

BGES, INC.

ENVIRONMENTAL CONSULTANTS

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

GROUNDWATER MONITORING REPORT

May 2017

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

Submitted by: BGES, INC.

**1042 East 6th Avenue
Anchorage, Alaska 99501
Ph: (907) 644-2900
Fax: (907) 644-2901**

**Eagle River Office
(907) 696-BGES (2437)**

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	BACKGROUND	1
3.0	SITE ACTIVITIES	3
4.0	EVALUATION OF LABORATORY DATA.....	5
5.0	LABORATORY DATA QUALITY REVIEW.....	6
6.0	CONCEPTUAL SITE MODEL	8
7.0	CONCLUSIONS AND RECOMMENDATIONS	8
8.0	EXCLUSIONS AND CONSIDERATIONS	9

FIGURES (Located at End of report)

Figure 1	Site Vicinity Map
Figure 2	Monitoring Well Locations & Relative Groundwater Elevations
Figure 3	Monitoring Well Locations & Sample Results

TABLES (Located at End of Report)

Table 1	March 2017 Monitoring Well Sampling Data
Table 2	Analytical Results – Water Samples (March 2017)
Table 3	Historical Groundwater Monitoring Data

APPENDICES (Located at End of Report)

Appendix A	Field Notes & Groundwater Monitoring Logs
Appendix B	Laboratory Analytical Data
Appendix C	Laboratory Analytical Data Quality Control Checklist
Appendix D	Graphs of Historical Contaminant Concentration Trends

ACRONYMS

AAC	-	Alaska Administrative Code
ADEC	-	Alaska Department of Environmental Conservation
AK	-	Alaska Method
BGES	-	Braunstein Geological and Environmental Services
BTEX	-	Benzene, Toluene, Ethylbenzene, and Xylenes
C	-	Celsius
COC	-	Chain of Custody
CSM	-	Conceptual Site Model
DRO	-	Diesel Range Organics
EPA	-	Environmental Protection Agency
GRO	-	Gasoline Range Organics
IDW	-	Investigation-Derived Waste
LCS	-	Laboratory Control Sample
LCSD	-	Laboratory Control Sample Duplicate
LOQ	-	Limit of Quantitation
LUST	-	Leaking Underground Storage Tank
MS	-	Matrix Spike
MSD	-	Matrix Spike Duplicate
mg/L	-	Milligrams per Liter
ml/min	-	Milliliters per Minute
MRLs	-	Method Reporting Limits
N/A	-	Not Available
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.
µg/L	-	Micrograms per Liter
USTs	-	Underground Storage Tanks
VOCs	-	Volatile Organic Compounds

1.0 INTRODUCTION

BGES, Inc. (BGES) was retained by Curt Nading of Commercial Rest Estate Alaska, LLC to conduct groundwater monitoring activities at the former Hanna Dimond Car Care Center, located at 2201 West Dimond Boulevard, Anchorage, Alaska, hereafter referred to as the subject property (Figure 1). The site is currently undergoing long-term groundwater monitoring related to releases from three leaking underground storage tanks (LUSTs) that were removed from the subject property in 2007. Based on the results from the March 2013 groundwater monitoring report, it was requested by Robert Weimer, Alaska Department of Environmental Conservation (ADEC) Project Manager, that Monitoring Wells MW-6, MW-7, and MW-8 have depth to water measurements and measurements of the thickness of any product at the top and bottom in each well recorded. He also requested that a groundwater sample be collected from Monitoring Wells MW-6 and MW-7 and submitted to the laboratory for analysis.

2.0 BACKGROUND

The subject property is an active Contaminated Site as listed in the ADEC Contaminated Sites database (File Number 2100.26.274). 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 typical 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 MW6 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 groundwater 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.

Because it is apparent that the greatest contaminant concentrations within MW-7 have been observed during late winter months, additional groundwater monitoring was requested by the ADEC during this time period.

3.0 SITE ACTIVITIES

BGES mobilized to the site on March 23, 2017 to check for free product at the top and bottom of the water column in MW-6, MW-7, and MW-8; and to collect water samples from MW-6 and MW-7.

An oil/water interface probe was used to check for free product at the top and bottom of the water column in each monitoring well and the depths to water and total depths of each well were each recorded in the field book. A thin layer of ice was present approximately three feet below the top of the polyvinyl chloride (PVC) casing in MW-7. The ice was cleared with a 6-foot steel breaker bar. All other wells were free of ice and no obstructions were noted within the PVC casing. The breaker bar and interface probe were decontaminated prior to use by washing them

in an Alconox (laboratory grade detergent) solution, followed by a distilled water rinse. Using the groundwater information, as well as the diameters of the well casings, the volume of water in each well was calculated. Free product was not identified by the oil/water interface probe within any of the three wells. The bottom 0.7 foot of MW-7 contained what appeared to be bentonite and an unidentifiable black substance. Neither the bentonite nor the black substance exhibited a petroleum odor.

After the depths to water readings were obtained, Monitoring Wells MW-6 and MW-7 were purged utilizing a submersible bladder pump. After removal of at least one well volume, groundwater quality parameters for pH, conductivity, oxidation reduction potential, and temperature were measured utilizing a YSI Professional Plus water quality meter and a flow-through cell; these measurements were recorded on groundwater monitoring logs, which are presented in Table 1. Purging of MW-7 continued until one well volume was removed and the well parameters had stabilized. Purging continued in MW-6 until two well volumes were removed and the entire well casing was evacuated; in accordance with the ADEC Field Sampling Guidance (March 2016).

Upon completion of the purging activities, the groundwater samples were collected with the submersible bladder pump utilizing low-flow sampling techniques. Prior to collecting groundwater samples, the flow-through cell was removed from the sample chain in accordance with the ADEC Field Sampling Guidance. 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 and sampling activities ranged from 50 to 150 milliliters per minute (ml/min). Groundwater was pumped directly into the laboratory-supplied sample jars, and the samples 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 (labeled MW9) and was submitted “blindly” to the laboratory for analyses. The depths to water and the total depth of the wells are presented in Table 1 and copies of the groundwater monitoring logs are presented in Appendix A.

The samples were stored and transported in a chilled cooler and were delivered under chain of custody protocol to SGS Environmental Services Inc. (SGS) in Anchorage on March 24, 2016.

As a quality control measure, a trip blank sample accompanied the water samples scheduled for volatile analyses during the entire sampling and handling process.

Investigation-derived waste (IDW) generated during sampling was separated by monitoring well and containerized in two, 5-gallon buckets. In addition, decontamination water was containerized in one, 5-gallon bucket. For convenience of disposal, all purge and decontamination water was consolidated into one 5-gallon bucket. The investigation-derived wastes were stored onsite. The 5-gallon bucket was clearly labeled with the monitoring well identification numbers, BGES' contact information, and a description of the contents (Field Notes are included in Appendix A).

Utilizing the measured depths to water and the monitoring well elevations which were surveyed during May 2016 activities, the groundwater elevations in each of the three monitoring wells were calculated. Then the calculated groundwater elevations for the subject property were utilized to create a groundwater elevation map which suggests that groundwater flows in a northerly direction (Figure 2) at an approximate hydraulic gradient of 0.035 foot per linear foot.

4.0 EVALUATION OF LABORATORY DATA

Samples MW6, MW7 and MW9 (a duplicate sample of MW7) were submitted to SGS and were analyzed for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method SW 8260; polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270; GRO by Alaska Method (AK) 101, DRO by AK 102, and RRO by AK 103. The water sample results were compared to the ADEC Method 2 Cleanup Criteria listed in Alaska Administrative Code (AAC) 75.341—Table C for groundwater.

A Trip blank sample accompanied the samples at all times during sample container transportation and from sample collection until submission to the laboratory, and was analyzed for GRO and VOCs by the same methods described above, to determine if cross-contamination of the samples had occurred.

The water samples collected from the subject property were labeled, for example, MW6-0323. Where the prefix "MW6" indicates the monitoring well from which the water sample was collected; and 0323 indicates the month and day 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.

Three water samples, including a duplicate sample, were collected from two of the three existing monitoring wells (MW-6 and MW-7) at the site. The water sample collected from MW-6 exhibited detectable concentrations of DRO, benzo[g,h,i]perylene, and pyrene below the applicable ADEC cleanup criteria.

The water samples MW7 and MW9 (duplicate of MW7) collected from Monitoring Well MW-7 exhibited concentrations (greatest concentrations described) of GRO at 2,550 µg/L, 1,2,4-trimethylbenzene at 72.8 µg/L, benzene at 254 µg/L, ethylbenzene at 313 µg/L, naphthalene at 11.2 µg/L, vinyl chloride at 2.76 µg/L, total xylenes at 829 µg/L, benzo(a)anthracene at 0.807 µg/L, benzo[a]pyrene at 0.269 µg/L, benzo[b]fluoranthene at 0.374 µg/L, and naphthalene at 9.79 µg/L which exceed their applicable ADEC cleanup criteria of 2,200 µg/L, 15 µg/L, 4.6 µg/L, 15 µg/L, 1.7 µg/L, 0.19 µg/L, 190 µg/L, 0.12 µg/L, 0.034 µg/L, 0.34 µg/L, and 1.7 µg/L respectively.

No other analytes within the samples were detected at values exceeding their ADEC cleanup criterion. The analytical results for the groundwater samples are listed in Tables 2 and 3 and presented on Figure 3. The complete 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 the laboratory work order, and this checklist is attached in Appendix C. The checklist provides 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 water samples collected during the March 2017 field activities.

Sample analyses were provided by SGS of Anchorage which is approved to conduct the specified analyses by the ADEC. The samples were hand-delivered to SGS in Anchorage by BGES personnel under chain of custody (COC) 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. A case narrative was included with the laboratory data.

The temperature of the sample cooler submitted on March 24, 2017 was measured at the laboratory at the time of receipt to be 2.2° Celsius (C); which is within the prescribed optimal temperature range of 0 to 6 degrees C. A case narrative was included with the laboratory data package. The following quality control (QC) errors were noted by the laboratory.

The recovery of surrogate terphenyl-d14 associated with PAHs analysis was below the acceptance criteria in all samples on this work order. This indicates the potential for the reported concentrations of the PAHs to be biased low. For this reason, detectable concentrations of PAHs are marked with a 'J' in Table 2 should be considered estimates. However, because the reported concentrations of benzo(a)anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and naphthalene exceed their associated ADEC cleanup criteria, it is our opinion that this QC failure does not affect our interpretation of the data.

The recovery of chloromethane exceeds the acceptance criteria in the laboratory control sample duplicate (LSCD). This indicates the potential for the reported concentrations of the chloromethane to be biased high in the associated project samples. However, because this analyte was not detected at concentrations exceeding the limit of quantitation (LOQ) in all samples, and because the LOQs for this analyte in all samples are greater than one order of magnitude below applicable ADEC cleanup criteria, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recoveries for bromomethane and chloromethane exceed the acceptance criteria in the matrix spike (MS) sample. This indicates the potential for the reported concentrations of these analytes to be biased high. However, because these analytes were not detected at concentrations exceeding the LOQ, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recovery for chloromethane exceed the acceptance criteria in the matrix spike duplicate (MSD). This indicates the potential for the reported concentrations of this analyte to be biased high. However, because this analyte was not detected at concentrations exceeding the LOQ, and because the LOQs for this analyte in all samples are greater than one order of magnitude below applicable ADEC cleanup criteria it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The LOQs for 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dibromoethane, bromomethane, and hexachlorobutadiene, each exceeded their respective ADEC cleanup criteria in samples MW-7 and MW-9 on this work order (and are shown in italics on Table 2). Similarly, the LOQs for 1,2,3-trichloropropane and 1,2-dibromoethane exceeded their respective ADEC cleanup criterion in sample MW-6 on this work order (and are shown in italics on Table 2). In these instances, where the analytes were not detected above the LOQs, with the exception of naphthalene and vinyl chloride which exhibited concentrations above their associated ADEC cleanup criteria, it cannot be determined if the actual concentrations of those analytes exceed the applicable ADEC cleanup criteria.

Sample MW-9 was a duplicate of MW-7, and was collected and analyzed to evaluate field-sampling precision. The relative percent difference (RPD) between the original sample (MW-7) and the duplicate (MW-9) for analytes tested ranged from 0 to 17 percent. These RPD values are less than the ADEC QC acceptance limit of 30 percent for water, indicating good sampling precision.

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, 2009. Based on the results of the March 23, 2017 groundwater monitoring event, no changes to the CSM are warranted at this time.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Three groundwater samples, including a duplicate sample, were collected from two onsite groundwater monitoring wells on March 23, 2017. As previously stated in Section 4 above, concentrations of GRO, 1,2,4-trimethylbenzene, benzene, ethylbenzene, naphthalene, vinyl chloride, total xylenes, benzo(a)anthracene, benzo[a]pyrene, and benzo[b]fluoranthene were detected above their respective ADEC cleanup criterion in MW-7. Contaminant concentration trends can be observed in Table 3 and graphs representing historical trends are included in Appendix D.

A significant increase in contaminant concentrations was observed during this sampling event in MW-7, as compared to the previous sampling event, possibly representing a seasonal water quality fluctuation. Overall, a slight decreasing trend in contaminant concentrations is evident in

MW-7. 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. It is also recommended that a copy of this report be provided to the ADEC for review.

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.

This report was prepared by Evan Tyler, Environmental Engineer for BGES. Field work was completed by William Schmaltz, a qualified environmental professional (QEP) as defined by the ADEC. Mr. Schmaltz has conducted numerous site characterization and remedial projects in south central Alaska. This report was reviewed by Robert Braunstein, Principal Geologist of BGES. Mr. Braunstein has more than 35 years of geological and environmental consulting experience and has conducted and managed thousands of environmental projects involving site characterization and remediation efforts, throughout Alaska and the lower 48 states.

Prepared by:

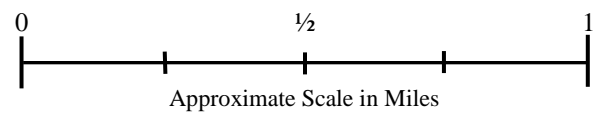
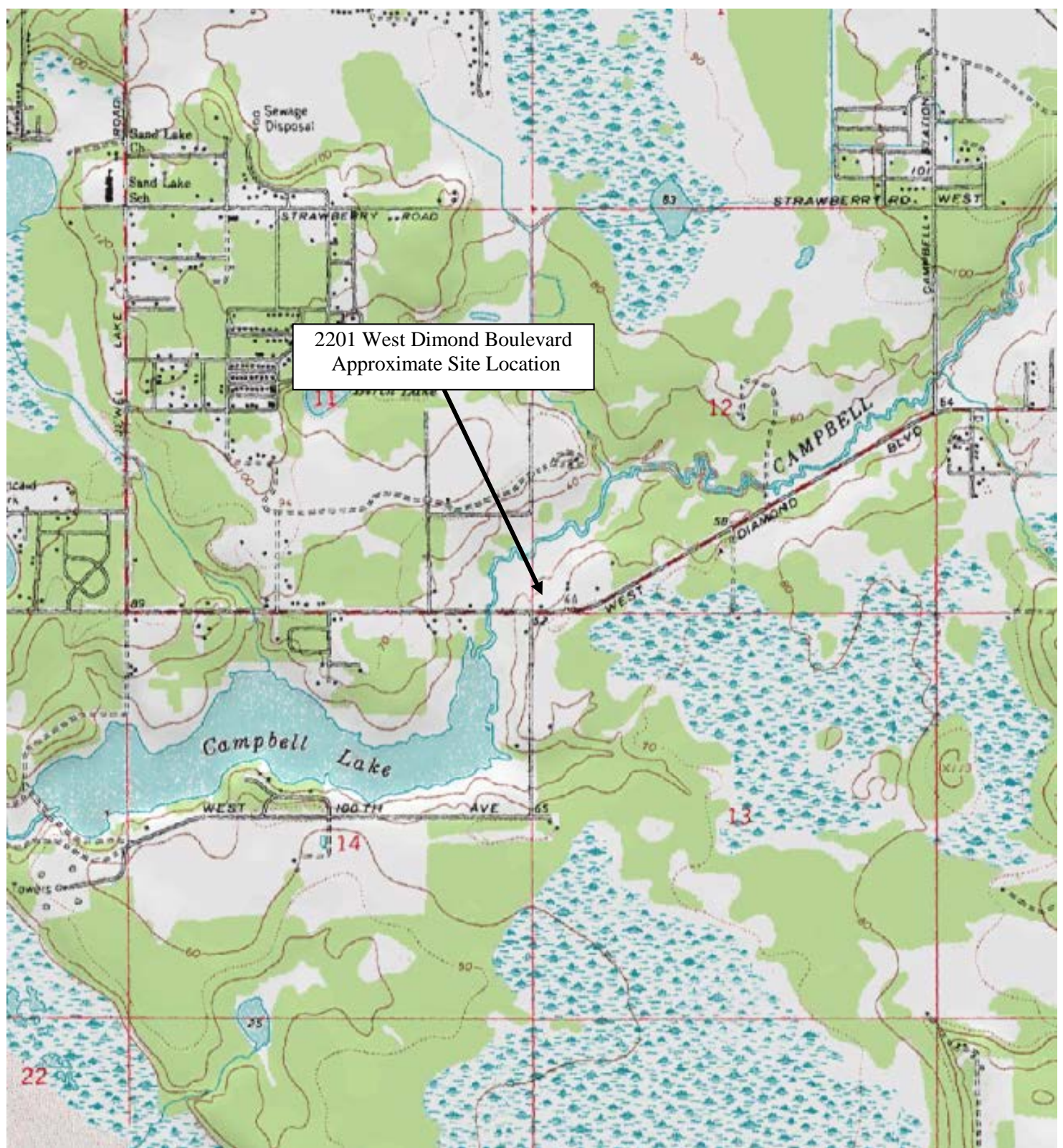


Evan Tyler
Environmental Engineer

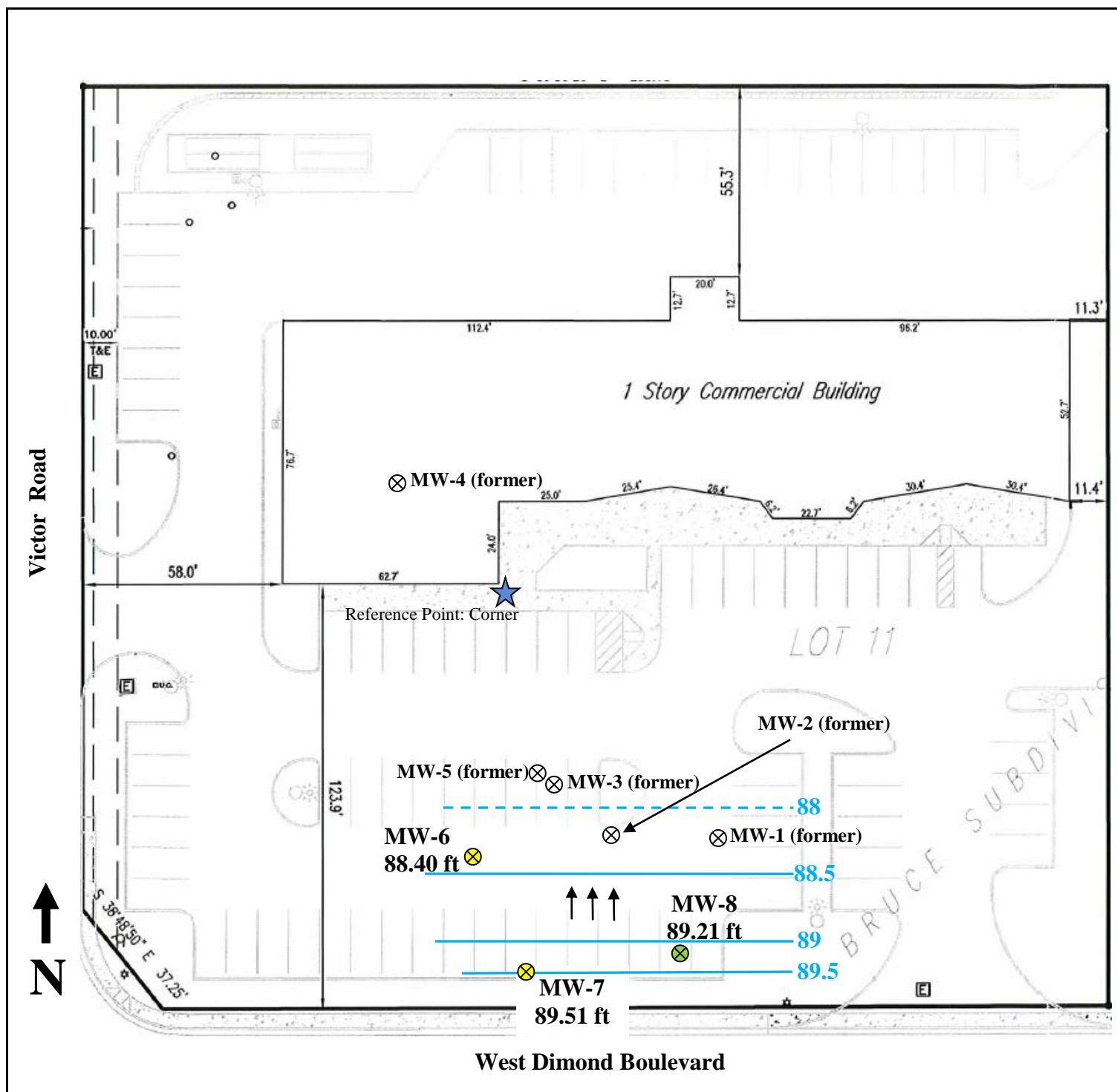
Reviewed by:



Robert N. Braunstein, C.P.G.
Principal



2201 West Dimond Boulevard
Anchorage, Alaska
Site Vicinity Map



Legend

- ⊗ = Approximate Locations of Former Monitoring Wells
- ⊗ = Approximate Locations of Monitoring Wells (sampled in May 2016)
- ⊗ = Approximate Location of Monitoring Well (not sampled)
- = Approximate Groundwater Elevation Contours (elevations in feet)
- ↑↑↑ = Approximate Groundwater Flow Direction

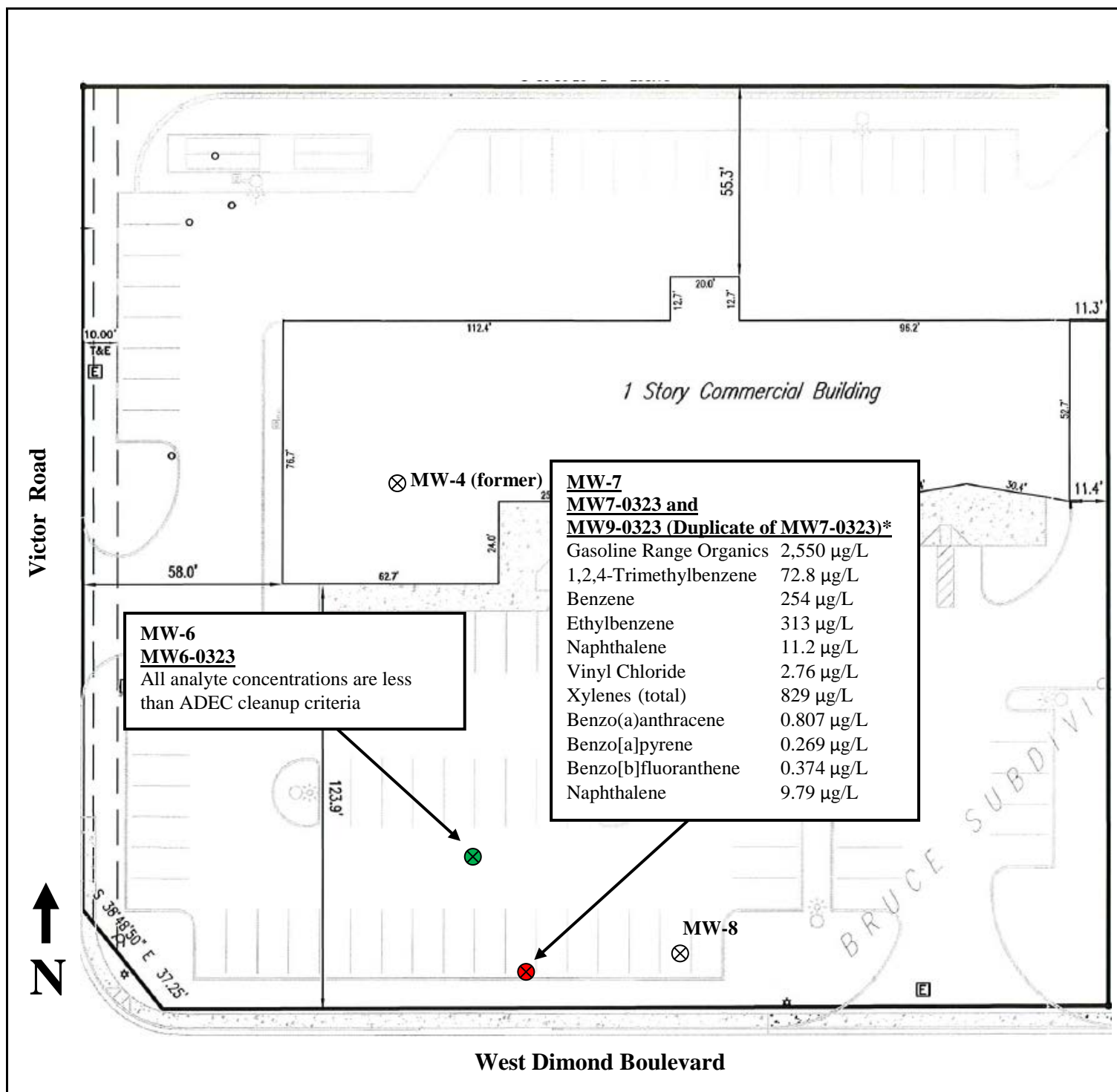
Note: The contour interval is 0.5 foot and the calculated hydraulic gradient is approximately 0.035 foot per linear foot.



Approximate Scale in Feet

2201 West Dimond Boulevard
Anchorage, Alaska

Monitoring Well Locations and Relative Groundwater Elevations



Legend

- ⊗ = Approximate Locations of Monitoring Well Not Sampled
- = Approximate Locations of Monitoring Well With no Exceedances of Alaska Department of Environmental Conservation (ADEC) Cleanup Criteria
- ⊗ = Approximate Location of Monitoring Well With Exceedances of ADEC Cleanup Criteria
- * = Greatest Concentration Reported
- µg/L = Micrograms per Liter



Approximate Scale in Feet

2201 West Dimond Boulevard
Anchorage, Alaska

Monitoring Well Locations and Sample Results

TABLE 1
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA
MARCH 2017 MONITORING WELL SAMPLING DATA

BGES, INC.

Well Number	MW6	MW7	MW8
Date Sampled	03/23/17	03/23/17	N/A
Date of Depth and Elevation Measurement	03/23/17	03/23/17	03/23/17
Time of Depth to Water Measurement	10:22	10:29	10:13
Time Sample Collected	16:31	15:21	N/A
Top of Casing Elevation (feet)	99.85	99.13	98.81
Depth to Water (feet below top of casing)	11.45	9.62	9.60
Water Elevation (feet)	88.40	89.51	89.21
Total Depth of Well (feet below top of casing)	14.16	17.68	17.14
Ground Elevation	100.07	101.14	101.25
Depth to Water (feet below top of ground surface)	11.67	11.63	12.04
Well Casing Diameter (Inches)	2	2	2
Standing Water Well Volume (gallons)	0.44	1.32	1.23
Purge Volume-Actual (gallons)	1.0	1.5	N/A
Temperature (degrees Celsius)	3.6/2.0/0.6	3.2/2.9/2.9/3.0	N/A
pH (standard units)	5.93/6.29/6.49	6.84/7.12/7.17/7.18	N/A
Conductivity (millisiemens per centimeter)	182.0/1745/172.8	3291/3980/4065/4039	N/A
Oxidation Reduction Potential (millivolts)	17.6/-28.9/-7.2	30.3/-105.0/-108.8/-111.1	N/A
Notes: Sampler: W. Schmaltz Field parameters were measured with a YSI Professional Plus water quality meter and flow-through cell. Weather conditions on March 23, 2017 were clear with an ambient temperature of 17 degrees Fahrenheit. MW6 was purged at approximately 50 to 100 milliliters per minute and had a very slow recharge rate. The entire well casing was evacuated after approximately 1 gallon was purged. The well was allowed to recharge, and groundwater samples were collected. MW7 parameters stabilized after approximately 1.5 gallons were purged. Duplicate sample was collected at 15:46 and was labeled MW9-0323.			

TABLE 2
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA
ANALYTICAL RESULTS - WATER SAMPLES (MARCH 2017)

Water Sample No.	Parameter	Results (µg/L)	LOQ (µg/L)	ADEC Water Cleanup Criterion (µg/L) ¹	Analytical Method
MW6-0323	Gasoline Range Organics	ND	100	2,200	AK101
	Diesel Range Organics	ND	588	1,500	AK102
	Residual Range Organics	605	490	1,100	AK103
	<i>1,2,3-Trichloropropane</i>	ND	1.00	0.0075	SW 8260C
	<i>1,2-Dibromoethane</i>	ND	1.00	0.075	SW 8260C
	Benzene	ND	0.400	4.6	SW 8260C
	Ethylbenzene	ND	1.00	15	SW 8260C
	Toluene	ND	1.00	1,100	SW 8260C
	Xylenes (total)	ND	3.00	190	SW 8260C
	All Other VOCs	ND	Varies	Varies	SW 8260C
	Benzo[g,h,i]perylene	0.0487	0.0481	0.26	8270D SIM LV
	Pyrene	0.0698	0.0481	120	8270D SIM LV
	All Other PAHs	ND	Varies	Varies	8270D SIM LV
MW7-0323	Gasoline Range Organics	2,550	100	2,200	AK101
	Diesel Range Organics	1,320	577	1,500	AK102
	Residual Range Organics	515	481	1,100	AK103
	<i>1,1,2,2-Tetrachloroethane</i>	ND	1.00	0.76	SW 8260C
	<i>1,1,2-Trichloroethane</i>	ND	0.800	0.41	SW 8260C
	<i>1,2,3-Trichloropropane</i>	ND	2.00	0.0075	SW 8260C
	1,2,4-Trimethylbenzene	72.8	2.00	15	SW 8260C
	<i>1,2-Dibromoethane</i>	ND	2.00	0.075	SW 8260C
	1,3,5-Trimethylbenzene	6.23	2.00	120	SW 8260C
	4-Isopropyltoluene	3.39	2.00	N/A	SW 8260C
	Benzene	254	0.800	4.6	SW 8260C
	<i>Bromomethane</i>	ND	10.0	7.5	SW 8260C
	Ethylbenzene	313	2.00	15	SW 8260C
	<i>Hexachlorobutadiene</i>	ND	2.00	1.4	SW 8260C
	Isopropylbenzene (Cumene)	7.72	2.00	450	SW 8260C
	Naphthalene	11.2	2.00	1.7	SW 8260C
	n-Propylbenzene	10.6	2.00	660	SW 8260C
	Toluene	20.4	2.00	1,100	SW 8260C
	Trichloroethene	2.78	2.00	2.8	SW 8260C
	Vinyl Chloride	2.76	0.300	0.19	SW 8260C
	Xylenes (total)	829	6.00	190	SW 8260C
	All Other VOCs	ND	Varies	Varies	SW 8260C
	1-Methylnaphthalene	1.44 J	0.0463	11	8270D SIM LV
	2-Methylnaphthalene	1.10 J	0.0463	36	8270D SIM LV
	Acenaphthene	16.6 J	0.463	530	8270D SIM LV
	Anthracene	5.66 J	0.0463	43	8270D SIM LV
	Benzo(a)Anthracene	0.785 J	0.0463	0.12	8270D SIM LV
	Benzo[a]pyrene	0.269 J	0.0185	0.034	8270D SIM LV
	Benzo[b]Fluoranthene	0.374 J	0.0463	0.34	8270D SIM LV
	Benzo[g,h,i]perylene	0.0815 J	0.0463	0.26	8270D SIM LV
	Benzo[k]fluoranthene	0.114 J	0.0463	0.80	8270D SIM LV
	Chrysene	0.607 J	0.0463	2.0	8270D SIM LV
	Dibenzo[a,h]anthracene	0.0218 J	0.0185	0.034	8270D SIM LV
	Fluoranthene	8.41 J	0.0463	260	8270D SIM LV
	Fluorene	9.59 J	0.463	290	8270D SIM LV
	Indeno[1,2,3-c,d] pyrene	0.0737 J	0.0463	0.19	8270D SIM LV
	Naphthalene	8.91 J	0.926	1.7	8270D SIM LV
	Phenanthrene	26.8 J	0.463	170	8270D SIM LV
	Pyrene	6.30 J	0.0463	120	8270D SIM LV
	All Other PAHs	ND	Varies	Varies	8270D SIM LV

TABLE 2
2201 WEST DIMOND BOULEVARD
ANCHORAGE, ALASKA
ANALYTICAL RESULTS - WATER SAMPLES (MARCH 2017)

Water Sample No.	Parameter	Results (µg/L)	LOQ (µg/L)	ADEC Water Cleanup Criterion (µg/L) ¹	Analytical Method
MW9-0323					
(Duplicate of MW7-0323)					
RPD = 2%	Gasoline Range Organics	2,510	100	2,200	AK101
RPD = 9%	Diesel Range Organics	1,210	566	1,500	AK102
	Residual Range Organics	ND	472	1,100	AK103
	<i>1,1,2,2-Tetrachloroethane</i>	<i>ND</i>	<i>1.00</i>	0.76	SW 8260C
	<i>1,1,2-Trichloroethane</i>	<i>ND</i>	<i>0.800</i>	0.41	SW 8260C
	<i>1,2,3-Trichloropropane</i>	<i>ND</i>	<i>2.00</i>	0.0075	SW 8260C
RPD = 7%	1,2,4-Trimethylbenzene	67.8	2.00	15	SW 8260C
	<i>1,2-Dibromoethane</i>	<i>ND</i>	<i>2.00</i>	0.075	SW 8260C
RPD = 17%	1,3,5-Trimethylbenzene	5.28	2.00	120	SW 8260C
RPD = 3%	4-Isopropyltoluene	3.29	2.00	N/A	SW 8260C
RPD = 7%	Benzene	238	0.800	4.6	SW 8260C
	<i>Bromomethane</i>	<i>ND</i>	<i>10.0</i>	7.5	SW 8260C
RPD = 9%	Ethylbenzene	285	2.00	15	SW 8260C
	<i>Hexachlorobutadiene</i>	<i>ND</i>	<i>2.00</i>	1.4	SW 8260C
RPD = 8%	Isopropylbenzene (Cumene)	7.12	2.00	450	SW 8260C
RPD = 12%	Naphthalene	9.97	2.00	1.7	SW 8260C
RPD = 11%	n-Propylbenzene	9.52	2.00	660	SW 8260C
RPD = 16%	Toluene	17.3	2.00	1,100	SW 8260C
RPD = 7%	Trichloroethene	2.58	2.00	2.8	SW 8260C
RPD = 11%	Vinyl Chloride	2.46	0.300	0.19	SW 8260C
RPD = 11%	Xylenes (total)	745	6.00	190	SW 8260C
	All Other VOCs	ND	Varies	Varies	SW 8260C
RPD = 2%	1-Methylnaphthalene	1.47 J	0.0490	11	8270D SIM LV
RPD = 2%	2-Methylnaphthalene	1.12 J	0.0490	36	8270D SIM LV
RPD = 10%	Acenaphthene	18.4 J	0.490	530	8270D SIM LV
RPD = 2%	Anthracene	5.80 J	0.0490	43	8270D SIM LV
RPD = 3%	Benzo(a)Anthracene	0.807 J	0.0490	0.12	8270D SIM LV
RPD = 1%	Benzo[a]pyrene	0.267 J	0.0196	0.034	8270D SIM LV
RPD = 3%	Benzo[b]Fluoranthene	0.362 J	0.0490	0.34	8270D SIM LV
RPD = 1%	Benzo[g,h,i]perylene	0.0806 J	0.0490	0.26	8270D SIM LV
RPD = 4%	Benzo[k]fluoranthene	0.119 J	0.0490	0.80	8270D SIM LV
RPD = 1%	Chrysene	0.612 J	0.0490	2.0	8270D SIM LV
RPD = 10%	Dibenzo[a,h]anthracene	0.0198 J	0.0196	0.034	8270D SIM LV
RPD = 0%	Fluoranthene	8.42 J	0.0490	260	8270D SIM LV
RPD = 7%	Fluorene	10.3 J	0.490	290	8270D SIM LV
RPD = 3%	Indeno[1,2,3-c,d] pyrene	0.0715 J	0.0490	0.19	8270D SIM LV
RPD = 9%	Naphthalene	9.79 J	0.0980	1.7	8270D SIM LV
RPD = 12%	Phenanthrene	30.2 J	0.490	170	8270D SIM LV
RPD = 0%	Pyrene	6.32 J	0.0490	120	8270D SIM LV
	All Other PAHs	ND	Varies	Varies	8270D SIM LV
¹ Groundwater cleanup criteria are obtained from ADEC 18 Alaska Administrative Code 75.345, Table C (March 23, 2017).					
AK = Alaska Method; ADEC = Alaska Department of Environmental Conservation; µg/L = micrograms per liter					
PAH = polynuclear aromatic hydrocarbons; N/A = not available; J = estimated value					
LOQ = limit of quantitation; ND = not detectable; RPD = relative percent difference; VOC = Volatile Organic Compound					
<i>Italics</i> = The LOQ exceeds the applicable ADEC cleanup criterion.					
Bold = The result exceeds the applicable ADEC cleanup criterion					

TABLE 3
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)	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		
MW-5	Gasoline Range Organics	ND	ND	ND	ND	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	1.5	AK102
	Residual Range Organics	<0.551	ND	ND	ND	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	0.0046	EPA 8260B
	Toluene	ND	ND	ND	ND	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	0.015	EPA 8260B
	Total Xylenes	ND	ND	ND	ND	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	2.2	AK101
	Diesel Range Organics	0.489 J	ND	ND	ND	N/A	ND	N/A	ND	ND	1.5	AK102
	Residual Range Organics	ND	ND	ND	ND	N/A	ND	N/A	0.559	0.605	1.1	AK103
	Benzene	0.02160	ND	ND	ND	0.00067	ND	N/A	ND	ND	0.0046	EPA 8260B
	Toluene	0.00159	ND	ND	ND	0.00140	ND	N/A	ND	ND	1.1	EPA 8260B
	Ethylbenzene	0.00055	ND	ND	ND	ND	ND	N/A	ND	ND	0.015	EPA 8260B
	Total Xylenes	0.00665	ND	ND	ND	ND	ND	N/A	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	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	1.5	AK102
	Residual Range Organics	ND	ND	ND	ND	N/A	0.707	1.87 J	0.683	0.515	1.1	AK103
	Benzene	1.11900	0.04620	0.00393	0.0295	0.254	0.00664	0.601	0.00100	0.254	0.0046	EPA 8260B
	Toluene	7.88000	0.01580	ND	0.000607	0.403	ND	0.330	ND	0.0204	1.1	EPA 8260B
	Ethylbenzene	1.9700	0.0306	0.00256	0.0154	0.564	0.00455	0.834	ND	0.313	0.015	EPA 8260B
	Total Xylenes	12.26	0.0929	0.00837	0.0144	2.309	ND	4.840	ND	0.829	0.190	EPA 8260B
	1,2,4 Trimethylbenzene	0.7320	N/A	ND	ND	N/A	N/A	0.209	ND	0.0728	0.015	EPA 8260B
	1,3,5 Trimethylbenzene	N/A	N/A	ND	ND	N/A	N/A	0.0500	ND	0.00623	0.120	EPA 8260B
	4-Isopropyltoluene	N/A	N/A	ND	ND	N/A	N/A	0.00908	ND	0.00339	NA	EPA 8260B
	cis-1,2-Dichloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00207	ND	ND	0.036	EPA 8260B
	Isopropylbenzene (cumene)	N/A	N/A	ND	ND	N/A	N/A	0.0172	ND	0.00772	0.450	EPA 8260B
	n-propylbenzene	N/A	N/A	ND	ND	N/A	N/A	0.0242	ND	0.0106	0.660	EPA 8260B
	Naphthalene	N/A	N/A	0.000133	0.000329	N/A	N/A	0.0315	ND	0.0112	0.0017	EPA 8260B

¹ = Groundwater cleanup criteria are based on ADEC 18AAC 75.345 Table C (November 6, 2016).

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 results - Concentration exceeds the corresponding ADEC cleanup criterion

TABLE 3
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)	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		
MW-7 (cont.)	Tetrachloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00280	ND	ND	0.041	EPA 8260B
	Trichloroethene	N/A	N/A	ND	ND	N/A	N/A	0.00564	ND	0.00278	0.0028	EPA 8260B
	Vinyl chloride	N/A	N/A	ND	ND	N/A	N/A	0.00293	ND	0.00276	0.00019	EPA 8260B
	1,2-Dibromoethane	N/A	N/A	ND	ND	N/A	N/A	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	NA	EPA 8260B
	Methyl tert-butyl ether	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	0.140	EPA 8260B
	1,2-Dichloroethane	N/A	N/A	ND	ND	N/A	N/A	ND	ND	ND	0.0017	EPA 8260B
	All other VOCs	ND	N/A	ND	ND	N/A	N/A	ND	ND	ND	Varies	EPA 8260B
	Napthalene	N/A	N/A	ND	ND	N/A	N/A	0.0343	N/A	0.00979	0.0017	EPA 8270M
	1-Methylnaphthalene	N/A	N/A	ND	ND	N/A	N/A	0.00541	N/A	0.00147	0.011	EPA 8270M
	2-Methylnaphthalene	N/A	N/A	ND	0.0000952	N/A	N/A	0.00573	N/A	0.00112	0.036	EPA 8270M
	Acenaphthene	N/A	N/A	ND	ND	N/A	N/A	0.0442	N/A	0.0184	0.530	EPA 8270M
	Acenaphthylene	N/A	N/A	0.000474	0.000933	N/A	N/A	0.000112	N/A	ND	0.260	EPA 8270M
	Anthracene	N/A	N/A	ND	0.000467	N/A	N/A	0.0184	N/A	0.00580	0.043	EPA 8270M
	Benzo(a)Anthracene	N/A	N/A	ND	ND	N/A	N/A	0.00208	N/A	0.000807	0.00012	EPA 8270M
	Benzo[a]pyrene	N/A	N/A	ND	ND	N/A	N/A	0.00110	N/A	0.000269	0.000034	EPA 8270M
	Benzo[b]fluoranthene	N/A	N/A	ND	ND	N/A	N/A	0.00178	N/A	0.000374	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	0.00026	EPA 8270M
	Benzo[k]fluoranthene	N/A	N/A	ND	ND	N/A	N/A	ND	N/A	0.000119	0.00080	EPA 8270M
	Chrysene	N/A	N/A	ND	ND	N/A	N/A	0.00172	N/A	0.000612	0.0020	EPA 8270M
	Dibenzo[a,h]anthracene	N/A	N/A	ND	ND	N/A	N/A	0.0000885	N/A	0.0000218	0.000034	EPA 8270M
	Fluorene	N/A	N/A	0.000246	0.000381	N/A	N/A	0.0302	N/A	0.0103	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	0.00019	EPA 8270M
	Phenanthrene	N/A	N/A	0.000123	0.000948	N/A	N/A	0.0759	N/A	0.0302	0.170	EPA 8270M
	Fluoranthene	N/A	N/A	ND	0.000495	N/A	N/A	0.0203	N/A	0.00842	0.260	EPA 8270M
	Pyrene	N/A	N/A	ND	0.000424	N/A	N/A	0.0154	N/A	0.00632	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	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	1.5	AK102
	Residual Range Organics	<0.547	<0.385	0.441	<0.397	N/A	N/A	N/A	N/A	N/A	1.1	AK103
	Benzene	<0.000500	<0.000500	<0.000500	<0.000500	N/A	N/A	N/A	N/A	N/A	0.0046	EPA 8260B
	Toluene	<0.0005	<0.0010	0.000617	<0.000500	N/A	N/A	N/A	N/A	N/A	1.1	EPA 8260B
	Ethylbenzene	<0.0005	<0.0010	<0.000500	<0.000500	N/A	N/A	N/A	N/A	N/A	0.015	EPA 8260B
	Total Xylenes	<0.0015	<0.0030	0.00183	<0.00100	N/A	N/A	N/A	N/A	N/A	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 results = Concentration exceeds the corresponding ADEC cleanup criterion												

APPENDIX A
FIELD NOTES & GROUNDWATER MONITORING LOGS

8/12/16

59°F Clear

09:00 BGETS on site. Transferring water into 55 gallon drums.

19 total buckets of water were transferred to 2, 55-gallon drums.

09:30 NRC on site. Loaded drums.

09:50 NRC, BGETS off site.

WTS

3-23-17

170°F Clear

09:30 Schneltz, Tyler of BGETS on site to check for free product in MW6, 7, & 8, and to collect samples from MW6 & MW7

Located wells with metal detector. Opened wells.

10:10 Began checking for free product		
	DTW	TDW Time
MW6	11.45	14.16 10:22
MW7	9.62	17.68 10:29
MW8	9.60	17.14 10:13

No free product detected in wells with interface probe.

Approximately 8 inches of Black tar-like substance in the bottom of MW7

10:40 Began setting up on MW6

MW6 was purged until vacant.

14:15 Moving sample gear to MW7. Will sample MW6 after it recharges in accordance with the guidance.

14:41 Began purging MW7. Parameters stabilized in accordance with the guidance. Removed flow through cell to collect sample.

15:21 Collected sample from MW7. Moving gear back to MW6.

16:31 Collected sample from MW6.

Began cleaning up. All purge & decon placed in 1 bucket, labeled, & placed in utility room.

17:15 BGES off site.

Well Number: MW6

Date of Sampling Event: 3/23/2017

Total Depth of Well (feet below TOC): 14.16

Depth to Water (feet below TOC): 11.45

Water Column (feet): 2.71

Volume of well (gals) 0.44

Time Purging Began: 10:59

Time of Sampling: 16:31

Volume purged 1.0

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 3.6

Conductivity 182.0

pH 5.93

ORP 17.6

Volume Purged 0.1

Depth To Water 11.45

Time of Measurement 11:05

Temperature (°C) 2.0

Conductivity 174.5

pH 6.29

ORP -28.9

Volume Purged 0.5

Depth To Water 11.45

Time of Measurement 11:37

Temperature (°C) 0.6

Conductivity 172.8

pH 6.49

ORP -7.2

Volume Purged 1.0

Depth To Water 12.90

Time of Measurement 12:12

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 _____

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Depth of Bladder intake:
~ 11.95

Purge Rate:
~ 50 mL/min

Sample Rate:
50 mL/min

Sample ID:
MW6-0323

Type of Sampling Equipment:
MPSO Controller, 1.75 inch
bladder pump, VSI Pro
Plus w/ Flow Through Cell

=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)

Additional Notes:

Recharge of well is extremely slow. Purged until vacant.
Allowed well to recharge for two hours and collected
sample.

Well Number: MW7
Date of Sampling Event: 3/23/2017

Weather Conditions: 31°F
Time of Depth to Water Measurement: 10:29
Date of Depth to Water Measurement: 3-23-17

Total Depth of Well (feet below TOC): 17.68
Depth to Water (feet below TOC): 9.62
Water Column (feet): 8.06

Type of Sampling Equipment:
MPSO Controller, 1.75 inch
Bladder Pump, YSZ Pro Plus
w/ Flow Through Cell

Volume of well (gals) 1.32

=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: 14:41
Time of Sampling: 15:21
Volume purged 1.5 gal

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 3.2
Conductivity 3291
pH 6.84
ORP 30.3
Volume Purged 1.5 gal
Depth To Water -
Time of Measurement 14:55

Temperature (°C) 3.0
Conductivity 4020
pH 7.19
ORP -112.2
Volume Purged 1.5
Depth To Water -
Time of Measurement 15:15

Depth of Bladder intake:
~10.12

Temperature (°C) 2.9
Conductivity 3980
pH 7.12
ORP -105.0
Volume Purged 1.3
Depth To Water -
Time of Measurement 15:02

Temperature (°C)
Conductivity
pH
ORP
Volume Purged
Depth To Water
Time of Measurement

Purge Rate:
50-150 mL/min

Temperature (°C) 2.9
Conductivity 4065
pH 7.17
ORP -108.8
Volume Purged 1.35
Depth To Water -
Time of Measurement 15:06

Temperature (°C)
Conductivity
pH
ORP
Volume Purged
Depth To Water
Time of Measurement

Sample Rate:
100 mL/min

Temperature (°C) 3.0
Conductivity 4039
pH 7.18
ORP -111.1
Volume Purged 1.4
Depth To Water -
Time of Measurement 15:11

Temperature (°C)
Conductivity
pH
ORP
Volume Purged
Depth To Water
Time of Measurement

Sample ID:
MW7-0323

Additional Notes: Duplicate Collected & labeled MW9-0323 @ 15:46

APPENDIX B
LABORATORY ANALYTICAL DATA

Laboratory Report of Analysis

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

Report Number: **1171210**

Client Project: **Dimond**

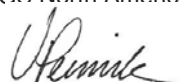
Dear Jayne Martin,

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 Victoria 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.



SGS North America Inc.
Environmental Services - Alaska Division
Project Manager

Victoria Pennick

2017.04.05

10:17:33 -08'00'

Victoria Pennick
Project Manager
Victoria.Pennick@sgs.com

Date

Print Date: 04/04/2017 11:41:10AM

Case Narrative

SGS Client: **BGES Inc.**
 SGS Project: **1171210**
 Project Name/Site: **Dimond**
 Project Contact: **Jayne Martin**

Refer to sample receipt form for information on sample condition.

MW6-0323 (1171210001) PS

8270D SIM - PAH - Surrogate recovery for terphenyl-d14 (25.7%) does not meet QC criteria. Sample was re-extracted past hold time with PAH surrogate recovery for terphenyl-d14 (25.6%) still not meeting QC criteria. Results are comparable; original results within hold time are reported.

MW7-0323 (1171210002) PS

Note: Sample has dark coloring that precipitates out with strong acid.
 8270D SIM - PAH - Surrogate recovery for terphenyl-d14 (31.2%) does not meet QC criteria. Sample was re-extracted past hold time with PAH surrogate recovery for terphenyl-d14 (31.9%) still not meeting QC criteria. Results are comparable; original results within hold time are reported.

MW9-0323 (1171210003) PS

Note: Sample has dark coloring that precipitates out with strong acid.
 8270D SIM - PAH - Surrogate recovery for terphenyl-d14 (30.3%) does not meet QC criteria. Sample was re-extracted past hold time with PAH surrogate recovery for terphenyl-d14 (36.8%) still not meeting QC criteria. Results are comparable; original results within hold time are reported.

LCSD for HBN 1756368 [VXX/3031 (1377562) LCSD

8260C - LCSD recovery for chloromethane (144%) does not meet QC criteria. This analyte was not detected above the LOQ in the associated samples.

1177658009MS (1377563) MS

8260C - MS recovery for bromomethane (146%) and chloromethane (148%) do not meet QC criteria. See LCS for accuracy requirements.

1177658009MSD (1377564) MSD

8260C - MSD recovery for chloromethane (145%) does 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.

Print Date: 04/04/2017 11:41:11AM

Report of Manual Integrations

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Analytical Batch</u>	<u>Analyte</u>	<u>Reason</u>
8270D SIM LV (PAH)				
1171210002	MW7-0323	XMS9903	Benzo[k]fluoranthene	RP
1171210003	MW9-0323	XMS9903	Benzo[k]fluoranthene	RP

Manual Integration Reason Code Descriptions

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

All DRO/RRO analysis are integrated per SOP.

Print Date: 04/04/2017 11:41:12AM

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. 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) for which SGS North America Inc. is Provisionally Certified as of 2/8/2017 & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). 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	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
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>
MW6-0323	1171210001	03/23/2017	03/24/2017	Water (Surface, Eff., Ground)
MW7-0323	1171210002	03/23/2017	03/24/2017	Water (Surface, Eff., Ground)
MW9-0323	1171210003	03/23/2017	03/24/2017	Water (Surface, Eff., Ground)
Trip Blank	1171210004	03/23/2017	03/24/2017	Water (Surface, Eff., Ground)

<u>Method</u>	<u>Method Description</u>
8270D SIM LV (PAH)	8270 PAH SIM GC/MS Liq/Liq ext. LV
AK102	DRO/RRO Low Volume Water
AK103	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
SW8260C	Volatile Organic Compounds (W) FULL

Print Date: 04/04/2017 11:41:13AM

Detectable Results Summary

Client Sample ID: **MW6-0323**

Lab Sample ID: 1171210001

Polynuclear Aromatics GC/MS

Semivolatile Organic Fuels

Client Sample ID: **MW7-0323**

Lab Sample ID: 1171210002

Polynuclear Aromatics GC/MS

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

Parameter	Result	Units
Benzo[g,h,i]perylene	0.0487	ug/L
Pyrene	0.0698	ug/L
Residual Range Organics	0.605	mg/L
Parameter	Result	Units
1-Methylnaphthalene	1.44	ug/L
2-Methylnaphthalene	1.10	ug/L
Acenaphthene	16.6	ug/L
Anthracene	5.66	ug/L
Benzo(a)Anthracene	0.785	ug/L
Benzo[a]pyrene	0.269	ug/L
Benzo[b]Fluoranthene	0.374	ug/L
Benzo[g,h,i]perylene	0.0815	ug/L
Benzo[k]fluoranthene	0.114	ug/L
Chrysene	0.607	ug/L
Dibenzo[a,h]anthracene	0.0218	ug/L
Fluoranthene	8.41	ug/L
Fluorene	9.59	ug/L
Indeno[1,2,3-c,d] pyrene	0.0737	ug/L
Naphthalene	8.91	ug/L
Phenanthrene	26.8	ug/L
Pyrene	6.30	ug/L
Diesel Range Organics	1.32	mg/L
Residual Range Organics	0.515	mg/L
Gasoline Range Organics	2.55	mg/L
1,2,4-Trimethylbenzene	72.8	ug/L
1,3,5-Trimethylbenzene	6.23	ug/L
4-Isopropyltoluene	3.39	ug/L
Benzene	254	ug/L
Ethylbenzene	313	ug/L
Isopropylbenzene (Cumene)	7.72	ug/L
Naphthalene	11.2	ug/L
n-Propylbenzene	10.6	ug/L
o-Xylene	209	ug/L
P & M -Xylene	620	ug/L
Toluene	20.4	ug/L
Trichloroethene	2.78	ug/L
Vinyl chloride	2.76	ug/L
Xylenes (total)	829	ug/L

Print Date: 04/04/2017 11:41:14AM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Member of SGS Group

Detectable Results Summary

Client Sample ID: **MW9-0323**

Lab Sample ID: 1171210003

Polynuclear Aromatics GC/MS

Parameter	Result	Units
1-Methylnaphthalene	1.47	ug/L
2-Methylnaphthalene	1.12	ug/L
Acenaphthene	18.4	ug/L
Anthracene	5.80	ug/L
Benzo(a)Anthracene	0.807	ug/L
Benzo[a]pyrene	0.267	ug/L
Benzo[b]Fluoranthene	0.362	ug/L
Benzo[g,h,i]perylene	0.0806	ug/L
Benzo[k]fluoranthene	0.119	ug/L
Chrysene	0.612	ug/L
Dibenzo[a,h]anthracene	0.0198	ug/L
Fluoranthene	8.42	ug/L
Fluorene	10.3	ug/L
Indeno[1,2,3-c,d] pyrene	0.0715	ug/L
Naphthalene	9.79	ug/L
Phenanthrene	30.2	ug/L
Pyrene	6.32	ug/L
Diesel Range Organics	1.21	mg/L
Gasoline Range Organics	2.51	mg/L
1,2,4-Trimethylbenzene	67.8	ug/L
1,3,5-Trimethylbenzene	5.28	ug/L
4-Isopropyltoluene	3.29	ug/L
Benzene	238	ug/L
Ethylbenzene	285	ug/L
Isopropylbenzene (Cumene)	7.12	ug/L
Naphthalene	9.97	ug/L
n-Propylbenzene	9.52	ug/L
o-Xylene	187	ug/L
P & M -Xylene	559	ug/L
Toluene	17.3	ug/L
Trichloroethene	2.58	ug/L
Vinyl chloride	2.46	ug/L
Xylenes (total)	745	ug/L

Semivolatile Organic Fuels

Volatile Fuels

Volatile GC/MS

Print Date: 04/04/2017 11:41:14AM

SGS North America Inc.

200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Member of SGS Group

Results of MW6-0323

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 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	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
2-Methylnaphthalene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Acenaphthene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Acenaphthylene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Benzo(a)Anthracene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Benzo[a]pyrene	0.0192 U	0.0192	0.00596	ug/L	1		03/28/17 16:00
Benzo[b]Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Benzo[g,h,i]perylene	0.0487	0.0481	0.0144	ug/L	1		03/28/17 16:00
Benzo[k]fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Chrysene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Dibenzo[a,h]anthracene	0.0192 U	0.0192	0.00596	ug/L	1		03/28/17 16:00
Fluoranthene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Fluorene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Indeno[1,2,3-c,d] pyrene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Naphthalene	0.0962 U	0.0962	0.0298	ug/L	1		03/28/17 16:00
Phenanthrene	0.0481 U	0.0481	0.0144	ug/L	1		03/28/17 16:00
Pyrene	0.0698	0.0481	0.0144	ug/L	1		03/28/17 16:00
Surrogates							
2-Fluorobiphenyl (surr)	71	53-106		%	1		03/28/17 16:00
Terphenyl-d14 (surr)	25.7 *	58-132		%	1		03/28/17 16:00

Batch Information

Analytical Batch: XMS9903
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: S.G
 Analytical Date/Time: 03/28/17 16:00
 Container ID: 1171210001-I

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:02
 Prep Initial Wt./Vol.: 260 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW6-0323

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	0.588 U	0.588	0.176	mg/L	1		03/27/17 17:37
Surrogates							
5a Androstane (surr)	76.2	50-150		%	1		03/27/17 17:37

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK102
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:37
 Container ID: 1171210001-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 255 mL
 Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.605	0.490	0.147	mg/L	1		03/27/17 17:37
Surrogates							
n-Triacontane-d62 (surr)	82.3	50-150		%	1		03/27/17 17:37

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK103
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:37
 Container ID: 1171210001-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 255 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW6-0323

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 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		03/27/17 19:33
Surrogates							
4-Bromofluorobenzene (surr)	97.2	50-150		%	1		03/27/17 19:33

Batch Information

Analytical Batch: VFC13575
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 03/27/17 19:33
 Container ID: 1171210001-D

Prep Batch: VXX30315
 Prep Method: SW5030B
 Prep Date/Time: 03/27/17 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW6-0323

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 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		03/28/17 19:40
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		03/28/17 19:40
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
1,2-Dibromoethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
Benzene	0.400 U	0.400	0.120	ug/L	1		03/28/17 19:40
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
Bromoform	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Bromomethane	5.00 U	5.00	1.50	ug/L	1		03/28/17 19:40
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
Chloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40

Print Date: 04/04/2017 11:41:15AM

Results of MW6-0323

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 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		03/28/17 19:40
Chloromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 19:40
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Freon-113	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		03/28/17 19:40
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
Naphthalene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
o-Xylene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		03/28/17 19:40
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Styrene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Toluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 19:40
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		03/28/17 19:40
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		03/28/17 19:40
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		03/28/17 19:40
Surrogates							
1,2-Dichloroethane-D4 (surr)	104	81-118		%	1		03/28/17 19:40
4-Bromofluorobenzene (surr)	101	85-114		%	1		03/28/17 19:40
Toluene-d8 (surr)	98.8	89-112		%	1		03/28/17 19:40

Print Date: 04/04/2017 11:41:15AM

Results of **MW6-0323**

Client Sample ID: **MW6-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210001
 Lab Project ID: 1171210

Collection Date: 03/23/17 16:31
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS16615
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 03/28/17 19:40
 Container ID: 1171210001-A

Prep Batch: VXX30316
 Prep Method: SW5030B
 Prep Date/Time: 03/28/17 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW7-0323

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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	1.44	0.0463	0.0139	ug/L	1		03/28/17 16:20
2-Methylnaphthalene	1.10	0.0463	0.0139	ug/L	1		03/28/17 16:20
Acenaphthene	16.6	0.463	0.139	ug/L	10		03/28/17 23:31
Acenaphthylene	0.0463 U	0.0463	0.0139	ug/L	1		03/28/17 16:20
Anthracene	5.66	0.0463	0.0139	ug/L	1		03/28/17 16:20
Benzo(a)Anthracene	0.785	0.0463	0.0139	ug/L	1		03/28/17 16:20
Benzo[a]pyrene	0.269	0.0185	0.00574	ug/L	1		03/28/17 16:20
Benzo[b]Fluoranthene	0.374	0.0463	0.0139	ug/L	1		03/28/17 16:20
Benzo[g,h,i]perylene	0.0815	0.0463	0.0139	ug/L	1		03/28/17 16:20
Benzo[k]fluoranthene	0.114	0.0463	0.0139	ug/L	1		03/28/17 16:20
Chrysene	0.607	0.0463	0.0139	ug/L	1		03/28/17 16:20
Dibenzo[a,h]anthracene	0.0218	0.0185	0.00574	ug/L	1		03/28/17 16:20
Fluoranthene	8.41	0.0463	0.0139	ug/L	1		03/28/17 16:20
Fluorene	9.59	0.463	0.139	ug/L	10		03/28/17 23:31
Indeno[1,2,3-c,d] pyrene	0.0737	0.0463	0.0139	ug/L	1		03/28/17 16:20
Naphthalene	8.91	0.926	0.287	ug/L	10		03/28/17 23:31
Phenanthrene	26.8	0.463	0.139	ug/L	10		03/28/17 23:31
Pyrene	6.30	0.0463	0.0139	ug/L	1		03/28/17 16:20
Surrogates							
2-Fluorobiphenyl (surr)	62.1	53-106		%	1		03/28/17 16:20
Terphenyl-d14 (surr)	31.2 *	58-132		%	1		03/28/17 16:20

Batch Information

Analytical Batch: XMS9903
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: S.G
 Analytical Date/Time: 03/28/17 16:20
 Container ID: 1171210002-I

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:02
 Prep Initial Wt./Vol.: 270 mL
 Prep Extract Vol: 1 mL

Analytical Batch: XMS9903
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: S.G
 Analytical Date/Time: 03/28/17 23:31
 Container ID: 1171210002-I

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:02
 Prep Initial Wt./Vol.: 270 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW7-0323

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	1.32	0.577	0.173	mg/L	1		03/27/17 17:47
Surrogates							
5a Androstane (surr)	77.1	50-150		%	1		03/27/17 17:47

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK102
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:47
 Container ID: 1171210002-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 260 mL
 Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.515	0.481	0.144	mg/L	1		03/27/17 17:47
Surrogates							
n-Triacontane-d62 (surr)	85	50-150		%	1		03/27/17 17:47

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK103
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:47
 Container ID: 1171210002-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 260 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW7-0323

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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	2.55	0.100	0.0310	mg/L	1		03/27/17 19:52
Surrogates							
4-Bromofluorobenzene (surr)	147	50-150		%	1		03/27/17 19:52

Batch Information

Analytical Batch: VFC13575
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 03/27/17 19:52
 Container ID: 1171210002-D

Prep Batch: VXX30315
 Prep Method: SW5030B
 Prep Date/Time: 03/27/17 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW7-0323

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
1,1,1-Trichloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,1,2,2-Tetrachloroethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
1,1,2-Trichloroethane	0.800 U	0.800	0.240	ug/L	2		03/28/17 19:57
1,1-Dichloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,1-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,1-Dichloropropene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2,3-Trichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2,3-Trichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2,4-Trichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2,4-Trimethylbenzene	72.8	2.00	0.620	ug/L	2		03/28/17 19:57
1,2-Dibromo-3-chloropropane	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
1,2-Dibromoethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2-Dichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,2-Dichloroethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
1,2-Dichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,3,5-Trimethylbenzene	6.23	2.00	0.620	ug/L	2		03/28/17 19:57
1,3-Dichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
1,3-Dichloropropane	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
1,4-Dichlorobenzene	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
2,2-Dichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
2-Butanone (MEK)	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
2-Chlorotoluene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
2-Hexanone	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
4-Chlorotoluene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
4-Isopropyltoluene	3.39	2.00	0.620	ug/L	2		03/28/17 19:57
4-Methyl-2-pentanone (MIBK)	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
Benzene	254	0.800	0.240	ug/L	2		03/28/17 19:57
Bromobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Bromochloromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Bromodichloromethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
Bromoform	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Bromomethane	10.0 U	10.0	3.00	ug/L	2		03/28/17 19:57
Carbon disulfide	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
Carbon tetrachloride	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Chlorobenzene	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
Chloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57

Print Date: 04/04/2017 11:41:15AM

Results of MW7-0323

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Chloromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
cis-1,2-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
cis-1,3-Dichloropropene	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
Dibromochloromethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 19:57
Dibromomethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Dichlorodifluoromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Ethylbenzene	313	2.00	0.620	ug/L	2		03/28/17 19:57
Freon-113	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
Hexachlorobutadiene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Isopropylbenzene (Cumene)	7.72	2.00	0.620	ug/L	2		03/28/17 19:57
Methylene chloride	10.0 U	10.0	2.00	ug/L	2		03/28/17 19:57
Methyl-t-butyl ether	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
Naphthalene	11.2	2.00	0.620	ug/L	2		03/28/17 19:57
n-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
n-Propylbenzene	10.6	2.00	0.620	ug/L	2		03/28/17 19:57
o-Xylene	209	2.00	0.620	ug/L	2		03/28/17 19:57
P & M -Xylene	620	4.00	1.24	ug/L	2		03/28/17 19:57
sec-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Styrene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
tert-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Tetrachloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Toluene	20.4	2.00	0.620	ug/L	2		03/28/17 19:57
trans-1,2-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
trans-1,3-Dichloropropene	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Trichloroethene	2.78	2.00	0.620	ug/L	2		03/28/17 19:57
Trichlorofluoromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 19:57
Vinyl acetate	20.0 U	20.0	6.20	ug/L	2		03/28/17 19:57
Vinyl chloride	2.76	0.300	0.100	ug/L	2		03/28/17 19:57
Xylenes (total)	829	6.00	2.00	ug/L	2		03/28/17 19:57
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	81-118		%	2		03/28/17 19:57
4-Bromofluorobenzene (surr)	100	85-114		%	2		03/28/17 19:57
Toluene-d8 (surr)	101	89-112		%	2		03/28/17 19:57

Print Date: 04/04/2017 11:41:15AM

Results of **MW7-0323**

Client Sample ID: **MW7-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210002
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS16615
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 03/28/17 19:57
 Container ID: 1171210002-A

Prep Batch: VXX30316
 Prep Method: SW5030B
 Prep Date/Time: 03/28/17 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW9-0323

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 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	1.47	0.0490	0.0147	ug/L	1		03/28/17 16:41
2-Methylnaphthalene	1.12	0.0490	0.0147	ug/L	1		03/28/17 16:41
Acenaphthene	18.4	0.490	0.147	ug/L	10		03/30/17 17:34
Acenaphthylene	0.0490 U	0.0490	0.0147	ug/L	1		03/28/17 16:41
Anthracene	5.80	0.0490	0.0147	ug/L	1		03/28/17 16:41
Benzo(a)Anthracene	0.807	0.0490	0.0147	ug/L	1		03/28/17 16:41
Benzo[a]pyrene	0.267	0.0196	0.00608	ug/L	1		03/28/17 16:41
Benzo[b]Fluoranthene	0.362	0.0490	0.0147	ug/L	1		03/28/17 16:41
Benzo[g,h,i]perylene	0.0806	0.0490	0.0147	ug/L	1		03/28/17 16:41
Benzo[k]fluoranthene	0.119	0.0490	0.0147	ug/L	1		03/28/17 16:41
Chrysene	0.612	0.0490	0.0147	ug/L	1		03/28/17 16:41
Dibenzo[a,h]anthracene	0.0198	0.0196	0.00608	ug/L	1		03/28/17 16:41
Fluoranthene	8.42	0.0490	0.0147	ug/L	1		03/28/17 16:41
Fluorene	10.3	0.490	0.147	ug/L	10		03/30/17 17:34
Indeno[1,2,3-c,d] pyrene	0.0715	0.0490	0.0147	ug/L	1		03/28/17 16:41
Naphthalene	9.79	0.0980	0.0304	ug/L	1		03/28/17 16:41
Phenanthrene	30.2	0.490	0.147	ug/L	10		03/30/17 17:34
Pyrene	6.32	0.0490	0.0147	ug/L	1		03/28/17 16:41
Surrogates							
2-Fluorobiphenyl (surr)	60.6	53-106		%	1		03/28/17 16:41
Terphenyl-d14 (surr)	30.3 *	58-132		%	1		03/28/17 16:41

Batch Information

Analytical Batch: XMS9903
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: S.G
 Analytical Date/Time: 03/28/17 16:41
 Container ID: 1171210003-I

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:02
 Prep Initial Wt./Vol.: 255 mL
 Prep Extract Vol: 1 mL

Analytical Batch: XMS9906
 Analytical Method: 8270D SIM LV (PAH)
 Analyst: S.G
 Analytical Date/Time: 03/30/17 17:34
 Container ID: 1171210003-I

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:02
 Prep Initial Wt./Vol.: 255 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW9-0323

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Semivolatile Organic Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Diesel Range Organics	1.21	0.566	0.170	mg/L	1		03/27/17 17:56
Surrogates							
5a Androstane (surr)	70.1	50-150		%	1		03/27/17 17:56

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK102
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:56
 Container ID: 1171210003-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Residual Range Organics	0.472 U	0.472	0.142	mg/L	1		03/27/17 17:56
Surrogates							
n-Triacontane-d62 (surr)	78.6	50-150		%	1		03/27/17 17:56

Batch Information

Analytical Batch: XFC13230
 Analytical Method: AK103
 Analyst: FDR
 Analytical Date/Time: 03/27/17 17:56
 Container ID: 1171210003-G

Prep Batch: XXX37067
 Prep Method: SW3520C
 Prep Date/Time: 03/27/17 09:40
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW9-0323

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 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	2.51	0.100	0.0310	mg/L	1		03/27/17 20:10
Surrogates							
4-Bromofluorobenzene (surr)	144	50-150		%	1		03/27/17 20:10

Batch Information

Analytical Batch: VFC13575
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 03/27/17 20:10
 Container ID: 1171210003-D

Prep Batch: VXX30315
 Prep Method: SW5030B
 Prep Date/Time: 03/27/17 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of MW9-0323

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 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	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
1,1,1-Trichloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,1,2,2-Tetrachloroethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
1,1,2-Trichloroethane	0.800 U	0.800	0.240	ug/L	2		03/28/17 20:14
1,1-Dichloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,1-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,1-Dichloropropene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2,3-Trichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2,3-Trichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2,4-Trichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2,4-Trimethylbenzene	67.8	2.00	0.620	ug/L	2		03/28/17 20:14
1,2-Dibromo-3-chloropropane	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
1,2-Dibromoethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2-Dichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,2-Dichloroethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
1,2-Dichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,3,5-Trimethylbenzene	5.28	2.00	0.620	ug/L	2		03/28/17 20:14
1,3-Dichlorobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
1,3-Dichloropropane	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
1,4-Dichlorobenzene	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
2,2-Dichloropropane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
2-Butanone (MEK)	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
2-Chlorotoluene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
2-Hexanone	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
4-Chlorotoluene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
4-Isopropyltoluene	3.29	2.00	0.620	ug/L	2		03/28/17 20:14
4-Methyl-2-pentanone (MIBK)	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
Benzene	238	0.800	0.240	ug/L	2		03/28/17 20:14
Bromobenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Bromochloromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Bromodichloromethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
Bromoform	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Bromomethane	10.0 U	10.0	3.00	ug/L	2		03/28/17 20:14
Carbon disulfide	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
Carbon tetrachloride	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Chlorobenzene	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
Chloroethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14

Print Date: 04/04/2017 11:41:15AM

Results of MW9-0323

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 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	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Chloromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
cis-1,2-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
cis-1,3-Dichloropropene	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
Dibromochloromethane	1.00 U	1.00	0.300	ug/L	2		03/28/17 20:14
Dibromomethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Dichlorodifluoromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Ethylbenzene	285	2.00	0.620	ug/L	2		03/28/17 20:14
Freon-113	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
Hexachlorobutadiene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Isopropylbenzene (Cumene)	7.12	2.00	0.620	ug/L	2		03/28/17 20:14
Methylene chloride	10.0 U	10.0	2.00	ug/L	2		03/28/17 20:14
Methyl-t-butyl ether	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
Naphthalene	9.97	2.00	0.620	ug/L	2		03/28/17 20:14
n-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
n-Propylbenzene	9.52	2.00	0.620	ug/L	2		03/28/17 20:14
o-Xylene	187	2.00	0.620	ug/L	2		03/28/17 20:14
P & M -Xylene	559	4.00	1.24	ug/L	2		03/28/17 20:14
sec-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Styrene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
tert-Butylbenzene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Tetrachloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Toluene	17.3	2.00	0.620	ug/L	2		03/28/17 20:14
trans-1,2-Dichloroethene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
trans-1,3-Dichloropropene	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Trichloroethene	2.58	2.00	0.620	ug/L	2		03/28/17 20:14
Trichlorofluoromethane	2.00 U	2.00	0.620	ug/L	2		03/28/17 20:14
Vinyl acetate	20.0 U	20.0	6.20	ug/L	2		03/28/17 20:14
Vinyl chloride	2.46	0.300	0.100	ug/L	2		03/28/17 20:14
Xylenes (total)	745	6.00	2.00	ug/L	2		03/28/17 20:14
Surrogates							
1,2-Dichloroethane-D4 (surr)	101	81-118		%	2		03/28/17 20:14
4-Bromofluorobenzene (surr)	100	85-114		%	2		03/28/17 20:14
Toluene-d8 (surr)	99.3	89-112		%	2		03/28/17 20:14

Print Date: 04/04/2017 11:41:15AM

Results of **MW9-0323**

Client Sample ID: **MW9-0323**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210003
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:46
 Received Date: 03/24/17 10:04
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS16615
 Analytical Method: SW8260C
 Analyst: NRB
 Analytical Date/Time: 03/28/17 20:14
 Container ID: 1171210003-A

Prep Batch: VXX30316
 Prep Method: SW5030B
 Prep Date/Time: 03/28/17 06:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210004
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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		03/27/17 18:18
Surrogates							
4-Bromofluorobenzene (surr)	101	50-150		%	1		03/27/17 18:18

Batch Information

Analytical Batch: VFC13575
 Analytical Method: AK101
 Analyst: ST
 Analytical Date/Time: 03/27/17 18:18
 Container ID: 1171210004-D

Prep Batch: VXX30315
 Prep Method: SW5030B
 Prep Date/Time: 03/27/17 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210004
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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		03/28/17 16:46
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		03/28/17 16:46
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
1,2-Dibromoethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
Benzene	0.400 U	0.400	0.120	ug/L	1		03/28/17 16:46
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
Bromoform	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Bromomethane	5.00 U	5.00	1.50	ug/L	1		03/28/17 16:46
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
Chloroethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46

Print Date: 04/04/2017 11:41:15AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **Dimond**
 Lab Sample ID: 1171210004
 Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
 Received Date: 03/24/17 10:04
 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		03/28/17 16:46
Chloromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		03/28/17 16:46
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Freon-113	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		03/28/17 16:46
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
Naphthalene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
o-Xylene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		03/28/17 16:46
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Styrene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Toluene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		03/28/17 16:46
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		03/28/17 16:46
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		03/28/17 16:46
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		03/28/17 16:46
Surrogates							
1,2-Dichloroethane-D4 (surr)	102	81-118		%	1		03/28/17 16:46
4-Bromofluorobenzene (surr)	101	85-114		%	1		03/28/17 16:46
Toluene-d8 (surr)	101	89-112		%	1		03/28/17 16:46

Print Date: 04/04/2017 11:41:15AM

Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **Dimond**
Lab Sample ID: 1171210004
Lab Project ID: 1171210

Collection Date: 03/23/17 15:21
Received Date: 03/24/17 10:04
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS16615
Analytical Method: SW8260C
Analyst: NRB
Analytical Date/Time: 03/28/17 16:46
Container ID: 1171210004-A

Prep Batch: VXX30316
Prep Method: SW5030B
Prep Date/Time: 03/28/17 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:15AM

Method Blank

Blank ID: MB for HBN 1756266 [VXX/30315]
Blank Lab ID: 1377360

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003, 1171210004

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)	94.9	50-150		%

Batch Information

Analytical Batch: VFC13575
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 3/27/2017 11:26:00AM

Prep Batch: VXX30315
Prep Method: SW5030B
Prep Date/Time: 3/27/2017 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:18AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [VXX30315]
 Blank Spike Lab ID: 1377363
 Date Analyzed: 03/27/2017 17:59

Spike Duplicate ID: LCSD for HBN 1171210 [VXX30315]
 Spike Duplicate Lab ID: 1377364
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

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	0.914	91	1.00	1.01	101	(60-120)	10.00	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	103	103	0.0500	105	105	(50-150)	2.00	

Batch Information

Analytical Batch: **VFC13575**
 Analytical Method: **AK101**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ST**

Prep Batch: **VXX30315**
 Prep Method: **SW5030B**
 Prep Date/Time: **03/27/2017 08:00**
 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: 04/04/2017 11:41:20AM

Method Blank

Blank ID: MB for HBN 1756368 [VXX/30316]
Blank Lab ID: 1377560

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

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	0.500U	1.00	0.310	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	1.50	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

Print Date: 04/04/2017 11:41:22AM

Method Blank

Blank ID: MB for HBN 1756368 [VXX/30316]
Blank Lab ID: 1377560

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

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	2.50U	5.00	1.00	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)	105	81-118		%
4-Bromofluorobenzene (surr)	102	85-114		%
Toluene-d8 (surr)	97.3	89-112		%

Print Date: 04/04/2017 11:41:22AM

Method Blank

Blank ID: MB for HBN 1756368 [VXX/30316]
Blank Lab ID: 1377560

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
------------------	----------------	---------------	-----------	--------------

Batch Information

Analytical Batch: VMS16615
Analytical Method: SW8260C
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 3/28/2017 1:20:00PM

Prep Batch: VXX30316
Prep Method: SW5030B
Prep Date/Time: 3/28/2017 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/04/2017 11:41:22AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [VXX30316]
 Blank Spike Lab ID: 1377561
 Date Analyzed: 03/28/2017 13:37

Spike Duplicate ID: LCSD for HBN 1171210 [VXX30316]
 Spike Duplicate Lab ID: 1377562
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

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	32.7	109	30	33.4	111	(78-124)	1.90	(< 20)
1,1,1-Trichloroethane	30	31.5	105	30	33.6	112	(74-131)	6.50	(< 20)
1,1,2,2-Tetrachloroethane	30	30.8	103	30	32.6	109	(71-121)	5.50	(< 20)
1,1,2-Trichloroethane	30	31.4	105	30	31.2	104	(80-119)	0.81	(< 20)
1,1-Dichloroethane	30	30.6	102	30	32.0	107	(77-125)	4.60	(< 20)
1,1-Dichloroethene	30	30.8	103	30	32.7	109	(71-131)	6.10	(< 20)
1,1-Dichloropropene	30	30.3	101	30	32.4	108	(79-125)	6.80	(< 20)
1,2,3-Trichlorobenzene	30	33.2	111	30	34.6	115	(69-129)	4.10	(< 20)
1,2,3-Trichloropropane	30	30.9	103	30	32.4	108	(73-122)	4.80	(< 20)
1,2,4-Trichlorobenzene	30	32.8	109	30	34.2	114	(69-130)	4.40	(< 20)
1,2,4-Trimethylbenzene	30	31.3	104	30	33.3	111	(79-124)	6.20	(< 20)
1,2-Dibromo-3-chloropropane	30	33.1	110	30	34.4	115	(62-128)	3.70	(< 20)
1,2-Dibromoethane	30	32.3	108	30	32.1	107	(77-121)	0.38	(< 20)
1,2-Dichlorobenzene	30	31.2	104	30	32.1	107	(80-119)	2.70	(< 20)
1,2-Dichloroethane	30	30.2	101	30	31.0	103	(73-128)	2.90	(< 20)
1,2-Dichloropropane	30	30.7	102	30	31.8	106	(78-122)	3.70	(< 20)
1,3,5-Trimethylbenzene	30	32.0	107	30	33.8	113	(75-124)	5.70	(< 20)
1,3-Dichlorobenzene	30	29.4	98	30	31.0	103	(80-119)	5.10	(< 20)
1,3-Dichloropropane	30	30.8	103	30	30.7	102	(80-119)	0.04	(< 20)
1,4-Dichlorobenzene	30	31.2	104	30	32.0	107	(79-118)	2.50	(< 20)
2,2-Dichloropropane	30	31.9	106	30	33.4	111	(60-139)	4.70	(< 20)
2-Butanone (MEK)	90	96.8	108	90	99.3	110	(56-143)	2.60	(< 20)
2-Chlorotoluene	30	31.2	104	30	32.6	109	(79-122)	4.50	(< 20)
2-Hexanone	90	96.6	107	90	98.2	109	(57-139)	1.70	(< 20)
4-Chlorotoluene	30	31.6	105	30	32.8	109	(78-122)	3.80	(< 20)
4-Isopropyltoluene	30	32.6	109	30	35.0	117	(77-127)	7.30	(< 20)
4-Methyl-2-pentanone (MIBK)	90	98.8	110	90	105	117	(67-130)	6.00	(< 20)
Benzene	30	28.9	96	30	31.0	103	(79-120)	7.20	(< 20)
Bromobenzene	30	31.4	105	30	32.5	108	(80-120)	3.20	(< 20)
Bromochloromethane	30	30.3	101	30	30.9	103	(78-123)	2.00	(< 20)
Bromodichloromethane	30	32.5	108	30	33.6	112	(79-125)	3.40	(< 20)
Bromoform	30	36.2	121	30	35.9	120	(66-130)	1.00	(< 20)
Bromomethane	30	37.6	125	30	38.9	130	(53-141)	3.40	(< 20)
Carbon disulfide	45	45.0	100	45	47.8	106	(64-133)	6.00	(< 20)

Print Date: 04/04/2017 11:41:25AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [VXX30316]
 Blank Spike Lab ID: 1377561
 Date Analyzed: 03/28/2017 13:37

Spike Duplicate ID: LCSD for HBN 1171210
 [VXX30316]
 Spike Duplicate Lab ID: 1377562
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Carbon tetrachloride	30	32.7	109	30	34.9	116	(72-136)	6.50	(< 20)
Chlorobenzene	30	29.6	99	30	30.9	103	(82-118)	4.20	(< 20)
Chloroethane	30	31.0	103	30	31.6	105	(60-138)	1.90	(< 20)
Chloroform	30	30.6	102	30	32.0	107	(79-124)	4.50	(< 20)
Chloromethane	30	39.7	132	30	43.3	144	* (50-139)	8.70	(< 20)
cis-1,2-Dichloroethene	30	29.8	99	30	31.1	104	(78-123)	4.20	(< 20)
cis-1,3-Dichloropropene	30	31.8	106	30	32.9	110	(75-124)	3.40	(< 20)
Dibromochloromethane	30	33.4	111	30	33.3	111	(74-126)	0.50	(< 20)
Dibromomethane	30	29.5	98	30	30.0	100	(79-123)	1.70	(< 20)
Dichlorodifluoromethane	30	29.9	100	30	32.2	107	(32-152)	7.40	(< 20)
Ethylbenzene	30	30.4	101	30	31.6	105	(79-121)	4.00	(< 20)
Freon-113	45	47.8	106	45	50.8	113	(70-136)	6.20	(< 20)
Hexachlorobutadiene	30	31.8	106	30	35.0	117	(66-134)	9.50	(< 20)
Isopropylbenzene (Cumene)	30	32.1	107	30	32.9	110	(72-131)	2.60	(< 20)
Methylene chloride	30	28.1	94	30	29.4	98	(74-124)	4.40	(< 20)
Methyl-t-butyl ether	45	49.3	110	45	50.2	112	(71-124)	1.80	(< 20)
Naphthalene	30	32.3	108	30	34.2	114	(61-128)	5.80	(< 20)
n-Butylbenzene	30	33.0	110	30	35.6	119	(75-128)	7.50	(< 20)
n-Propylbenzene	30	31.8	106	30	33.2	111	(76-126)	4.20	(< 20)
o-Xylene	30	30.8	103	30	31.2	104	(78-122)	1.30	(< 20)
P & M -Xylene	60	60.9	101	60	62.5	104	(80-121)	2.70	(< 20)
sec-Butylbenzene	30	32.7	109	30	34.4	115	(77-126)	5.00	(< 20)
Styrene	30	31.4	105	30	32.0	107	(78-123)	1.80	(< 20)
tert-Butylbenzene	30	32.2	107	30	34.1	114	(78-124)	5.70	(< 20)
Tetrachloroethene	30	31.0	103	30	33.5	112	(74-129)	7.80	(< 20)
Toluene	30	29.1	97	30	30.5	102	(80-121)	4.60	(< 20)
trans-1,2-Dichloroethene	30	29.8	99	30	31.9	106	(75-124)	6.80	(< 20)
trans-1,3-Dichloropropene	30	32.5	108	30	33.0	110	(73-127)	1.60	(< 20)
Trichloroethene	30	30.0	100	30	32.0	107	(79-123)	6.40	(< 20)
Trichlorofluoromethane	30	36.0	120	30	38.3	128	(65-141)	6.10	(< 20)
Vinyl acetate	30	40.2	134	30	40.2	134	(54-146)	0.02	(< 20)
Vinyl chloride	30	32.9	110	30	35.5	118	(58-137)	7.60	(< 20)
Xylenes (total)	90	91.7	102	90	93.8	104	(79-121)	2.20	(< 20)

Print Date: 04/04/2017 11:41:25AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [VXX30316]
 Blank Spike Lab ID: 1377561
 Date Analyzed: 03/28/2017 13:37

Spike Duplicate ID: LCSD for HBN 1171210 [VXX30316]
 Spike Duplicate Lab ID: 1377562
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

Parameter	Blank Spike (%)			Spike Duplicate (%)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	103	103	30	103	103	(81-118)	0.08	
4-Bromofluorobenzene (surr)	30	100	100	30	98.2	98	(85-114)	2.30	
Toluene-d8 (surr)	30	99.8	100	30	99.2	99	(89-112)	0.64	

Batch Information

Analytical Batch: VMS16615
 Analytical Method: SW8260C
 Instrument: VSA Agilent GC/MS 7890B/5977A
 Analyst: NRB

Prep Batch: VXX30316
 Prep Method: SW5030B
 Prep Date/Time: 03/28/2017 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: 04/04/2017 11:41:25AM

Matrix Spike Summary

Original Sample ID: 1177658009
MS Sample ID: 1377563 MS
MSD Sample ID: 1377564 MSD

Analysis Date: 03/28/2017 19:22
Analysis Date: 03/28/2017 14:46
Analysis Date: 03/28/2017 15:03
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
1,1,1,2-Tetrachloroethane	0.250U	30.0	34.3	114	30.0	34.5	115	78-124	0.70	(< 20)
1,1,1-Trichloroethane	0.500U	30.0	34.6	115	30.0	33.9	113	74-131	2.00	(< 20)
1,1,2,2-Tetrachloroethane	0.250U	30.0	33.6	112	30.0	33.1	110	71-121	1.40	(< 20)
1,1,2-Trichloroethane	0.200U	30.0	32.2	107	30.0	32.5	108	80-119	0.83	(< 20)
1,1-Dichloroethane	0.500U	30.0	32.8	109	30.0	32.2	107	77-125	1.90	(< 20)
1,1-Dichloroethene	0.500U	30.0	34.3	114	30.0	33.3	111	71-131	3.10	(< 20)
1,1-Dichloropropene	0.500U	30.0	33.6	112	30.0	32.8	109	79-125	2.40	(< 20)
1,2,3-Trichlorobenzene	0.500U	30.0	34.8	116	30.0	34.8	116	69-129	0.01	(< 20)
1,2,3-Trichloropropane	0.500U	30.0	33.1	110	30.0	32.7	109	73-122	1.20	(< 20)
1,2,4-Trichlorobenzene	0.500U	30.0	35.4	118	30.0	34.5	115	69-130	2.50	(< 20)
1,2,4-Trimethylbenzene	0.500U	30.0	34.2	114	30.0	33.6	112	79-124	1.70	(< 20)
1,2-Dibromo-3-chloropropane	5.00U	30.0	34	113	30.0	34.7	116	62-128	2.00	(< 20)
1,2-Dibromoethane	0.500U	30.0	32.9	110	30.0	33.2	111	77-121	0.91	(< 20)
1,2-Dichlorobenzene	0.500U	30.0	33.2	111	30.0	32.6	109	80-119	1.80	(< 20)
1,2-Dichloroethane	0.250U	30.0	31.5	105	30.0	31.2	104	73-128	0.93	(< 20)
1,2-Dichloropropane	0.500U	30.0	32.3	108	30.0	31.9	106	78-122	1.10	(< 20)
1,3,5-Trimethylbenzene	0.500U	30.0	34.1	114	30.0	33.4	111	75-124	2.10	(< 20)
1,3-Dichlorobenzene	0.500U	30.0	31.6	105	30.0	31.0	103	80-119	1.90	(< 20)
1,3-Dichloropropane	0.250U	30.0	31.7	106	30.0	31.9	106	80-119	0.62	(< 20)
1,4-Dichlorobenzene	0.250U	30.0	33.6	112	30.0	32.8	109	79-118	2.60	(< 20)
2,2-Dichloropropane	0.500U	30.0	34.9	116	30.0	34.2	114	60-139	2.20	(< 20)
2-Butanone (MEK)	5.00U	90.0	95.2	106	90.0	99.1	110	56-143	4.10	(< 20)
2-Chlorotoluene	0.500U	30.0	33.7	112	30.0	33.0	110	79-122	2.00	(< 20)
2-Hexanone	5.00U	90.0	97.6	108	90.0	101	112	57-139	3.60	(< 20)
4-Chlorotoluene	0.500U	30.0	33.5	112	30.0	32.8	109	78-122	2.10	(< 20)
4-Isopropyltoluene	0.500U	30.0	35.4	118	30.0	33.9	113	77-127	4.40	(< 20)
4-Methyl-2-pentanone (MIBK)	5.00U	90.0	102	113	90.0	104	116	67-130	2.40	(< 20)
Benzene	0.200U	30.0	31.7	106	30.0	30.9	103	79-120	2.40	(< 20)
Bromobenzene	0.500U	30.0	33.5	112	30.0	32.9	110	80-120	1.90	(< 20)
Bromochloromethane	0.500U	30.0	31.7	106	30.0	31.4	105	78-123	1.00	(< 20)
Bromodichloromethane	0.250U	30.0	33.8	113	30.0	33.6	112	79-125	0.65	(< 20)
Bromoform	0.500U	30.0	36.5	122	30.0	36.6	122	66-130	0.21	(< 20)
Bromomethane	2.50U	30.0	43.7	146 *	30.0	41.5	138	53-141	5.10	(< 20)
Carbon disulfide	5.00U	45.0	50.9	113	45.0	48.6	108	64-133	4.50	(< 20)
Carbon tetrachloride	0.500U	30.0	36.2	121	30.0	35.3	118	72-136	2.40	(< 20)
Chlorobenzene	0.250U	30.0	31.7	106	30.0	31.4	105	82-118	0.82	(< 20)
Chloroethane	0.500U	30.0	36	120	30.0	33.9	113	60-138	6.10	(< 20)

Print Date: 04/04/2017 11:41:26AM

Matrix Spike Summary

Original Sample ID: 1177658009
MS Sample ID: 1377563 MS
MSD Sample ID: 1377564 MSD

Analysis Date: 03/28/2017 19:22
Analysis Date: 03/28/2017 14:46
Analysis Date: 03/28/2017 15:03
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

Parameter	Sample	Matrix Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
		Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Chloroform	0.433J	30.0	32.8	108	30.0	32.5	107	79-124	1.10	(< 20)
Chloromethane	0.500U	30.0	44.5	148 *	30.0	43.6	145 *	50-139	2.20	(< 20)
cis-1,2-Dichloroethene	0.500U	30.0	31.8	106	30.0	31.1	104	78-123	2.10	(< 20)
cis-1,3-Dichloropropene	0.250U	30.0	33.6	112	30.0	33.0	110	75-124	1.70	(< 20)
Dibromochloromethane	0.250U	30.0	34.2	114	30.0	34.5	115	74-126	0.85	(< 20)
Dibromomethane	0.500U	30.0	30.5	102	30.0	30.1	100	79-123	1.10	(< 20)
Dichlorodifluoromethane	0.500U	30.0	29.8	99	30.0	28.7	96	32-152	3.80	(< 20)
Ethylbenzene	0.439J	30.0	33	108	30.0	32.9	108	79-121	0.32	(< 20)
Freon-113	5.00U	45.0	53.6	119	45.0	51.9	115	70-136	3.20	(< 20)
Hexachlorobutadiene	0.500U	30.0	37	123	30.0	33.9	113	66-134	8.90	(< 20)
Isopropylbenzene (Cumene)	0.500U	30.0	33.7	112	30.0	33.7	112	72-131	0.05	(< 20)
Methylene chloride	2.50U	30.0	30.6	102	30.0	30.2	101	74-124	1.20	(< 20)
Methyl-t-butyl ether	5.00U	45.0	50.6	113	45.0	50.7	113	71-124	0.05	(< 20)
Naphthalene	0.500U	30.0	33.9	113	30.0	34.7	116	61-128	2.20	(< 20)
n-Butylbenzene	0.500U	30.0	35.6	119	30.0	34.6	115	75-128	2.70	(< 20)
n-Propylbenzene	0.500U	30.0	34.2	114	30.0	33.6	112	76-126	1.90	(< 20)
o-Xylene	1.05	30.0	32.9	106	30.0	33.2	107	78-122	0.93	(< 20)
P & M -Xylene	2.06	60.0	66.1	107	60.0	66.1	107	80-121	0.07	(< 20)
sec-Butylbenzene	0.500U	30.0	34.8	116	30.0	34.0	113	77-126	2.50	(< 20)
Styrene	0.500U	30.0	32.7	109	30.0	32.5	108	78-123	0.60	(< 20)
tert-Butylbenzene	0.500U	30.0	34.3	114	30.0	33.3	111	78-124	2.90	(< 20)
Tetrachloroethene	0.500U	30.0	33.9	113	30.0	34.4	115	74-129	1.60	(< 20)
Toluene	0.686J	30.0	32.1	105	30.0	32.4	106	80-121	0.76	(< 20)
trans-1,2-Dichloroethene	0.500U	30.0	33	110	30.0	32.1	107	75-124	3.00	(< 20)
trans-1,3-Dichloropropene	0.500U	30.0	33.5	112	30.0	33.5	112	73-127	0.12	(< 20)
Trichloroethene	0.500U	30.0	33.1	110	30.0	32.3	108	79-123	2.40	(< 20)
Trichlorofluoromethane	0.500U	30.0	40.1	134	30.0	38.6	129	65-141	3.90	(< 20)
Vinyl acetate	5.00U	30.0	41.4	138	30.0	40.8	136	54-146	1.30	(< 20)
Vinyl chloride	0.0750U	30.0	36	120	30.0	34.9	116	58-137	3.20	(< 20)
Xylenes (total)	3.11	90.0	99	107	90.0	99.2	107	79-121	0.26	(< 20)
Surrogates										
1,2-Dichloroethane-D4 (surr)		30.0	30.6	102	30.0	30.6	102	81-118	0.23	
4-Bromofluorobenzene (surr)		30.0	30.3	101	30.0	30.0	100	85-114	1.10	
Toluene-d8 (surr)		30.0	30	100	30.0	30.5	102	89-112	1.50	

Print Date: 04/04/2017 11:41:26AM

Matrix Spike Summary

Original Sample ID: 1177658009
MS Sample ID: 1377563 MS
MSD Sample ID: 1377564 MSD

Analysis Date:
Analysis Date: 03/28/2017 14:46
Analysis Date: 03/28/2017 15:03
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003, 1171210004

Results by SW8260C

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

Batch Information

Analytical Batch: VMS16615
Analytical Method: SW8260C
Instrument: VSA Agilent GC/MS 7890B/5977A
Analyst: NRB
Analytical Date/Time: 3/28/2017 2:46:00PM

Prep Batch: VXX30316
Prep Method: Volatiles Extraction 8240/8260 FULL
Prep Date/Time: 3/28/2017 6:00:00AM
Prep Initial Wt./Vol.: 5.00mL
Prep Extract Vol: 5.00mL

Print Date: 04/04/2017 11:41:26AM

Method Blank

Blank ID: MB for HBN 1756160 [XXX/37064]
Blank Lab ID: 1377215

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003

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-Fluorobiphenyl (surr)	78.4	53-106		%
Terphenyl-d14 (surr)	76.1	58-132		%

Batch Information

Analytical Batch: XMS9903
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: S.G
Analytical Date/Time: 3/28/2017 2:58:00PM

Prep Batch: XXX37064
Prep Method: SW3520C
Prep Date/Time: 3/27/2017 9:02:15AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [XXX37064]
 Blank Spike Lab ID: 1377216
 Date Analyzed: 03/28/2017 15:19

Spike Duplicate ID: LCSD for HBN 1171210 [XXX37064]
 Spike Duplicate Lab ID: 1377217
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003

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	1.46	73	2	1.65	83	(41-115)	12.60	(< 20)
2-Methylnaphthalene	2	1.42	71	2	1.61	81	(39-114)	12.40	(< 20)
Acenaphthene	2	1.74	87	2	1.98	99	(48-114)	12.50	(< 20)
Acenaphthylene	2	1.39	70	2	1.61	80	(35-121)	14.40	(< 20)
Anthracene	2	1.37	68	2	1.60	80	(53-119)	15.60	(< 20)
Benzo(a)Anthracene	2	1.34	67	2	1.51	75	(59-120)	12.00	(< 20)
Benzo[a]pyrene	2	1.37	68	2	1.66	83	(53-120)	19.30	(< 20)
Benzo[b]Fluoranthene	2	1.41	70	2	1.58	79	(53-126)	11.70	(< 20)
Benzo[g,h,i]perylene	2	1.30	65	2	1.52	76	(44-128)	15.70	(< 20)
Benzo[k]fluoranthene	2	1.43	71	2	1.56	78	(54-125)	8.90	(< 20)
Chrysene	2	1.50	75	2	1.68	84	(57-120)	11.60	(< 20)
Dibenzo[a,h]anthracene	2	1.18	59	2	1.40	70	(44-131)	17.00	(< 20)
Fluoranthene	2	1.41	71	2	1.62	81	(58-120)	13.40	(< 20)
Fluorene	2	1.46	73	2	1.66	83	(50-118)	13.20	(< 20)
Indeno[1,2,3-c,d] pyrene	2	1.32	66	2	1.50	75	(48-130)	12.90	(< 20)
Naphthalene	2	1.48	74	2	1.67	84	(43-114)	11.90	(< 20)
Phenanthrene	2	1.36	68	2	1.55	78	(53-115)	13.60	(< 20)
Pyrene	2	1.48	74	2	1.70	85	(53-121)	13.80	(< 20)
Surrogates									
2-Fluorobiphenyl (surr)	2	76.8	77	2	86.8	87	(53-106)	12.20	
Terphenyl-d14 (surr)	2	77.2	77	2	85	85	(58-132)	9.60	

Batch Information

Analytical Batch: XMS9903
 Analytical Method: 8270D SIM LV (PAH)
 Instrument: SVA Agilent 780/5975 GC/MS
 Analyst: S.G

Prep Batch: XXX37064
 Prep Method: SW3520C
 Prep Date/Time: 03/27/2017 09:02
 Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:30AM

Method Blank

Blank ID: MB for HBN 1756163 [XXX/37067]
Blank Lab ID: 1377223

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003

Results by AK102

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	85.4	60-120		%

Batch Information

Analytical Batch: XFC13230
Analytical Method: AK102
Instrument: Agilent 7890B R
Analyst: FDR
Analytical Date/Time: 3/27/2017 5:07:00PM

Prep Batch: XXX37067
Prep Method: SW3520C
Prep Date/Time: 3/27/2017 9:40:23AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:32AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [XXX37067]
 Blank Spike Lab ID: 1377224
 Date Analyzed: 03/27/2017 17:17

Spike Duplicate ID: LCSD for HBN 1171210 [XXX37067]
 Spike Duplicate Lab ID: 1377225
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003

Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	17.6	88	20	17.6	88	(75-125)	0.00	(< 20)
Surrogates									
5a Androstane (surr)	0.4	92.7	93	0.4	90.8	91	(60-120)	2.00	

Batch Information

Analytical Batch: **XFC13230**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **FDR**

Prep Batch: **XXX37067**
 Prep Method: **SW3520C**
 Prep Date/Time: **03/27/2017 09:40**
 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:34AM

Method Blank

Blank ID: MB for HBN 1756163 [XXX/37067]
Blank Lab ID: 1377223

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1171210001, 1171210002, 1171210003

Results by AK103

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62 (surr)	92.4	60-120		%

Batch Information

Analytical Batch: XFC13230
Analytical Method: AK103
Instrument: Agilent 7890B R
Analyst: FDR
Analytical Date/Time: 3/27/2017 5:07:00PM

Prep Batch: XXX37067
Prep Method: SW3520C
Prep Date/Time: 3/27/2017 9:40:23AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:36AM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1171210 [XXX37067]
 Blank Spike Lab ID: 1377224
 Date Analyzed: 03/27/2017 17:17

Spike Duplicate ID: LCSD for HBN 1171210 [XXX37067]
 Spike Duplicate Lab ID: 1377225
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1171210001, 1171210002, 1171210003

Results by AK103

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Residual Range Organics	20	16.7	84	20	16.5	82	(60-120)	1.40	(< 20)
Surrogates									
n-Triacontane-d62 (surr)	0.4	95.3	95	0.4	89	89	(60-120)	6.80	

Batch Information

Analytical Batch: **XFC13230**
 Analytical Method: **AK103**
 Instrument: **Agilent 7890B R**
 Analyst: **FDR**

Prep Batch: **XXX37067**
 Prep Method: **SW3520C**
 Prep Date/Time: **03/27/2017 09:40**
 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 04/04/2017 11:41:38AM

CLIENT: BGES, Inc						Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.								Page <u>1</u> of <u>1</u>				
Section 1	CONTACT: Jayne Martin PHONE NO: 644-2900					Section 3		Preservative										
	PROJECT NAME: Dimond PROJECT PWSID/ PERMIT#:					# C O N T A I N E R S	Type C = COMP G = GRAB MI = Multi Incremental Solis	HCL	HCL	HCL	None							
	REPORTS TO: Jayne E-MAIL: Jayne@bgesinc.com							VOCs 8260B	GR 1101	AK102 AK103 DRD, RRO	PAHs 8270 SW							
	INVOICE TO: BGES QUOTE #: open P.O. #:																	
Section 2	RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE												REMARKS/ LOC ID	
	① A-J	MW6-0323	03/23/17	16:31	Water	10	G	✓	✓	✓	✓							
	② A-J	MW7-0323	03/23/17	15:21	↓	10	G	✓	✓	✓	✓							
	③ A-J	MW9-0323	03/23/17	15:46	↓	10	G	✓	✓	✓	✓							
	④ A-C	Trip Blank	-	-	↓	3		✓										
	④ D-F	Trip Blank	-	-	↓	3			✓									
Section 5	Relinquished By: (1)		Date 3-24-17	Time 10:04	Received By:		Section 4 DOD Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Data Deliverable Requirements: Level 2									
	Relinquished By: (2)		Date	Time	Received By:		Cooler ID:		Requested Turnaround Time and/or Special Instructions: Standard									
	Relinquished By: (3)		Date	Time	Received By:		Temp Blank °C: 2.2 #023 or Ambient [] (See attached Sample Receipt Form)		Chain of Custody Seal: (Circle) INTACT BROKEN <u>ABSENT</u> (See attached Sample Receipt Form)									
	Relinquished By: (4)		Date 3/24/17	Time 10:04	Received For Laboratory By:													



e-Sample Receipt Form

SGS Workorder #:

1171210



1 1 7 1 2 1 0

Review Criteria		Condition (Yes, No, N/A)	Exceptions Noted below	
Chain of Custody / Temperature Requirements			<input checked="" type="checkbox"/> yes	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location		<input type="text" value="n/a"/>	ABSENT	
COC accompanied samples?		<input checked="" type="checkbox"/> yes		
<input type="text" value="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)?	<input checked="" type="checkbox"/> yes	Cooler ID:	<input type="text" value="1"/>	@ <input type="text" value="2.2"/> °C Therm. ID: <input type="text" value="D23"/>
	<input type="text" value="n/a"/>	Cooler ID:		@ °C Therm. ID:
	<input type="text" value="n/a"/>	Cooler ID:		@ °C Therm. ID:
	<input type="text" value="n/a"/>	Cooler ID:		@ °C Therm. ID:
	<input type="text" value="n/a"/>	Cooler ID:		@ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?		<input type="text" value="n/a"/>		
If <0°C, were sample containers ice free?		<input type="text" value="n/a"/>		
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".				
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?		<input checked="" type="checkbox"/> yes		
Do samples match COC ** (i.e., sample IDs, dates/times collected)?		<input checked="" type="checkbox"/> yes		
**Note: If times differ <1hr, record details & login per COC.				
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)		<input checked="" type="checkbox"/> yes		
Were proper containers (type/mass/volume/preservative***) used?		<input checked="" type="checkbox"/> yes	<input type="text" value="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?		<input checked="" type="checkbox"/> yes		
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?		<input checked="" type="checkbox"/> yes		
Were all soil VOAs field extracted with MeOH+BFB?		<input type="text" value="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>
1171210001-A	HCL to pH < 2	OK			
1171210001-B	HCL to pH < 2	OK			
1171210001-C	HCL to pH < 2	OK			
1171210001-D	HCL to pH < 2	OK			
1171210001-E	HCL to pH < 2	OK			
1171210001-F	HCL to pH < 2	OK			
1171210001-G	HCL to pH < 2	OK			
1171210001-H	HCL to pH < 2	OK			
1171210001-I	No Preservative Required	OK			
1171210001-J	No Preservative Required	OK			
1171210002-A	HCL to pH < 2	OK			
1171210002-B	HCL to pH < 2	OK			
1171210002-C	HCL to pH < 2	OK			
1171210002-D	HCL to pH < 2	OK			
1171210002-E	HCL to pH < 2	OK			
1171210002-F	HCL to pH < 2	OK			
1171210002-G	HCL to pH < 2	OK			
1171210002-H	HCL to pH < 2	OK			
1171210002-I	No Preservative Required	OK			
1171210002-J	No Preservative Required	OK			
1171210003-A	HCL to pH < 2	OK			
1171210003-B	HCL to pH < 2	OK			
1171210003-C	HCL to pH < 2	OK			
1171210003-D	HCL to pH < 2	OK			
1171210003-E	HCL to pH < 2	OK			
1171210003-F	HCL to pH < 2	OK			
1171210003-G	HCL to pH < 2	OK			
1171210003-H	HCL to pH < 2	OK			
1171210003-I	No Preservative Required	OK			
1171210003-J	No Preservative Required	OK			
1171210004-A	HCL to pH < 2	OK			
1171210004-B	HCL to pH < 2	OK			
1171210004-C	HCL to pH < 2	OK			
1171210004-D	HCL to pH < 2	OK			
1171210004-E	HCL to pH < 2	OK			
1171210004-F	HCL to pH < 2	OK			

Container Id

Preservative

Container
Condition

Container Id

Preservative

Container
Condition

Container Condition Glossary

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

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

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

DM- The container was received damaged.

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

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.

APPENDIX C

LABORATORY ANALYTICAL DATA QUALITY CONTROL CHECKLIST

Laboratory Data Review Checklist

Completed by:	Evan Tyler		
Title:	Environmental Engineer	Date:	4/6/2017
CS Report Name:	GROUNDWATER MONITORING REPORT	Report Date:	5/15/2017
Consultant Firm:	BGES, Inc		
Laboratory Name:	SGS	Laboratory Report Number:	1171210
ADEC File Number:	2100.38.563	ADEC Hazard ID:	26632

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

--

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

☐ Yes ☐ No ☒ NA (Please explain) Comments:

--

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

--

b. Correct analyses requested?

☒ Yes ☐ No ☐ NA (Please explain) Comments:

--

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ($4^{\circ} \pm 2^{\circ} \text{C}$)?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

The temperature of the sample cooler submitted on March 24, 2017 was measured at the laboratory at the time of receipt to be $2.2^{\circ} \text{Celsius (C)}$; which is within the prescribed optimal temperature range of 0-6 degrees C.

b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

No irregularities noted.

d. If there were any discrepancies, were they documented? - For example, incorrect sample containers/preservation, sample temperature outside of acceptance range, insufficient or missing samples, etc.?

☐ Yes

☐ No

☒ NA (Please explain)

Comments:

e. Data quality or usability affected? (Please explain)

Comments:

NA

4. Case Narrative

a. Present and understandable?

☒ Yes

☐ No

☐ NA (Please explain)

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

The recovery of surrogate terphenyl-d14 associated with PAHs analysis was below the acceptance criteria in all samples on this work order. This indicates the potential for the reported concentrations of the PAHs to be biased low. For this reason, detectable concentrations of PAHs are marked with a 'J' in Table 2 should be considered estimates. However, because the reported concentrations of benzo(a)anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and naphthalene exceed their associated ADEC cleanup criteria, it is our opinion that this QC failure does not affect our interpretation of the data.

The recovery of chloromethane exceeds the acceptance criteria in the laboratory control sample duplicate (LSCD). This indicates the potential for the reported concentrations of the chloromethane to be biased high in the associated project samples. However, because this analyte was not detected at concentrations exceeding the limit of quantitation (LOQ) in all samples, and because the LOQ s for this analyte in all samples are greater than one order of magnitude below applicable ADEC cleanup criteria, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recoveries for bromomethane and chloromethane exceed the acceptance criteria in the matrix spike (MS) sample. This indicates the potential for the reported concentrations of these analytes to be biased high. However, because these analytes were not detected at concentrations exceeding the LOQ, it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recovery for chloromethane exceed the acceptance criteria in the matrix spike duplicate (MSD). This indicates the potential for the reported concentrations of this analyte to be biased high. However, because this analyte was not detected at concentrations exceeding the LOQ, and because the LOQ s for this analyte in all samples are greater than one order of magnitude below applicable ADEC cleanup criteria it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

c. Were all corrective actions documented?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

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

Comments:

See 4b above

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

b. All applicable holding times met?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

c. All soils reported on a dry weight basis?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

The LOQs for 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dibromoethane, bromomethane, and hexachlorobutadiene, each exceeded their respective ADEC cleanup criteria in samples MW-7 and MW-9 on this work order (and are shown in italics on Table 2). Similarly, the LOQs for 1,2,3-trichloropropane and 1,2-dibromoethane exceeded their respective ADEC cleanup criterion in sample MW-6 on this work order (and are shown in italics on Table 2). In these instances, where the analytes were not detected above the LOQs, with the exception of naphthalene and vinyl chloride which exhibited concentrations above their associated ADEC cleanup criteria, it cannot be determined if the actual concentrations of those analytes exceed the applicable ADEC cleanup criteria.

e. Data quality or usability affected? (Please explain)

Comments:

See 5d.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

ii. All method blank results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

iii. If above PQL, what samples are affected?

Comments:

NA

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

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

v. Data quality or usability affected? (Please explain)

Comments:

NA

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

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

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

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

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

Metals were not collected for this report.

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

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

See 4b above.

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

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

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

Comments:

NA

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

☐ Yes ☐ No ☐ NA (Please explain)

Comments:

NA

vii. Data quality or usability affected? (Please explain)

Comments:

NA

c. Surrogates - Organics Only

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

☒ Yes ☐ No ☐ NA (Please explain) Comments:

ii. Accuracy - All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

☐ Yes ☒ No ☐ NA (Please explain) Comments:

See 4b above.

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

☒ Yes ☐ No ☐ NA (Please explain) Comments:

iv. Data quality or usability affected? (Use the comment box to explain.).

Comments:

See 4b above.

d. Trip Blank - Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

All samples were transported in same cooler.

iii. All results less than PQL?

☒ Yes ☐ No ☐ NA (Please explain.) Comments:

iv. If above PQL, what samples are affected?

Comments:

NA

v. Data quality or usability affected? (Please explain.)

Comments:

NA

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

ii. Submitted blind to lab?

☒ Yes ☐ No ☐ NA (Please explain.)

Comments:

iii. Precision - All relative percent differences (RPD) less than specified DQOs?
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute Value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

☒ Yes ☐ No ☐ NA (Please explain)

Comments:

Sample MW-9 was a duplicate of MW-7, and was collected and analyzed to evaluate field-sampling precision. The relative percent difference (RPD) between the original sample (MW-7) and the duplicate (MW-9) for analytes tested ranged from 0-17%. These RPD values are less than the laboratory QC acceptance limit of 30 percent for water, indicating good sampling precision.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

☐ Yes ☒ No ☐ NA (Please explain)

Comments:

f. Decontamination or Equipment Blank (if applicable)

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

Decontamination blank was not a part of the scope of work for the project.

i. All results less than PQL?

☐ Yes ☐ No ☒ NA (Please explain)

Comments:

ii. If above PQL, what samples are affected?

Comments:

NA

iii. Data quality or usability affected? (Please explain.)

Comments:

NA

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

a. Defined and appropriate?

☐ Yes ☐ No ☒ NA (Please explain)

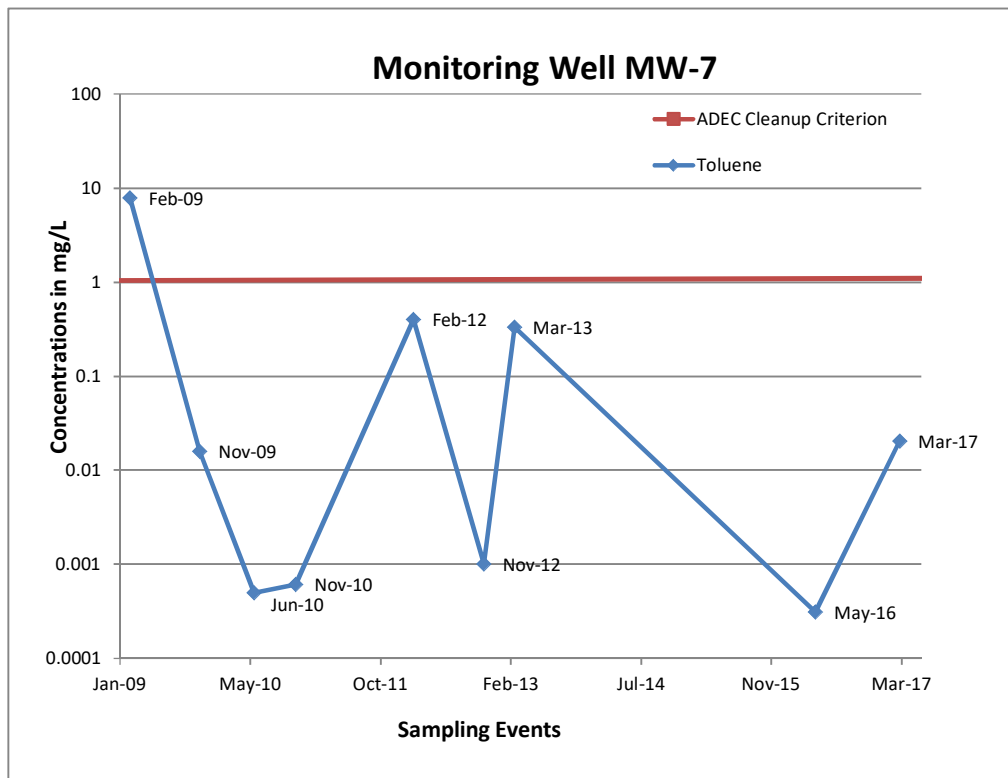
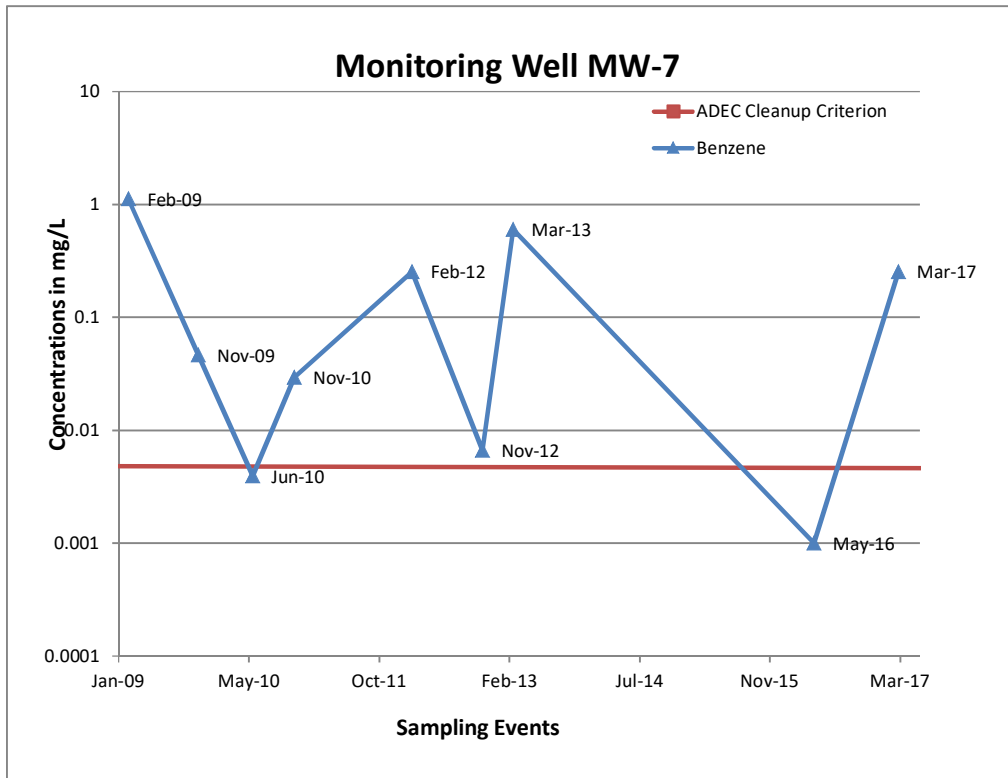
Comments:

Reset Form

APPENDIX D
GRAPHS OF HISTORICAL CONTAMINANT CONCENTRATION TRENDS

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

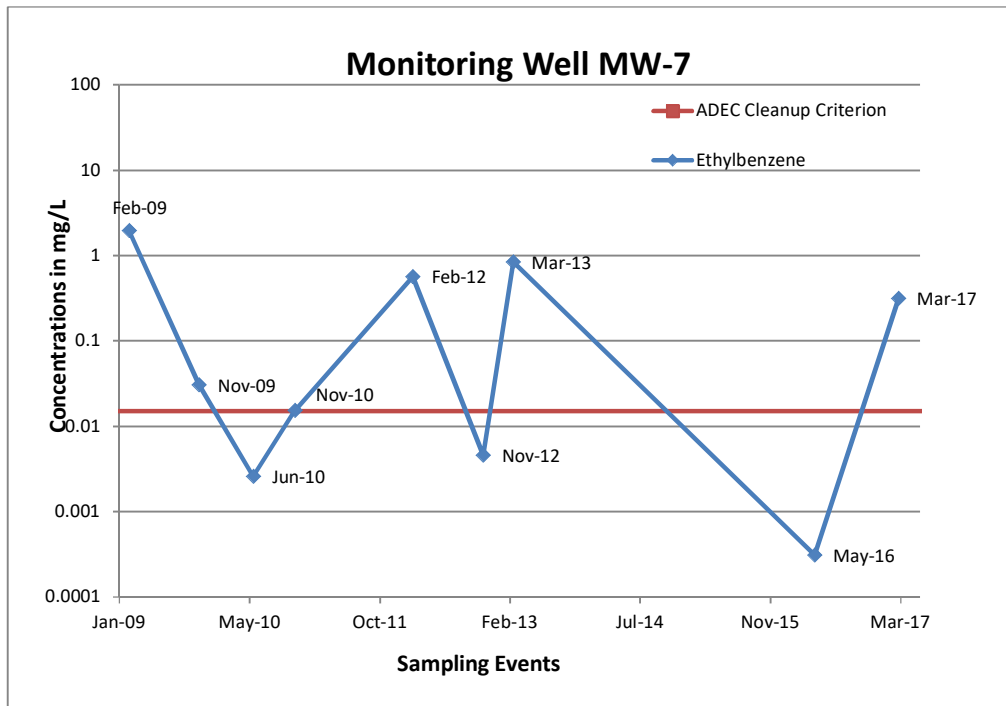
BGES, INC



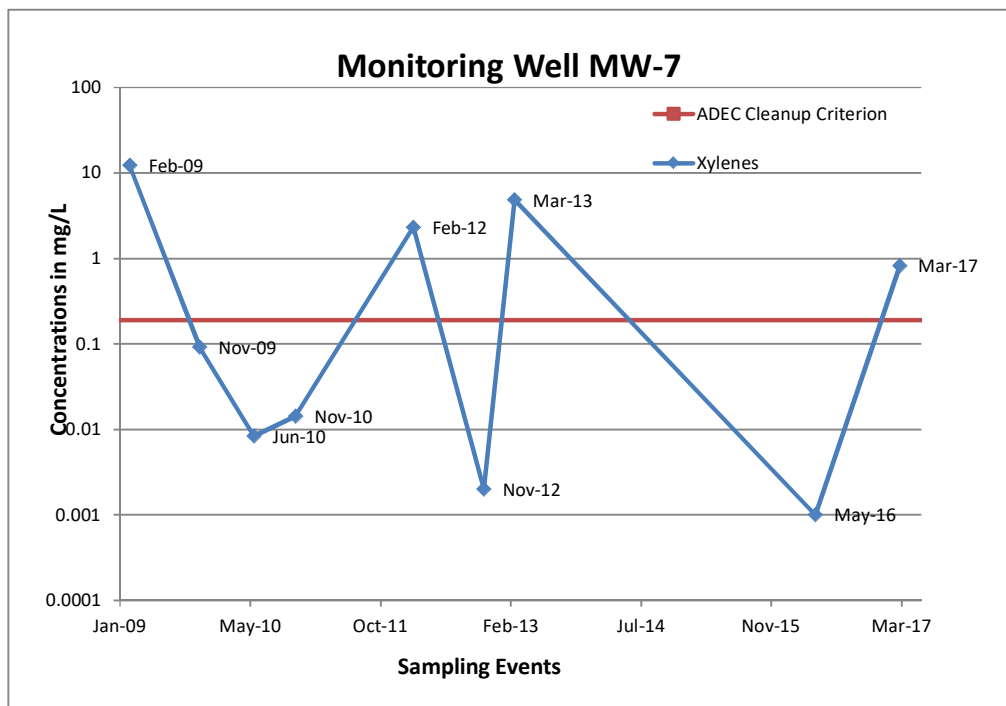
Note: Toluene was not detected above the method reporting limits (MRLs)/ limits of quantitation (LOQs) within the samples collected in June 2010, and November 2012. The MRLs/LOQs were used for the purposes of graphical representation.

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

BGES, INC



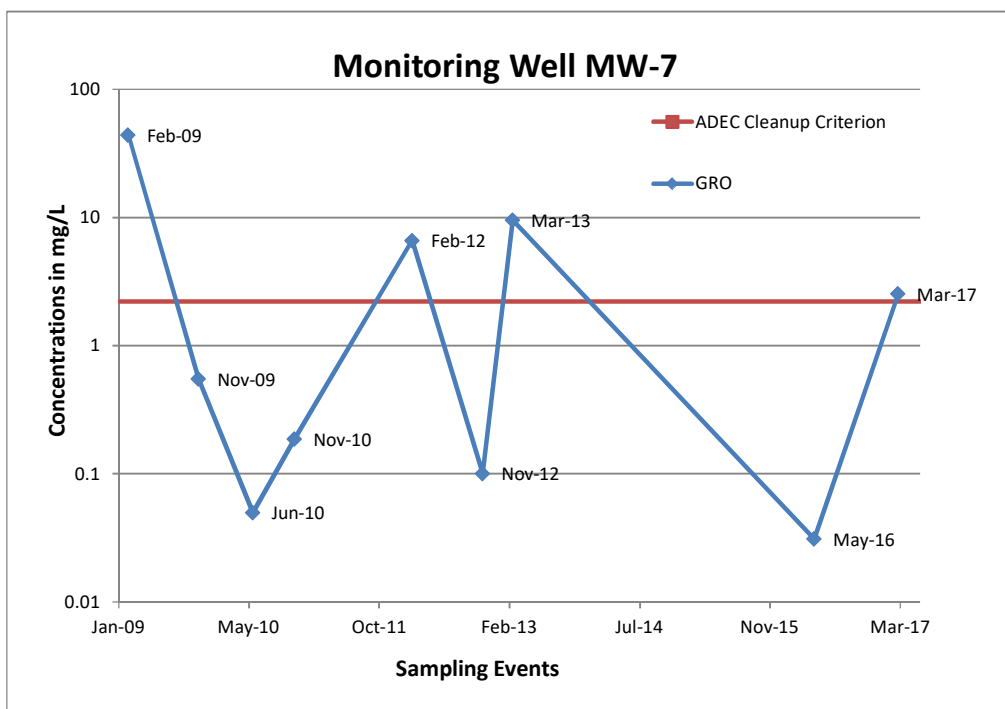
Note: Ethylbenzene was not detected above the LOQs within the samples collected in May 2016. The LOQ was used for the purposes of graphical representation.



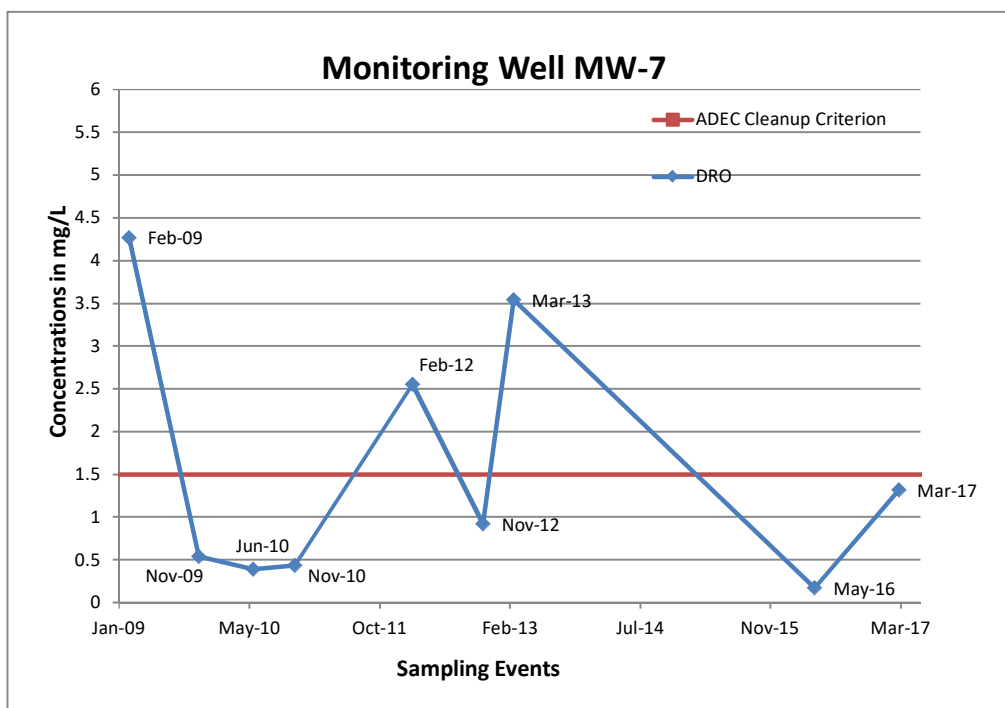
Note: Xylenes were not detected above the MRLs/LOQs within the samples collected in June 2010, November 2012 and May 2016. The MRLs/LOQs were used for the purposes of graphical representation.

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

BGES, INC



Note: GRO was not detected above the MRLs/LOQs within the samples collected in June 2010, November 2012, and May 2016. 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.