

BGES, INC.

ENVIRONMENTAL CONSULTANTS

2501 EAST 5th AVENUE
ANCHORAGE, ALASKA

ADEC FILE NUMBER 2100.26.129
HAZARD ID 23804

2019 GROUNDWATER MONITORING ACTIVITIES

September 2019

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ACRONYMS

AAC	-	Alaska Administrative Code
ADEC	-	Alaska Department of Environmental Conservation
AK	-	Alaska Method
bg	-	Below Grade
BGES	-	Braunstein Geological and Environmental Services
C	-	Celsius
CSM	-	Conceptual Site Model
DRO	-	Diesel Range Organics
EPA	-	Environmental Protection Agency
HCL	-	Hydrochloric Acid
IDW	-	Investigation-Derived Waste
LOQ	-	Limit of Quantitation
ml/min	-	Milliliters per Minute
PAH	-	Polynuclear Aromatic Hydrocarbons
PVC	-	Polyvinyl Chloride
QC	-	Quality Control
QEP	-	Qualified Environmental Professional
RPD	-	Relative Percent Difference
SGS	-	SGS North America, Inc.
UST	-	Underground Storage Tank
VOC	-	Volatile Organic Compounds

1.0 INTRODUCTION

BGES, Inc. (BGES) was retained by Corey Meyers of Anchorage Chrysler Dodge to conduct groundwater monitoring activities during the spring of 2019 at the property located at 2501 East 5th Avenue in Anchorage, Alaska (Figure 1); hereafter referred to as the subject property. The groundwater activities were performed as the result of a request by the Alaska Department of Environmental Conservation (ADEC) for conducting ongoing groundwater monitoring to evaluate the potential remaining contaminant concentrations in groundwater during seasonal changes associated with a previous release from an underground storage tank (UST) that was removed in 1989. These groundwater monitoring activities were conducted in accordance with the work plan dated September 20, 2016 and a work plan modification in an e-mail dated September 28, 2018. The work plan was conditionally approved by Robert Weimer, ADEC Project Manager, on September 21, 2016 and the work plan modification was conditionally approved by Mr. Weimer on September 28, 2018. Field activities for 2019 included groundwater sampling on June 5, 2019. The following field work is the second of the two seasonal groundwater monitoring events (fall of 2018 and spring of 2019) requested by Mr. Weimer and was conducted in accordance with the ADEC-approved work plan. The previous sampling occurred in the fall of 2018. These groundwater monitoring activities are the subject of this report.

2.0 SITE BACKGROUND

The subject property is a Contaminated Site with a status of “Active” as listed in the ADEC Contaminated Sites Database (File Number 2100.26.129). Previous assessments conducted by BGES are summarized below.

2014 Limited Phase II Environmental Site Assessment-Anchorage Chrysler Dodge (February 2014, BGES). Three soil borings (Soils Boring SB1, SB2, and SB3) were advanced within the area of excavation of the former USTs that were removed in 1989 from the subject property. The excavation area was approximately 30 to 60 feet, located to the north of the building on the subject property. A fourth boring (Soil Boring SB4) was advanced approximately 15 to 20 feet to the northwest of the former excavation area, in an approximate downgradient (with respect to groundwater flow) position from the contamination source area. A soil sample collected from a depth of 31.8 to 35 feet bg from Soil Boring SB2 exhibited a diesel range organics (DRO) concentration that exceeded the ADEC cleanup criterion.

2015 Site Characterization Activities – Anchorage Chrysler Dodge (March 2016, BGES). Four soil borings (Soil Boring SB5, SB6, SB7 and SB8) were advanced adjacent to Soil Boring SB2, but within the

area of the excavation of the former USTs. A soil sample collected from a depth of 35 to 40 feet bg from Soil Boring SB6 exhibited a DRO concentration that exceeded the ADEC cleanup criterion. Soil Boring SB6 was subsequently completed as Monitoring Well MW4. Water Samples (MW4-0721 and duplicate sample MW5-0721) exhibited concentrations of 1,2,4-trimethylbenzene and naphthalene that exceeded the ADEC cleanup criteria. All other polynuclear aromatic hydrocarbon (PAH) and volatile organic compound (VOC) parameters were reported at concentrations below their applicable ADEC cleanup criteria.

2016 Additional Site Characterization Activities – Anchorage Chrysler Dodge (February 2017, BGES).

Monitoring Wells MW1, MW2, and MW3 were repaired by replacing the flush-mount cover and trimming the polyvinyl chloride (PVC) to allow sufficient clearance for the well casing cap. Soil Borings SB9 and SB10 were advanced and completed as Monitoring Wells MW5 and MW6, respectively. Soil Boring Samples SB9-21-1129 and SB9-22-1129 exhibited concentrations of RRO below the ADEC cleanup criterion. Soil Boring Sample SB9-22-1129 exhibited a concentration of 2-methylnaphthalene that was below the ADEC cleanup criterion. Water Samples MW4-1026 and MW5-1026 (duplicate of MW4-1026) exhibited detectable concentrations of 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and DRO at concentrations below the ADEC cleanup criteria. Water Sample MW2-1026 exhibited concentrations of 1-methylnaphthalene and fluorene below the ADEC cleanup criteria. After installation of Monitoring Wells MW5 and MW6 in December of 2016, the DRO and PAH parameters for Water Samples MW5-1202, MW5B-1202, and MW6-1202 were non-detectable and the limit of quantitation (LOQs) were below the ADEC cleanup criteria. The estimated groundwater flow direction for the October of 2016 sampling event was in a west-northwesterly direction and for the November 2016 sampling event was in a northwesterly direction.

2017 Groundwater Monitoring Activities – Anchorage Chrysler Dodge (August 2017, BGES).

Groundwater samples were collected from the six monitoring wells located on the subject property in June of 2017. These activities were performed to assess the seasonal contaminant fluctuations in groundwater at the subject property. Water Samples MW4-0608 and MW7-0608 (duplicate of MW4-0608) exhibited concentrations of 1-methylnaphthalene below the ADEC cleanup criterion. Water Sample MW7-0608 also exhibited a concentration of naphthalene below the ADEC cleanup criterion. All other analytes in the water samples were non-detectable. The estimated groundwater flow direction for this sampling event was in a northwesterly direction and the calculated hydraulic gradient was approximately 0.0063 foot per linear foot.

2018 Groundwater Monitoring Activities – Anchorage Chrysler Dodge (November 2018, BGES).

Groundwater samples were collected from six monitoring wells located on the subject property in

November of 2018. All analytes in the groundwater samples were non-detectable. The estimated groundwater flow direction for this sampling event was in a northwesterly direction and the calculated hydraulic gradient was approximately 0.0072 foot per linear foot.

3.0 FIELD ACTIVITIES

Field work for these site characterization activities was performed by Chris Pepe, Environmental Scientist of BGES and a Qualified Environmental Professional (QEP) as defined by the ADEC. The onsite activities were performed during June of 2019 in accordance with the approved work plan mentioned above. The following paragraphs describe the field activities completed during the groundwater monitoring activities.

BGES attempted, but was unable collect groundwater samples from the monitoring wells on April 22, 2019 at the subject property due to snow rapidly melting and creating surface water that was unmanageable. Groundwater sampling activities were stopped because the snow meltwater started to drain into the monitoring well that was being purged.

BGES personnel collected groundwater samples from Monitoring Wells MW1, MW2, MW3, MW4, MW5, and MW6 on June 6, 2019. Prior to sampling, the depth to water and the total depth of the wells were measured using an electronic water level indicator that was decontaminated prior to its use by washing it in an Alconox (laboratory-grade detergent) solution, followed by a potable water rinse. The depth to water, the total depth of the wells, and the water quality parameters are presented in Table 1. Using this information, as well as the diameters of the well casings, the volume of water in each well was calculated. The low-flow purging, and sampling activities were completed utilizing a submersible pump (positive-displacement bladder pump), polyethylene bladders, and bonded polyethylene tubing.

The wells were purged until at least three of the stabilization parameters were within acceptable ranges or at least three well volumes were removed from each well. During the purging activities, the stabilization parameters (pH, conductivity, oxidation-reduction potential, and temperature) were monitored, utilizing a YSI Professional Pro Multi-Parameter water quality meter and a flow-through cell. 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 was between 150 and 200 milliliters per minute (ml/min). The depth to water was monitored to verify that drawdown in excess of 0.3 foot did not occur.

Prior to collecting groundwater samples, the flow-through cell was removed from the sampling train in accordance with the ADEC Field Sampling Guidance (August 2017). The groundwater samples were

collected with the submersible bladder pump utilizing low-flow sampling techniques. Groundwater was pumped directly into the laboratory-supplied sample jars, in which case the containers for volatile analyses that were preserved with hydrochloric acid (HCL) were filled first. Care was exercised during filling of the containers to ensure that no headspace was created and that none of the preservative was spilled from the containers destined for volatile analysis. As a quality control measure, a duplicate groundwater sample was collected from monitoring well MW4, and was “blindly” identified as MW7-0605 and submitted to the laboratory for analysis.

The sample containers were labeled, placed in chilled coolers, and transported by BGES personnel under chain of custody protocol to SGS North America, Inc. (SGS), an ADEC-approved laboratory, for analysis.

Investigation derived waste (IDW) included purge water and decontamination water. All purge water and decontamination water was placed into the two 55-gallon drums currently onsite pending disposal.

4.0 EVALUATION OF LABORATORY DATA

Seven groundwater samples, one from each of the six monitoring wells (MW1-MW6) plus one duplicate sample were submitted to SGS, an ADEC-approved laboratory, and were analyzed for DRO by Alaska Method (AK) 102 and VOCs by Environmental Protection Agency (EPA) Method SW8260C.

As a quality control procedure, a trip blank sample for water accompanied all of the samples scheduled for volatile analyses at all times from sample collection until submission to the laboratory. The trip blank was analyzed for VOCs by the same methods described above, to evaluate the potential for cross-contamination of the samples to have occurred.

Groundwater cleanup criteria are obtained from ADEC 18 Alaska Administrative Code (AAC) 75.345, Table C (October 27, 2018). The groundwater samples collected from the subject property were labeled, for example, MW1-0605, where the prefix “MW1” indicates the monitoring well location from which the groundwater sample was collected; “0605” indicates the month and the day the sample was collected. For brevity in this report, the samples are referred to as MW1, for example, with the date omitted.

The LOQ for 1,2,3-trichloropropane in all groundwater samples exceeded the ADEC cleanup criterion, as such it cannot be determined if the actual concentrations of this analyte within these samples exceed the ADEC cleanup criterion and are italicized in Table 2. No analytes in the groundwater samples exceeded ADEC cleanup criteria for this sampling event. Analytical results are presented in Table 2, Figure 3, and a copy of the laboratory data package is provided in Appendix B.

5.0 LABORATORY DATA QUALITY REVIEW

SGS provided sample analyses for this sampling event. SGS is approved by the ADEC to conduct the specified analyses. The samples were hand-delivered to SGS by BGES personnel under chain of custody protocol. A laboratory data quality checklist for the work order is included in Appendix C. The following is a discussion of our evaluation of sample conditions and laboratory procedures during the June 5, 2019 sampling event.

Laboratory Work Order Number 1192909

The sample cooler arrived at the laboratory with a measured temperature blank of 0.7 degree Celsius, which is within the prescribed optimal temperature range of 0 to 6 degrees Celsius. The samples contained the proper preservatives for the requested analyses and no unusual sample conditions were noted by the laboratory. A trip blank sample accompanied the samples scheduled for volatile analyses (VOCs) through the entirety of the sampling process and delivery to the laboratory. A case narrative was included with the laboratory data. No Quality Control (QC) failures were identified in the case narrative provided by SGS.

Sample MW7 is a duplicate of MW4 and was collected to evaluate field sampling precision. The relative percent difference (RPD) between the reported concentration of 1,2,4-trimethylbenzene was 2.58 percent, the RPD between the reported concentration of 4-isopropyltoluene was 0 percent, and the RPD between the reported concentration of n-propylbenzene was 5.59 percent, indicating good field sampling precision with respect to these analytes. The RPDs between the reported concentrations of the remaining analytes could not be calculated because those analytes were not detected in one or both of these samples.

The LOQ for 1,2,3-trichloropropane exceeded the ADEC cleanup criterion in all samples on this work order. As such, it cannot be determined if the actual concentrations of 1,2,3-trichloropropane within these samples exceed the ADEC cleanup criterion. However, because 1,2,3-trichloropropane is not a contaminant of concern for this site and because no other analytes were detected in the field samples, it is our opinion that this elevated LOQ does not affect the interpretation of the data for their intended use. All other LOQs were below the ADEC cleanup criteria.

6.0 CONCEPTUAL SITE MODEL

The potential for identified contamination to affect human receptors through various exposure pathways was evaluated and presented in the report submitted by BGES titled “2016 Additional Site Characterization Activities”, dated February 2017. Because the contamination was identified at a depth greater than 15 feet; the dermal absorption, ingestion, and inhalation pathways are incomplete due to the unlikelihood of soils

being excavated at this depth and brought to the surface where exposure can occur; as defined in the ADEC Policy Guidance on Developing Conceptual Site Models. No contamination exceeding the ADEC cleanup criteria was observed in the groundwater samples collected on the subject property during the 2019 field sampling event. Based on this information, we did not identify any complete exposure pathways for known contamination at this site to impact human receptors; and a graphical CSM was not prepared.

7.0 CONCLUSIONS AND RECOMMENDATIONS

As described above, groundwater samples were collected from six monitoring wells located on the subject property in June of 2019. In general, groundwater contaminant concentrations have declined from July of 2015 through July of 2019 (Table 3). All analytical results for the groundwater samples collected during 2016, 2017, 2018, and 2019 were below the ADEC cleanup criteria (Table 3). The extent of soil and groundwater contamination has been defined at the subject property. We recommend that the two 55-gallon drums, that consists of purge and decontamination water IDW, be disposed at an appropriate disposal facility.

Based on this information, there are no potentially complete exposure pathways for known contamination at this site to impact human receptors. Therefore, we are recommending that the ADEC consider a status of “Cleanup Complete” for the subject property. We recommend that a copy of this report be provided to the ADEC for review and approval of the recommendation for a change in site status.

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 immediate vicinities of the locations where 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.

The field work for this project and was performed by Chris Pepe, Environmental Scientist I of BGES and a Qualified Environmental Professional (QEP) as defined by the ADEC. The report was also prepared by Chris Pepe, Environmental Scientist I of BGES. Mr. Pepe has conducted groundwater sampling at numerous sites in southcentral Alaska. This report was reviewed by Robert Braunstein. Mr. Braunstein

has more than 35 years of geological and environmental consulting experience and has conducted and managed thousands of site characterizations and remediation projects throughout Alaska and the lower 48 states.

Sincerely,

BGES, INC.

Prepared by:

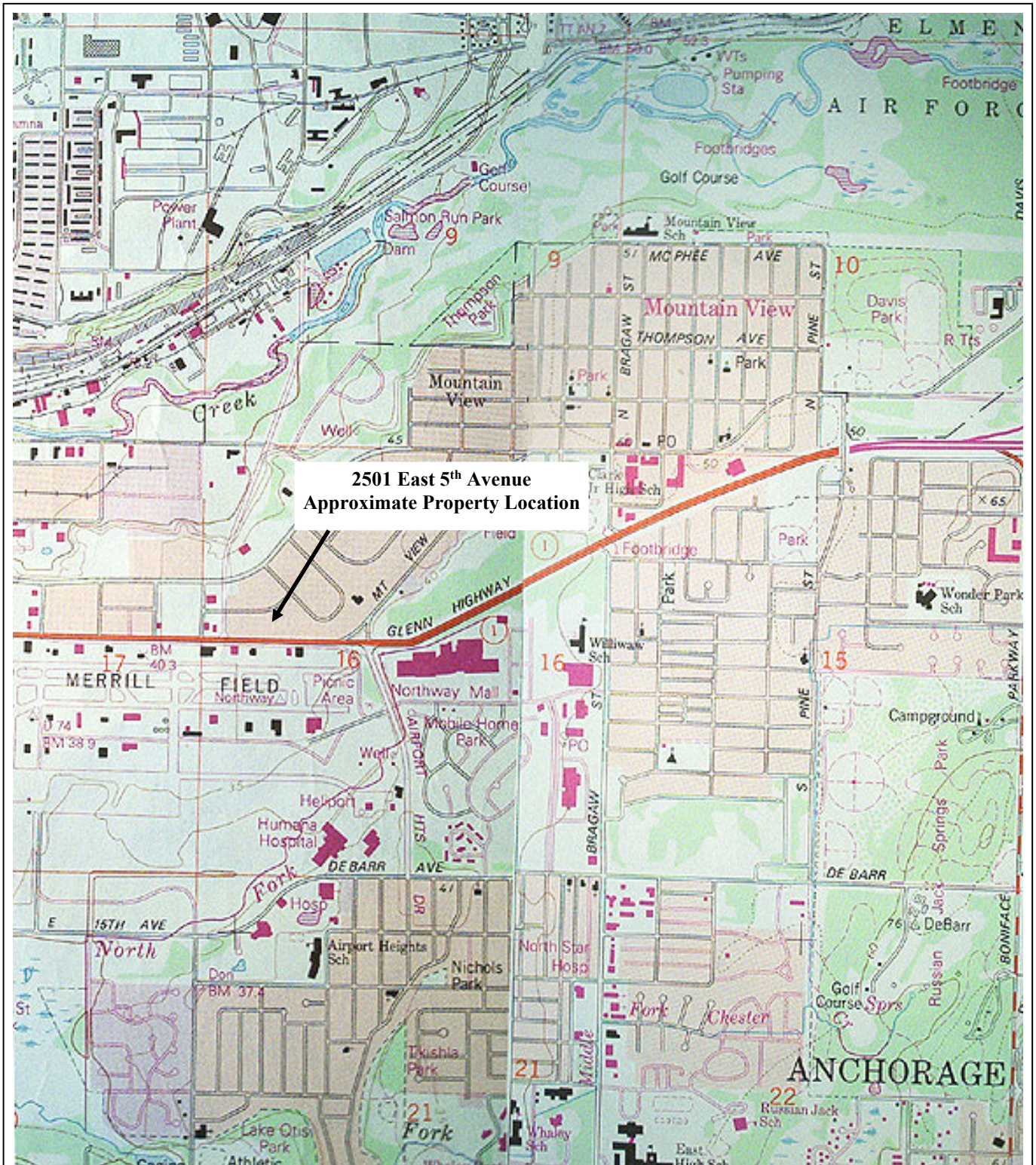


Chris Pepe
Environmental Scientist I

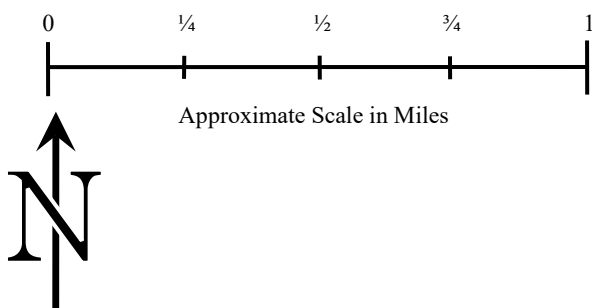
Reviewed by:



Robert Braunstein, C.P.G.; P.G.
Principal Geologist

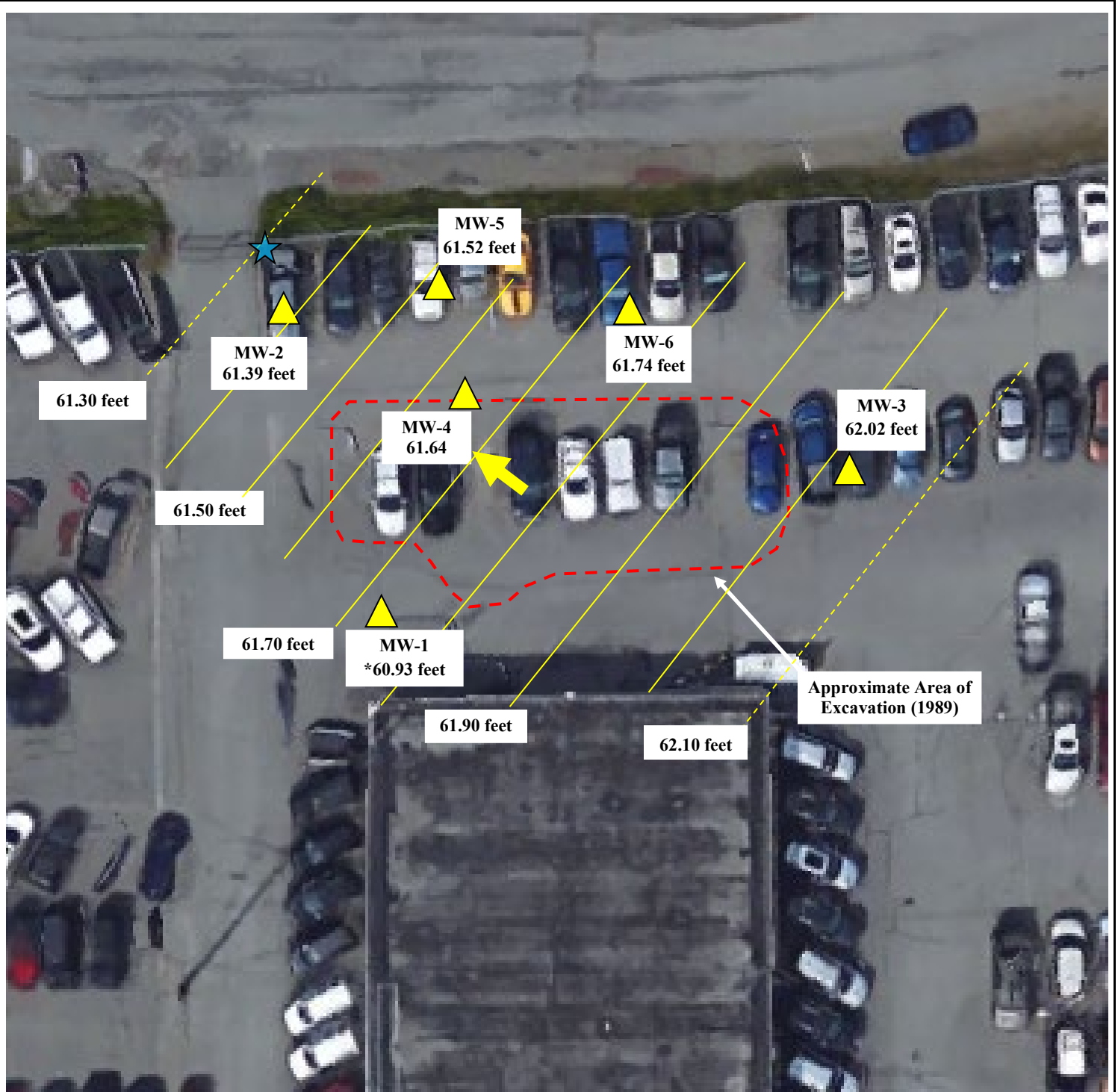


Source: USGS Map, Anchorage (A-8) NW, Alaska 1979, Revised 1994; and Anchorage (A-8) NE, Alaska 1979, Revised 1993

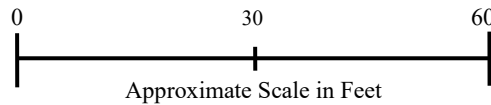


Approximate Scale in Miles

2501 East 5th Avenue
Anchorage, Alaska
Property Vicinity Map



Source: Google Earth Pro ©



LEGEND

- = Monitoring Well Location
- = Survey Reference Point (Western Gate Post)
- = Approximate Groundwater Flow Direction

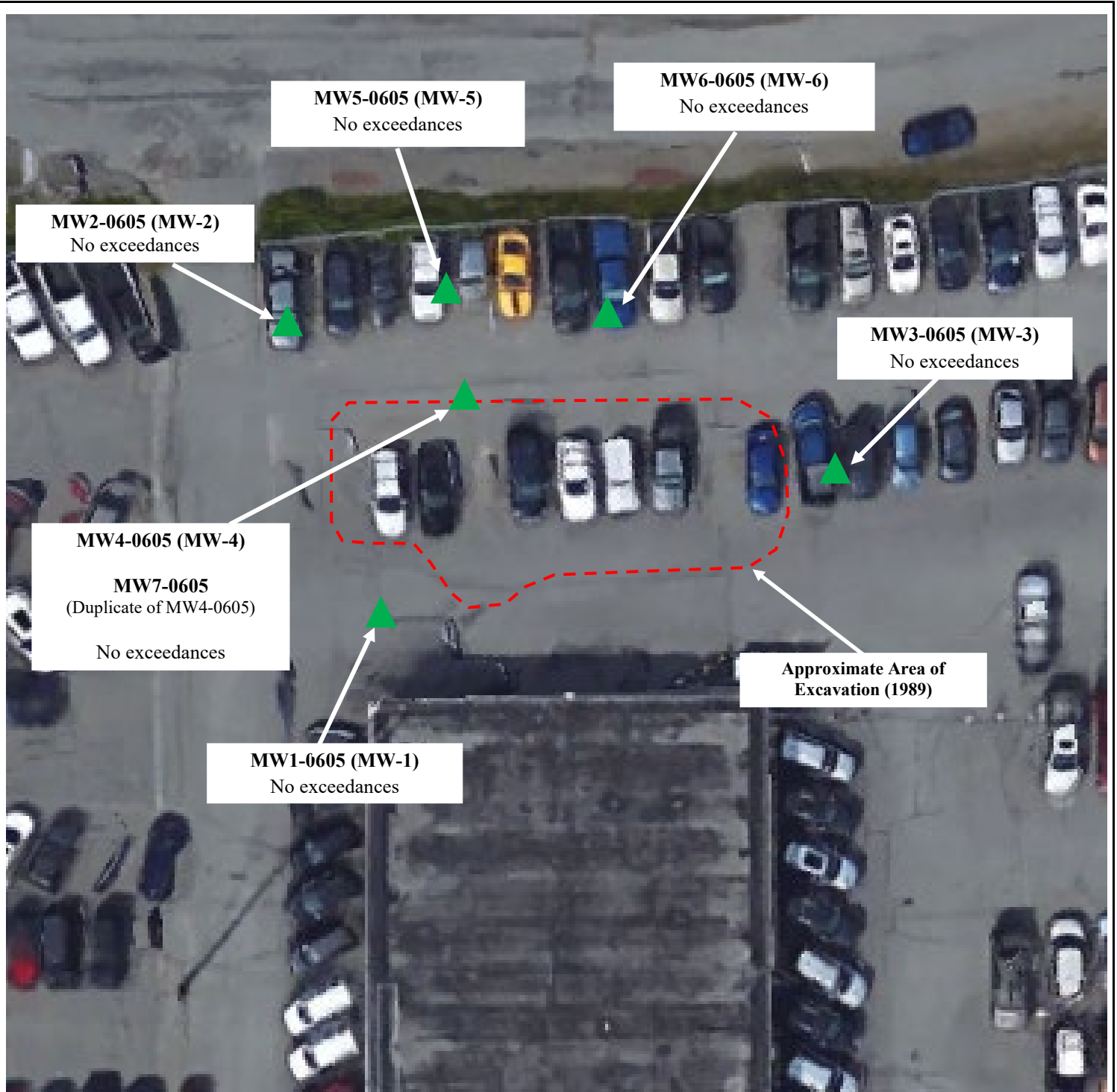
Notes: Values represent groundwater elevations.
 * = The groundwater elevation for MW1 was not used in development of the groundwater elevation contour map because the groundwater elevation appears to be an anomaly.
 The contour interval is 0.10 foot and the calculated hydraulic gradient was approximately 0.0070 foot per linear foot

2501 East 5th Avenue
 Anchorage, Alaska
Groundwater Elevation Contour Map
 (June 2019)

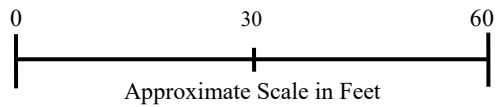


September 2019


Figure 2



Source: Google Earth Pro



KEY

 = Monitoring Well Location (concentrations are below ADEC cleanup criteria)

ADEC = Alaska Department of Environmental Conservation

2501 East 5th Avenue
Anchorage, Alaska
2019 Groundwater Sample Results



September 2019

Figure 3

TABLE 1
2501 EAST 5th AVENUE
ANCHORAGE, ALASKA
MONITORING WELL SAMPLING DATA (JUNE 2019)

BGES, INC.

Well Number	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Date Sampled	06/05/19	06/05/19	06/05/19	06/05/19	06/05/19	06/05/19
Date of Depth and Elevation Measurement	06/05/19	06/05/19	06/05/19	06/05/19	06/05/19	06/05/19
Time of Depth to Water Measurement	10:00	9:00	9:20	9:50	9:10	9:15
Time Sample Collected	17:07	14:55	11:27	15:44	13:38	12:29
Top of Casing Elevation (feet)	100.84	99.91	100.16	99.76	99.93	100.27
Depth to Water (feet below top of casing)	39.91	38.52	38.14	38.12	38.41	38.53
Water Elevation (feet)	60.93	61.39	62.02	61.64	61.52	61.74
Total Depth of Well (feet below top of casing)	47.83	48.86	49.51	43.25	44.61	44.75
Ground Elevation	101.03	100.32	100.92	100.51	100.34	100.65
Depth to Water (feet below top of ground surface)	40.10	38.93	38.90	38.87	38.82	38.91
Well Casing Diameter (Inches)	2	2	2	2	2	2
Standing Water Well Volume (gallons)	1.29	1.69	1.86	0.84	1.01	1.02
Actual Purge Volume (gallons)	3.9	5.1	5.6	2.6	3.1	3.1
Temperature (degrees Celsius)	20.8/8.5/8.3	18.7/7.6/7.5/7.5	8.6/6.9/6.8/6.8	13.0/8.4/8.2	18.7/7.8/8.1	14.2/8.2/8.1/8.4
pH (standard units)	6.52/6.02/6.01	6.60/6.25/6.15/6.07	5.52/5.50/5.65/5.71	6.39/6.25/6.13	6.45/6.35/6.32	5.99/6.07/6.07/6.07
Conductivity (millisiemens per centimeter)	370.9/271.1/271.0	386.5/259.8/257.5/257.8	274.4/248.1/250.1/251.3	316.4/278.0/280.6	371.5/259.5/258.6	338.0/269.2/269.8/270.4
Oxidation Reduction Potential (millivolts)	35.9/34.6/33.2	71.8/47.1/40.5/41.9	114.7/91.8/75.9/70.7	43.0/40.6/39.9	76.7/77.3/80.2	64.7/66.6/76.4/78.5

Notes:
 Sampler: C.Pepe
 Field parameters measured with a YSI Pro +
 water quality meter and flow-through cell.
 Weather conditions on June 5, 2019 were
 clear and sunny with ambient temperatures ranging
 from approximately 60 to 67 degrees Fahrenheit.

TABLE 2
 2501 EAST 5TH AVENUE
 ANCHORAGE, ALASKA
 ANALYTICAL RESULTS - GROUNDWATER SAMPLES (June 2019)

BGES, INC.

Sample No.	Parameter	Results (µg/L)	LOQ (µg/L)	ADEC Cleanup Criteria (µg/L) ¹	Analytical Method
MW1-0605	DRO	ND	600	1,500	AK 102
	<i>1,2,3-Trichloropropane</i>	ND	1.00	0.0075	SW8260C
	Benzene	ND	0.400	4.6	SW8260C
	Ethylbenzene	ND	1.00	15	SW8260C
	Toluene	ND	1.00	1,100	SW8260C
	Total Xylenes	ND	3.00	190	SW8260C
	All other VOCs	ND	varies	varies	SW8260C
MW2-0605	DRO	ND	588	1,500	AK 102
	<i>1,2,3-Trichloropropane</i>	ND	1.00	0.0075	SW8260C
	Benzene	ND	0.400	4.6	SW8260C
	Ethylbenzene	ND	1.00	15	SW8260C
	Toluene	ND	1.00	1,100	SW8260C
	Total Xylenes	ND	3.00	190	SW8260C
	n-Butylbenzene	1.53	1.00	1,000	SW8260C
	All other VOCs	ND	varies	varies	SW8260C
MW3-0605	DRO	ND	566	1,500	AK 102
	<i>1,2,3-Trichloropropane</i>	ND	1.00	0.0075	SW8260C
	Benzene	ND	0.400	4.6	SW8260C
	Ethylbenzene	ND	1.00	15	SW8260C
	Toluene	ND	1.00	1,100	SW8260C
	Total Xylenes	ND	3.00	190	SW8260C
	All other VOCs	ND	varies	varies	SW8260C
MW4-0605	DRO	ND	566	1,500	AK 102
	<i>1,2,3-Trichloropropane</i>	ND	1.00	0.0075	SW8260C
	Benzene	ND	0.400	4.6	SW8260C
	Ethylbenzene	ND	1.00	15	SW8260C
	Toluene	ND	1.00	1,100	SW8260C
	Total Xylenes	ND	3.00	190	SW8260C
	1,2,4-Trimethylbenzene	2.75	1.00	56	SW8260C
	4-Isopropyltoluene	3.20	1.00	N/A	SW8260C
	n-Propylbenzene	1.47	1.00	660	SW8260C
	All other VOCs	ND	varies	varies	SW8260C

TABLE 2
2501 EAST 5TH AVENUE
ANCHORAGE, ALASKA

BGES, INC.

ANALYTICAL RESULTS - GROUNDWATER SAMPLES (June 2019)

MW5-0605	DRO	ND	566	1,500	AK 102	
	<i>1,2,3-Trichloropropane</i>	ND	<i>1.00</i>	0.0075	SW8260C	
	Benzene	ND	0.400	4.6	SW8260C	
	Ethylbenzene	ND	1.00	15	SW8260C	
	Toluene	ND	1.00	1,100	SW8260C	
	Total Xylenes	ND	3.00	190	SW8260C	
	All other VOCs	ND	varies	varies	SW8260C	
MW6-0605	DRO	ND	566	1,500	AK 102	
	<i>1,2,3-Trichloropropane</i>	ND	<i>1.00</i>	0.0075	SW8260C	
	Benzene	ND	0.400	4.6	SW8260C	
	Ethylbenzene	ND	1.00	15	SW8260C	
	Toluene	ND	1.00	1,100	SW8260C	
	Total Xylenes	ND	3.00	190	SW8260C	
	All other VOCs	ND	varies	varies	SW8260C	
MW7-0605	DRO	619	566	1,500	AK 102	
	Duplicate of MW4-0605	<i>1,2,3-Trichloropropane</i>	ND	<i>1.00</i>	0.0075	SW8260C
		Benzene	ND	0.400	4.6	SW8260C
		Ethylbenzene	ND	1.00	15	SW8260C
		Toluene	ND	1.00	1,100	SW8260C
		Total Xylenes	ND	3.00	190	SW8260C
	RPD=2.58	1,2,4-Trimethylbenzene	2.68	1.00	56	SW8260C
	RPD=0	4-Isopropyltoluene	3.20	1.00	N/A	SW8260C
	RPD=5.59	n-Propylbenzene	1.39	1.00	660	SW8260C
		All other VOCs	ND	varies	varies	SW8260C

¹ Water cleanup criteria are obtained from ADEC 18 AAC 75.341, Table C (October 27, 2018).

AAC = Alaska Administrative Code; AK = Alaska Method; ADEC = Alaska Department of Environmental Conservation; µg/L = micrograms per liter; DRO = diesel range organics

VOC = volatile organic compounds; LOQ = limit of quantitation; ND = not detectable;

Italics = The LOQ exceeds the applicable ADEC cleanup criterion.

TABLE 3
2501 EAST 5TH AVENUE
ANCHORAGE, ALASKA

BGES, INC.

HISTORICAL GROUNDWATER SAMPLING ANALYTICAL RESULTS

Well No.	Date Collected: Parameter	Jul-15 (µg/L)	Oct-16 (µg/L)	Dec-16 (µg/L)	Jun-17 (µg/L)	Nov-18 (µg/L)	Jun-19 (µg/L)	Analytical Method	ADEC Method Two
									Groundwater Cleanup Level (µg/L) ^{1,2}
MW1	DRO	NS	ND	NS	ND	ND	ND	AK102	1,500
	All PAHs	NS	ND	NS	ND	NS	NS	8270D SIMS	varies
	All VOCs	NS	NS	NS	NS	ND	ND	SW 8260	varies
MW2	DRO	NS	ND	NS	ND	ND	ND	AK102	1,500
	1-Methylnaphthalene	NS	0.0605	NS	ND	NS	NS	8270D SIMS	11
	Fluorene	NS	0.0638	NS	ND	NS	NS	8270D SIMS	290
	All Other PAHs	NS	ND	ND	ND	NS	NS	8270D SIMS	varies
	n-Butylbenzene	NS	NS	NS	NS	ND	1.53	SW8260	1000
	All VOCs	NS	NS	NS	NS	ND	ND	SW 8260	varies
MW3	DRO	NS	ND	ND	ND	ND	ND	AK102	1,500
	All PAHs	NS	ND	ND	ND	NS	NS	8270D SIMS	varies
	All VOCs	NS	NS	NS	NS	ND	ND	SW 8260	varies
MW4	GRO	637	NS	NS	NS	NS	NS	AK101	2,200
	DRO	784	767	NS	ND	ND	ND	AK102	1,500
	RRO	ND	NS	NS	NS	NS	NS	AK103	1,100
	1-Methylnaphthalene	4.24	1.01	NS	0.168	NS	NS	8270D SIMS	11
	2-Methylnaphthalene	3.52 J	0.523	NS	ND	NS	NS	8270D SIMS	36
	Acenaphthene	0.0717	ND	ND	ND	NS	NS	8270D SIMS	530
	Acenaphthylene	0.0674	ND	ND	ND	NS	NS	8270D SIMS	260
	Fluorene	0.0766	ND	ND	ND	NS	NS	8270D SIMS	290
	Naphthalene	ND	1.63	NS	0.0968	NS	NS	8270D SIMS	1.7
	All Other PAHs	ND	ND	ND	ND	NS	NS	8270D SIMS	varies
	1,2,4-Trimethylbenzene	117	NS	NS	NS	5.96	2.75	SW 8260	56
	1,3,5-Trimethylbenzene	89.1	NS	NS	NS	16.1	ND	SW 8260	60
	4-Isopropyltoluene	14.7	NS	NS	NS	2.18	3.20	SW 8260	N/A
	Benzene	ND	NS	NS	NS	ND	ND	SW 8260	4.6
	Ethylbenzene	4.56	NS	NS	NS	ND	ND	SW 8260	15
	Isopropylbenzene (Cumene)	7.08	NS	NS	NS	ND	ND	SW 8260	450
	Naphthalene	13.9	NS	NS	NS	ND	ND	SW 8260	1.7
	n-Propylbenzene	17.2	NS	NS	NS	2.04	1.47	SW 8260	660
	sec-Butylbenzene	3.37	NS	NS	NS	ND	ND	SW 8260	2,000
	tert-Butylbenzene	2.98	NS	NS	NS	ND	ND	SW 8260	690
	Toluene	ND	NS	NS	NS	ND	ND	SW 8260	1,100
	Total Xylenes	54.2	NS	NS	NS	ND	ND	SW 8260	190
	All Other VOCs	ND	NS	NS	NS	ND	ND	SW 8260	varies
MW5	DRO	NS	NS	ND	ND	ND	ND	AK102	1,500
	All PAHs	NS	NS	ND	ND	NS	NS	8270D SIMS	varies
	All VOCs	NS	NS	NS	NS	ND	ND	SW 8260	varies
MW6	DRO	NS	NS	ND	ND	ND	ND	AK102	1,500
	All PAHs	NS	NS	ND	ND	NS	NS	8270D SIMS	varies
	All VOCs	NS	NS	NS	NS	ND	ND	SW 8260	varies

¹Current water cleanup criteria are obtained from ADEC 18 AAC 75.341, Table C (October 27, 2018).

²The analytical data for all water samples are compared to the current cleanup criteria.

AAC = Alaska Administration Code; GRO = Gasoline Range Organics; DRO = Diesel Range Organics; RRO = Residual Range Organics;

NS = Not Sampled; J = Estimated Quantity; ND = Not Detected; VOC = Volatile Organic Compound; N/A = Not Available

ADEC = Alaska Department of Environmental Conservation; PAH = Polynuclear Aromatic Hydrocarbon; µg/L = milligrams per Liter;

Note: The concentrations presented in this table reflect the greatest concentration reported for each sample/duplicate pair.

APPENDIX A
GROUNDWATER SAMPLING LOGS AND FIELD NOTES

Chrysler

Well Number: MW1
Date of Sampling Event: 6-5-19

Weather Conditions: 60°F Sunny
Time of Depth to Water Measurement: 10:00
Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 47.83
Depth to Water (feet below TOC): 39.91
Water Column (feet): 7.92

Type of Sampling Equipment:
MPSO Controller
1.75" Bladder
YSI Pro plus

Volume of well (gals) 1.29

=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: 16:07
Time of Sampling: 17:07
Volume purged: 3.9 gal

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 20.8
Conductivity 370.9
pH 6.52
ORP 35.9
Volume Purged intra
Depth To Water _____
Time of Measurement 16:10

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

Depth of Bladder intake: 39.91

Temperature (°C) 8.5
Conductivity 271.1
pH 6.02
ORP 34.6
Volume Purged 2.8 gal
Depth To Water _____
Time of Measurement 16:42

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

Purge Rate: 200 mL/min

Temperature (°C) 8.3
Conductivity 271.0
pH 6.01
ORP 33.2
Volume Purged 43.9 gal
Depth To Water _____
Time of Measurement 17:01

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

Sample Rate: 200 mL/min

Sample ID: MW1-0605

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 _____

Additional Notes:

Chrysler

Well Number: MW2
Date of Sampling Event: 6-5-19

Weather Conditions: 60°F Sunny
Time of Depth to Water Measurement: 9:00
Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 48.86
Depth to Water (feet below TOC): 38.52
Water Column (feet): 10.34

Type of Sampling Equipment:
MPSO Controller
1.75 Bladder
VSI Pro plus

Volume of well (gals) 1.69

=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: 13:47
Time of Sampling: 14:55
Volume purged: 5.07

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 18.7
Conductivity 386.5
pH 6.60
ORP 71.8
Volume Purged initial
Depth To Water _____
Time of Measurement 13:50

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

Depth of Bladder intake: 38.52

Temperature (°C) 7.6
Conductivity 259.8
pH 6.23
ORP 47.1
Volume Purged 2.75
Depth To Water _____
Time of Measurement 14:15

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

Purge Rate: 200 mL/min

Temperature (°C) 7.5
Conductivity 257.5
pH 6.15
ORP 40.5
Volume Purged 4.2 gal
Depth To Water _____
Time of Measurement 14:40

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

Sample Rate: 200 mL/min

Sample ID: MW2-0605

Temperature (°C) 7.5
Conductivity 257.8
pH 6.07
ORP 41.9
Volume Purged 5.07
Depth To Water _____
Time of Measurement 14:52

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

Additional Notes:

Chrysler

Well Number: MW3
Date of Sampling Event: 6-5-19

Weather Conditions: 60° Sunny
Time of Depth to Water Measurement: 9:20
Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 49.51
Depth to Water (feet below TOC): 38.14
Water Column (feet): 11.37

Type of Sampling Equipment:
NPSO Controller
1.75 bladder
455 Pro plus

Volume of well (gals) 1.86

=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: 10:05
Time of Sampling: 11:27
Volume purged 5.6

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 8.6°
Conductivity 274.4
pH 5.52
ORP 114.7
Volume Purged 17gal
Depth To Water _____
Time of Measurement 10:07

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

Depth of Bladder intake: 38.2

Temperature (°C) 6.9
Conductivity 248.1
pH 5.50
ORP 91.8
Volume Purged 2.25
Depth To Water _____
Time of Measurement 10:50

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

Purge Rate: 200ml/min

Temperature (°C) 6.8
Conductivity 250.1
pH 5.65
ORP 75.9
Volume Purged 4.5
Depth To Water _____
Time of Measurement 11:20

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

Sample Rate: 200 ml/min

Temperature (°C) 6.8
Conductivity 251.3
pH 5.71
ORP 70.7
Volume Purged 5.6
Depth To Water _____
Time of Measurement 11:25

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

Sample ID: MW3-0605

Additional Notes:

Chrysler

Well Number: MW4
Date of Sampling Event: 6-5-19

Weather Conditions: 60° Sunny
Time of Depth to Water Measurement: 9:50
Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 43.25
Depth to Water (feet below TOC): 38.12
Water Column (feet): 5.13

Type of Sampling Equipment:
MPSO Controller
1.75 bladder
VST Pro plus

Volume of well (gals) 0.84

=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: 15:10
Time of Sampling: 15:44
Volume purged: 2.6

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 13.0
Conductivity 316.4
pH 6.39
ORP 43.0
Volume Purged initial
Depth To Water _____
Time of Measurement 15:13

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

Depth of Bladder intake: 38.12

Temperature (°C) 8.4
Conductivity 278.0
pH 6.75
ORP 40.6
Volume Purged 1.0
Depth To Water _____
Time of Measurement 15:24

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

Purge Rate: 200 ml/min

Temperature (°C) 8.2
Conductivity 280.6
pH 6.13
ORP 39.9
Volume Purged 2.7
Depth To Water _____
Time of Measurement 15:42

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

Sample Rate: 200 ml/min

Sample ID: MW4-0605

Duplicate
MW7-0605
@ 15:50

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 _____

Additional Notes:

Well Number: MW5

Weather Conditions 60° Sunny

Date of Sampling Event: _____

Time of Depth to Water Measurement: 9:10

Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 44.61

Depth to Water (feet below TOC): 38.41

Water Column (feet): 6.2

Type of Sampling Equipment:
MPSO Controller
1.75 Bladder
VST Pro plus

Volume of well (gals) 1.01

=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: 12:45

Time of Sampling: 13:38

Volume purged 3.1

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 18.7

Conductivity 371.5

pH 6.45

ORP 76.7

Volume Purged initial

Depth To Water _____

Time of Measurement 12:51

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Depth of Bladder intake:
38.41

Temperature (°C) 7.8

Conductivity 259.5

pH 6.35

ORP 77.3

Volume Purged 2 gal

Depth To Water _____

Time of Measurement 13:15

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Purge Rate:
200 ml/min

Temperature (°C) 8.1

Conductivity 258.6

pH 6.32

ORP 80.2

Volume Purged 3.1

Depth To Water _____

Time of Measurement 13:35

Temperature (°C) _____

Conductivity _____

pH _____

ORP _____

Volume Purged _____

Depth To Water _____

Time of Measurement _____

Sample Rate:
200 ml/min

Sample ID:
MW5-0605

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 _____

Additional Notes:

Well Number: MW 6
Date of Sampling Event: 6-5-19

Weather Conditions: 60°F Sunny
Time of Depth to Water Measurement: 9:15
Date of Depth to Water Measurement: 6-5-19

Total Depth of Well (feet below TOC): 44.75
Depth to Water (feet below TOC): 38.53
Water Column (feet): 6.22

Type of Sampling Equipment:
M850 Controller
1.75 Bladder
KSI Pro plus

Volume of well (gals) 1.02

=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: 11:43
Time of Sampling: 12:29
Volume purged: 3.1 gal

PURGE A MINIMUM OF THREE WELL VOLUMES

Temperature (°C) 14.2
Conductivity 338.0
pH 5.99
ORP 64.7
Volume Purged intra
Depth To Water _____
Time of Measurement 11:46

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

Depth of Bladder intake: 38.53

Temperature (°C) 8.2
Conductivity 269.2
pH 6.07
ORP 66.6
Volume Purged 1.03 gal
Depth To Water _____
Time of Measurement 12:15

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

Purge Rate: 200 ml/min

Temperature (°C) 8.1
Conductivity 269.8
pH 6.07
ORP 76.4
Volume Purged 2.5
Depth To Water _____
Time of Measurement 12:20

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

Sample Rate: 200 ml/min

Sample ID: MW6-0605

Temperature (°C) 8.4
Conductivity 270.4
pH 6.07
ORP 78.5
Volume Purged 3.1
Depth To Water _____
Time of Measurement 12:27

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

Additional Notes: _____

32°F snow

4-22-19³⁹

9:00am Arrived on site and began opening monitoring wells to collect measurements.

frost
freeze
→ MW1 DTW Total Depth Water Time
39.57 44.24 9:05

MW2 Frozen

MW3 38.65 49.55 9:21

MW4 38.72 43.24 9:43

MW5 38.87 44.81 9:51

frost
freeze
→ MW6 39.02 44.75 10:03

11:10 - Purged MW-3 for 3 well volumes and collected samples

14:21

CP 2:21 Purged MW-5 ~~14:35~~

~~14:35~~

14:35 Stopped purging due to surface water flow.

40
4-22-19

5700
30°

14:45 Replaced end cap on MW1

65° sunny

41
6-5-19

8:30 Arrived on site & began opening wells to collect measurements

	DTW	Total Depth	Time
MW1	39.91	8' ^{ce} 47.83	10:00
MW2	38.52	48.86	9:00
MW3	38.14	49.51	9:20
MW4	38.12	43.25	9:50
MW5	38.41	44.81	9:10
MW6	38.53	44.75	9:15

- See Groundwater monitoring logs for details of sampling.

17:30 All purged water emptied into 55 gallon drum on site.

APPENDIX B
LABORATORY ANALYTICAL DATA

Laboratory Report of Analysis

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

Report Number: **1192909**

Client Project: **Anchorage Chrysler Dodge**

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 Jillian 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

Jillian Janssen

2019.06.21

12:47:45 -08'00'

Jillian Janssen
Project Manager
Jillian.Janssen@sgs.com

Date

Case Narrative

SGS Client: **BGES Inc.**
SGS Project: **1192909**
Project Name/Site: **Anchorage Chrysler Dodge**
Project Contact: **Jayne Martin**

Refer to sample receipt form for information on sample condition.

*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: 06/21/2019 12:16:10PM

Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 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	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
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>
MW1-0605	1192909001	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW2-0605	1192909002	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW3-0605	1192909003	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW4-0605	1192909004	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW5-0605	1192909005	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW6-0605	1192909006	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
MW7-0605	1192909007	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)
Trip Blank	1192909008	06/05/2019	06/06/2019	Water (Surface, Eff., Ground)

Method

AK102
SW8260C

Method Description

DRO Low Volume (W)
Volatile Organic Compounds (W) FULL

Detectable Results Summary

Client Sample ID: **MW2-0605**

Lab Sample ID: 1192909002

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
n-Butylbenzene	1.53	ug/L

Client Sample ID: **MW4-0605**

Lab Sample ID: 1192909004

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
1,2,4-Trimethylbenzene	2.75	ug/L
4-Isopropyltoluene	3.20	ug/L
n-Propylbenzene	1.47	ug/L

Client Sample ID: **MW7-0605**

Lab Sample ID: 1192909007

Semivolatile Organic Fuels

Volatile GC/MS

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.619	mg/L
1,2,4-Trimethylbenzene	2.68	ug/L
4-Isopropyltoluene	3.20	ug/L
n-Propylbenzene	1.39	ug/L

Results of MW1-0605

Client Sample ID: **MW1-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909001
 Lab Project ID: 1192909

Collection Date: 06/05/19 17:07
 Received Date: 06/06/19 11:25
 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	0.600 U	0.600	0.180	mg/L	1		06/20/19 13:42
Surrogates							
5a Androstane (surr)	69.8	50-150		%	1		06/20/19 13:42

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 13:42
 Container ID: 1192909001-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 250 mL
 Prep Extract Vol: 1 mL

Print Date: 06/21/2019 12:16:14PM



Results of MW1-0605

Client Sample ID: MW1-0605
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909001
Lab Project ID: 1192909

Collection Date: 06/05/19 17:07
Received Date: 06/06/19 11:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

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

Print Date: 06/21/2019 12:16:14PM



Results of MW1-0605

Client Sample ID: **MW1-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909001
 Lab Project ID: 1192909

Collection Date: 06/05/19 17:07
 Received Date: 06/06/19 11:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:36
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:36
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:36
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/10/19 16:36
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:36
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/10/19 16:36
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Styrene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Toluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:36
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:36
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/10/19 16:36
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/10/19 16:36
Surrogates							
1,2-Dichloroethane-D4 (surr)	105	81-118		%	1		06/10/19 16:36
4-Bromofluorobenzene (surr)	101	85-114		%	1		06/10/19 16:36
Toluene-d8 (surr)	101	89-112		%	1		06/10/19 16:36

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Results of MW1-0605

Client Sample ID: **MW1-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909001
Lab Project ID: 1192909

Collection Date: 06/05/19 17:07
Received Date: 06/06/19 11:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19014
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/10/19 16:36
Container ID: 1192909001-C

Prep Batch: VXX34221
Prep Method: SW5030B
Prep Date/Time: 06/10/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:14PM

Results of MW2-0605

Client Sample ID: **MW2-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909002
 Lab Project ID: 1192909

Collection Date: 06/05/19 14:55
 Received Date: 06/06/19 10:25
 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		06/20/19 13:52
Surrogates							
5a Androstane (surr)	80.6	50-150		%	1		06/20/19 13:52

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 13:52
 Container ID: 1192909002-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 255 mL
 Prep Extract Vol: 1 mL



Results of MW2-0605

Client Sample ID: **MW2-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909002
 Lab Project ID: 1192909

Collection Date: 06/05/19 14:55
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		06/10/19 16:51
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		06/10/19 16:51
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
Benzene	0.400 U	0.400	0.120	ug/L	1		06/10/19 16:51
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
Bromoform	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Bromomethane	5.00 U	5.00	1.50	ug/L	1		06/10/19 16:51
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
Chloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51

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Results of MW2-0605

Client Sample ID: **MW2-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909002
 Lab Project ID: 1192909

Collection Date: 06/05/19 14:55
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 16:51
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/10/19 16:51
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
n-Butylbenzene	1.53	1.00	0.310	ug/L	1		06/10/19 16:51
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/10/19 16:51
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Styrene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Toluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 16:51
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/10/19 16:51
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/10/19 16:51
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/10/19 16:51
Surrogates							
1,2-Dichloroethane-D4 (surr)	103	81-118		%	1		06/10/19 16:51
4-Bromofluorobenzene (surr)	101	85-114		%	1		06/10/19 16:51
Toluene-d8 (surr)	101	89-112		%	1		06/10/19 16:51

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Results of MW2-0605

Client Sample ID: **MW2-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909002
Lab Project ID: 1192909

Collection Date: 06/05/19 14:55
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19014
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/10/19 16:51
Container ID: 1192909002-C

Prep Batch: VXX34221
Prep Method: SW5030B
Prep Date/Time: 06/10/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:14PM

Results of MW3-0605

Client Sample ID: **MW3-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909003
 Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
 Received Date: 06/06/19 10:25
 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	0.566 U	0.566	0.170	mg/L	1		06/20/19 14:01
Surrogates							
5a Androstane (surr)	80.6	50-150		%	1		06/20/19 14:01

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 14:01
 Container ID: 1192909003-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL



Results of MW3-0605

Client Sample ID: **MW3-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909003
 Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		06/10/19 17:06
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		06/10/19 17:06
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		06/10/19 17:06
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		06/10/19 17:06
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		06/10/19 17:06
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		06/10/19 17:06
Benzene	0.400 U	0.400	0.120	ug/L	1		06/10/19 17:06
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
Bromoform	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
Bromomethane	5.00 U	5.00	1.50	ug/L	1		06/10/19 17:06
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		06/10/19 17:06
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/10/19 17:06
Chloroethane	1.00 U	1.00	0.310	ug/L	1		06/10/19 17:06

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Results of MW3-0605

Client Sample ID: MW3-0605
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909003
Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical parameters like Chloroform, Benzene, and Toluene with their respective results and limits.

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Results of MW3-0605

Client Sample ID: **MW3-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909003
Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19014
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/10/19 17:06
Container ID: 1192909003-C

Prep Batch: VXX34221
Prep Method: SW5030B
Prep Date/Time: 06/10/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of MW4-0605

Client Sample ID: **MW4-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909004
 Lab Project ID: 1192909

Collection Date: 06/05/19 15:44
 Received Date: 06/06/19 10:25
 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	0.566 U	0.566	0.170	mg/L	1		06/20/19 14:11
Surrogates							
5a Androstane (surr)	71.8	50-150		%	1		06/20/19 14:11

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 14:11
 Container ID: 1192909004-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL

Print Date: 06/21/2019 12:16:14PM



Results of MW4-0605

Client Sample ID: MW4-0605
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909004
Lab Project ID: 1192909

Collection Date: 06/05/19 15:44
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

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

Print Date: 06/21/2019 12:16:14PM



Results of MW4-0605

Client Sample ID: **MW4-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909004
 Lab Project ID: 1192909

Collection Date: 06/05/19 15:44
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:18
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:18
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:18
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/11/19 16:18
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:18
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
n-Propylbenzene	1.47	1.00	0.310	ug/L	1		06/11/19 16:18
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/11/19 16:18
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Styrene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Toluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:18
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:18
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/11/19 16:18
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/11/19 16:18
Surrogates							
1,2-Dichloroethane-D4 (surr)	107	81-118		%	1		06/11/19 16:18
4-Bromofluorobenzene (surr)	103	85-114		%	1		06/11/19 16:18
Toluene-d8 (surr)	99.5	89-112		%	1		06/11/19 16:18

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Results of MW4-0605

Client Sample ID: **MW4-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909004
Lab Project ID: 1192909

Collection Date: 06/05/19 15:44
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19017
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/11/19 16:18
Container ID: 1192909004-C

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 06/11/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of MW5-0605

Client Sample ID: **MW5-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909005
 Lab Project ID: 1192909

Collection Date: 06/05/19 13:38
 Received Date: 06/06/19 10:25
 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	0.566 U	0.566	0.170	mg/L	1		06/20/19 14:20
Surrogates							
5a Androstane (surr)	73	50-150		%	1		06/20/19 14:20

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 14:20
 Container ID: 1192909005-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL

Print Date: 06/21/2019 12:16:14PM



Results of MW5-0605

Client Sample ID: **MW5-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909005
 Lab Project ID: 1192909

Collection Date: 06/05/19 13:38
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		06/11/19 16:33
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		06/11/19 16:33
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
Benzene	0.400 U	0.400	0.120	ug/L	1		06/11/19 16:33
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
Bromoform	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Bromomethane	5.00 U	5.00	1.50	ug/L	1		06/11/19 16:33
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
Chloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33

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Results of MW5-0605

Client Sample ID: **MW5-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909005
 Lab Project ID: 1192909

Collection Date: 06/05/19 13:38
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:33
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/11/19 16:33
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/11/19 16:33
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Styrene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Toluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:33
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:33
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/11/19 16:33
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/11/19 16:33
Surrogates							
1,2-Dichloroethane-D4 (surr)	104	81-118		%	1		06/11/19 16:33
4-Bromofluorobenzene (surr)	101	85-114		%	1		06/11/19 16:33
Toluene-d8 (surr)	101	89-112		%	1		06/11/19 16:33

Print Date: 06/21/2019 12:16:14PM

Results of MW5-0605

Client Sample ID: **MW5-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909005
Lab Project ID: 1192909

Collection Date: 06/05/19 13:38
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19017
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/11/19 16:33
Container ID: 1192909005-C

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 06/11/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:14PM

Results of MW6-0605

Client Sample ID: **MW6-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909006
 Lab Project ID: 1192909

Collection Date: 06/05/19 12:29
 Received Date: 06/06/19 10:25
 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	0.566 U	0.566	0.170	mg/L	1		06/20/19 14:30
Surrogates							
5a Androstane (surr)	78.8	50-150		%	1		06/20/19 14:30

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 14:30
 Container ID: 1192909006-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL

Print Date: 06/21/2019 12:16:14PM



Results of MW6-0605

Client Sample ID: MW6-0605
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909006
Lab Project ID: 1192909

Collection Date: 06/05/19 12:29
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

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

Print Date: 06/21/2019 12:16:14PM



Results of MW6-0605

Client Sample ID: **MW6-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909006
 Lab Project ID: 1192909

Collection Date: 06/05/19 12:29
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:49
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 16:49
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:49
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/11/19 16:49
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:49
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
n-Propylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/11/19 16:49
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Styrene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Toluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 16:49
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/11/19 16:49
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/11/19 16:49
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/11/19 16:49
Surrogates							
1,2-Dichloroethane-D4 (surr)	104	81-118		%	1		06/11/19 16:49
4-Bromofluorobenzene (surr)	100	85-114		%	1		06/11/19 16:49
Toluene-d8 (surr)	101	89-112		%	1		06/11/19 16:49

Print Date: 06/21/2019 12:16:14PM

Results of MW6-0605

Client Sample ID: **MW6-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909006
Lab Project ID: 1192909

Collection Date: 06/05/19 12:29
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19017
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/11/19 16:49
Container ID: 1192909006-C

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 06/11/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of MW7-0605

Client Sample ID: **MW7-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909007
 Lab Project ID: 1192909

Collection Date: 06/05/19 15:50
 Received Date: 06/06/19 10:25
 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	0.619	0.566	0.170	mg/L	1		06/20/19 14:39
Surrogates							
5a Androstane (surr)	74.2	50-150		%	1		06/20/19 14:39

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Analyst: CMS
 Analytical Date/Time: 06/20/19 14:39
 Container ID: 1192909007-A

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 06/17/19 10:10
 Prep Initial Wt./Vol.: 265 mL
 Prep Extract Vol: 1 mL



Results of MW7-0605

Client Sample ID: MW7-0605
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909007
Lab Project ID: 1192909

Collection Date: 06/05/19 15:50
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

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

Print Date: 06/21/2019 12:16:14PM



Results of MW7-0605

Client Sample ID: **MW7-0605**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909007
 Lab Project ID: 1192909

Collection Date: 06/05/19 15:50
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Chloroform	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Chloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
cis-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
cis-1,3-Dichloropropene	0.500 U	0.500	0.150	ug/L	1		06/11/19 17:04
Dibromochloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 17:04
Dibromomethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Dichlorodifluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Ethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Freon-113	10.0 U	10.0	3.10	ug/L	1		06/11/19 17:04
Hexachlorobutadiene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Isopropylbenzene (Cumene)	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Methylene chloride	5.00 U	5.00	1.00	ug/L	1		06/11/19 17:04
Methyl-t-butyl ether	10.0 U	10.0	3.10	ug/L	1		06/11/19 17:04
Naphthalene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
n-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
n-Propylbenzene	1.39	1.00	0.310	ug/L	1		06/11/19 17:04
o-Xylene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
P & M -Xylene	2.00 U	2.00	0.620	ug/L	1		06/11/19 17:04
sec-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Styrene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
tert-Butylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Tetrachloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Toluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
trans-1,2-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
trans-1,3-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Trichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Trichlorofluoromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 17:04
Vinyl acetate	10.0 U	10.0	3.10	ug/L	1		06/11/19 17:04
Vinyl chloride	0.150 U	0.150	0.0500	ug/L	1		06/11/19 17:04
Xylenes (total)	3.00 U	3.00	1.00	ug/L	1		06/11/19 17:04
Surrogates							
1,2-Dichloroethane-D4 (surr)	106	81-118		%	1		06/11/19 17:04
4-Bromofluorobenzene (surr)	101	85-114		%	1		06/11/19 17:04
Toluene-d8 (surr)	100	89-112		%	1		06/11/19 17:04

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Results of MW7-0605

Client Sample ID: **MW7-0605**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909007
Lab Project ID: 1192909

Collection Date: 06/05/19 15:50
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19017
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/11/19 17:04
Container ID: 1192909007-C

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 06/11/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:14PM



Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **Anchorage Chrysler Dodge**
 Lab Sample ID: 1192909008
 Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
 Received Date: 06/06/19 10:25
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile GC/MS

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
1,1,1,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
1,1,1-Trichloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,1,2,2-Tetrachloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
1,1,2-Trichloroethane	0.400 U	0.400	0.120	ug/L	1		06/11/19 15:02
1,1-Dichloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,1-Dichloroethene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,1-Dichloropropene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2,3-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2,3-Trichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2,4-Trichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2,4-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2-Dibromo-3-chloropropane	10.0 U	10.0	3.10	ug/L	1		06/11/19 15:02
1,2-Dibromoethane	0.0750 U	0.0750	0.0180	ug/L	1		06/11/19 15:02
1,2-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,2-Dichloroethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
1,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,3,5-Trimethylbenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,3-Dichlorobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
1,3-Dichloropropane	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
1,4-Dichlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
2,2-Dichloropropane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
2-Butanone (MEK)	10.0 U	10.0	3.10	ug/L	1		06/11/19 15:02
2-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
2-Hexanone	10.0 U	10.0	3.10	ug/L	1		06/11/19 15:02
4-Chlorotoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
4-Isopropyltoluene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
4-Methyl-2-pentanone (MIBK)	10.0 U	10.0	3.10	ug/L	1		06/11/19 15:02
Benzene	0.400 U	0.400	0.120	ug/L	1		06/11/19 15:02
Bromobenzene	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
Bromochloromethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
Bromodichloromethane	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
Bromoform	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
Bromomethane	5.00 U	5.00	1.50	ug/L	1		06/11/19 15:02
Carbon disulfide	10.0 U	10.0	3.10	ug/L	1		06/11/19 15:02
Carbon tetrachloride	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02
Chlorobenzene	0.500 U	0.500	0.150	ug/L	1		06/11/19 15:02
Chloroethane	1.00 U	1.00	0.310	ug/L	1		06/11/19 15:02

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Results of Trip Blank

Client Sample ID: Trip Blank
Client Project ID: Anchorage Chrysler Dodge
Lab Sample ID: 1192909008
Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Lists various chemical parameters like Chloroform, Chloromethane, etc., with their respective values and limits.

Print Date: 06/21/2019 12:16:14PM

Results of Trip Blank

Client Sample ID: **Trip Blank**
Client Project ID: **Anchorage Chrysler Dodge**
Lab Sample ID: 1192909008
Lab Project ID: 1192909

Collection Date: 06/05/19 11:27
Received Date: 06/06/19 10:25
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile GC/MS

Batch Information

Analytical Batch: VMS19017
Analytical Method: SW8260C
Analyst: FDR
Analytical Date/Time: 06/11/19 15:02
Container ID: 1192909008-A

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 06/11/19 00:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:14PM



Method Blank

Blank ID: MB for HBN 1794772 [VXX/34221]
Blank Lab ID: 1511987

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1192909001, 1192909002, 1192909003

Results by SW8260C

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

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Method Blank

Blank ID: MB for HBN 1794772 [VXX/34221]

Blank Lab ID: 1511987

QC for Samples:

1192909001, 1192909002, 1192909003

Matrix: Water (Surface, Eff., Ground)

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	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)	108	81-118		%
4-Bromofluorobenzene (surr)	104	85-114		%
Toluene-d8 (surr)	99.2	89-112		%

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Method Blank

Blank ID: MB for HBN 1794772 [VXX/34221]
Blank Lab ID: 1511987

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1192909001, 1192909002, 1192909003

Results by SW8260C

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

Analytical Batch: VMS19014
Analytical Method: SW8260C
Instrument: Agilent 7890-75MS
Analyst: FDR
Analytical Date/Time: 6/10/2019 7:59:00AM

Prep Batch: VXX34221
Prep Method: SW5030B
Prep Date/Time: 6/10/2019 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:16PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34221]
 Blank Spike Lab ID: 1511988
 Date Analyzed: 06/10/2019 08:15

Spike Duplicate ID: LCSD for HBN 1192909 [VXX34221]
 Spike Duplicate Lab ID: 1511989
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909001, 1192909002, 1192909003

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	30.2	101	30	30.5	102	(78-124)	0.92	(< 20)
1,1,1-Trichloroethane	30	30.6	102	30	30.8	103	(74-131)	0.59	(< 20)
1,1,2,2-Tetrachloroethane	30	29.8	99	30	29.6	99	(71-121)	0.77	(< 20)
1,1,2-Trichloroethane	30	30.4	101	30	30.4	101	(80-119)	0.23	(< 20)
1,1-Dichloroethane	30	29.9	100	30	30.0	100	(77-125)	0.23	(< 20)
1,1-Dichloroethene	30	29.4	98	30	28.9	96	(71-131)	1.80	(< 20)
1,1-Dichloropropene	30	30.7	102	30	30.6	102	(79-125)	0.20	(< 20)
1,2,3-Trichlorobenzene	30	25.4	85	30	25.4	85	(69-129)	0.16	(< 20)
1,2,3-Trichloropropane	30	29.5	98	30	28.7	96	(73-122)	2.80	(< 20)
1,2,4-Trichlorobenzene	30	28.7	96	30	29.1	97	(69-130)	1.50	(< 20)
1,2,4-Trimethylbenzene	30	31.9	106	30	31.8	106	(79-124)	0.47	(< 20)
1,2-Dibromo-3-chloropropane	30	31.1	104	30	31.0	103	(62-128)	0.32	(< 20)
1,2-Dibromoethane	30	30.5	102	30	30.5	102	(77-121)	0.13	(< 20)
1,2-Dichlorobenzene	30	29.3	98	30	29.7	99	(80-119)	1.40	(< 20)
1,2-Dichloroethane	30	29.7	99	30	30.2	101	(73-128)	1.50	(< 20)
1,2-Dichloropropane	30	30.5	102	30	30.8	103	(78-122)	0.85	(< 20)
1,3,5-Trimethylbenzene	30	31.7	106	30	31.3	104	(75-124)	1.20	(< 20)
1,3-Dichlorobenzene	30	30.4	101	30	30.7	102	(80-119)	0.95	(< 20)
1,3-Dichloropropane	30	30.5	102	30	30.4	101	(80-119)	0.56	(< 20)
1,4-Dichlorobenzene	30	31.1	104	30	30.7	102	(79-118)	1.40	(< 20)
2,2-Dichloropropane	30	38.1	127	30	37.9	126	(60-139)	0.53	(< 20)
2-Butanone (MEK)	90	91.0	101	90	90.0	100	(56-143)	1.00	(< 20)
2-Chlorotoluene	30	30.2	101	30	29.6	99	(79-122)	2.00	(< 20)
2-Hexanone	90	93.1	103	90	93.2	104	(57-139)	0.11	(< 20)
4-Chlorotoluene	30	31.6	105	30	31.6	105	(78-122)	0.06	(< 20)
4-Isopropyltoluene	30	32.2	107	30	31.7	106	(77-127)	1.70	(< 20)
4-Methyl-2-pentanone (MIBK)	90	90.6	101	90	90.4	100	(67-130)	0.20	(< 20)
Benzene	30	29.4	98	30	29.5	98	(79-120)	0.37	(< 20)
Bromobenzene	30	29.8	99	30	29.6	99	(80-120)	0.77	(< 20)
Bromochloromethane	30	28.6	95	30	29.2	97	(78-123)	1.90	(< 20)
Bromodichloromethane	30	30.2	101	30	30.5	102	(79-125)	1.10	(< 20)
Bromoform	30	32.1	107	30	31.9	106	(66-130)	0.63	(< 20)
Bromomethane	30	26.7	89	30	26.8	89	(53-141)	0.49	(< 20)
Carbon disulfide	45	43.8	97	45	43.1	96	(64-133)	1.60	(< 20)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34221]
 Blank Spike Lab ID: 1511988
 Date Analyzed: 06/10/2019 08:15

Spike Duplicate ID: LCSD for HBN 1192909 [VXX34221]
 Spike Duplicate Lab ID: 1511989
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909001, 1192909002, 1192909003

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	30.4	101	30	30.5	102	(72-136)	0.13	(< 20)
Chlorobenzene	30	28.0	93	30	28.5	95	(82-118)	1.80	(< 20)
Chloroethane	30	26.3	88	30	27.7	92	(60-138)	5.00	(< 20)
Chloroform	30	28.6	95	30	29.0	97	(79-124)	1.60	(< 20)
Chloromethane	30	28.8	96	30	28.6	95	(50-139)	0.73	(< 20)
cis-1,2-Dichloroethene	30	29.2	97	30	29.5	98	(78-123)	1.20	(< 20)
cis-1,3-Dichloropropene	30	32.8	109	30	33.0	110	(75-124)	0.61	(< 20)
Dibromochloromethane	30	31.0	103	30	31.2	104	(74-126)	0.55	(< 20)
Dibromomethane	30	29.1	97	30	29.8	99	(79-123)	2.50	(< 20)
Dichlorodifluoromethane	30	28.4	95	30	27.9	93	(32-152)	2.10	(< 20)
Ethylbenzene	30	30.4	101	30	30.5	102	(79-121)	0.39	(< 20)
Freon-113	45	43.7	97	45	43.2	96	(70-136)	1.10	(< 20)
Hexachlorobutadiene	30	31.1	104	30	30.7	102	(66-134)	1.10	(< 20)
Isopropylbenzene (Cumene)	30	31.6	105	30	31.5	105	(72-131)	0.44	(< 20)
Methylene chloride	30	29.5	98	30	30.1	100	(74-124)	2.20	(< 20)
Methyl-t-butyl ether	45	46.2	103	45	46.7	104	(71-124)	1.10	(< 20)
Naphthalene	30	26.9	90	30	28.1	94	(61-128)	4.60	(< 20)
n-Butylbenzene	30	32.6	109	30	32.1	107	(75-128)	1.50	(< 20)
n-Propylbenzene	30	32.5	108	30	32.0	107	(76-126)	1.80	(< 20)
o-Xylene	30	30.2	101	30	30.8	103	(78-122)	1.80	(< 20)
P & M -Xylene	60	61.0	102	60	61.5	102	(80-121)	0.72	(< 20)
sec-Butylbenzene	30	32.7	109	30	32.2	107	(77-126)	1.70	(< 20)
Styrene	30	30.1	100	30	30.4	101	(78-123)	1.00	(< 20)
tert-Butylbenzene	30	32.5	108	30	32.0	107	(78-124)	1.50	(< 20)
Tetrachloroethene	30	29.7	99	30	29.9	100	(74-129)	0.71	(< 20)
Toluene	30	27.7	93	30	28.0	93	(80-121)	0.86	(< 20)
trans-1,2-Dichloroethene	30	29.4	98	30	29.7	99	(75-124)	0.91	(< 20)
trans-1,3-Dichloropropene	30	32.9	110	30	32.6	109	(73-127)	0.95	(< 20)
Trichloroethene	30	29.8	99	30	29.9	100	(79-123)	0.30	(< 20)
Trichlorofluoromethane	30	27.7	92	30	28.4	95	(65-141)	2.30	(< 20)
Vinyl acetate	30	35.2	117	30	35.4	118	(54-146)	0.71	(< 20)
Vinyl chloride	30	28.1	94	30	27.6	92	(58-137)	1.90	(< 20)
Xylenes (total)	90	91.3	101	90	92.3	103	(79-121)	1.10	(< 20)

Print Date: 06/21/2019 12:16:17PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34221]
 Blank Spike Lab ID: 1511988
 Date Analyzed: 06/10/2019 08:15

Spike Duplicate ID: LCSD for HBN 1192909 [VXX34221]
 Spike Duplicate Lab ID: 1511989
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909001, 1192909002, 1192909003

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	98.5	99	30	99.4	99	(81-118)	0.88	
4-Bromofluorobenzene (surr)	30	103	103	30	102	102	(85-114)	0.94	
Toluene-d8 (surr)	30	99.6	100	30	99.9	100	(89-112)	0.33	

Batch Information

Analytical Batch: **VMS19014**
 Analytical Method: **SW8260C**
 Instrument: **Agilent 7890-75MS**
 Analyst: **FDR**

Prep Batch: **VXX34221**
 Prep Method: **SW5030B**
 Prep Date/Time: **06/10/2019 00:00**
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL



Method Blank

Blank ID: MB for HBN 1794792 [VXX/34226]

Blank Lab ID: 1512089

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1192909004, 1192909005, 1192909006, 1192909007, 1192909008

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	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: 06/21/2019 12:16:19PM



Method Blank

Blank ID: MB for HBN 1794792 [VXX/34226]

Matrix: Water (Surface, Eff., Ground)

Blank Lab ID: 1512089

QC for Samples:

1192909004, 1192909005, 1192909006, 1192909007, 1192909008

Results by SW8260C

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	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)	108	81-118		%
4-Bromofluorobenzene (surr)	102	85-114		%
Toluene-d8 (surr)	102	89-112		%

Print Date: 06/21/2019 12:16:19PM

Method Blank

Blank ID: MB for HBN 1794792 [VXX/34226]
Blank Lab ID: 1512089

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1192909004, 1192909005, 1192909006, 1192909007, 1192909008

Results by SW8260C

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

Analytical Batch: VMS19017
Analytical Method: SW8260C
Instrument: Agilent 7890-75MS
Analyst: FDR
Analytical Date/Time: 6/11/2019 9:36:00AM

Prep Batch: VXX34226
Prep Method: SW5030B
Prep Date/Time: 6/11/2019 12:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:19PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34226]
 Blank Spike Lab ID: 1512090
 Date Analyzed: 06/11/2019 09:52

Spike Duplicate ID: LCSD for HBN 1192909
 [VXX34226]
 Spike Duplicate Lab ID: 1512091
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909004, 1192909005, 1192909006, 1192909007, 1192909008

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	30.9	103	30	31.1	104	(78-124)	0.55	(< 20)
1,1,1-Trichloroethane	30	30.2	101	30	30.2	101	(74-131)	0.03	(< 20)
1,1,2,2-Tetrachloroethane	30	29.5	99	30	30.1	100	(71-121)	1.90	(< 20)
1,1,2-Trichloroethane	30	30.4	101	30	30.5	102	(80-119)	0.39	(< 20)
1,1-Dichloroethane	30	29.3	98	30	29.1	97	(77-125)	0.86	(< 20)
1,1-Dichloroethene	30	28.8	96	30	28.7	96	(71-131)	0.56	(< 20)
1,1-Dichloropropene	30	30.5	102	30	30.3	101	(79-125)	0.76	(< 20)
1,2,3-Trichlorobenzene	30	24.9	83	30	26.4	88	(69-129)	5.80	(< 20)
1,2,3-Trichloropropane	30	29.3	98	30	30.2	101	(73-122)	2.90	(< 20)
1,2,4-Trichlorobenzene	30	28.8	96	30	29.8	99	(69-130)	3.30	(< 20)
1,2,4-Trimethylbenzene	30	31.4	105	30	31.9	106	(79-124)	1.50	(< 20)
1,2-Dibromo-3-chloropropane	30	28.9	96	30	30.5	102	(62-128)	5.60	(< 20)
1,2-Dibromoethane	30	30.4	101	30	30.7	102	(77-121)	0.98	(< 20)
1,2-Dichlorobenzene	30	29.8	99	30	30.0	100	(80-119)	0.87	(< 20)
1,2-Dichloroethane	30	29.7	99	30	29.8	99	(73-128)	0.30	(< 20)
1,2-Dichloropropane	30	30.0	100	30	30.2	101	(78-122)	0.43	(< 20)
1,3,5-Trimethylbenzene	30	31.2	104	30	31.8	106	(75-124)	2.00	(< 20)
1,3-Dichlorobenzene	30	30.5	102	30	31.0	103	(80-119)	1.50	(< 20)
1,3-Dichloropropane	30	29.8	99	30	30.2	101	(80-119)	1.50	(< 20)
1,4-Dichlorobenzene	30	30.7	102	30	31.0	103	(79-118)	0.91	(< 20)
2,2-Dichloropropane	30	34.3	114	30	34.3	114	(60-139)	0.15	(< 20)
2-Butanone (MEK)	90	86.3	96	90	89.4	99	(56-143)	3.50	(< 20)
2-Chlorotoluene	30	31.5	105	30	32.3	108	(79-122)	2.40	(< 20)
2-Hexanone	90	90.9	101	90	93.7	104	(57-139)	3.00	(< 20)
4-Chlorotoluene	30	30.8	103	30	31.3	104	(78-122)	1.80	(< 20)
4-Isopropyltoluene	30	32.0	107	30	32.3	108	(77-127)	0.78	(< 20)
4-Methyl-2-pentanone (MIBK)	90	89.5	100	90	92.2	102	(67-130)	3.00	(< 20)
Benzene	30	29.7	99	30	29.0	97	(79-120)	2.20	(< 20)
Bromobenzene	30	29.8	100	30	30.3	101	(80-120)	1.50	(< 20)
Bromochloromethane	30	29.5	98	30	29.5	98	(78-123)	0.03	(< 20)
Bromodichloromethane	30	30.3	101	30	30.3	101	(79-125)	0.03	(< 20)
Bromoform	30	31.2	104	30	31.6	105	(66-130)	1.30	(< 20)
Bromomethane	30	25.5	85	30	25.7	86	(53-141)	0.74	(< 20)
Carbon disulfide	45	42.8	95	45	42.1	94	(64-133)	1.70	(< 20)

Print Date: 06/21/2019 12:16:21PM



Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34226]
 Blank Spike Lab ID: 1512090
 Date Analyzed: 06/11/2019 09:52

Spike Duplicate ID: LCSD for HBN 1192909 [VXX34226]
 Spike Duplicate Lab ID: 1512091
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909004, 1192909005, 1192909006, 1192909007, 1192909008

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	30.7	102	30	30.3	101	(72-136)	1.20	(< 20)
Chlorobenzene	30	28.5	95	30	28.7	96	(82-118)	0.80	(< 20)
Chloroethane	30	25.8	86	30	28.5	95	(60-138)	10.30	(< 20)
Chloroform	30	28.8	96	30	28.8	96	(79-124)	0.28	(< 20)
Chloromethane	30	28.0	93	30	27.7	92	(50-139)	1.00	(< 20)
cis-1,2-Dichloroethene	30	29.5	98	30	29.0	97	(78-123)	1.50	(< 20)
cis-1,3-Dichloropropene	30	31.5	105	30	31.7	106	(75-124)	0.63	(< 20)
Dibromochloromethane	30	31.2	104	30	31.2	104	(74-126)	0.06	(< 20)
Dibromomethane	30	29.7	99	30	29.8	99	(79-123)	0.17	(< 20)
Dichlorodifluoromethane	30	27.1	90	30	26.4	88	(32-152)	2.40	(< 20)
Ethylbenzene	30	30.1	100	30	30.5	102	(79-121)	1.40	(< 20)
Freon-113	45	43.6	97	45	42.9	95	(70-136)	1.50	(< 20)
Hexachlorobutadiene	30	30.4	101	30	30.8	103	(66-134)	1.50	(< 20)
Isopropylbenzene (Cumene)	30	31.4	105	30	31.1	104	(72-131)	1.10	(< 20)
Methylene chloride	30	29.6	99	30	29.5	98	(74-124)	0.20	(< 20)
Methyl-t-butyl ether	45	44.7	99	45	45.0	100	(71-124)	0.76	(< 20)
Naphthalene	30	26.3	88	30	28.6	95	(61-128)	8.60	(< 20)
n-Butylbenzene	30	32.3	108	30	32.9	110	(75-128)	1.80	(< 20)
n-Propylbenzene	30	31.9	106	30	32.2	107	(76-126)	0.87	(< 20)
o-Xylene	30	30.5	102	30	30.1	100	(78-122)	1.30	(< 20)
P & M -Xylene	60	60.6	101	60	61.3	102	(80-121)	1.10	(< 20)
sec-Butylbenzene	30	32.2	107	30	32.4	108	(77-126)	0.77	(< 20)
Styrene	30	31.3	104	30	30.1	100	(78-123)	4.20	(< 20)
tert-Butylbenzene	30	31.5	105	30	32.2	107	(78-124)	2.10	(< 20)
Tetrachloroethene	30	30.8	103	30	30.5	102	(74-129)	1.00	(< 20)
Toluene	30	28.0	93	30	28.0	93	(80-121)	0.00	(< 20)
trans-1,2-Dichloroethene	30	29.7	99	30	29.6	99	(75-124)	0.54	(< 20)
trans-1,3-Dichloropropene	30	30.0	100	30	30.6	102	(73-127)	1.70	(< 20)
Trichloroethene	30	29.9	100	30	29.9	100	(79-123)	0.03	(< 20)
Trichlorofluoromethane	30	27.8	93	30	29.1	97	(65-141)	4.40	(< 20)
Vinyl acetate	30	33.8	113	30	34.6	115	(54-146)	2.30	(< 20)
Vinyl chloride	30	27.6	92	30	26.8	89	(58-137)	2.80	(< 20)
Xylenes (total)	90	91.1	101	90	91.4	102	(79-121)	0.33	(< 20)

Print Date: 06/21/2019 12:16:21PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [VXX34226]
 Blank Spike Lab ID: 1512090
 Date Analyzed: 06/11/2019 09:52

Spike Duplicate ID: LCSD for HBN 1192909 [VXX34226]
 Spike Duplicate Lab ID: 1512091
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909004, 1192909005, 1192909006, 1192909007, 1192909008

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	98.1	98	30	98.2	98	(81-118)	0.10	
4-Bromofluorobenzene (surr)	30	101	101	30	102	102	(85-114)	0.96	
Toluene-d8 (surr)	30	100	100	30	101	101	(89-112)	1.10	

Batch Information

Analytical Batch: **VMS19017**
 Analytical Method: **SW8260C**
 Instrument: **Agilent 7890-75MS**
 Analyst: **FDR**

Prep Batch: **VXX34226**
 Prep Method: **SW5030B**
 Prep Date/Time: **06/11/2019 00:00**
 Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 06/21/2019 12:16:21PM

Method Blank

Blank ID: MB for HBN 1795051 [XXX/41592]
 Blank Lab ID: 1513114

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1192909001, 1192909002, 1192909003, 1192909004, 1192909005, 1192909006, 1192909007

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)	81.7	60-120		%

Batch Information

Analytical Batch: XFC15068
 Analytical Method: AK102
 Instrument: Agilent 7890B R
 Analyst: CMS
 Analytical Date/Time: 6/20/2019 1:04:00PM

Prep Batch: XXX41592
 Prep Method: SW3520C
 Prep Date/Time: 6/17/2019 10:10:29AM
 Prep Initial Wt./Vol.: 250 mL
 Prep Extract Vol: 1 mL

Print Date: 06/21/2019 12:16:22PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1192909 [XXX41592]
 Blank Spike Lab ID: 1513115
 Date Analyzed: 06/20/2019 13:13

Spike Duplicate ID: LCSD for HBN 1192909 [XXX41592]
 Spike Duplicate Lab ID: 1513116
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1192909001, 1192909002, 1192909003, 1192909004, 1192909005, 1192909006, 1192909007

Results by AK102

Parameter	Blank Spike (mg/L)			Spike Duplicate (mg/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Diesel Range Organics	20	20.1	100	20	20.8	104	(75-125)	3.70	(< 20)
Surrogates									
5a Androstane (surr)	0.4	85.8	86	0.4	88.6	89	(60-120)	3.20	

Batch Information

Analytical Batch: **XFC15068**
 Analytical Method: **AK102**
 Instrument: **Agilent 7890B R**
 Analyst: **CMS**

Prep Batch: **XXX41592**
 Prep Method: **SW3520C**
 Prep Date/Time: **06/17/2019 10:10**
 Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
 Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL



e-Sample Receipt Form

SGS Workorder #:

1192909



1 1 9 2 9 0 9

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="checkbox"/> No	HD				
COC accompanied samples?	<input checked="" type="checkbox"/> Yes					
DOD: Were samples received in COC corresponding coolers?	<input type="checkbox"/> N/A					
<input type="checkbox"/> 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:	1 cooler	@	<input checked="" type="checkbox"/> 0.7 °C Therm. ID: D45	
	<input type="checkbox"/> N/A	Cooler ID:		@	°C Therm. ID:	
	<input type="checkbox"/> N/A	Cooler ID:		@	°C Therm. ID:	
	<input type="checkbox"/> N/A	Cooler ID:		@	°C Therm. ID:	
	<input type="checkbox"/> N/A					
	<input type="checkbox"/> N/A					
*If >6°C, were samples collected <8 hours ago?		<input type="checkbox"/> N/A				
If <0°C, were sample containers ice free?		<input type="checkbox"/> N/A				
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.						
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.				
Were samples received within holding time?	<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.						
***Note: If sample information on containers differs from COC, SGS will default to COC information						
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	<input checked="" type="checkbox"/> Yes					
Were proper containers (type/mass/volume/preservative***) used?	<input type="checkbox"/> N/A	<input type="checkbox"/> 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="checkbox"/> 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>
1192909001-A	HCL to pH < 2	OK			
1192909001-B	HCL to pH < 2	OK			
1192909001-C	HCL to pH < 2	OK			
1192909001-D	HCL to pH < 2	OK			
1192909001-E	HCL to pH < 2	OK			
1192909002-A	HCL to pH < 2	OK			
1192909002-B	HCL to pH < 2	OK			
1192909002-C	HCL to pH < 2	OK			
1192909002-D	HCL to pH < 2	OK			
1192909002-E	HCL to pH < 2	OK			
1192909003-A	HCL to pH < 2	OK			
1192909003-B	HCL to pH < 2	OK			
1192909003-C	HCL to pH < 2	OK			
1192909003-D	HCL to pH < 2	OK			
1192909003-E	HCL to pH < 2	OK			
1192909004-A	HCL to pH < 2	OK			
1192909004-B	HCL to pH < 2	OK			
1192909004-C	HCL to pH < 2	OK			
1192909004-D	HCL to pH < 2	OK			
1192909004-E	HCL to pH < 2	OK			
1192909005-A	HCL to pH < 2	OK			
1192909005-B	HCL to pH < 2	OK			
1192909005-C	HCL to pH < 2	OK			
1192909005-D	HCL to pH < 2	OK			
1192909005-E	HCL to pH < 2	OK			
1192909006-A	HCL to pH < 2	OK			
1192909006-B	HCL to pH < 2	OK			
1192909006-C	HCL to pH < 2	OK			
1192909006-D	HCL to pH < 2	OK			
1192909006-E	HCL to pH < 2	OK			
1192909007-A	HCL to pH < 2	OK			
1192909007-B	HCL to pH < 2	OK			
1192909007-C	HCL to pH < 2	OK			
1192909007-D	HCL to pH < 2	OK			
1192909007-E	HCL to pH < 2	OK			
1192909008-A	HCL to pH < 2	OK			
1192909008-B	HCL to pH < 2	OK			
1192909008-C	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 that an inappropriate container was submitted.

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

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

DM - The container was received damaged.

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

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

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 DATA REVIEW CHECKLIST

Laboratory Data Review Checklist

Completed By:

Chris Pepe

Title:

Environmental Scientist

Date:

7/12/2019

CS Report Name:

2019 Groundwater Monitoring Activities Report

Report Date:

September 2019

Consultant Firm:

BGES

Laboratory Name:

SGS North America, Inc.

Laboratory Report Number:

1192909

ADEC File Number:

2100.26.129

Hazard Identification Number:

23804

1. Laboratory

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

 Yes No

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

Comments:

N/A2. Chain of Custody (CoC)

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

 Yes No

Comments:

- b. Correct Analyses requested?

 Yes No

Comments:

3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

 Yes No

Comments:

The sample cooler arrived at the laboratory with a measured temperature blank of 0.7 degree Celsius, which is within the prescribed optimal temperature range of 0 to 6 degrees Celsius. The samples contained the proper preservatives for the requested analyses and no unusual sample conditions were noted by the laboratory.

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

 Yes No

Comments:

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

 Yes No

Comments:

No unusual sample conditions were documented.

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

Yes No

Comments:

No discrepancies noted

- e. Data quality or usability affected?

Comments:

NA

4. Case Narrative

- a. Present and understandable?

Yes No

Comments:

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

Yes No

Comments:

No discrepancies, errors, or QC failures identified by the lab.

- c. Were all corrective actions documented?

Yes No

Comments:

N/A

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

Comments:

N/A

5. Samples Results

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

Yes No

Comments:

- b. All applicable holding times met?

Yes No

Comments:

c. All soils reported on a dry weight basis?

Yes No

Comments:

N/A. No soil samples were part of the scope of work for this project.

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

Yes No

Comments:

The LOQ for 1,2,3-trichloropropane exceeded the ADEC cleanup criterion in all samples on this work order. As such, it cannot be determined if the actual concentrations of 1,2,3-trichloropropane within these samples exceed the ADEC cleanup criterion. However, because 1,2,3-trichloropropane is not a contaminant of concern for this site and because no other analytes were detected in the field samples, it is our opinion that this elevated LOQ does not affect the interpretation of the data for their intended use. All other LOQs were below the ADEC cleanup criteria.

e. Data quality or usability affected?

Yes No

Comments:

6. QC Samples

a. Method Blank

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

Yes No

Comments:

ii. All method blank results less than limit of quantitation (LOQ)?

Yes No

Comments:

iii. If above LOQ, what samples are affected?

Comments:

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

Yes No

Comments:

N/A

v. Data quality or usability affected?

Comments:

N/A

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

Comments:

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

Yes No

Comments:

The samples on this work order were not analyzed for metals or inorganics.

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

Comments:

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

Yes No

Comments:

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

Comments:

N/A

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

Yes No

Comments:

N/A

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

Comments:

N/A

c. Surrogates – Organics Only

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

Yes No

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

Comments:

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

Yes No

Comments:

N/A. All recoveries met laboratory's standards

iv. Data quality or usability affected?

Comments:

N/A

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

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

Comments:

iii. All results less than LOQ?

Yes No

Comments:

iv. If above LOQ, what samples are affected?

Comments:

N/A

v. Data quality or usability affected?

Comments:

N/A

e. Field Duplicate

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

Yes No

Comments:

ii. Submitted blind to lab?

Yes No

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

Comments:

Sample MW7 is a duplicate of MW4 and was collected to evaluate field sampling precision. The relative percent difference (RPD) between the reported concentration of 1,2,4-trimethylbenzene was 2.58 percent, the RPD between the reported concentration of 4-isopropyltoluene was 0 percent, indicating good field sampling precision with respect to these analytes. The RPD between the reported concentration of n-propylbenzene was 5.59 percent, indicating good field sampling precision with respect to this analyte. The RPDs between the reported concentrations of the remaining analytes could not be calculated because those analytes were not detected in one or both of these samples.

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

Comments:

see 6.3.iii above

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below).

Yes No Not Applicable

Decontamination and equipment blanks were not part of the approved scope of work for this project.

i. All results less than LOQ?

Yes No

Comments:

N/A

ii. If above LOQ, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected?

Comments:

N/A

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

a. Defined and appropriate?

Yes No

Comments: