)	3.30	(< 20)
Benzo[g,h,i]perylene	2	1.44	72	1.82	1.32	73	(44-128)	8.70	(< 20)
Benzo[k]fluoranthene	2	1.44	72	1.82	1.30	71	(54-125)	10.50	(< 20)
Chrysene	2	1.36	68	1.82	1.27	70	(57-120)	6.70	(< 20)
Dibenzo[a,h]anthracene	2	1.48	74	1.82	1.35	74	(44-131)	9.40	(< 20)
Fluoranthene	2	1.24	62	1.82	1.20	66	(58-120)	3.40	(< 20)
Fluorene	2	1.28	64	1.82	1.30	71	(50-118)	1.50	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.45	72	1.82	1.32	73	(48-130)	9.00	(< 20)
Naphthalene	2	1.16	58	1.82	1.18	65	(43-114)	1.50	(< 20)
Phenanthrene	2	1.30	65	1.82	1.29	71	(53-115)	0.70	(< 20)
Pyrene	2	1.24	62	1.82	1.20	66	(53-121)	3.70	(< 20)
Surrogates									
2-Methylnaphthalene-d10 (surr)	2		53	1.82		59	(42-86)	1.10	
Fluoranthene-d10 (surr)	2		60	1.82		65	(50-97)	2.40	

Batch Information

Analytical Batch: XMS12591
 Analytical Method: 8270D SIM LV (PAH)
 Instrument: SVA Agilent 780/5975 GC/MS
 Analyst: LAW

Prep Batch: XXX44717
 Prep Method: SW3535A
 Prep Date/Time: 05/04/2021 15:31
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 1.82 ug/L Extract Vol: 1 mL

Print Date: 05/06/2021 12:49:20PM

Matrix Spike Summary

Original Sample ID: 1212085001
MS Sample ID: 1608377 MS
MSD Sample ID: 1608378 MSD

Analysis Date: 05/06/2021 1:08
Analysis Date: 05/06/2021 1:28
Analysis Date: 05/06/2021 1:49
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1211995002

Results by 8270D SIM LV (PAH)

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Acenaphthene	0.0455U	1.82	1.07	59	1.82	1.00	55	48-114	6.50	(< 20)
Acenaphthylene	0.0455U	1.82	1.07	59	1.82	1.00	55	35-121	6.60	(< 20)
Anthracene	0.0455U	1.82	1.07	59	1.82	1.01	56	53-119	6.00	(< 20)
Benzo(a)Anthracene	0.0455U	1.82	1.19	65	1.82	0.883	49	* 59-120	29.20	* (< 20)
Benzo[a]pyrene	0.0182U	1.82	1.16	64	1.82	0.614	34	* 53-120	61.20	* (< 20)
Benzo[b]Fluoranthene	0.0455U	1.82	1.19	65	1.82	0.613	34	* 53-126	63.70	* (< 20)
Benzo[g,h,i]perylene	0.0455U	1.82	.965	53	1.82	0.351	19	* 44-128	93.30	* (< 20)
Benzo[k]fluoranthene	0.0455U	1.82	1.18	65	1.82	0.629	35	* 54-125	60.80	* (< 20)
Chrysene	0.0455U	1.82	1.24	68	1.82	0.926	51	* 57-120	29.10	* (< 20)
Dibenzo[a,h]anthracene	0.0182U	1.82	.965	53	1.82	0.358	20	* 44-131	91.60	* (< 20)
Fluoranthene	0.0455U	1.82	1.17	64	1.82	1.04	57	* 58-120	11.20	(< 20)
Fluorene	0.217	1.82	1.27	58	1.82	1.19	54	50-118	6.50	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0455U	1.82	1.03	57	1.82	0.371	20	* 48-130	94.20	* (< 20)
Naphthalene	0.791	1.82	1.84	58	1.82	1.68	49	43-114	8.80	(< 20)
Phenanthrene	0.316	1.82	1.41	60	1.82	1.34	56	53-115	4.90	(< 20)
Pyrene	0.0455U	1.82	1.17	65	1.82	1.06	58	53-121	9.90	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		1.82	.859	47	1.82	0.785	43	42-86	8.90	
Fluoranthene-d10 (surr)		1.82	1.16	64	1.82	1.05	58	50-97	9.30	

Batch Information

Analytical Batch: XMS12591
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: LAW
Analytical Date/Time: 5/6/2021 1:28:00AM

Prep Batch: XXX44717
Prep Method: 3535 Solid Phase Ext for 8270 PAH SIM LV
Prep Date/Time: 5/4/2021 3:31:20PM
Prep Initial Wt./Vol.: 275.00mL
Prep Extract Vol: 1.00mL

Print Date: 05/06/2021 12:49:22PM

1211995

profile: 334626 83

[illegible]



200 W. Potter Dr., 3180 Peger Rd. Ste.
Anchorage, AK 99518 (ph) 190, Fairbanks, AK
907-562-2343, (fax) 907-99709 (ph) 907-474-
561-5301 8656

Client pickup Date:	4/13/2021	Time:	08:00
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F083_KitRequest 20190102



e-Sample Receipt Form

SGS Workorder #:

1211995

1211995

Review Criteria		Condition (Yes, No, N/A)		Exceptions Noted below	
Chain of Custody / Temperature Requirements				Yes Exemption permitted if sampler hand carries/delivers.	
Were Custody Seals intact? Note # & location		N/A		absent	
COC accompanied samples?		Yes			
DOD: Were samples received in COC corresponding coolers?		N/A			
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required					
Temperature blank compliant* (i.e., 0-6 °C after CF)?		Yes		Cooler ID:	1 @ 5.7 °C Therm. ID: D60
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.				Cooler ID:	@ °C Therm. ID:
				Cooler ID:	@ °C Therm. ID:
				Cooler ID:	@ °C Therm. ID:
				Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		N/A			
If <0°C, were sample containers ice free?		N/A			
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.					
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.			
Were samples received within holding time?		Yes			
Do samples match COC** (i.e., sample IDs, dates/times collected)?		Yes			
**Note: If times differ <1hr, record details & login per COC.					
***Note: If sample information on containers differs from COC, SGS will default to COC information					
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)		Yes			
Were proper containers (type/mass/volume/preservative***) used?		Yes		N/A ***Exemption permitted for metals (e.g. 200.8/6020A).	
Volatile / LL-Hg Requirements					
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		Yes			
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		Yes			
Were all soil VOAs field extracted with MeOH+BFB?		N/A			
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.					
Additional notes (if applicable):					

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1211995001-A	HCL to pH < 2	OK			
1211995001-B	HCL to pH < 2	OK			
1211995001-C	HCL to pH < 2	OK			
1211995001-D	HCL to pH < 2	OK			
1211995001-E	No Preservative Required	OK			
1211995001-F	HCL to pH < 2	OK			
1211995001-G	No Preservative Required	OK			
1211995001-H	No Preservative Required	OK			
1211995002-A	HCL to pH < 2	OK			
1211995002-B	No Preservative Required	OK			
1211995002-C	HCL to pH < 2	OK			
1211995002-D	HCL to pH < 2	OK			
1211995002-E	HCL to pH < 2	OK			
1211995002-F	HCL to pH < 2	OK			
1211995002-G	No Preservative Required	OK			
1211995002-H	No Preservative Required	OK			
1211995003-A	HCL to pH < 2	OK			
1211995003-B	No Preservative Required	OK			
1211995003-C	HCL to pH < 2	OK			
1211995003-D	HCL to pH < 2	OK			
1211995003-E	HCL to pH < 2	OK			
1211995003-F	HCL to pH < 2	OK			
1211995003-G	No Preservative Required	OK			
1211995003-H	No Preservative Required	OK			
1211995004-A	HCL to pH < 2	OK			
1211995004-B	No Preservative Required	OK			
1211995004-C	HCL to pH < 2	OK			
1211995004-D	HCL to pH < 2	OK			
1211995004-E	HCL to pH < 2	OK			
1211995004-F	HCL to pH < 2	OK			
1211995004-G	No Preservative Required	OK			
1211995004-H	No Preservative Required	OK			
1211995005-A	HCL to pH < 2	OK			
1211995005-B	HCL to pH < 2	OK			
1211995005-C	HCL to pH < 2	OK			
1211995005-D	HCL to pH < 2	OK			
1211995005-E	HCL to pH < 2	OK			
1211995005-F	HCL to pH < 2	OK			

Laboratory Report of Analysis

To: BGES Inc.
1042 E. 6th Ave.,
Anchorage, AK 99501
(907)644-2900

Report Number: **1216183**

Client Project: **Hanna Dimond**

Dear Jayne Martin,

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

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

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

Sincerely,
SGS North America Inc.



Alexandra Daniel
2021.10.14 16:37:22 -08'00'

Alexandra Daniel
Project Manager
Alexandra.Daniel@sgs.com

Date

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

Case Narrative

SGS Client: **BGES Inc.**
SGS Project: **1216183**
Project Name/Site: **Hanna Dimond**
Project Contact: **Jayne Martin**

Refer to sample receipt form for information on sample condition.

1216212009(1638544MSD) (1638546) MSD

8260D - MSD recoveries for 2,2-Dichloropropane and 1,2,3-Trichlorobenzene do not meet QC criteria. See LCS for accuracy requirements.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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Laboratory Qualifiers

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

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

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

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

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

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

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
DWC1-0920	1216183001	09/20/2021	09/20/2021	Soil/Solid (dry weight)
Trip Blank	1216183002	09/20/2021	09/20/2021	Soil/Solid (dry weight)

<u>Method</u>	<u>Method Description</u>
AK102	Diesel/Residual Range Organics
AK103	Diesel/Residual Range Organics
AK101	Gasoline Range Organics (S)
SW6020B	Metals by ICP-MS (S)
SM21 2540G	Percent Solids SM2540G
SW8260D	VOC 8260 (S) Field Extracted

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Detectable Results Summary

Client Sample ID: **DWC1-0920**

Lab Sample ID: 1216183001

Metals by ICP/MS

Semivolatile Organic Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Lead	5.33	mg/kg
Diesel Range Organics	42.8	mg/kg
Ethylbenzene	28.5	ug/kg

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Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Metals by ICP/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Lead	5.33	1.11	0.345	mg/kg	50		10/11/21 13:19

Batch Information

Analytical Batch: MMS11337
 Analytical Method: SW6020B
 Analyst: DMM
 Analytical Date/Time: 10/11/21 13:19
 Container ID: 1216183001-A

Prep Batch: MXX34703
 Prep Method: SW3050B
 Prep Date/Time: 10/03/21 15:10
 Prep Initial Wt./Vol.: 1.03 g
 Prep Extract Vol: 50 mL

Print Date: 10/12/2021 4:48:19PM

Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Semivolatile Organic Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	42.8	22.8	10.2	mg/kg	1		09/30/21 23:58
Surrogates							
5a Androstane (surr)	81.1	50-150		%	1		09/30/21 23:58

Batch Information

Analytical Batch: XFC16092
 Analytical Method: AK102
 Analyst: IVM
 Analytical Date/Time: 09/30/21 23:58
 Container ID: 1216183001-A

Prep Batch: XXX45606
 Prep Method: SW3550C
 Prep Date/Time: 09/23/21 08:28
 Prep Initial Wt./Vol.: 30.248 g
 Prep Extract Vol: 5 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	114 U	114	48.9	mg/kg	1		09/30/21 23:58
Surrogates							
n-Triacontane-d62 (surr)	75.4	50-150		%	1		09/30/21 23:58

Batch Information

Analytical Batch: XFC16092
 Analytical Method: AK103
 Analyst: IVM
 Analytical Date/Time: 09/30/21 23:58
 Container ID: 1216183001-A

Prep Batch: XXX45606
 Prep Method: SW3550C
 Prep Date/Time: 09/23/21 08:28
 Prep Initial Wt./Vol.: 30.248 g
 Prep Extract Vol: 5 mL

Print Date: 10/12/2021 4:48:19PM

Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Volatile Fuels**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Gasoline Range Organics	2.28 U	2.28	0.684	mg/kg	1		09/23/21 15:43
Surrogates							
4-Bromofluorobenzene (surr)	125	50-150		%	1		09/23/21 15:43

Batch Information

Analytical Batch: VFC15840
 Analytical Method: AK101
 Analyst: IJV
 Analytical Date/Time: 09/23/21 15:43
 Container ID: 1216183001-B

Prep Batch: VXX37900
 Prep Method: SW5035A
 Prep Date/Time: 09/20/21 15:50
 Prep Initial Wt./Vol.: 92.974 g
 Prep Extract Vol: 36.9325 mL

Print Date: 10/12/2021 4:48:19PM

Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	18.2 U	18.2	5.65	ug/kg	1		09/27/21 19:29
1,1,1-Trichloroethane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,1,2,2-Tetrachloroethane	1.82 U	1.82	0.565	ug/kg	1		09/27/21 19:29
1,1,2-Trichloroethane	0.911 U	0.911	0.456	ug/kg	1		09/27/21 19:29
1,1-Dichloroethane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,1-Dichloroethene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,1-Dichloropropene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,2,3-Trichlorobenzene	91.1 U	91.1	27.3	ug/kg	1		09/27/21 19:29
1,2,3-Trichloropropane	1.82 U	1.82	0.565	ug/kg	1		09/27/21 19:29
1,2,4-Trichlorobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,2,4-Trimethylbenzene	91.1 U	91.1	27.3	ug/kg	1		09/27/21 19:29
1,2-Dibromo-3-chloropropane	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
1,2-Dibromoethane	1.37 U	1.37	0.684	ug/kg	1		09/27/21 19:29
1,2-Dichlorobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,2-Dichloroethane	1.82 U	1.82	0.638	ug/kg	1		09/27/21 19:29
1,2-Dichloropropane	9.11 U	9.11	4.56	ug/kg	1		09/27/21 19:29
1,3,5-Trimethylbenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,3-Dichlorobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
1,3-Dichloropropane	9.11 U	9.11	2.83	ug/kg	1		09/27/21 19:29
1,4-Dichlorobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
2,2-Dichloropropane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
2-Butanone (MEK)	228 U	228	71.1	ug/kg	1		09/27/21 19:29
2-Chlorotoluene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
2-Hexanone	109 U	109	54.7	ug/kg	1		09/27/21 19:29
4-Chlorotoluene	18.2 U	18.2	9.11	ug/kg	1		09/27/21 19:29
4-Isopropyltoluene	72.9 U	72.9	36.5	ug/kg	1		09/27/21 19:29
4-Methyl-2-pentanone (MIBK)	228 U	228	71.1	ug/kg	1		09/27/21 19:29
Acetone	228 U	228	100	ug/kg	1		09/27/21 19:29
Benzene	11.4 U	11.4	3.55	ug/kg	1		09/27/21 19:29
Bromobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Bromochloromethane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Bromodichloromethane	1.82 U	1.82	0.565	ug/kg	1		09/27/21 19:29
Bromoform	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Bromomethane	18.2 U	18.2	7.29	ug/kg	1		09/27/21 19:29
Carbon disulfide	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
Carbon tetrachloride	11.4 U	11.4	3.55	ug/kg	1		09/27/21 19:29
Chlorobenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29

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Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Volatile GC/MS**

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroethane	182 U	182	56.5	ug/kg	1		09/27/21 19:29
Chloroform	5.47 U	5.47	2.73	ug/kg	1		09/27/21 19:29
Chloromethane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
cis-1,2-Dichloroethene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
cis-1,3-Dichloropropene	11.4 U	11.4	3.55	ug/kg	1		09/27/21 19:29
Dibromochloromethane	4.56 U	4.56	1.37	ug/kg	1		09/27/21 19:29
Dibromomethane	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Dichlorodifluoromethane	91.1 U	91.1	27.3	ug/kg	1		09/27/21 19:29
Ethylbenzene	28.5	22.8	7.11	ug/kg	1		09/27/21 19:29
Freon-113	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
Hexachlorobutadiene	18.2 U	18.2	5.65	ug/kg	1		09/27/21 19:29
Isopropylbenzene (Cumene)	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Methylene chloride	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
Methyl-t-butyl ether	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
Naphthalene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
n-Butylbenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
n-Propylbenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
o-Xylene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
P & M -Xylene	45.6 U	45.6	13.7	ug/kg	1		09/27/21 19:29
sec-Butylbenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Styrene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
tert-Butylbenzene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
Tetrachloroethene	11.4 U	11.4	3.55	ug/kg	1		09/27/21 19:29
Toluene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
trans-1,2-Dichloroethene	22.8 U	22.8	7.11	ug/kg	1		09/27/21 19:29
trans-1,3-Dichloropropene	11.4 U	11.4	3.55	ug/kg	1		09/27/21 19:29
Trichloroethene	9.11 U	9.11	2.92	ug/kg	1		09/27/21 19:29
Trichlorofluoromethane	45.6 U	45.6	13.7	ug/kg	1		09/27/21 19:29
Vinyl acetate	91.1 U	91.1	28.3	ug/kg	1		09/27/21 19:29
Vinyl chloride	0.729 U	0.729	0.228	ug/kg	1		09/27/21 19:29
Xylenes (total)	68.4 U	68.4	20.8	ug/kg	1		09/27/21 19:29
Surrogates							
1,2-Dichloroethane-D4 (surr)	103	71-136		%	1		09/27/21 19:29
4-Bromofluorobenzene (surr)	107	55-151		%	1		09/27/21 19:29
Toluene-d8 (surr)	99.3	85-116		%	1		09/27/21 19:29

Print Date: 10/12/2021 4:48:19PM

Results of **DWC1-0920**

Client Sample ID: **DWC1-0920**
 Client Project ID: **Hanna Dimond**
 Lab Sample ID: 1216183001
 Lab Project ID: 1216183

Collection Date: 09/20/21 15:50
 Received Date: 09/20/21 16:22
 Matrix: Soil/Solid (dry weight)
 Solids (%):87.2
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS21219
 Analytical Method: SW8260D
 Analyst: S.S
 Analytical Date/Time: 09/27/21 19:29
 Container ID: 1216183001-B

Prep Batch: VXX37915
 Prep Method: SW5035A
 Prep Date/Time: 09/20/21 15:50
 Prep Initial Wt./Vol.: 92.974 g
 Prep Extract Vol: 36.9325 mL

Print Date: 10/12/2021 4:48:19PM

Method Blank

Blank ID: MB for HBN 1826472 [MXX/34703]
Blank Lab ID: 1639684

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by SW6020B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Lead	0.100U	0.200	0.0620	mg/kg

Batch Information

Analytical Batch: MMS11337
Analytical Method: SW6020B
Instrument: Perkin Elmer Nexlon P5
Analyst: DMM
Analytical Date/Time: 10/11/2021 12:45:18PM

Prep Batch: MXX34703
Prep Method: SW3050B
Prep Date/Time: 10/3/2021 3:10:17PM
Prep Initial Wt./Vol.: 1 g
Prep Extract Vol: 50 mL

Print Date: 10/12/2021 4:48:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [MXX34703]

Blank Spike Lab ID: 1639685

Date Analyzed: 10/11/2021 12:49

Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by SW6020B

Blank Spike (mg/kg)				
Parameter	Spike	Result	Rec (%)	CL
Lead	50	54.3	109	(84-118)

Batch Information

Analytical Batch: MMS11337

Analytical Method: SW6020B

Instrument: Perkin Elmer Nexlon P5

Analyst: DMM

Prep Batch: MXX34703

Prep Method: SW3050B

Prep Date/Time: 10/03/2021 15:10

Spike Init Wt./Vol.: 50 mg/kg Extract Vol: 50 mL

Dupe Init Wt./Vol.: Extract Vol:

Print Date: 10/12/2021 4:48:24PM

Matrix Spike Summary

Original Sample ID: 1639686
MS Sample ID: 1639688 MS
MSD Sample ID: 1639689 MSD

QC for Samples: 1216183001

Analysis Date: 10/11/2021 12:53
Analysis Date: 10/11/2021 12:58
Analysis Date: 10/11/2021 13:02
Matrix: Solid/Soil (Wet Weight)

Results by SW6020B

Parameter	Sample	Matrix Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Lead	20.4	47.5	68.6	102	46.1	66.6	100	84-118	2.96	(< 20)

Batch Information

Analytical Batch: MMS11337
Analytical Method: SW6020B
Instrument: Perkin Elmer Nexlon P5
Analyst: DMM
Analytical Date/Time: 10/11/2021 12:58:00PM

Prep Batch: MXX34703
Prep Method: Soils/Solids Digest for Metals by ICP-MS
Prep Date/Time: 10/3/2021 3:10:17PM
Prep Initial Wt./Vol.: 1.05g
Prep Extract Vol: 50.00mL

Print Date: 10/12/2021 4:48:26PM

Method Blank

Blank ID: MB for HBN 1825960 [SPT/11389]
Blank Lab ID: 1637486

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by SM21 2540G

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Total Solids	100			%

Batch Information

Analytical Batch: SPT11389
Analytical Method: SM21 2540G
Instrument:
Analyst: TMM
Analytical Date/Time: 9/21/2021 5:30:00PM

Print Date: 10/12/2021 4:48:27PM

Duplicate Sample Summary

Original Sample ID: 1216106001

Duplicate Sample ID: 1637487

QC for Samples:

Analysis Date: 09/21/2021 17:30

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	85.6	86.0	%	0.50	(< 15)

Batch Information

Analytical Batch: SPT11389

Analytical Method: SM21 2540G

Instrument:

Analyst: TMM

Print Date: 10/12/2021 4:48:28PM

Duplicate Sample Summary

Original Sample ID: 1216170004

Duplicate Sample ID: 1637488

QC for Samples:

1216183001

Analysis Date: 09/21/2021 17:30

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	89.6	89.9	%	0.39	(< 15)

Batch Information

Analytical Batch: SPT11389

Analytical Method: SM21 2540G

Instrument:

Analyst: TMM

Print Date: 10/12/2021 4:48:28PM

Duplicate Sample Summary

Original Sample ID: 1216183001

Duplicate Sample ID: 1637489

QC for Samples:

1216183001

Analysis Date: 09/21/2021 17:30

Matrix: Soil/Solid (dry weight)

Results by SM21 2540G

<u>NAME</u>	<u>Original</u>	<u>Duplicate</u>	<u>Units</u>	<u>RPD (%)</u>	<u>RPD CL</u>
Total Solids	87.2	88.0	%	1.00	(< 15)

Batch Information

Analytical Batch: SPT11389

Analytical Method: SM21 2540G

Instrument:

Analyst: TMM

Print Date: 10/12/2021 4:48:28PM

Method Blank

Blank ID: MB for HBN 1826074 [VXX/37900]
Blank Lab ID: 1637912

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by AK101

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Gasoline Range Organics	1.25U	2.50	0.750	mg/kg
Surrogates				
4-Bromofluorobenzene (surr)	91.7	50-150		%

Batch Information

Analytical Batch: VFC15840
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: IJV
Analytical Date/Time: 9/23/2021 12:01:00PM

Prep Batch: VXX37900
Prep Method: SW5035A
Prep Date/Time: 9/23/2021 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 10/12/2021 4:48:31PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [VXX37900]
 Blank Spike Lab ID: 1637913
 Date Analyzed: 09/23/2021 11:25

Spike Duplicate ID: LCSD for HBN 1216183 [VXX37900]
 Spike Duplicate Lab ID: 1637914
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by AK101

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Gasoline Range Organics	12.5	14.0	112	12.5	13.4	107	(60-120)	4.70	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	1.25		96	1.25		98	(50-150)	2.70	

Batch Information

Analytical Batch: **VFC15840**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890 PID/FID**
 Analyst: **IJV**

Prep Batch: **VXX37900**
 Prep Method: **SW5035A**
 Prep Date/Time: **09/23/2021 06:00**
 Spike Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL
 Dupe Init Wt./Vol.: 12.5 mg/Kg Extract Vol: 25 mL

Print Date: 10/12/2021 4:48:33PM

Method Blank

Blank ID: MB for HBN 1826204 [VXX/37915]
Blank Lab ID: 1638525

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by SW8260D

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	10.0U	20.0	6.20	ug/kg
1,1,1-Trichloroethane	12.5U	25.0	7.80	ug/kg
1,1,2,2-Tetrachloroethane	1.00U	2.00	0.620	ug/kg
1,1,2-Trichloroethane	0.500U	1.00	0.500	ug/kg
1,1-Dichloroethane	12.5U	25.0	7.80	ug/kg
1,1-Dichloroethene	12.5U	25.0	7.80	ug/kg
1,1-Dichloropropene	12.5U	25.0	7.80	ug/kg
1,2,3-Trichlorobenzene	50.0U	100	30.0	ug/kg
1,2,3-Trichloropropane	1.00U	2.00	0.620	ug/kg
1,2,4-Trichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2,4-Trimethylbenzene	50.0U	100	30.0	ug/kg
1,2-Dibromo-3-chloropropane	50.0U	100	31.0	ug/kg
1,2-Dibromoethane	0.750U	1.50	0.750	ug/kg
1,2-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,2-Dichloroethane	1.00U	2.00	0.700	ug/kg
1,2-Dichloropropane	5.00U	10.0	5.00	ug/kg
1,3,5-Trimethylbenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
1,3-Dichloropropane	5.00U	10.0	3.10	ug/kg
1,4-Dichlorobenzene	12.5U	25.0	7.80	ug/kg
2,2-Dichloropropane	12.5U	25.0	7.80	ug/kg
2-Butanone (MEK)	125U	250	78.0	ug/kg
2-Chlorotoluene	12.5U	25.0	7.80	ug/kg
2-Hexanone	60.0U	120	60.0	ug/kg
4-Chlorotoluene	10.0U	20.0	10.0	ug/kg
4-Isopropyltoluene	40.0U	80.0	40.0	ug/kg
4-Methyl-2-pentanone (MIBK)	125U	250	78.0	ug/kg
Acetone	125U	250	110	ug/kg
Benzene	6.25U	12.5	3.90	ug/kg
Bromobenzene	12.5U	25.0	7.80	ug/kg
Bromochloromethane	12.5U	25.0	7.80	ug/kg
Bromodichloromethane	1.00U	2.00	0.620	ug/kg
Bromoform	12.5U	25.0	7.80	ug/kg
Bromomethane	10.0U	20.0	8.00	ug/kg
Carbon disulfide	50.0U	100	31.0	ug/kg
Carbon tetrachloride	6.25U	12.5	3.90	ug/kg
Chlorobenzene	12.5U	25.0	7.80	ug/kg
Chloroethane	100U	200	62.0	ug/kg

Print Date: 10/12/2021 4:48:36PM

Method Blank

Blank ID: MB for HBN 1826204 [VXX/37915]
Blank Lab ID: 1638525

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloroform	3.00U	6.00	3.00	ug/kg
Chloromethane	12.5U	25.0	7.80	ug/kg
cis-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
cis-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Dibromochloromethane	2.50U	5.00	1.50	ug/kg
Dibromomethane	12.5U	25.0	7.80	ug/kg
Dichlorodifluoromethane	50.0U	100	30.0	ug/kg
Ethylbenzene	12.5U	25.0	7.80	ug/kg
Freon-113	50.0U	100	31.0	ug/kg
Hexachlorobutadiene	10.0U	20.0	6.20	ug/kg
Isopropylbenzene (Cumene)	12.5U	25.0	7.80	ug/kg
Methylene chloride	50.0U	100	31.0	ug/kg
Methyl-t-butyl ether	50.0U	100	31.0	ug/kg
Naphthalene	12.5U	25.0	7.80	ug/kg
n-Butylbenzene	12.5U	25.0	7.80	ug/kg
n-Propylbenzene	12.5U	25.0	7.80	ug/kg
o-Xylene	12.5U	25.0	7.80	ug/kg
P & M -Xylene	25.0U	50.0	15.0	ug/kg
sec-Butylbenzene	12.5U	25.0	7.80	ug/kg
Styrene	12.5U	25.0	7.80	ug/kg
tert-Butylbenzene	12.5U	25.0	7.80	ug/kg
Tetrachloroethene	6.25U	12.5	3.90	ug/kg
Toluene	12.5U	25.0	7.80	ug/kg
trans-1,2-Dichloroethene	12.5U	25.0	7.80	ug/kg
trans-1,3-Dichloropropene	6.25U	12.5	3.90	ug/kg
Trichloroethene	5.00U	10.0	3.20	ug/kg
Trichlorofluoromethane	25.0U	50.0	15.0	ug/kg
Vinyl acetate	50.0U	100	31.0	ug/kg
Vinyl chloride	0.400U	0.800	0.250	ug/kg
Xylenes (total)	37.5U	75.0	22.8	ug/kg
Surrogates				
1,2-Dichloroethane-D4 (surr)	104	71-136		%
4-Bromofluorobenzene (surr)	95.5	55-151		%
Toluene-d8 (surr)	101	85-116		%

Method Blank

Blank ID: MB for HBN 1826204 [VXX/37915]
Blank Lab ID: 1638525

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by SW8260D

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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Batch Information

Analytical Batch: VMS21219
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 9/27/2021 12:18:00PM

Prep Batch: VXX37915
Prep Method: SW5035A
Prep Date/Time: 9/27/2021 6:00:00AM
Prep Initial Wt./Vol.: 50 g
Prep Extract Vol: 25 mL

Print Date: 10/12/2021 4:48:36PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [VXX37915]

Blank Spike Lab ID: 1638526

Date Analyzed: 09/27/2021 13:32

Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by SW8260D

Blank Spike (ug/kg)				
Parameter	Spike	Result	Rec (%)	CL
1,1,1,2-Tetrachloroethane	750	769	103	(78-125)
1,1,1-Trichloroethane	750	787	105	(73-130)
1,1,2,2-Tetrachloroethane	750	851	113	(70-124)
1,1,2-Trichloroethane	750	817	109	(78-121)
1,1-Dichloroethane	750	844	113	(76-125)
1,1-Dichloroethene	750	731	97	(70-131)
1,1-Dichloropropene	750	756	101	(76-125)
1,2,3-Trichlorobenzene	750	875	117	(66-130)
1,2,3-Trichloropropane	750	833	111	(73-125)
1,2,4-Trichlorobenzene	750	869	116	(67-129)
1,2,4-Trimethylbenzene	750	796	106	(75-123)
1,2-Dibromo-3-chloropropane	750	851	113	(61-132)
1,2-Dibromoethane	750	853	114	(78-122)
1,2-Dichlorobenzene	750	789	105	(78-121)
1,2-Dichloroethane	750	743	99	(73-128)
1,2-Dichloropropane	750	776	103	(76-123)
1,3,5-Trimethylbenzene	750	799	107	(73-124)
1,3-Dichlorobenzene	750	781	104	(77-121)
1,3-Dichloropropane	750	799	107	(77-121)
1,4-Dichlorobenzene	750	798	106	(75-120)
2,2-Dichloropropane	750	881	117	(67-133)
2-Butanone (MEK)	2250	2610	116	(51-148)
2-Chlorotoluene	750	782	104	(75-122)
2-Hexanone	2250	2620	117	(53-145)
4-Chlorotoluene	750	791	105	(72-124)
4-Isopropyltoluene	750	824	110	(73-127)
4-Methyl-2-pentanone (MIBK)	2250	2510	111	(65-135)
Acetone	2250	2180	97	(36-164)
Benzene	750	742	99	(77-121)
Bromobenzene	750	785	105	(78-121)
Bromochloromethane	750	759	101	(78-125)
Bromodichloromethane	750	872	116	(75-127)
Bromoform	750	807	108	(67-132)
Bromomethane	750	734	98	(53-143)

Print Date: 10/12/2021 4:48:38PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [VXX37915]

Blank Spike Lab ID: 1638526

Date Analyzed: 09/27/2021 13:32

Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by SW8260D

Blank Spike (ug/kg)				
Parameter	Spike	Result	Rec (%)	CL
Carbon disulfide	1130	1200	107	(63-132)
Carbon tetrachloride	750	824	110	(70-135)
Chlorobenzene	750	752	100	(79-120)
Chloroethane	750	695	93	(59-139)
Chloroform	750	738	98	(78-123)
Chloromethane	750	729	97	(50-136)
cis-1,2-Dichloroethene	750	753	100	(77-123)
cis-1,3-Dichloropropene	750	796	106	(74-126)
Dibromochloromethane	750	793	106	(74-126)
Dibromomethane	750	808	108	(78-125)
Dichlorodifluoromethane	750	798	106	(29-149)
Ethylbenzene	750	740	99	(76-122)
Freon-113	1130	1080	96	(66-136)
Hexachlorobutadiene	750	925	123	(61-135)
Isopropylbenzene (Cumene)	750	787	105	(68-134)
Methylene chloride	750	810	108	(70-128)
Methyl-t-butyl ether	1130	1350	120	(73-125)
Naphthalene	750	775	103	(62-129)
n-Butylbenzene	750	853	114	(70-128)
n-Propylbenzene	750	775	103	(73-125)
o-Xylene	750	766	102	(77-123)
P & M -Xylene	1500	1490	99	(77-124)
sec-Butylbenzene	750	808	108	(73-126)
Styrene	750	802	107	(76-124)
tert-Butylbenzene	750	791	105	(73-125)
Tetrachloroethene	750	742	99	(73-128)
Toluene	750	737	98	(77-121)
trans-1,2-Dichloroethene	750	771	103	(74-125)
trans-1,3-Dichloropropene	750	817	109	(71-130)
Trichloroethene	750	771	103	(77-123)
Trichlorofluoromethane	750	598	80	(62-140)
Vinyl acetate	750	863	115	(50-151)
Vinyl chloride	750	753	100	(56-135)
Xylenes (total)	2250	2260	100	(78-124)

Print Date: 10/12/2021 4:48:38PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [VXX37915]

Blank Spike Lab ID: 1638526

Date Analyzed: 09/27/2021 13:32

Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by SW8260D

	Blank Spike (ug/kg)			
<u>Parameter</u>	<u>Spike</u>	<u>Result</u>	<u>Rec (%)</u>	<u>CL</u>
Surrogates				
1,2-Dichloroethane-D4 (surr)	750		102	(71-136)
4-Bromofluorobenzene (surr)	750		93	(55-151)
Toluene-d8 (surr)	750		99	(85-116)

Batch Information

Analytical Batch: VMS21219

Analytical Method: SW8260D

Instrument: VRA Agilent GC/MS 7890B/5977A

Analyst: S.S

Prep Batch: VXX37915

Prep Method: SW5035A

Prep Date/Time: 09/27/2021 06:00

Spike Init Wt./Vol.: 750 ug/kg Extract Vol: 25 mL

Dupe Init Wt./Vol.: Extract Vol:

Matrix Spike Summary

Original Sample ID: 1638544
MS Sample ID: 1638545 MS
MSD Sample ID: 1638546 MSD

Analysis Date: 09/27/2021 16:23
Analysis Date: 09/27/2021 14:34
Analysis Date: 09/27/2021 14:50
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1216183001

Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	7.95U	596	630	106	596	620	104	78-125	1.50	(< 20)
1,1,1-Trichloroethane	9.95U	596	628	105	596	726	122	73-130	14.60	(< 20)
1,1,2,2-Tetrachloroethane	0.795U	596	684	115	596	675	113	70-124	1.30	(< 20)
1,1,2-Trichloroethane	0.398U	596	665	112	596	663	111	78-121	0.36	(< 20)
1,1-Dichloroethane	9.95U	596	577	97	596	680	114	76-125	16.50	(< 20)
1,1-Dichloroethene	9.95U	596	565	95	596	544	91	70-131	3.70	(< 20)
1,1-Dichloropropene	9.95U	596	601	101	596	672	113	76-125	11.30	(< 20)
1,2,3-Trichlorobenzene	39.8U	596	730	122	596	826	139	* 66-130	12.40	(< 20)
1,2,3-Trichloropropane	0.795U	596	662	111	596	659	111	73-125	0.51	(< 20)
1,2,4-Trichlorobenzene	9.95U	596	709	119	596	738	124	67-129	4.00	(< 20)
1,2,4-Trimethylbenzene	39.8U	596	659	110	596	639	107	75-123	3.00	(< 20)
1,2-Dibromo-3-chloropropane	39.8U	596	679	114	596	695	117	61-132	2.30	(< 20)
1,2-Dibromoethane	0.595U	596	693	116	596	691	116	78-122	0.34	(< 20)
1,2-Dichlorobenzene	9.95U	596	635	106	596	620	104	78-121	2.30	(< 20)
1,2-Dichloroethane	0.795U	596	588	99	596	585	98	73-128	0.58	(< 20)
1,2-Dichloropropane	3.98U	596	616	103	596	606	102	76-123	1.70	(< 20)
1,3,5-Trimethylbenzene	9.95U	596	650	109	596	630	106	73-124	3.10	(< 20)
1,3-Dichlorobenzene	9.95U	596	641	108	596	629	106	77-121	1.90	(< 20)
1,3-Dichloropropane	3.98U	596	650	109	596	643	108	77-121	1.10	(< 20)
1,4-Dichlorobenzene	9.95U	596	645	108	596	628	105	75-120	2.80	(< 20)
2,2-Dichloropropane	9.95U	596	698	117	596	817	137	* 67-133	15.70	(< 20)
2-Butanone (MEK)	99.5U	1790	2040	114	1790	2160	121	51-148	5.90	(< 20)
2-Chlorotoluene	9.95U	596	645	108	596	631	106	75-122	2.30	(< 20)
2-Hexanone	47.7U	1790	2130	119	1790	2160	121	53-145	1.30	(< 20)
4-Chlorotoluene	7.95U	596	632	106	596	621	104	72-124	1.70	(< 20)
4-Isopropyltoluene	31.8U	596	658	110	596	649	109	73-127	1.40	(< 20)
4-Methyl-2-pentanone (MIBK)	99.5U	1790	2000	112	1790	1990	111	65-135	0.23	(< 20)
Acetone	99.5U	1790	1680	94	1790	1650	92	36-164	1.80	(< 20)
Benzene	30.4	596	623	99	596	607	97	77-121	2.60	(< 20)
Bromobenzene	9.95U	596	631	106	596	613	103	78-121	2.80	(< 20)
Bromochloromethane	9.95U	596	603	101	596	701	118	78-125	15.10	(< 20)
Bromodichloromethane	0.795U	596	694	116	596	684	115	75-127	1.40	(< 20)
Bromoform	9.95U	596	656	110	596	653	110	67-132	0.49	(< 20)
Bromomethane	7.95U	596	569	95	596	539	90	53-143	5.40	(< 20)
Carbon disulfide	39.8U	894	891	100	894	856	96	63-132	4.00	(< 20)
Carbon tetrachloride	4.97U	596	658	110	596	751	126	70-135	13.30	(< 20)
Chlorobenzene	9.95U	596	612	103	596	600	101	79-120	2.10	(< 20)

Print Date: 10/12/2021 4:48:39PM

Matrix Spike Summary

Original Sample ID: 1638544
MS Sample ID: 1638545 MS
MSD Sample ID: 1638546 MSD

Analysis Date: 09/27/2021 16:23
Analysis Date: 09/27/2021 14:34
Analysis Date: 09/27/2021 14:50
Matrix: Solid/Soil (Wet Weight)

QC for Samples: 1216183001

Results by SW8260D

Parameter	Sample	Matrix Spike (ug/kg)			Spike Duplicate (ug/kg)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroethane	79.5U	596	568	95	596	523	88	59-139	8.30	(< 20)
Chloroform	2.38U	596	591	99	596	687	115	78-123	15.00	(< 20)
Chloromethane	9.95U	596	532	89	596	498	84	50-136	6.50	(< 20)
cis-1,2-Dichloroethene	9.95U	596	592	99	596	689	116	77-123	15.20	(< 20)
cis-1,3-Dichloropropene	4.97U	596	635	106	596	628	105	74-126	1.00	(< 20)
Dibromochloromethane	1.99U	596	642	108	596	641	107	74-126	0.28	(< 20)
Dibromomethane	9.95U	596	643	108	596	640	107	78-125	0.53	(< 20)
Dichlorodifluoromethane	39.8U	596	467	78	596	448	75	29-149	4.20	(< 20)
Ethylbenzene	9.95U	596	603	101	596	591	99	76-122	2.00	(< 20)
Freon-113	39.8U	894	819	92	894	789	88	66-136	3.70	(< 20)
Hexachlorobutadiene	7.95U	596	657	110	596	683	115	61-135	3.90	(< 20)
Isopropylbenzene (Cumene)	9.95U	596	647	109	596	631	106	68-134	2.50	(< 20)
Methylene chloride	39.8U	596	612	103	596	618	104	70-128	1.00	(< 20)
Methyl-t-butyl ether	39.8U	894	907	101	894	1080	121	73-125	17.40	(< 20)
Naphthalene	9.95U	596	647	108	596	697	117	62-129	7.40	(< 20)
n-Butylbenzene	9.95U	596	671	113	596	660	111	70-128	1.70	(< 20)
n-Propylbenzene	9.95U	596	635	106	596	612	103	73-125	3.60	(< 20)
o-Xylene	9.95U	596	630	106	596	610	102	77-123	3.30	(< 20)
P & M -Xylene	19.9U	1190	1210	101	1190	1190	100	77-124	1.50	(< 20)
sec-Butylbenzene	9.95U	596	651	109	596	629	106	73-126	3.40	(< 20)
Styrene	9.95U	596	659	111	596	653	110	76-124	0.97	(< 20)
tert-Butylbenzene	9.95U	596	633	106	596	619	104	73-125	2.30	(< 20)
Tetrachloroethene	4.97U	596	613	103	596	588	99	73-128	4.10	(< 20)
Toluene	9.95U	596	607	102	596	590	99	77-121	2.90	(< 20)
trans-1,2-Dichloroethene	9.95U	596	528	89	596	598	100	74-125	12.40	(< 20)
trans-1,3-Dichloropropene	4.97U	596	665	112	596	658	110	71-130	1.10	(< 20)
Trichloroethene	3.98U	596	619	104	596	602	101	77-123	2.90	(< 20)
Trichlorofluoromethane	19.9U	596	665	112	596	620	104	62-140	7.00	(< 20)
Vinyl acetate	39.8U	596	686	115	596	838	141	50-151	20.00	(< 20)
Vinyl chloride	0.318U	596	550	92	596	530	89	56-135	3.70	(< 20)
Xylenes (total)	29.8U	1790	1840	103	1790	1800	101	78-124	2.10	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		596	602	101	596	602	101	71-136	0.03	
4-Bromofluorobenzene (surr)		994	768	77	994	758	76	55-151	1.30	
Toluene-d8 (surr)		596	597	100	596	594	100	85-116	0.43	

Print Date: 10/12/2021 4:48:39PM

Matrix Spike Summary

Original Sample ID: 1638544
MS Sample ID: 1638545 MS
MSD Sample ID: 1638546 MSD

QC for Samples: 1216183001

Analysis Date:
Analysis Date: 09/27/2021 14:34
Analysis Date: 09/27/2021 14:50
Matrix: Solid/Soil (Wet Weight)

Results by SW8260D

Parameter	Sample	Matrix Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			

Batch Information

Analytical Batch: VMS21219
Analytical Method: SW8260D
Instrument: VRA Agilent GC/MS 7890B/5977A
Analyst: S.S
Analytical Date/Time: 9/27/2021 2:34:00PM

Prep Batch: VXX37915
Prep Method: Vol. Extraction SW8260 Field Extracted L
Prep Date/Time: 9/27/2021 6:00:00AM
Prep Initial Wt./Vol.: 62.90g
Prep Extract Vol: 25.00mL

Print Date: 10/12/2021 4:48:39PM

Method Blank

Blank ID: MB for HBN 1826010 [XXX/45606]
Blank Lab ID: 1637675

Matrix: Soil/Solid (dry weight)

QC for Samples:
1216183001

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	10.0U	20.0	9.00	mg/kg
Surrogates				
5a Androstane (surr)	89.1	60-120		%

Batch Information

Analytical Batch: XFC16092
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: IVM
Analytical Date/Time: 9/30/2021 9:35:00PM

Prep Batch: XXX45606
Prep Method: SW3550C
Prep Date/Time: 9/23/2021 8:28:03AM
Prep Initial Wt./Vol.: 30 g
Prep Extract Vol: 5 mL

Print Date: 10/12/2021 4:48:40PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [XXX45606]
 Blank Spike Lab ID: 1637676
 Date Analyzed: 09/30/2021 21:44

Spike Duplicate ID: LCSD for HBN 1216183 [XXX45606]
 Spike Duplicate Lab ID: 1637677
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by AK102

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	667	735	110	667	630	95	(75-125)	15.40	(< 20)
Surrogates									
5a Androstane (surr)	16.7		109	16.7		92	(60-120)	16.20	

Batch Information

Analytical Batch: **XFC16092**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **IVM**

Prep Batch: **XXX45606**
 Prep Method: **SW3550C**
 Prep Date/Time: **09/23/2021 08:28**
 Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 10/12/2021 4:48:43PM

Method Blank

Blank ID: MB for HBN 1826010 [XXX/45606]

Blank Lab ID: 1637675

QC for Samples:

1216183001

Matrix: Soil/Solid (dry weight)

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	50.0U	100	43.0	mg/kg
Surrogates				
n-Triacontane-d62 (surr)	80.7	60-120		%

Batch Information

Analytical Batch: XFC16092

Analytical Method: AK103

Instrument: Agilent 7890B R

Analyst: IVM

Analytical Date/Time: 9/30/2021 9:35:00PM

Prep Batch: XXX45606

Prep Method: SW3550C

Prep Date/Time: 9/23/2021 8:28:03AM

Prep Initial Wt./Vol.: 30 g

Prep Extract Vol: 5 mL

Print Date: 10/12/2021 4:48:45PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1216183 [XXX45606]
 Blank Spike Lab ID: 1637676
 Date Analyzed: 09/30/2021 21:44

Spike Duplicate ID: LCSD for HBN 1216183 [XXX45606]
 Spike Duplicate Lab ID: 1637677
 Matrix: Soil/Solid (dry weight)

QC for Samples: 1216183001

Results by AK103

Parameter	Blank Spike (mg/kg)			Spike Duplicate (mg/kg)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	667	642	96	667	546	82	(60-120)	16.20	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	16.7		94	16.7		79	(60-120)	17.00	

Batch Information

Analytical Batch: **XFC16092**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B R**
 Analyst: **IVM**

Prep Batch: **XXX45606**
 Prep Method: **SW3550C**
 Prep Date/Time: **09/23/2021 08:28**
 Spike Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 667 mg/kg Extract Vol: 5 mL

Print Date: 10/12/2021 4:48:47PM

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Review Criteria		Condition (Yes, No, N/A)		Exceptions Noted below	
Chain of Custody / Temperature Requirements		N/A		Exemption permitted if sampler hand carries/delivers.	
Were Custody Seals intact? Note # & location		N/A			
COC accompanied samples?		Yes			
DOD: Were samples received in COC corresponding coolers?		N/A			
<div>Yes</div> **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required					
Temperature blank compliant* (i.e., 0-6 °C after CF)?		Yes		Cooler ID: 1	@ 3.2 °C Therm. ID: D60
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		N/A		Cooler ID:	@ °C Therm. ID:
		N/A		Cooler ID:	@ °C Therm. ID:
		N/A		Cooler ID:	@ °C Therm. ID:
		N/A		Cooler ID:	@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		Yes			
If <0°C, were sample containers ice free?		N/A			
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.					
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.			
Were samples received within holding time?		Yes			
Do samples match COC** (i.e., sample IDs, dates/times collected)? **Note: If times differ <1hr, record details & login per COC. ***Note: If sample information on containers differs from COC, SGS will default to COC information		Yes			
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals))		Yes			
Were proper containers (type/mass/volume/preservative***) used?		Yes		<div>Yes</div> ***Exemption permitted for metals (e.g. 200.8/6020B).	
Volatile / LL-Hg Requirements					
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?		Yes			
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		N/A			
Were all soil VOAs field extracted with MeOH+BFB?		Yes			
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.					
Additional notes (if applicable):					

Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1216183001-A	No Preservative Required	OK			
1216183001-B	Methanol field pres. 4 C	OK			
1216183002-A	Methanol field pres. 4 C	OK			

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.

BU - The container was received with headspace greater than 6mm.

DM - The container was received damaged.

FR - The container was received frozen and not usable for Bacteria or BOD analyses.

IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.

NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.

PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.

QN - Insufficient sample quantity provided.

APPENDIX C
LABORATORY ANALYTICAL DATA QUALITY CONTROL CHECKLIST

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sam Bundy	CS Site Name:	Texaco / Hanna Car Care Center	Lab Name:	SGS North America, Inc.
Title:	Environmental Scientist I	ADEC File No.:	2100.26.274	Lab Report No.:	1211995
Consulting Firm:	BGES, Inc.	Hazard ID No.:	23025	Lab Report Date:	05/06/2021

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.
- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
Yes ☐ No ☐ N/A ☒
Comments: Samples were not transferred to another “network” laboratory

2. Chain of Custody (CoC)

- a. Is the CoC information completed, signed, and dated (including released/received by)?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.
- b. Were the correct analyses requested?
Yes ☒ No ☐ N/A ☐
Analyses requested: Gasoline Range Organics - AK101; VOCs - Method 8260D; and PAHS - Method 8270D SIM
Comments: Click or tap here to enter text.

3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes ☒ No ☐ N/A ☐
Cooler temperature(s): 5.7 degrees Celsius

Sample temperature(s): Click or tap here to enter text.

Comments: Click or tap here to enter text.

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

Yes ☐ No ☐ N/A ☒

Comments: No unusual sample conditions were noted by the laboratory

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were noted by the laboratory.

- e. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: No unusual sample conditions or sample discrepancies were noted by the laboratory.

4. Case Narrative

- a. Is the case narrative present and understandable?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes ☒ No ☐ N/A ☐

Comments: The recovery of surrogate fluoranthene-d10 associated with PAHs analysis in groundwater Samples MW-6 and MW-8 was below the acceptance criteria, indicating a potential for the laboratory results associated with PAHs, which are associated with surrogate fluoranthene-d10 to be biased low in these project samples. However, because the PAH analytes associated with surrogate fluoranthene-d10 were non-detectable in these samples, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

The recoveries for numerous PAH analytes were below the laboratory's acceptance ranges in the matrix spike duplicate (MSD) sample associated with Groundwater Sample MW-6; indicating a potential for the reported concentrations of these analytes within the associated field samples to be biased low. However, because these PAH analytes were non-detectable in the associated field sample

MW-6, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

The relative percent differences (RPDs) for numerous PAH analytes in the matrix spike (MS)/MSD sample pair associated with analyses of PAHs for Sample MW-6 exceeded the laboratory's acceptance criteria, indicating poor laboratory precision for these analytes. However, because the MS and MSD samples were derived from soils from another project it is our opinion that these QC failures do not affect the interpretation of the data. Additionally, because these PAH analytes were non-detectable in the associated project Sample MW-6, and because the LOQs were more than one order of magnitude below the ADEC cleanup criteria; it is our opinion that this QC failure does not affect the interpretation of the data.

The LOQ and the detection limit (DL) for 1,2,3-trichloropropane exceeded the ADEC cleanup criterion in Samples MW-5, MW-6, MW-7, and MW-8. This analyte is presented in italics and is underlined in Table 3. In these instances, where the analytes were not detected above the LOQ or the DL, it cannot be determined if the actual concentrations of this analyte exceed the applicable ADEC cleanup criterion.

- c. Were all the corrective actions documented?

Yes ☒ No ☐ N/A ☐

Comments: See 4.b. above.

- d. What is the effect on data quality/usability according to the case narrative?

Comments: See 4.b. above.

5. Sample Results

- a. Are the correct analyses performed/reported as requested on CoC?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- b. Are all applicable holding times met?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- c. Are all soils reported on a dry weight basis?

Yes ☐ No ☐ N/A ☒

Comments: No soil samples were submitted for this laboratory work order.

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- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?

Yes ☐ No ☒ N/A ☐

Comments: See 4.b. above.

- e. Is the data quality or usability affected?

Yes ☒ No ☐ N/A ☐

Comments: See 4.b

6. QC Samples

a. Method Blank

- i. Was one method blank reported per matrix, analysis, and 20 samples?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- ii. Are all method blank results less than LOQ (or RL)?

Yes ☒ No ☐

Comments:

- iii. If above LoQ or RL, what samples are affected?

Comments: Click or tap here to enter text.

- iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☐ N/A ☒

Comments: No data qualifiers were associated with method blank results.

- v. Data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: See 6.a. iv. above.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes ☒ No ☐ N/A ☐

Comments:

- ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes ☐ No ☐ N/A ☒

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Comments: The soil samples were not analyzed for metals / inorganics for this work order.

- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes ☒ No ☐ N/A ☐

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments: Click or tap here to enter text.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☐ N/A ☒

Comments: No LCS/LCSD sample QC issues were identified by the laboratory.

- vii. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: No LCS/LCSD sample QC issues were identified by the laboratory.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes ☐ No ☐ N/A ☒

Comments: The samples were not analyzed for metals and inorganics for this laboratory report.

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Lab Report No.: 1211995

- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments: See 4. b. above.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☒ No ☐ N/A ☐

Comments: See 4. b. above.

- vii. Is the data quality or usability affected?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- iv. Is the data quality or usability affected?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

e. Trip Blanks

- i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- ii. Are all results less than LoQ or RL?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- iii. If above LoQ or RL, what samples are affected?

Comments: Click or tap here to enter text.

- iv. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: All trip blank results were below the RLs.

f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes ☒ No ☐ N/A ☐

Comments:

- ii. Was the duplicate submitted blind to lab?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☒ No ☐ N/A ☐

Comments: Sample MW-5 was a duplicate of Sample MW-7 and was collected to evaluate field sampling precision. The RPDs between the reported concentrations in these sample could not be calculated because no analytes were detected above the LOQs.

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iv. Is the data quality or usability affected? (Explain)

Yes ☐ No ☐ N/A ☒

Comments: See 6.f.iii.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?

Yes ☐ No ☐ N/A ☒

Comments: No decontamination or equipment blank samples were collected because they were not part of the scope work for this project.

ii. Are all results less than LoQ or RL?

Yes ☐ No ☐ N/A ☒

Comments: See 6.g.i.

iii. If above LoQ or RL, specify what samples are affected.

Comments: Click or tap here to enter text.

iv. Are data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: See 6.g.i.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

Yes ☐ No ☐ N/A ☒

Comments: No other data flags are applicable.

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sam Bundy	CS Site Name:	Texaco / Hanna Car Care Center	Lab Name:	SGS North America, Inc.
Title:	Environmental Scientist I	ADEC File No.:	2100.26.274	Lab Report No.:	1216183
Consulting Firm:	BGES, Inc.	Hazard ID No.:	23025	Lab Report Date:	10/14/2021

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

- a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.
- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
Yes ☐ No ☐ N/A ☒
Comments: Samples were not transferred to another “network” laboratory

2. Chain of Custody (CoC)

- a. Is the CoC information completed, signed, and dated (including released/received by)?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.
- b. Were the correct analyses requested?
Yes ☒ No ☐ N/A ☐
Analyses requested: AK101-Gasoline Range Organics, AK102-Diesel Range Organics, AK103-Residual Range Organics, Method 8260D-Volatile Organic Compounds, Method 6020B-Lead
Comments: Click or tap here to enter text.

3. Laboratory Sample Receipt Documentation

- a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
Yes ☒ No ☐ N/A ☐

CS Site Name: Texaco / Hanna Car Care Center

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Cooler temperature(s): 3.2 degrees Celsius

Sample temperature(s): Click or tap here to enter text.

Comments: Click or tap here to enter text.

- b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?

Yes ☒ No ☐ N/A ☐

Comments: No unusual sample conditions or discrepancies were noted by the laboratory.

- d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were noted by the laboratory

- e. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were noted by the laboratory

4. Case Narrative

- a. Is the case narrative present and understandable?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- b. Are there discrepancies, errors, or QC failures identified by the lab?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

Were all the corrective actions documented?

Yes ☒ No ☐ N/A ☐

Comments: The recoveries for 1,2,3-trichlorobenzene and 2,2-dichloropropane exceeded the laboratory's acceptance ranges in the MSD sample associated with Sample DWC-0920; indicating a potential for the reported concentrations of these analytes within the associated field sample to be biased high. However, because this sample was derived from soil from another project site; it is our opinion that these QC failures are likely attributable to matrix effects inherent to soil from the other project, and they do not affect the acceptability of the data for their intended use.

The LOQs for 1,2-dibromoethane (EDB), 1,2,3-trichloropropane, and

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Lab Report No.: 1216183

dibromochloromethane exceeded the ADEC cleanup criteria in Sample DWC-0920. These analytes are shown in italics in Table 4. In addition, DLs for 1,2-dibromoethane (EDB) and 1,2,3-trichloropropane exceeded the ADEC cleanup criteria in this sample. These analytes are also underlined in Table 4. In these instances, where the analytes were not detected above the LOQs, it cannot be determined if the actual concentrations of those analytes exceed the applicable ADEC cleanup criteria.

- c. Were all the corrective actions documented?

Yes ☒ No ☐ N/A ☐

Comments: See 4. B. above.

- d. What is the effect on data quality/usability according to the case narrative?

Comments: See 4. b. above.

5. Sample Results

- a. Are the correct analyses performed/reported as requested on CoC?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- b. Are all applicable holding times met?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- c. Are all soils reported on a dry weight basis?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- e. Is the data quality or usability affected?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

6. QC Samples

- a. Method Blank

- i. Was one method blank reported per matrix, analysis, and 20 samples?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

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- ii. Are all method blank results less than LOQ (or RL)?

Yes ☒ No ☐

Comments:

- iii. If above LoQ or RL, what samples are affected?

Comments: Click or tap here to enter text.

- iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☐ N/A ☒

Comments: No data qualifiers associated with method blank results were identified by the laboratory.

- v. Data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were identified by the laboratory.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

- i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes ☐ No ☒ N/A ☐

Comments: An LCSD was not performed for Method 8260D.

- ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes ☐ No ☒ N/A ☐

Comments: An LCSD was not performed for Method 6020B-Lead.

- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes ☒ No ☐ N/A ☐

Comments:

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

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Comments: Click or tap here to enter text.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were identified by the laboratory.

- vii. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: No discrepancies were identified by the laboratory.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

- i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes ☐ No ☒ N/A ☐

Comments: An MS/MSD sample pair was not performed for AK101, AK102, or AK103

- ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?

Yes ☐ No ☒ N/A ☒

Comments: A MS/MSD sample pair were not performed for Method 6020-lead.

- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?

Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

- iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments: See 4. b. above.

- vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes ☒ No ☐ N/A ☐

Comments: See 4. b. above.

- vii. Is the data quality or usability affected?

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Yes ☐ No ☒ N/A ☐

Comments: See 4. b. above.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

- i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?

Yes ☒ No ☐ N/A ☐

Comments: Click or tap here to enter text.

- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)

Yes ☐ No ☐ N/A ☒

Comments: All surrogate recoveries were within acceptable limits.

- iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes ☐ No ☐ N/A ☒

Comments: All surrogate recoveries were within acceptable limits.

- iv. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: All surrogate recoveries were within acceptable limits.

e. Trip Blanks

- i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☐ No ☒ N/A ☐

Comments: A trip blank was submitted to the laboratory as part of this work order; however, it was not analyzed because this sample was utilized for waste characterization purposes.

- ii. Are all results less than LoQ or RL?

Yes ☐ No ☐ N/A ☒

Comments: See 6. e. i. above.

- iii. If above LoQ or RL, what samples are affected?

Comments: Click or tap here to enter text.

- iv. Is the data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: See 6. e. i above.

f. Field Duplicate

- i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?

Yes ☐ No ☒ N/A ☐

Comments: A field duplicate sample was not collected for these waste characterization sampling activities.

- ii. Was the duplicate submitted blind to lab?

Yes ☐ No ☐ N/A ☒

Comments: A field duplicate sample was not collected for these waste characterization sampling activities.

- iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☐ No ☐ N/A ☒

Comments: A field duplicate sample was not collected for these waste characterization sampling activities

- iv. Is the data quality or usability affected? (Explain)

Yes ☐ No ☐ N/A ☒

Comments: A field duplicate sample was not collected for these waste characterization sampling activities

g. Decontamination or Equipment Blanks

- i. Were decontamination or equipment blanks collected?

Yes ☐ No ☐ N/A ☒

Comments: No decontamination or equipment blank samples were collected for this project.

- ii. Are all results less than LoQ or RL?

Yes ☐ No ☐ N/A ☒

Comments: See 6. g. i. above.

- iii. If above LoQ or RL, specify what samples are affected.

Comments: Click or tap here to enter text.

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iv. Are data quality or usability affected?

Yes ☐ No ☐ N/A ☒

Comments: See 6. g. i. above.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?

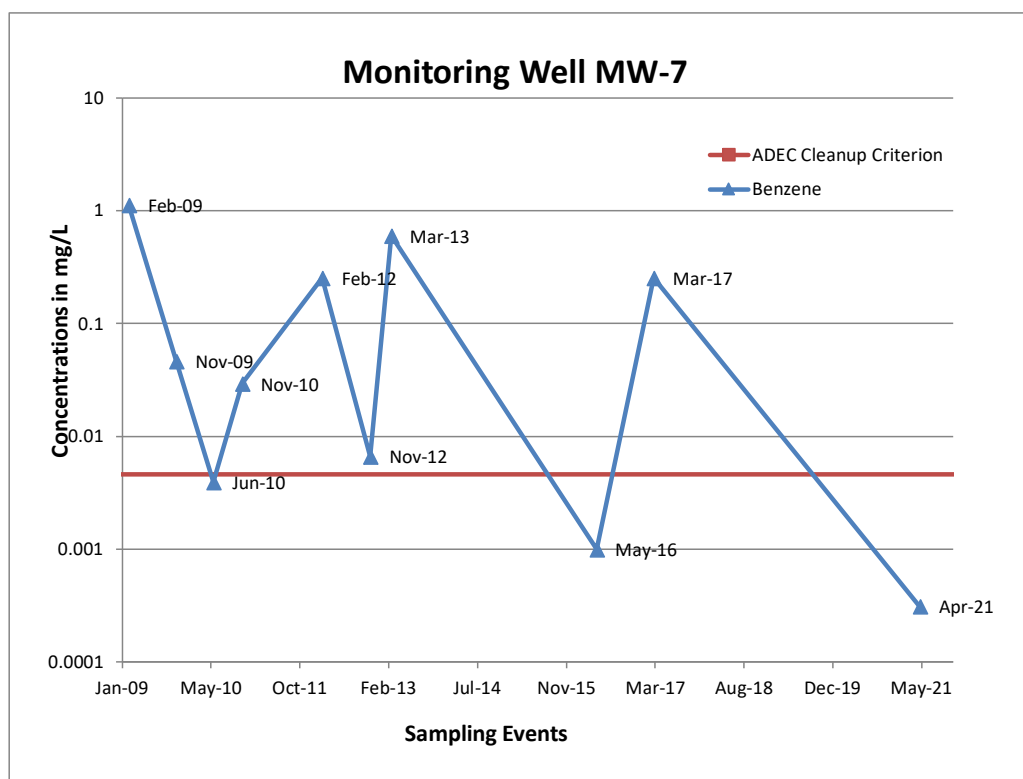
Yes ☐ No ☐ N/A ☒

Comments: No other data flags are applicable.

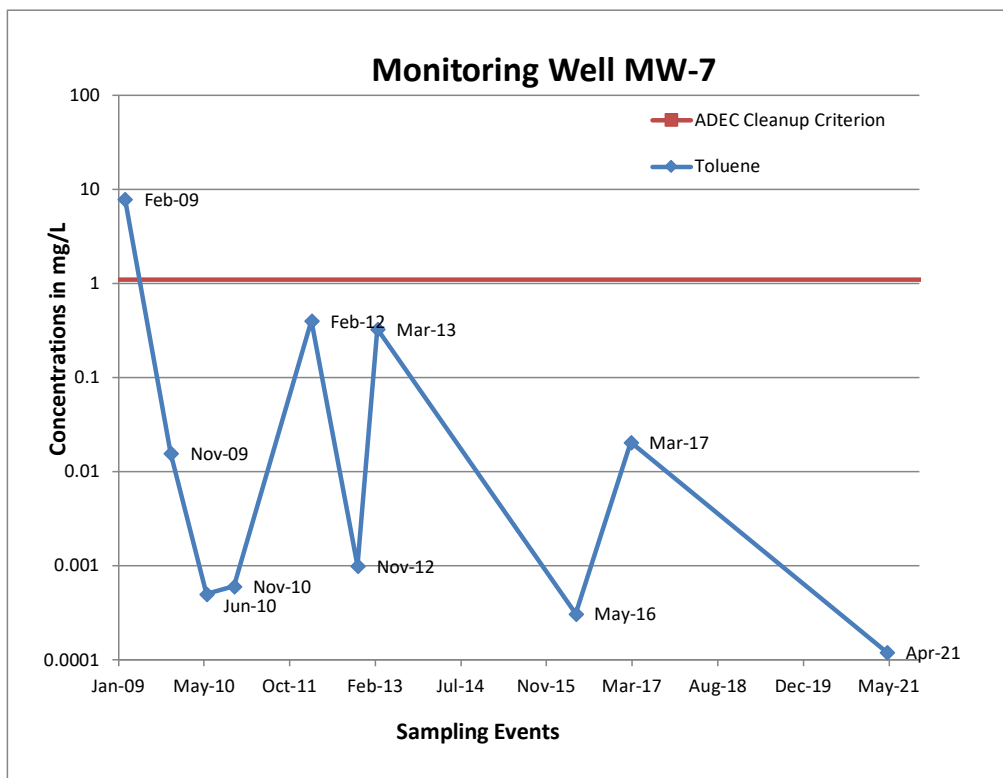
APPENDIX D
GRAPHS OF HISTORICAL CONTAMINANT CONCENTRATION TRENDS

**FORMER HANNA CAR CARE CENTER
2201 WEST DIMOND BOULEVARD
GRAPHS OF HISTORICAL CONTAMINANT CONCENTRATION TRENDS**

BGES, INC



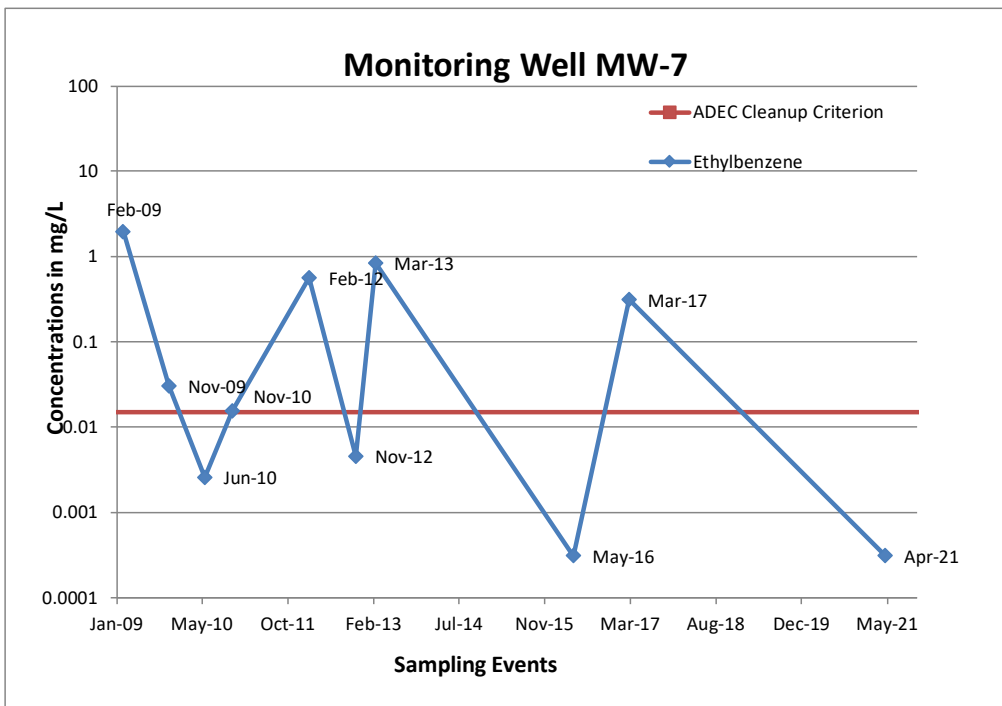
Note: Benzene was not detected above the method reporting limits (MRLs)/ limits of quantitation (LOQs) within the samples collected in April 2021. The MRLs/LOQs were used for the purposes of graphical representation.



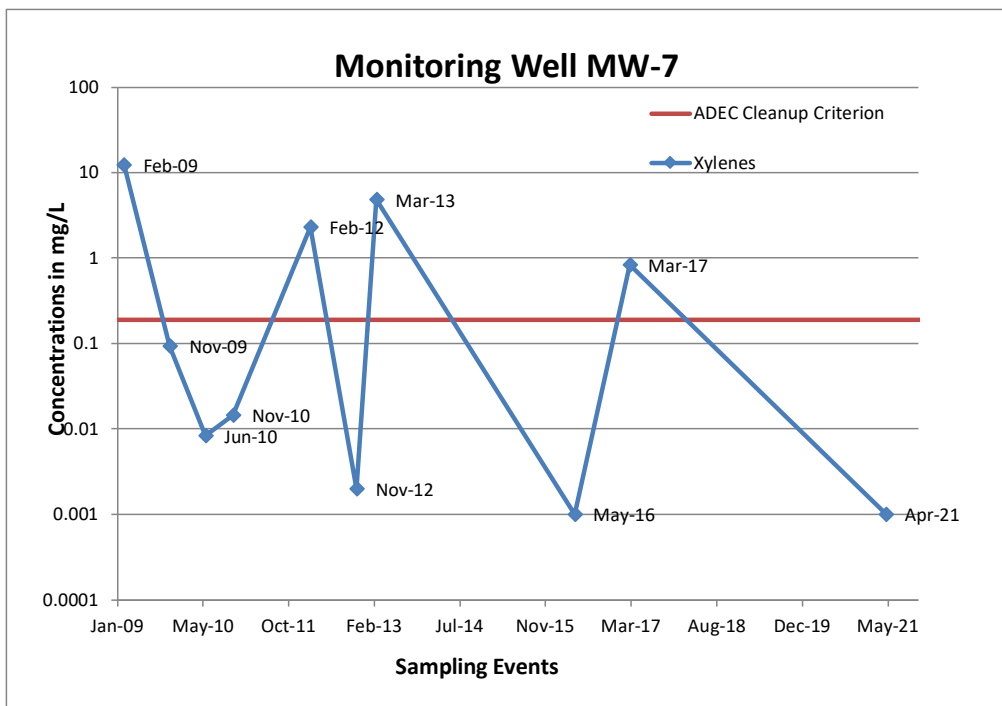
Note: Toluene was not detected above the method reporting limits (MRLs)/ limits of quantitation (LOQs) within the samples collected in June 2010, November 2012 and April 2021. The MRLs/LOQs were used for the purposes of graphical representation.

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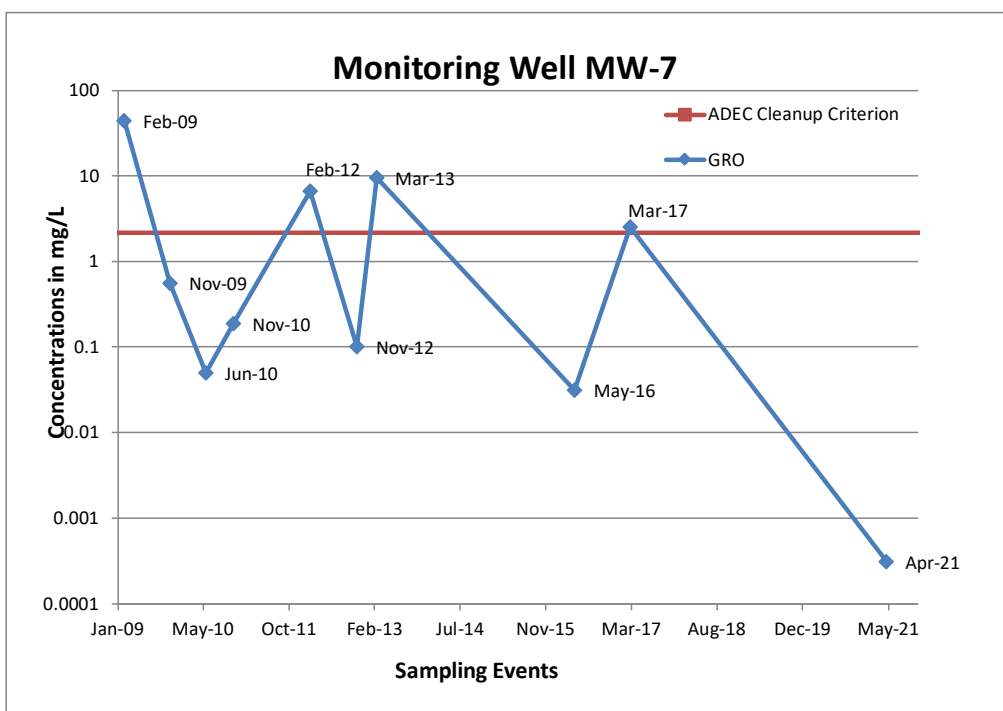
Note: Ethylbenzene was not detected above the LOQs within the samples collected in May 2016 and April 2021. The LOQ was used for the purposes of graphical representation.



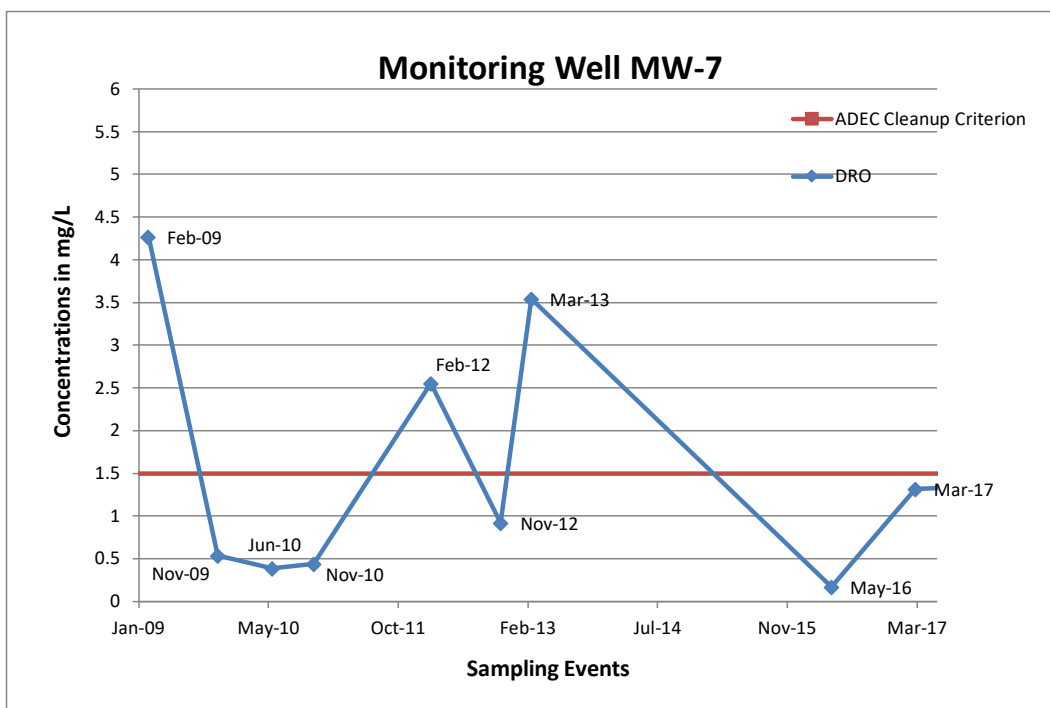
Note: Xylenes were not detected above the MRLs/LOQs within the samples collected in June 2010, November 2012, May 2016 and April 2021. The MRLs/LOQs were used for the purposes of graphical representation.

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Note: GRO was not detected above the MRLs/LOQs within the samples collected in June 2010, November 2012, May 2016 and April 2021. The MRLs/LOQs were used for the purposes of graphical representation.



Note: DRO was not detected above the method reporting limit within the sample collected in June 2010 and May 2016. The MRLs/LOQs were used for the purposes of graphical representation. DRO was not sampled for during the 2021 sampling event.