SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

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April 3, 2015

Holiday Alaska, Inc.
4567 American Boulevard West
Bloomington, MN 55437

Attn: Mr. Bruce Anthony

RE: AUGUST 2014 GROUNDWATER MONITORING, FORMER WILLIAMS EXPRESS SITE NO. 5021, 6010 OLD SEWARD HIGHWAY, ANCHORAGE, ALASKA

ADEC File No. 2100.26.030; FacID No. 0727

This letter report presents the results of our August 2014 groundwater monitoring event conducted at former Williams Express Site (WES) No. 5021, 6010 Old Seward Highway, Anchorage, Alaska. A site plan illustrating pertinent site features with the results from the August 2014 sampling event is included as Figure 1.

The August 2014 groundwater sampling event was conducted in general accordance with our *Revised Groundwater Sampling Schedule at Williams Express Site No. 5021, 6010 Old Seward Highway, Anchorage, Alaska, ADEC File No. 2100.26.030* document dated March 27, 2012. The sampling schedule was approved by Ms. Keather McLoone of the Alaska Department of Environmental Conservation (ADEC) in an email dated April 13, 2012.

BACKGROUND

At least 19 underground storage tanks (USTs) have been in use at or near WES No. 5021 since the late 1950s. The earliest formal records of on-site tank installations are four USTs that were installed in 1975. A vapor extraction system (VES) and groundwater pump-and-treat (P&T) system were installed at the site in December 1990 and October 1991, respectively. The P&T system function was limited due to low water table conditions, and was shut down in January 2004. The VES system was last operated in 2007. The VES was configured with one horizontal extraction line which was formerly connected to one dual-phase vapor/groundwater recovery well, designated RW-2. As documented in our May 24, 2012 *Monitoring Well Decommissioning at*

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Former Williams Express Site No. 5021, 6010 Old Seward Highway, Anchorage, Alaska report, Recovery Well RW-2 was decommissioned in May 2012. With ADEC approval, the remediation shed and remaining recovery well (Well RW-5A) were decommissioned in July 2013. Details of the decommissioning activities are provided in our *Remediation System and Recovery Well Decommissioning at Former Williams Express Site No. 5021, 6010 Old Seward Highway, Anchorage, Alaska* report.

In 2013 and 2014, Tesoro constructed a new fueling station and installed a new UST array at the site. During construction activities by others, Monitoring Well MW-1was decommissioned and three additional monitoring wells (Wells MW-26, B5MW, and B13MW) were paved over, covered by landscaping, and/or destroyed.

In June 2014, Shannon & Wilson installed three monitoring wells (Wells MW-39, MW-40, and MW-41) southwest of WES No. 5021 to further define the leading edge of the contaminant plume. Details of these activities are provided in our November 2014 *Site Characterization, Williams Express Site No. 5021, 6010 Old Seward Highway, Anchorage, Alaska* report,

GROUNDWATER MONITORING

Groundwater samples were collected from fourteen monitoring wells on August 25 and 26, 2014 and one drinking water well on August 22, 2014. In addition, Well MW-30 was screened for the presence of measurable product, and a groundwater depth measurement was recorded for the well.

The groundwater samples were collected following purging, which consisted of removing approximately three well volumes from each well with disposable bailers. Field parameters including temperature, specific conductivity, pH, dissolved oxygen, and turbidity were measured following removal of the three well volumes. Monitoring well sampling data for the August 2014 sampling event are presented in Table 1.

The purgewater from wells which historically contained contaminant concentrations less than the applicable cleanup levels (Wells MW-10, MW-25, and MW-32 through MW-41) was discharged to unpaved portions of the site, as approved by Mr. O'Connell of the ADEC in an August 19, 2013 email. The purgewater from wells which historically contained contaminant concentrations in excess of the applicable ADEC cleanup levels (Wells MW-9 and MW-31) was containerized in 55-gallon drums and transported to Holiday Station Store (HSS) 602 for temporary storage.

Emerald Alaska, Inc. collected the purgewater on October 14, 2014 for disposal/treatment at an off-site facility. The waste manifest and certificate of disposal are included in Attachment 1.

A drinking water sample was collected on August 22, 2014 from a water well located at 900 East Dowling Road. At the time of sampling, the property was occupied by Cal's Park and Sell. As of March 2015, the property is unoccupied. The samples were collected from a break room faucet after configuring the water well system to bypass the water filter.

Groundwater Flow Data

The groundwater depths ranged from 13.75 feet (Well MW-37) to 26.73 (Well MW-41) feet below the tops of the well casings. Based on these measurements, the August 2014 average depth to groundwater is deeper than the September 2013 monitoring event by about 0.45 foot. The groundwater depth measurement collected from Well MW-10 was not included in the August 2014 average depth calculations due to a potentially anomalous measurement. The change in groundwater levels between the 2014 and 2015 monitoring events was not uniform over the site. It is noted that localized inconsistencies have been observed historically, and are likely attributable to the site's complex hydrogeology, which includes interbedded soil layers of varying permeability. Based on historical data, the local groundwater flow direction the vicinity of WES No. 5021 is generally oriented to the southwest.

LABORATORY ANALYSES

The groundwater and drinking water samples were submitted to SGS North America Inc. (SGS) of Anchorage, Alaska using chain-of custody procedures. Analytical results for the August 2014 sampling event are shown on Table 2 and Figure 1. The groundwater and drinking water samples were selectively analyzed for gasoline range organics (GRO) by Alaska Method (AK) 101; diesel range organics (DRO) by AK 102; residual range organics (RRO) by AK 103; and benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8021B. A trip blank was submitted with the samples and analyzed for GRO by AK 101 and BTEX by EPA Method 8021B.

DISCUSSION OF RESULTS

The following discussion of analytical results includes an assessment of the present extent of contamination. Results for Wells MW-9, MW-10, and MW-31 (wells that were sampled in August 2014 and for which concentrations of petroleum hydrocarbons above ADEC cleanup levels have been detected in previous sampling events) are plotted on Graphs 1 through 3, respectively. Groundwater analytical results, including historical analytical results from the past eight years, are presented in Table 3.

Groundwater

The analytical groundwater sample results are used to evaluate potential source areas, delineate plume boundaries, and track changes in hydrocarbon distribution throughout the plume(s). Based on concentration magnitudes and/or the historical presence of non-aqueous phase liquid (NAPL), existing Well MW-30 and former Wells MW-1, B4P, MW-12, MW-27, MW-28, and B5MW appear to be representative of source-area conditions. Historically, free-phase NAPL has been observed at least once in five of the site wells (Wells B5MW, B4P, MW-12, MW-27, and MW-30). Well MW-30 is checked for free-phase NAPL annually but is not sampled. Measurable NAPL was not observed in Well MW-30 during the August 2014 sampling event and has not been observed in this well during the last five sampling events. The September 2011 sampling event is the most recent event in which measurable NAPL (0.02 foot) was documented in Well MW-30. The remaining source area wells have either been decommissioned or could not be located during the August 2014 sampling event.

Historically, the highest concentrations of BTEX, GRO, and/or DRO in non-source area wells have been measured in Wells MW-9, MW-31, and B13MW. In August 2014, BTEX concentrations were detected in the samples from Wells MW-9, MW-31, and MW-40. Well B13MW could not be located during the 2014 sampling event. Samples collected from Wells MW-9 and MW-31 contained benzene concentrations exceeding the ADEC's applicable cleanup level of 0.005 milligrams per liter (mg/L). GRO was also detected in Sample MW-31 at a concentration greater than the ADEC cleanup level of 2.2 mg/L. These wells are located north (Well MW-31) and southwest (Wells MW-9 and MW-40) of the primary source area. DRO was not detected in the 2014 groundwater samples, or was detected at concentrations less than the ADEC cleanup level.

As shown on Graphs 1 and 3 and Table 3, benzene and GRO concentrations in Wells MW-9 and MW-31 are within historical ranges. The 2014 benzene concentration for Well MW-9 is the lowest benzene concentration since 2008. This is the first sampling event since 2010 for which GRO has not been detected at a concentration greater than the ADEC cleanup level in Well MW-9.

The distribution of RRO in the groundwater appears to be different than BTEX, GRO, and DRO. Specifically, higher concentrations of RRO are typically measured in wells south of the primary source area, with the highest concentrations generally measured in Well B13MW. The August 2014 samples from Wells MW-9 and MW-10, which are both located southwest of the primary source area, were the only samples analyzed for RRO. The concentration of RRO in Sample MW-9 was greater than the ADEC cleanup level of 1.1 mg/L but within historical range. RRO was not detected in the sample from Well MW-10. Concentrations of RRO in Well MW-10 have generally decreased since 2009, as shown on Graph 2.

Based on the 2014 sampling results, the lateral extent of the groundwater contaminant plume is delineated by trace or non-detect results to the north and east in Wells MW-32, MW-33, and MW-34; to the northwest in Wells MW-37 and MW-38; and to the south/southwest in Wells MW-35, MW-39, MW-40, and MW-41.

During the August 2014 groundwater sampling event, the potentiometric groundwater surface was above the top of the well screen in Wells MW-32, MW-34, and MW-37. Therefore, the water samples collected from these wells may not be representative of the smear zone, where the highest concentrations of petroleum hydrocarbons would be expected if the potentiometric surface is equal to the water table (i.e. not a confined or semi-confined aquifer with positive pore pressure).

Drinking Water

The August 2014 drinking water sample collected from the water well located at 900 East Dowling Road did not contain detectable concentrations of GRO, DRO, RRO, or BTEX. Historical analytical results are generally non-detect although RRO has sporadically been detected in samples collected from the well.

QUALITY CONTROL

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQO). Internal laboratory controls to assess data quality for this project included surrogates, method blanks, and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to determine precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a report specific note identifying the problem in the Case Narrative section of their Laboratory Analysis Report. Shannon & Wilson reviewed the SGS data deliverables and completed an ADEC Laboratory Data Review Checklist. The laboratory report and review checklist are included in Attachment 2. No non-conformances with the DQOs were identified that would adversely affect the quality or usability of the data.

SUMMARY

Overall, the contaminant plume appears to be either steady state or shrinking. Based on historical analytical data, our November 2014 *Site Characterization, Williams Express Site No. 5021, 6010 Old Seward Highway, Anchorage, Alaska* report, and data from the August 2014 groundwater sampling event, the southwestern edge of the plume is located north of Well MW-40, east of Well MW-39, and west of Well MW-41. North of the source area, the plume extends beneath Dowling Road to the property located at 5900 Old Seward Highway, with the northern plume edge located between Wells MW-31 and MW-32. To the east, the plume appears to extend beneath Old Seward Highway and is bounded by non-detect results for Wells MW-33 and MW-34.

The 2014 groundwater samples from Monitoring Wells MW-9 and MW-31 continue to exhibit elevated petroleum hydrocarbon concentrations. Although the current set of monitoring wells enables an evaluation of changes in plume boundaries, with the exception of Well MW-30 it is not possible to evaluate potential changes in source area conditions. It is our understanding that the ADEC may require Tesoro to re-install or relocate wells located within the source area.

As stated in our ADEC-approved sampling plan, the 2015 groundwater monitoring event will be conducted in either August or September. Because the 900 East Dowling Road property is currently unoccupied, we recommend re-evaluating site usage and the practicality of collecting a drinking water sample from this property prior to the 2015 sampling event.

We appreciate this opportunity to be of service and your continued confidence in our firm. If you have questions or comments concerning this submittal, please contact Dan P. McMahon or the undersigned at (907) 561-2120.

Sincerely,

SHANNON & WILSON, INC.

Prepared by:

Erika Knight
Environmental Scientist

Approved by:

Vice President
Matthew S. Hemry, P.E.

Enc: Tables 1 through 3, Figure 1, Graphs 1 through 3, and Attachments 1 and 2

cc: Mr. Bill O'Connell, ADEC
Mr. Mark Gebbia, Williams

TABLE 1 - AUGUST 2014 WATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-1	MW-9	MW-10	MW-25	MW-26
Date Water Level Measured	-	8/25/2014	8/25/2014	8/25/2014	-
Time Water Level Measured	-	13:44	12:41	11:30	-
Surveyed MP Elevation (ft)	-	116.88	120.16	109.29	-
Measured Depth to Water (ft below MP)	-	25.81	34.87**	17.75	-
Water Level Elevation (ft)	-	91.07	85.29	91.54	-

Note: Well surveys conducted in October 2009, September 2011, October 2012, and July 2014 (Del Norte Surveying, Inc.)

SAMPLING DATA

Well Number	MW-1	MW-9	MW-10	MW-25	MW-26
Date Sampled	-	8/26/2014	8/26/2014	8/26/2014	-
Time Sampled	-	11:15	12:05	9:35	-
Measured Depth to Water (ft below MP)	-	25.81	34.87**	17.75	-
Total Depth of Well (ft below MP)	-	27.39	38.88	31.28	30.40
Water Column in Well (ft)	-	1.58	4.01	13.53	-
Screened interval (ft below ground surface)*	-	20-29.5	25-45	16.8-32	20.8-30.8
Gallons per Foot	-	0.16	0.16	0.16	-
Water Column Volume (gallons)	-	0.25	0.64	2.16	-
Total Volume Pumped/Bailed (gallons)	-	0.8	2	7	-
Sampling Method	-	Bailer	Bailer	Bailer	-
Diameter of Well Casing	-	2-inch	2-inch	2-inch	2-inch
Remarks	Decommissioned by Tesoro in 2013				Not located; assumed paved over or destroyed

WATER QUALITY DATA

Well Number	MW-1	MW-9	MW-10	MW-25	MW-26
Temperature (°C)	-	7.97	7.99	6.07	-
Conductivity (µS/cm)	-	816	278	700	-
pH (Standard Units)	-	6.90	7.56	7.40	-
Turbidity (NTU)	-	643	1,024	356	-
Dissolved Oxygen (mg/L)	-	3.36	3.69	3.52	-

Note: Water quality parameters were measured with Hanna, Hach, and YSI instruments.

KEY	DESCRIPTION
°C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
mg/L	Milligrams per liter
MP	Measuring Point
NTU	Nephelometric turbidity units
-	Not applicable or measurement not collected
NS	Not sampled
DTW	Depth to water
*	At time of well installation
**	Potential error recording measurement in the field

TABLE 1 - AUGUST 2014 WATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-30	MW-31	MW-32	MW-33	MW-34
Date Water Level Measured	8/25/2014	8/25/2014	8/25/2014	8/25/2014	8/25/2014
Time Water Level Measured	14:10	14:03	10:35	13:22	10:47
Surveyed MP Elevation (ft)	121.70	122.93	123.62	124.82	124.39
Measured Depth to Water (ft below MP)	19.93	21.50	22.26	22.14	21.84
Water Level Elevation (ft)	101.77	101.43	101.36	102.68	102.55

Note: Well surveys conducted in October 2009, September 2011, October 2012, and July 2014 (Del Norte Surveying, Inc.)

SAMPLING DATA

Well Number	MW-30	MW-31	MW-32	MW-33	MW-34
Date Sampled	NS	8/26/2014	8/26/2014	8/26/2014	8/26/2014
Time Sampled	NS	15:45	16:30	13:00	13:25
Measured Depth to Water (ft below MP)	19.93	21.50	22.26	22.14	21.84
Total Depth of Well (ft below MP)	27.67	30.18	36.96	29.54	31.06
Water Column in Well (ft)	7.74	8.68	14.70	7.40	9.22
Screened interval (ft below ground surface)*	19-29	20.2-30.2	27.5-37.5	20-30	22-32
Gallons per Foot	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	1.24	1.39	2.35	1.18	1.48
Total Volume Pumped/Bailed (gallons)	-	4.5	7.5	3.6	4.5
Sampling Method	NS	Bailer	Bailer	Bailer	Bailer
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch	2-inch
Remarks	No product observed. DTW only				

WATER QUALITY DATA

Well Number	MW-30	MW-31	MW-32	MW-33	MW-34
Temperature (°C)	-	8.66	8.10	5.62	8.09
Conductivity (µS/cm)	-	674	800	677	1,123
pH (Standard Units)	-	7.26	7.34	6.73	7.14
Turbidity (NTU)	-	65	62	145	>1,100
Dissolved Oxygen (mg/L)	-	4.28	3.90	3.76	8.15

Note: Water quality parameters were measured with Hanna, Hach, and YSI instruments.

KEY	DESCRIPTION
°C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
mg/L	Milligrams per liter
MP	Measuring Point
NTU	Nephelometric turbidity units
-	Not applicable or measurement not collected
NS	Not sampled
DTW	Depth to water
*	At time of well installation

TABLE 1 - AUGUST 2014 WATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-35	MW-36	MW-37	MW-38	B5MW
Date Water Level Measured	8/25/2014	8/25/2014	8/25/2014	8/25/2014	-
Time Water Level Measured	11:20	11:05	10:20	9:53	-
Surveyed MP Elevation (ft)	111.32	114.07	120.48	118.66	-
Measured Depth to Water (ft below MP)	20.33	23.04	13.75	16.86	-
Water Level Elevation (ft)	90.99	91.03	106.73	101.80	-

Note: Well surveys conducted in October 2009, September 2011, October 2012, and July 2014 (Del Norte Surveying, Inc.)

SAMPLING DATA

Well Number	MW-35	MW-36	MW-37	MW-38	B5MW
Date Sampled	8/25/2014	8/25/2014	8/26/2014	8/26/2014	-
Time Sampled	16:45	15:30	14:15	15:05	-
Measured Depth to Water (ft below MP)	20.33	23.04	13.75	16.86	-
Total Depth of Well (ft below MP)	26.71	25.11	27.67	26.63	32.00
Water Column in Well (ft)	6.38	2.07	13.92	9.77	-
Screened interval (ft below ground surface)*	17.4-26.3	17.4-26.8	17.8-27.5	16.7-26.4	19-34
Gallons per Foot	0.16	0.16	0.16	0.16	-
Water Column Volume (gallons)	1.02	0.33	2.23	1.56	-
Total Volume Pumped/Bailed (gallons)	3.5	1	7	4.7	-
Sampling Method	Bailer	Bailer	Bailer	Bailer	-
Total Volume Pumped/Bailed (gallons)	2-inch	2-inch	2-inch	2-inch	2-inch
Remarks					Not located; assumed destroyed or covered by landscaping

WATER QUALITY DATA

Well Number	MW-35	MW-36	MW-37	MW-38	B5MW
Temperature (°C)	7.58	8.31	6.99	9.21	-
Conductivity (µS/cm)	524	898	847	588	-
pH (Standard Units)	7.44	6.77	7.05	7.65	-
Turbidity (NTU)	159	1,077	907	316	-
Dissolved Oxygen (mg/L)	3.12	8.23	2.73	3.41	-

Note: Water quality parameters were measured with Hanna, Hach, and YSI instruments.

KEY	DESCRIPTION
^{o}C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
mg/L	Milligrams per liter
MP	Measuring Point
NTU	Nephelometric turbidity units
-	Measurement not collected
NS	Not sampled
DTW	Depth to water
*	At time of well installation

TABLE 1 - AUGUST 2014 WATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	B13MW	MW-39	MW-40	MW-41
Date Water Level Measured	-	8/25/2014	8/25/2014	8/25/2014
Time Water Level Measured	-	13:04	12:18	12:28
Surveyed MP Elevation (ft)	-	113.72	116.35	118.26
Measured Depth to Water (ft below MP)	-	21.84	25.35	26.73
Water Level Elevation (ft)	-	91.88	91.00	91.53

Note: Well surveys conducted in October 2009, September 2011, October 2012, and July 2014 (Del Norte Surveying, Inc.)

SAMPLING DATA

Well Number	B13MW	MW-39	MW-40	MW-41
Date Sampled	-	8/26/2014	8/26/2014	8/26/2014
Time Sampled	-	10:25	10:55	11:35
Measured Depth to Water (ft below MP)	-	21.84	25.35	26.73
Total Depth of Well (ft below MP)	28.88	29.75	30.60	28.72
Water Column in Well (ft)	-	7.91	5.25	1.99
Screened interval (ft below ground surface)*	22-32	19.8-29.8	20.6-30.6	18.7-28.7
Gallons per Foot	-	0.16	0.16	0.16
Water Column Volume (gallons)	-	1.27	0.84	0.32
Total Volume Pumped/Bailed (gallons)	-	4	3	1
Sampling Method	-	Bailer	Bailer	Bailer
Diameter of Well Casing	2-inch	2-inch	2-inch	2-inch
Remarks	Not located; assumed paved over or destroyed			

WATER QUALITY DATA

Well Number	B13MW	MW-39	MW-40	MW-41
Temperature (°C)	-	6.66	7.58	7.68
Conductivity (µS/cm)	-	586	685	398
pH (Standard Units)	-	7.83	7.06	7.47
Turbidity (NTU)	-	517	>1000	>1000
Dissolved Oxygen (mg/L)	-	9.49	2.45	5.56

Note: Water quality parameters were measured with Hanna, Hach, and YSI instruments.

KEY	DESCRIPTION
°C	Degrees Celsius
ft	Feet
µS/cm	Microsiemens per Centimeter
mg/L	Milligrams per liter
MP	Measuring Point
NTU	Nephelometric turbidity units
-	Not applicable or measurement not collected
NS	Not sampled
*	At time of well installation

TABLE 2 - AUGUST 2014 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Parameter Tested	Method	Cleanup Level (mg/L)*	Sample Number^ and Groundwater Depth in Feet							
			MW-9	MW-10	MW-25	MW-31	MW-32	MW-33	MW-34	MW-35
			25.81	34.87**	17.75	21.50	22.26	22.14	21.84	20.33
Gasoline Range Organics (GRO) - mg/L	AK 101	2.2	**0.721**	-	-	**4.81**	<0.0500	<0.100 B	<0.100 B	<0.100 B
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	-	-	-	**0.324 J**	<0.313	<0.311	<0.300	<0.300
Residual Range Organics (RRO) - mg/L	AK 103	1.1	**3.57**	<0.271	-	-	-	-	-	-
Aromatic Volatile Organics (BTEX)										
Benzene - mg/L	EPA 8021B	0.005	**0.288**	<0.000500 B	<0.000500 B	**0.0326**	<0.000250	<0.000250	<0.000250	<0.000250
Toluene - mg/L	EPA 8021B	1.0	<0.00100 B	<0.00100 B	<0.000500	**0.00436 J**	<0.000500	<0.00100 B	<0.000500	<0.000500
Ethylbenzene - mg/L	EPA 8021B	0.7	**0.0436**	<0.000500	<0.000500	**0.440**	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes - mg/L	EPA 8021B	10	**0.00225 J**	<0.00150	<0.00150	**1.30**	<0.00150	<0.00150	<0.00150	<0.00150

KEY	DESCRIPTION
*	Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (October 2014).
**	Potential error recording measurement in the field
^	Sample ID No. preceded by "17314-211" on the chain of custody form.
<0.271	Analyte not detected; laboratory reporting limit of 0.271 mg/L.
0.721	Analyte detected
-	Sample not tested for this analyte.
mg/L	Milligrams per liter
3.57	Reported concentration exceeds the regulated cleanup level.
J	Analyte detected below laboratory method detection limit.
B	Analyte concentration potentially affected by method blank contamination. See the ADEC Laboratory Data Review Checklist for details.

TABLE 2 - AUGUST 2014 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Parameter Tested	Method	Cleanup Level (mg/L)*	Sample Number^ and Groundwater Depth in Feet						
			MW-36	MW-37	MW-38	MW-39	MW-40	MW-41	Trip Blank
			23.04	13.75	16.86	21.84	25.35	26.73	WTB
Gasoline Range Organics (GRO) - mg/L	AK 101	2.2	<0.100 B	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500
Diesel Range Organics (DRO) - mg/L	AK 102	1.5	<0.310	<0.300	<0.300	<0.328	<0.313	<0.316	-
Residual Range Organics (RRO) - mg/L	AK 103	1.1	-	-	-	-	-	-	-
Aromatic Volatile Organics (BTEX)									
Benzene - mg/L	EPA 8021B	0.005	<0.000250	<0.000250	<0.000250	<0.000250	**0.00401**	<0.000250	<0.000250
Toluene - mg/L	EPA 8021B	1.0	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene - mg/L	EPA 8021B	0.7	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes - mg/L	EPA 8021B	10	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150	<0.00150

KEY	DESCRIPTION
*	Groundwater cleanup levels are listed in Table C, 18 AAC 75.345 (October 2014).
^	Sample ID No. preceded by "17314-211" on the chain of custody form.
<0.310	Analyte not detected; laboratory reporting limit of 0.310 mg/L.
0.00401	Analyte detected
-	Sample not tested for this analyte.
mg/L	Milligrams per liter
J	Analyte detected below laboratory method detection limit.
B	Analyte concentration potentially affected by method blank contamination. See the ADEC Laboratory Data Review Checklist for details.

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
MW-1	4/30/2007	27.15	**2.16**	42.5	**75.0**	**6.33**	-
	12/14/2007	27.05	**2.37**	58.3	**97.7**	**4.97**	-
	4/28/2008	27.06	**0.941**	38.5	**86.2**	**4.34**	-
	9/16/2008	26.61	**0.486**	33.7	**68.5**	**4.59**	-
	5/11/2009	27.76	**0.125**	17.8	**44.6**	**5.79**	-
	9/28/2009	28.02	**0.649**	42.0	**83.1**	**5.10**	-
	4/27/2010	27.02	**0.531**	15.3	**38.2**	**5.20**	-
	9/2/2010	25.81	**1.16**	48.6	**89.3**	**4.51**	-
	5/5/2011	26.07	**0.324**	16.6	**40.0**	**6.78**	-
	9/14/2011	25.97	**0.424**	27.9	**54.1**	**6.95**	-
	4/18/2012	25.60	**0.340**	19.3	**51.2**	**5.87**	-
	9/25/2012	24.65	**0.843**	33.3	**62.1**	**4.31**	-
	9/18/2013	25.60	**0.498**	20.0	**53.2**	**4.62**	
		Decommissioned by Tesoro in 2013					
MW-8A	4/27/2007	11.35	0.000517	0.00283	-	-	-
	12/18/2007	6.80	ND	ND	-	-	-
	6/2/2008	6.10	ND	ND	-	-	-
	9/16/2008	6.14	ND	ND	-	-	-
	5/11/2009	4.92	ND	0.00448 J	-	-	
	9/28/2009	8.12	ND	ND	-	-	-
	4/27/2010	8.61	ND	0.0107	ND	-	-
	9/8/2010	7.30	ND	ND	-	-	-
	5/6/2011	6.01	ND	ND	-	-	-
	9/15/2011	7.64	ND	0.00466	-	-	-
	9/24/2012	3.33	Not sampled. Depth to water measurement only.				
		Removed from the sampling program in 2013					
MW-9	4/30/2007	25.98	**1.94**	5.30	**8.98**	-	**1.80**
	10/4/2007	25.55	**2.01**	5.42	**9.46**	-	ND
	4/29/2008	26.03	**1.05**	3.25	**5.65**	-	**2.32**
	9/16/2008	25.70	**0.170**	0.606	1.11	-	**5.01**
	5/11/2009	26.23	**1.74**	4.73	**8.06**	-	**23.5**
	9/28/2009	26.39	**1.34**	5.38	**10.2**	-	0.549
	4/27/2010	26.32	**0.449**	1.37	ND	-	**1.67**
	9/2/2010	25.69	**2.13**	8.19	**15.4**	-	**1.32**
	5/6/2011	25.97	**1.26**	4.83	**9.22**	-	**1.74**
	9/14/2011	25.89	**1.63**	7.63	**14.2**	-	**1.86**
	4/18/2012	25.92	**1.42**	5.40 J	**10.1**	-	**2.35**
	9/25/2012	24.40	**1.99**	8.82	**17.2**	-	0.903
	9/18/2013	24.98	**0.567**	2.48	**5.63**	-	**4.60**
	8/26/2014	25.81	**0.288**	0.334 J	0.721	-	**3.57**

Key provided on Page 6 of Table 3

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
MW-10	4/30/2007	16.92	ND	ND	-	-	ND
	10/4/2007	17.74	0.00121	0.03179	-	-	ND
	4/28/2008	16.97	ND	0.00260	-	-	0.838
	9/16/2008	17.44	0.000549	0.00882	-	-	**2.87**
	5/11/2009	17.97	0.000843	0.00492 J	-	-	**3.47 J**
	9/28/2009	18.37	ND	ND	-	-	ND
	4/27/2010	17.84	ND	0.00880	-	-	0.787
	9/2/2010	17.12	ND	ND	-	-	0.742
	5/6/2011	17.18	ND	ND	-	-	0.569
	9/14/2011	17.42	ND	0.00208	-	-	0.959
	4/18/2012	16.53	ND	ND	-	-	0.350 J
	9/25/2012	16.34	ND	ND	-	-	ND
	9/17/2013	17.10	ND	ND	-	-	0.365 J
	8/26/2014	34.87***	ND	ND	-	-	ND
MW-16	9/2/2003	18.68	ND	ND	-	0.180	0.630
	5/5/2004	21.75	ND	ND	-	0.321	ND
	9/20/2004	18.93	ND	ND	-	ND	ND
	3/31/2005	18.42	ND	0.00385	-	ND	ND
		Well decommissioned on October 27, 2005					
MW-19	5/5/2004	23.69	ND	ND	-	-	-
	9/20/2004	22.50	ND	ND	-	-	-
	3/31/2005	22.31	ND	0.00295	-	-	-
	9/15/2005	21.42	ND	ND	-	-	-
	4/4/2006	22.70	ND	ND	-	-	-
	9/26/2006	Well could not be located (lost during road improvements)					
MW-20	9/2/2003	19.97	ND	ND	-	-	-
	4/15/2004	18.01	ND	ND	-	-	-
	9/20/2004	19.42	ND	ND	-	-	-
	3/31/2005	19.66	ND	0.00229	-	-	-
		Sampling suspended due to consistently low or ND results					
	4/17/2012	17.43	ND	ND	-	-	-
		Well decommissioned on May 3, 2012					
MW-21	9/2/2003	20.03	ND	ND	-	-	-
	4/15/2004	18.11	0.001	0.005	-	-	-
	9/20/2004	19.23	ND	ND	-	-	-
	3/31/2005	19.65	ND	ND	-	-	-
		Well decommissioned on October 27, 2005					
MW-22	3/10/2003	12.93	ND	ND	ND	ND	0.21
	9/2/2003	14.09	ND	ND	-	-	-
		Well decommissioned on October 27, 2005					
MW-24	3/10/2003	14.24	ND	ND	ND	0.72	**1.80**
	9/2/2003	14.54	ND	ND	-	-	-
		Well decommissioned on October 27, 2005					

Key provided on Page 6 of Table 3

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
MW-25	4/27/2007	18.65	ND	ND	-	-	-
	1/2/2008	18.42	ND	ND	-	-	-
	4/29/2008	18.08	ND	ND	-	-	-
	9/16/2008	17.63	ND	ND	-	-	-
	5/11/2009	18.38	0.000157 J	0.00393 J	-	-	-
	9/28/2009	18.27	ND	ND	-	-	-
	4/27/2010	18.60	ND	0.00806	ND	-	-
	9/2/2010	17.80	ND	ND	-	-	-
	5/6/2011	18.13	ND	ND	-	-	-
	9/14/2011	18.27	0.000322 J	0.00806	-	-	-
	4/18/2012	18.07	ND	ND	ND	-	-
	9/25/2012	16.25	ND	ND	-	-	-
	9/17/2013	16.74	ND	ND	-	-	-
	8/26/2014	17.75	ND	ND	-	-	-
MW-26	10/20/2009	26.56	0.00378	0.00378	ND	ND	-
	5/7/2010	26.52	ND	ND	ND	ND	-
	9/2/2010	25.78	ND	ND	ND	ND	-
	5/5/2011	26.02	ND	0.000680 J	ND	ND	-
	9/14/2011	25.99	0.000710	0.0102	0.211 J	0.0451 J	-
	4/17/2012	25.90	Not sampled. Depth to water measurement only.				
	9/24/2012	24.75	Not sampled. Depth to water measurement only.				
	9/17/2013	25.81	Not sampled. Depth to water measurement only.				
		Assumed paved over during Tesoro construction conducted in 2014.					
MW-27	10/20/2009~	24.50	**2.50**	48.1 E	**77.0**	1.37	-
	4/27/2010 #	24.87	**4.52**	92.3	**178**	**57.1**	-
	9/2/2010	23.62	**1.19**	38.1	**78.1**	**8.23**	-
	5/6/2011	23.81	**0.342**	20.9	**46.6**	**16.4**	-
	9/15/2011#	23.81	0.03 foot of product observed, not sampled				
	4/17/2012#	23.80	0.05 foot of product observed, not sampled				
		Well decommissioned on May 3, 2012					
MW-28	10/20/2009	23.50	**5.30**	71.7 E	**132**	**2.19**	-
	4/27/2010	23.76	**8.11**	59.7	**115**	**3.78**	-
	9/2/2010	22.65	**8.23**	55.6	**97.3**	**3.58**	-
	5/5/2011	22.90	**5.38**	49.8	**90.5**	**2.72**	-
	9/15/2011	22.70	**5.45**	65.0	**103**	**3.32**	-
	4/17/2012	22.73	Not sampled. No product observed.				
		Well decommissioned on May 3, 2012					
MW-29	10/20/2009	15.14	ND	ND	ND	ND	-
	4/27/2010	14.79	0.000720	0.0217	ND	ND	-
	9/2/2010	14.30	ND	ND	ND	ND	-
	5/5/2011	15.05	ND	0.000640 J	ND	ND	-
	9/15/2011	15.70	0.000186 J	0.00434	ND	0.269 J	-
	4/17/2012	12.96	Not sampled. Depth to water measurement only.				-
		Well decommissioned on May 3, 2012					

Key provided on Page 6 of Table 3

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
MW-30	9/15/2011#	20.68	0.02 foot of product observed, not sampled				-
	4/17/2012	20.70	Not sampled. No product observed.				
	9/24/2012	19.32	Not sampled. No product observed.				
	1/3/2013~	19.24	**0.266**	17.7	**33.9**	**1.51**	ND
	9/17/2013	20.03	Not sampled. No product observed.				
	8/25/2014	19.93	Not sampled. No product observed.				
MW-31	7/22/2011~	23.07	**0.0567**	2.13	**7.35**	0.643	ND
	9/14/2011	21.86	**0.0259**	0.0712	**1.27**	0.431 J	-
	4/17/2012	21.73	ND	ND	0.0478 J	ND	-
	9/26/2012	20.38	ND	ND	ND	ND	ND
	1/3/2013	20.60	**0.00640**	1.01	-	-	-
	9/18/2013	21.33	**0.0367**	1.80	**5.88**	0.601	-
	8/26/2014	21.50	**0.0326**	1.78 J	**4.81**	0.324 J	-
MW-32	7/22/2011	23.89	ND	ND	ND	ND	ND
	9/14/2011	22.63	0.000447 J	0.0149	0.0498 J	ND	-
	4/17/2012	22.48	ND	ND	ND	ND	ND
	9/26/2012	21.13	ND	ND	ND	ND	ND
	1/3/2013	21.36	ND	0.00383 J	-	-	-
	9/18/2013	22.02	ND	ND	0.0327 J	ND	-
	8/26/2014	22.26	ND	ND	ND	ND	-
MW-33	7/21/2011	23.60	ND	ND	ND	ND	ND
	9/15/2011	22.64	0.000265 J	0.0158	0.0498 J	0.200 J	-
	4/18/2012	22.67	0.000200 J	0.000810 J	ND	0.247 J	ND
	9/26/2012	21.51	ND	0.000880 J	ND	ND	ND
	9/18/2013	22.56	ND	ND	ND	ND	-
	8/26/2014	22.14	ND	ND	ND	ND	-
MW-34	7/21/2011	23.57	ND	ND	ND	ND	ND
	9/15/2011	22.54	0.000183 J	0.0206	0.0548 J	0.276 J	-
	4/18/2012	22.37	0.000150 J	0.000150 J	ND	ND	0.155 J
	9/26/2012	20.98	ND	ND	ND	ND	ND
	9/18/2013	12.69***	ND	ND	ND	ND	-
	8/26/2014	21.84	ND	ND	ND	ND	-
MW-35	9/2/2011	20.26	ND	ND	ND	ND	ND
	4/18/2012	20.13	0.000130 J	0.000560 J	ND	ND	ND
	9/25/2012	18.79	ND	ND	ND	ND	ND
	9/17/2013	19.32	ND	ND	ND	ND	-
	8/25/2014	20.33	ND	ND	ND	ND	-
MW-36	9/2/2011	22.88	ND	ND	ND	ND	ND
	4/18/2012	22.93	ND	ND	ND	0.310 J	0.340 J
	9/25/2012	21.50	ND	ND	ND	ND	ND
	9/17/2013	22.04	ND	ND	0.0401 J	ND	-
	8/25/2014	23.04	ND	ND	ND	ND	-
MW-37	9/26/2012	17.28	ND	ND	ND	ND	ND
	9/18/2013	14.45	ND	ND	ND	ND	-
	8/26/2014	13.75	ND	ND	ND	ND	-
MW-38	9/26/2012	15.35	ND	ND	ND	ND	ND
	9/18/2013	15.99	ND	ND	ND	0.250 J	-
	8/26/2014	16.86	ND	ND	ND	ND	-

Key provided on Page 6 of Table 3

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
MW-39	7/1/2014	20.14	ND	ND	ND	ND	0.186 J
	8/26/2014	21.84	ND	ND	ND	ND	-
MW-40	6/26/2014~	24.91	0.00283	0.00283	ND	ND	0.163 J
	8/26/2014	25.35	0.00401	0.00401	ND	ND	-
MW-41	6/26/2014	26.34	ND	ND	ND	ND	ND
	8/26/2014	26.73	ND	ND	ND	ND	-
B5MW	4/4/2006	26.49	**17.7**	119.3	**230**	**3.46**	-
	9/26/2006	24.48	-	-	**29.2**	**2.77**	-
	4/27/2007	25.09	**0.937**	14.9	**30.7**	**4.58**	-
	10/4/2007	25.61	**1.49**	30.6	**63.7**	**5.33**	-
	4/29/2008	24.45	**1.13**	13.3	**34.3**	**3.09**	-
	9/16/2008	24.44	**1.68**	19.8	**41.7**	**1.68**	-
	5/11/2009	25.62	**1.64**	18.5	**36.7**	**3.43**	-
	9/28/2009	25.89	**5.47**	37.8	**75.8**	**2.05**	-
	4/27/2010	25.80	Sample not analyzed				
	9/2/2010	24.76	**2.34**	17.8	**40.3**	**2.65**	-
	9/14/2011	24.97	**4.90**	29.4	**57.5**	**3.14**	-
	4/18/2012	24.87	**23.1**	98.9	**-**	**-**	-
	9/24/2012	23.61	Not sampled. No product observed.				
	9/17/2013	24.66	Not sampled. No product observed.				
		Assumed destroyed during Tesoro construction conducted in 2014.					
B6MW	4/11/2006	27.22	ND	ND	-	-	-
	4/12/2006	28.22	ND	ND	-	-	-
		Sampling suspended due to consistently low or ND results					
		Assumed destroyed by road improvement project conducted in 2013.					
B8MW	4/30/2007	19.83	ND	ND	ND	ND	-
	4/28/2008	19.43	ND	0.00762	ND	ND	-
	9/16/2008	19.28	ND	ND	ND	ND	-
	5/11/2009	20.34	ND	0.000818 J	ND	ND	-
	9/28/2009	Well not sampled due to site access limitation					
	2010	Well not sampled due to site access limitation					
	7/22/11	20.71	**1.51**	16.79	**32.9**	0.420 J	ND
	9/14/11	19.53	ND	0.000903	ND	ND	-
	4/17/2012	19.38	ND	0.000510 J	0.0546 J	ND	-
		Well decommissioned on May 3, 2012					
B13MW	6/2/2008	24.30	ND	ND	-	-	**10.2**
	9/16/2008	24.00	ND	ND	-	-	**8.64**
	5/11/2009	25.12	ND	0.00138 J	-	-	**7.79**
	9/28/2009	25.38	ND	ND	-	-	**1.97**
	4/27/2010	25.00	0.00104	0.0379	-	-	**2.90**
	9/2/2010	24.21	ND	ND	-	-	**2.47**
	5/5/2011	24.48	ND	ND	-	-	0.623
	9/14/2011	24.44	ND	0.00543	-	-	**6.25**
	4/18/2012	24.33	ND	ND	-	-	**2.76**
	9/26/2012	23.27	-	-	-	-	0.987
	9/18/2013	24.30	-	-	-	-	**4.31**
		Assumed paved over during Tesoro construction conducted in 2014.					

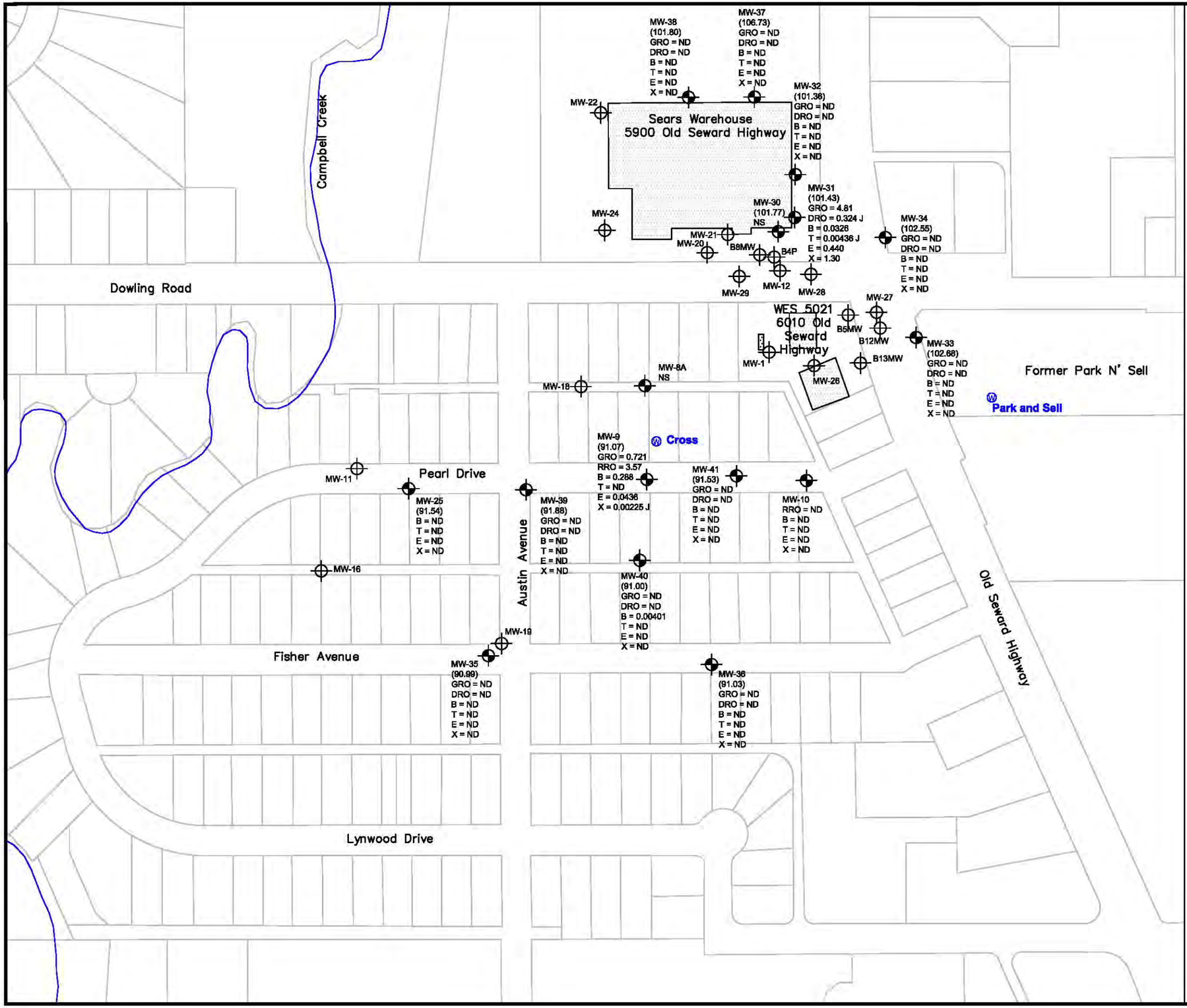
Key provided on Page 6 of Table 3

TABLE 3 - CUMULATIVE GROUNDWATER DATA

			Target Analyte Concentrations* (mg/L)				
Well No.	**Sample Date**	**Groundwater Depth^ (ft)**	**Benzene**	**Total BTEX**	**GRO**	**DRO**	**RRO**
B4P†	12/18/2007	20.18	**8.98**	114.3	**174**	**6.43**	-
	4/29/2008	20.46	**4.49**	69.9	**120**	**1.72**	-
	9/16/2008	20.25	**2.12**	28.2	**47.1**	0.961	-
	5/11/2009	21.29	**9.93**	96.0	**170**	**3.15**	-
	9/28/2009	Well not sampled due to site access limitation					
	2010	Well not sampled due to site access limitation					
	7/22/2011	21.72	**8.18**	99.41	**193**	**2.20**	ND
	9/14/2011	20.55	**8.17**	126	**180**	**6.32**	-
	4/17/2012	20.43	Not sampled. No product observed.				
		Well decommissioned on May 3, 2012					
Former Park n' Sell Water Well	12/8/2006	-	ND	ND	ND	ND	ND
	12/12/2008	-	ND	ND	ND	ND	ND
	12/22/2009	-	ND	ND	ND	ND	ND
	9/23/2011	-	ND	ND	ND	ND	**1.38**
	12/15/2011	-	ND**	ND**	ND**	ND**	ND**
	9/28/2012	-	ND	ND	ND	ND	ND
	9/19/2013	-	ND	ND	ND	ND	ND
	8/22/2014	-	ND	ND	ND	ND	ND

Note: See Table 2 and the Laboratory Data Review Checklist (Attachement 2) for details regarding 2014 GRO, benzene, and toluene analytical results which are B-flagged due to method blank detections. B-flagged results are listed as 'ND' on this table.

KEY	DESCRIPTION
*	See Attachment 2 for compounds tested, methods, and laboratory reporting limits
**	Identical results reported for sample run before and after silica-gel filtering
***	Potential error recording measurement in the field
-	Measurement not recorded or not applicable
^	Depth of static groundwater level below the measuring point or top of casing
ND	Not detected
8.98	Analyte concentration exceeds current cleanup criterion (0.005 ppm benzene, 2.2 ppm GRO, 1.5 ppm DRO, and 1.1 ppm RRO) by 18 AAC 75.345 (October 2014)
J	Estimated concentration detected below the reporting limit
~	Listed value based on highest concentrations in duplicate set
#	Free product observed
E	Value is based on an estimated concentration of toluene above the calibration range
mg/L	milligrams per liter
ft	feet
†	Well B8MW and Piezometer B4P were both sampled in the 2008 and 2009 groundwater monitoring events. Based on historical data for Well B8MW, it was speculated that samples were inadvertently collected from Piezometer B4P in 2004 and 2007 but incorrectly attributed to Well B8MW. These results are now listed under Piezometer B4P.



LEGEND

MW-9	Approximate location of Monitoring Well MW–9
MW-12	Approximate location of former Monitoring Well MW–12 (well was decommissioned, destroyed, or could not be located during the most recent sampling event)
Ⓦ	Approximate location of drinking water well
(91.07)	Approximate groundwater elevation based on August 25, 2014 depth to water measurements
ND	Not detected
NS	Not Sampled

GRO = 4.81	Gasoline Range Organics (mg/L)
DRO = 0.324 J	Diesel Range Organics (mg/L)
RRO = ND	Residual Range Organics (mg/L)
B = 0.0326	Benzene (mg/L)
T = 0.00436 J	Toluene (mg/L)
E = 0.440	Ethylbenzene (mg/L)
X = 1.301	Total Xylenes (mg/L)

Notes:
Samples were collected on August 25 or 26, 2014. See Table 2.

Existing and select former wells are presented on this figure.

See Table 2 and the Laboratory Data Review Checklist (Attachment 2) for details regarding 2014 GRO, benzene, and toluene analytical results which are B–flagged due to method blank detections. B–flagged results are listed as 'ND' on this figure.

N

0 100 200 400

APPROXIMATE SCALE IN FEET

6010 OLD SEWARD HIGHWAY
ANCHORAGE, ALASKA

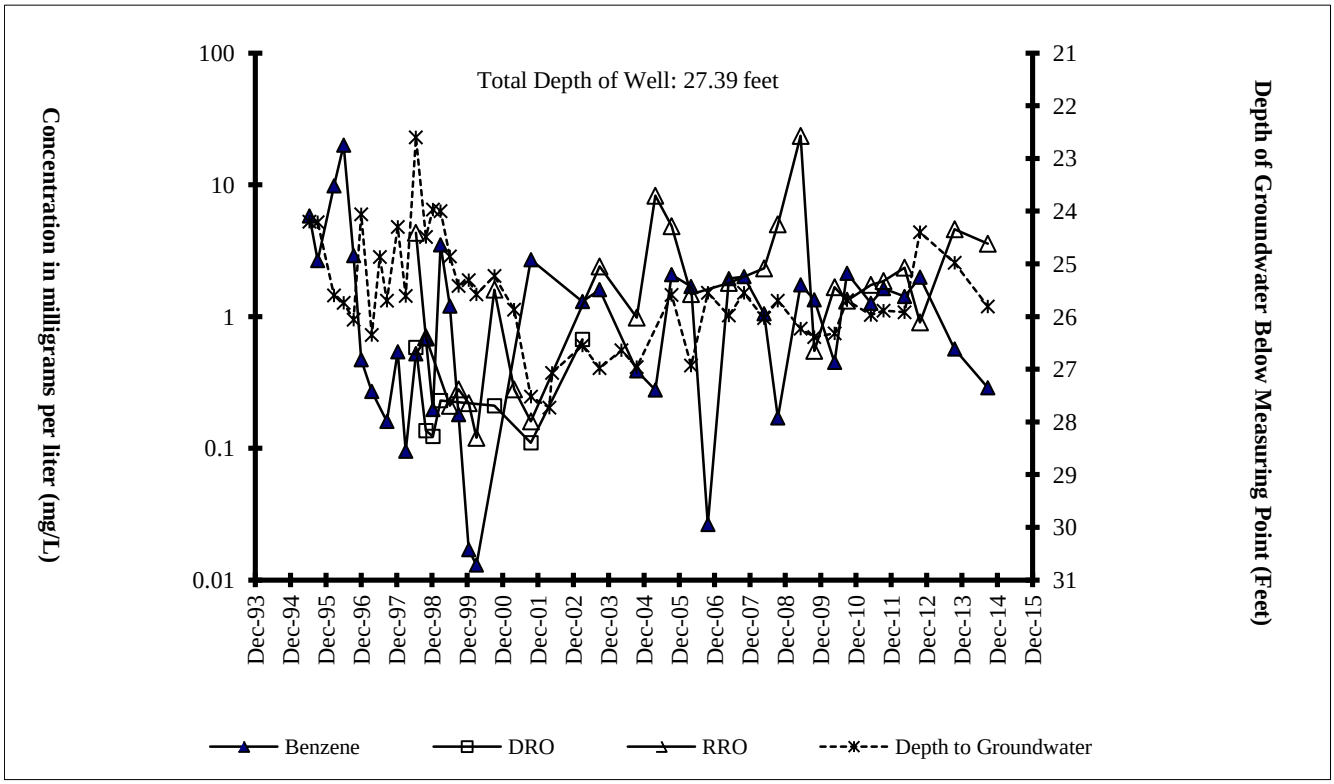
SITE PLAN
AUGUST 2014 RESULTS

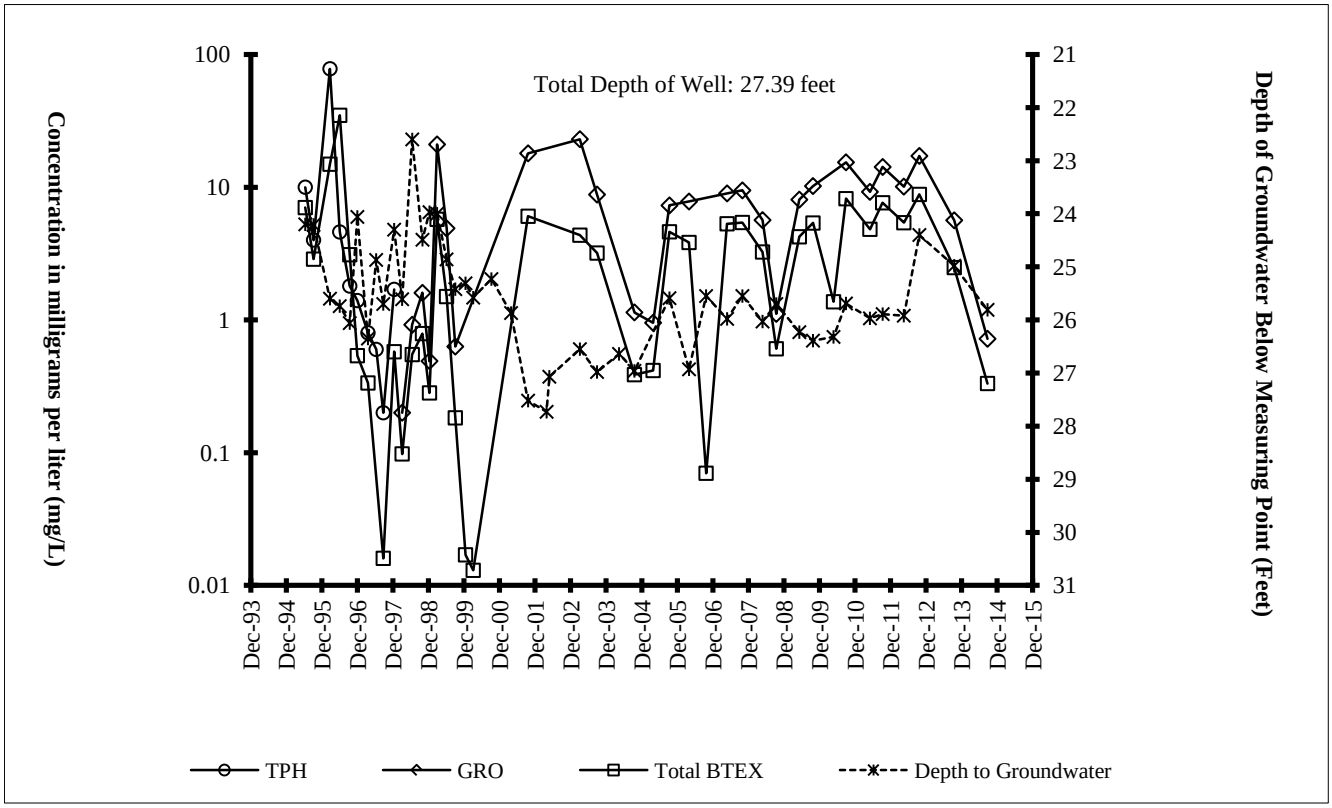
APRIL 2015 32-1-17715-215

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

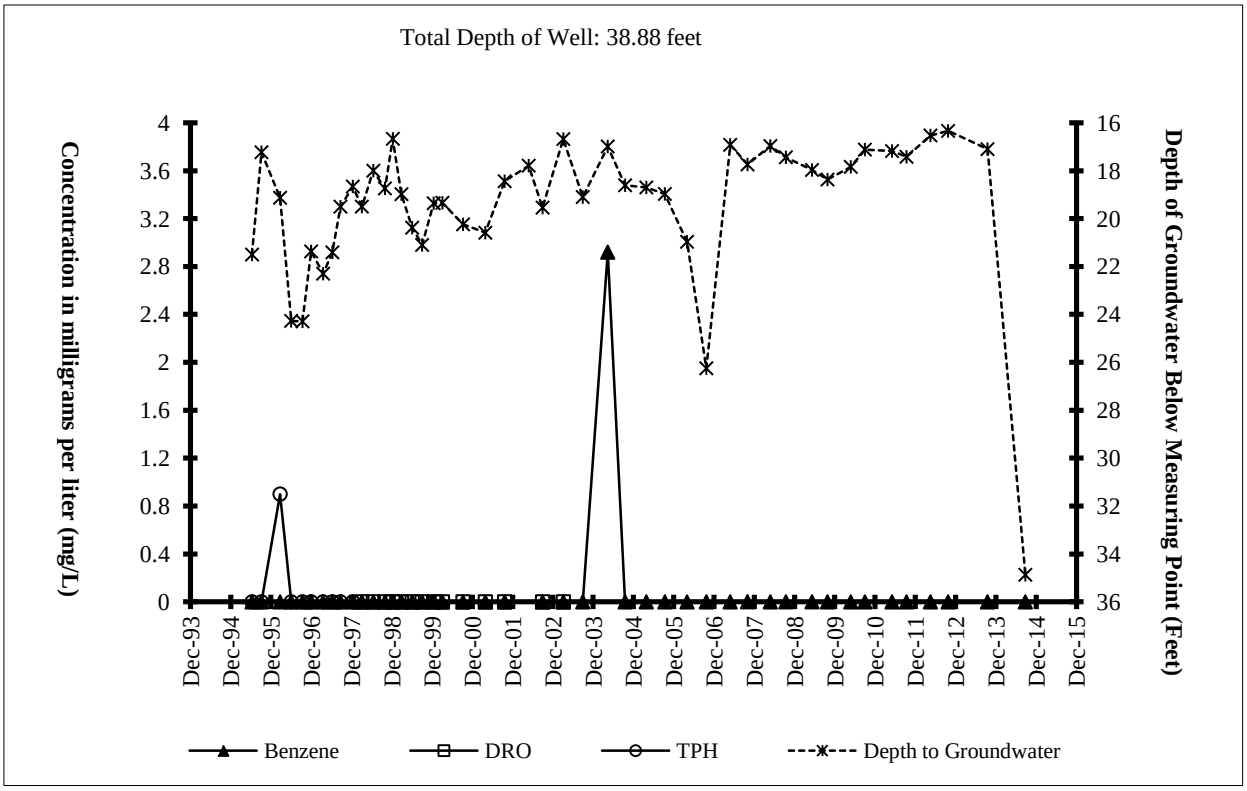
FIG. 1

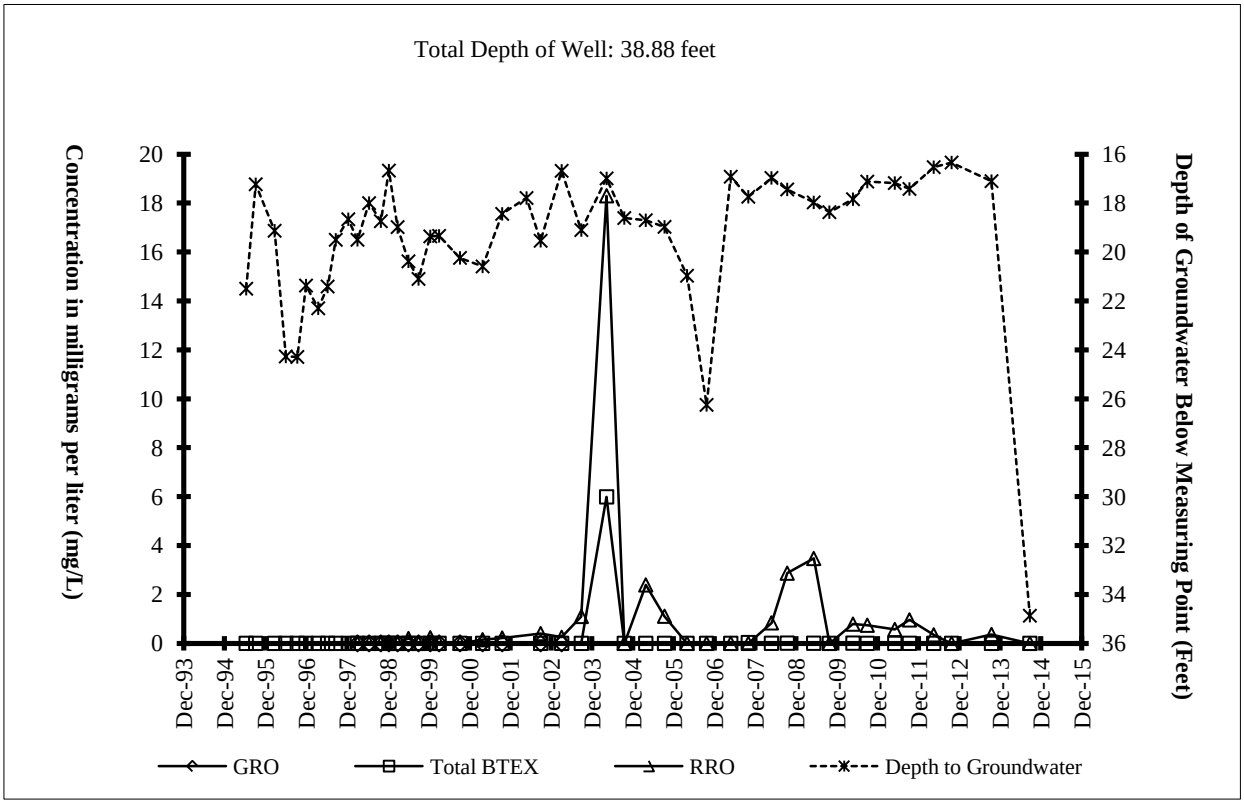
GRAPH 1 - MONITORING WELL MW-9 TRENDS



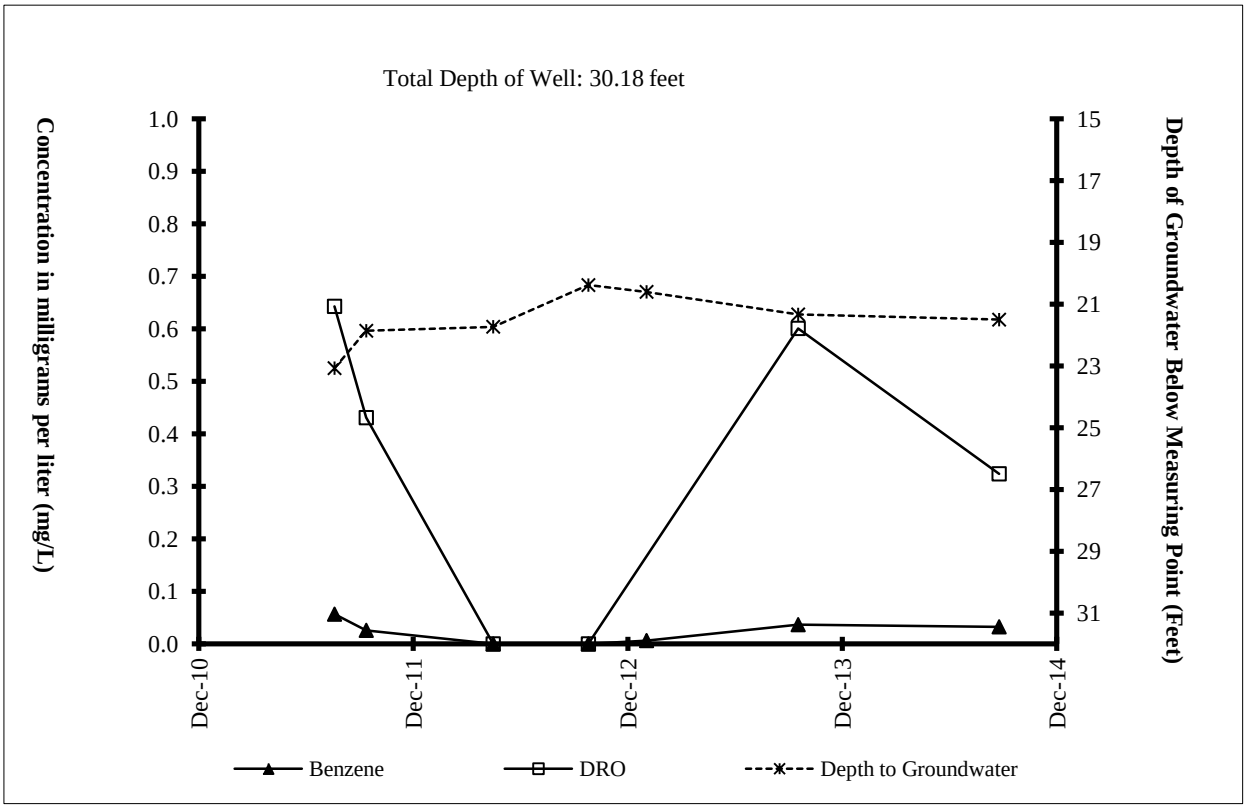


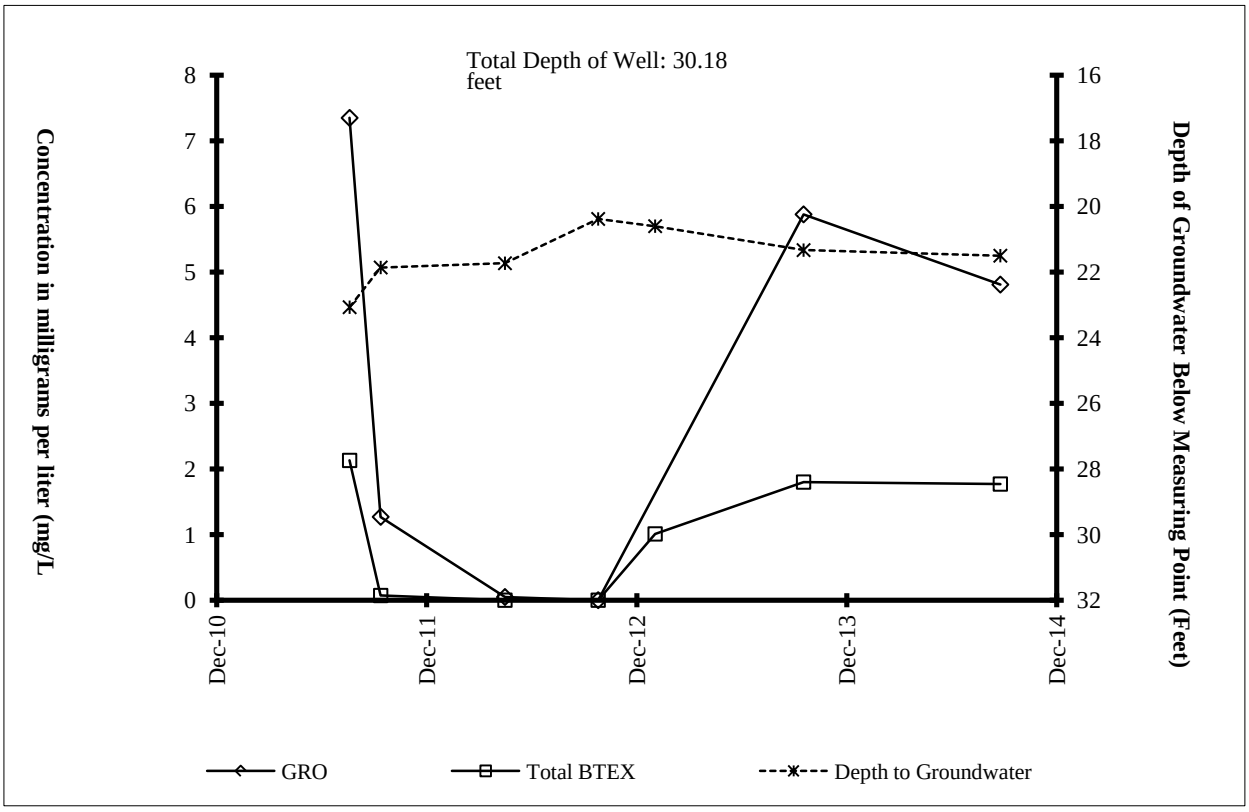
GRAPH 2 - MONITORING WELL MW-10 TRENDS





GRAPH 3 - MONITORING WELL MW-31 TRENDS





ATTACHMENT 1

WASTE MANIFEST AND DISPOSAL RECEIPT

*** IN CASE OF EMERGENCY CALL 1-800-424-9300 Contract# 7619 *** AK23075 (RP)

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: EXEMPT

Manifest Document No.: 23075

2. Page 1 of 1

3. Generator's Name and Mailing Address: HOLIDAY STORE, 6010 OLD SEWARD HIGHWAY, ANCHORAGE, AK 99518

Site Address: HOLIDAY STORE, 6010 OLD SEWARD HIGHWAY, ANCHORAGE, AK 99518

SHANNON & WILSON

4. Generator's Phone: (907) 561-2120

5. Transporter 1 Company Name: EMERALD ALASKA, INC

6. US EPA ID Number: AKR000004184

A. State Transporter's ID

B. Transporter 1 Phone: (907) 258-1558

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address: EMERALD ALASKA, INC., 2020 VIKING DRIVE, ANCHORAGE, AK 99501

10. US EPA ID Number: AKR000004184

E. State Facility's ID

F. Facility's Phone: (907) 258-1558

11. WASTE DESCRIPTION	Containers No.	Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. MATERIAL NOT REGULATED BY D.O.T.	1	DM	50	P X
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

1)EA0302 IDW DECON WATER

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

I certify that this material is not regulated nor mixed with waste regulated as a Hazardous Waste under 40CFR261 or TSCA regulated waste under 40CFR761. All used oil meets the definition under 40CFR279. Generator agrees to indemnify and hold harmless Emerald Alaska or its subsidiary for any damages, costs, attorneys and expert fees arising from or related to the above certification.

NON-HAZARDOUS WASTE

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Jake Tracy — Signature: Jake Tracy — Date: Month 10 Day 14 Year 14

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Roy C Trisdale R — Signature: Roy C Trisdale — Date: Month 10 Day 14 Year 14

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name: Patricia L. Beasley — Signature: Patricia L Beasley — Date: Month 10 Day 17 Year 14

CERTIFICATE OF DISPOSAL/RECYCLE

GENERATOR: HOLIDAY STORE
6010 OLD SEWARD HIGHWAY
ANCHORAGE AK 99518

DISPOSAL FACILITY: EMERALD ALASKA, INC.
2020 VIKING DRIVE
ANCHORAGE AK 99501

EPA ID NUMBER: EXEMPT
MANIFEST/DOCUMENT #: 23075
DATE OF DISPOSAL/RECYCLE: 10/15/2014

LINE	WASTE DESCRIPTION	CONTAINERS	TYPE	QUANTITY	UOM
1	IDW DECON WATER	1	DM	50	P

I certify, on behalf of the above listed treatment facility, that to the best of my knowledge, the above described waste was managed in compliance with all applicable laws, regulations, permits, and licenses on the date listed above.

PREPARED BY: PATRICIA BEASLEY

SIGNATURE: Patricia L Beasley **DATE:** 10/17/2014

ATTACHMENT 2

RESULTS OF ANALYTICAL TESTING BY

SGS NORTH AMERICA, INC.
OF ANCHORAGE, ALASKA

AND

ADEC LABORATORY DATA REVIEW CHECKLIST

Laboratory Report of Analysis

To: Shannon & Wilson, Inc.
5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907)433-3223

Report Number: **1144102**

Client Project: **32-1-17314-211 WES 5021**

Dear Dan McMahon,

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 five years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

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

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

Sincerely,
SGS North America Inc.

Alaska Division Technical Director

Stephen Ede
2014.09.09
13:39:35 -08'00'

Victoria Pennick Date
Project Manager
Victoria.Pennick@sgs.com

Print Date: 09/08/2014 4:05:24PM

Case Narrative

SGS Client: **Shannon & Wilson, Inc.**
SGS Project: **1144102**
Project Name/Site: **32-1-17314-211 WES 5021**
Project Contact: **Dan McMahon**

Refer to sample receipt form for information on sample condition.

17314-211-MW9 (1144102001) PS

AK103 - Unknown hydrocarbon with several peaks is present.

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

SGS North America Inc.
200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

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) & UST-005 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6020, 7470A, 7471B, 8021B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 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	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
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
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
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.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
17314-211-MW9	1144102001	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW10	1144102002	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW25	1144102003	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW31	1144102004	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW32	1144102005	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW33	1144102006	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW34	1144102007	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW35	1144102008	08/25/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW36	1144102009	08/25/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW37	1144102010	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW38	1144102011	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW39	1144102012	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW40	1144102013	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-MW41	1144102014	08/26/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-DW2014	1144102015	08/22/2014	08/27/2014	Water (Surface, Eff., Ground)
17314-211-WTB	1144102016	08/22/2014	08/27/2014	Water (Surface, Eff., Ground)

Method	Method Description
AK101	AK101/8021 Combo.
SW8021B	AK101/8021 Combo.
SW8021B	BTEX 8021
AK102	Diesel Range Organics (W)
AK102	Diesel/Residual Range Organics Water
AK103	Diesel/Residual Range Organics Water
AK103	Residual Range Organics (W)

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Detectable Results Summary

Client Sample ID: **17314-211-MW9**
Lab Sample ID: 1144102001
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Residual Range Organics	3.57	mg/L
Benzene	288	ug/L
Ethylbenzene	43.6	ug/L
Gasoline Range Organics	0.721	mg/L
o-Xylene	0.330J	ug/L
P & M -Xylene	1.92J	ug/L
Toluene	0.650J	ug/L

Client Sample ID: **17314-211-MW10**
Lab Sample ID: 1144102002
Volatile Fuels

Parameter	Result	Units
Benzene	0.300J	ug/L
Toluene	0.320J	ug/L

Client Sample ID: **17314-211-MW25**
Lab Sample ID: 1144102003
Volatile Fuels

Parameter	Result	Units
Benzene	0.160J	ug/L

Client Sample ID: **17314-211-MW31**
Lab Sample ID: 1144102004
Semivolatile Organic Fuels
Volatile Fuels

Parameter	Result	Units
Diesel Range Organics	0.324J	mg/L
Benzene	32.6	ug/L
Ethylbenzene	440	ug/L
Gasoline Range Organics	4.81	mg/L
o-Xylene	191	ug/L
P & M -Xylene	1110	ug/L
Toluene	4.36J	ug/L

Client Sample ID: **17314-211-MW33**
Lab Sample ID: 1144102006
Volatile Fuels

Parameter	Result	Units
Gasoline Range Organics	0.0431J	mg/L
Toluene	0.310J	ug/L

Client Sample ID: **17314-211-MW34**
Lab Sample ID: 1144102007
Volatile Fuels

Parameter	Result	Units
Gasoline Range Organics	0.0441J	mg/L

Client Sample ID: **17314-211-MW35**
Lab Sample ID: 1144102008
Volatile Fuels

Parameter	Result	Units
Gasoline Range Organics	0.0416J	mg/L

Client Sample ID: **17314-211-MW36**
Lab Sample ID: 1144102009
Volatile Fuels

Parameter	Result	Units
Gasoline Range Organics	0.0334J	mg/L

Client Sample ID: **17314-211-MW40**
Lab Sample ID: 1144102013
Volatile Fuels

Parameter	Result	Units
Benzene	4.01	ug/L

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Results of **17314-211-MW9**

Client Sample ID: **17314-211-MW9**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102001
Lab Project ID: 1144102

Collection Date: 08/26/14 11:15
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	3.57		0.513	0.154	mg/L	1		08/29/14 11:49
Surrogates								
n-Triacontane-d62	104		50-150		%	1		08/29/14 11:49

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK103
Analyst: AYC
Analytical Date/Time: 08/29/14 11:49
Container ID: 1144102001-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 975 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW9**

Client Sample ID: **17314-211-MW9**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102001
Lab Project ID: 1144102

Collection Date: 08/26/14 11:15
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.721		0.100	0.0310	mg/L	1		08/30/14 02:54
Surrogates								
4-Bromofluorobenzene	138		50-150		%	1		08/30/14 02:54

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 02:54
Container ID: 1144102001-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	288		5.00	1.50	ug/L	10		08/31/14 14:30
Ethylbenzene	43.6		1.00	0.310	ug/L	1		08/30/14 02:54
o-Xylene	0.330	J	1.00	0.310	ug/L	1		08/30/14 02:54
P & M -Xylene	1.92	J	2.00	0.620	ug/L	1		08/30/14 02:54
Toluene	0.650	J	1.00	0.310	ug/L	1		08/30/14 02:54
Surrogates								
1,4-Difluorobenzene	107		77-115		%	1		08/30/14 02:54

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 02:54
Container ID: 1144102001-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VFC12078
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/31/14 14:30
Container ID: 1144102001-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW10**

Client Sample ID: **17314-211-MW10**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102002
Lab Project ID: 1144102

Collection Date: 08/26/14 12:05
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.271	U	0.541	0.162	mg/L	1		08/29/14 06:45
Surrogates								
n-Triacontane-d62	95.4		50-150		%	1		08/29/14 06:45

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK103
Analyst: AYC
Analytical Date/Time: 08/29/14 06:45
Container ID: 1144102002-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 925 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW10**

Client Sample ID: **17314-211-MW10**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102002
Lab Project ID: 1144102

Collection Date: 08/26/14 12:05
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.300	J	0.500	0.150	ug/L	1		08/30/14 03:13
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 03:13
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 03:13
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 03:13
Toluene	0.320	J	1.00	0.310	ug/L	1		08/30/14 03:13
Surrogates								
1,4-Difluorobenzene	97		77-115		%	1		08/30/14 03:13

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 03:13
Container ID: 1144102002-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW25**

Client Sample ID: **17314-211-MW25**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102003
Lab Project ID: 1144102

Collection Date: 08/26/14 09:35
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.160	J	0.500	0.150	ug/L	1		08/30/14 03:32
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 03:32
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 03:32
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 03:32
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 03:32
Surrogates								
1,4-Difluorobenzene	97.7		77-115		%	1		08/30/14 03:32

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 03:32
Container ID: 1144102003-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW31**

Client Sample ID: **17314-211-MW31**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102004
Lab Project ID: 1144102

Collection Date: 08/26/14 15:45
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.324	J	0.625	0.188	mg/L	1		08/29/14 04:37
Surrogates								
5a Androstane	81.6		50-150		%	1		08/29/14 04:37

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 04:37
Container ID: 1144102004-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW31**

Client Sample ID: **17314-211-MW31**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102004
Lab Project ID: 1144102

Collection Date: 08/26/14 15:45
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	4.81		1.00	0.310	mg/L	10		08/31/14 14:49
Surrogates								
4-Bromofluorobenzene	112		50-150		%	10		08/31/14 14:49

Batch Information

Analytical Batch: VFC12078
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/31/14 14:49
Container ID: 1144102004-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	32.6		5.00	1.50	ug/L	10		08/31/14 14:49
Ethylbenzene	440		10.0	3.10	ug/L	10		08/31/14 14:49
o-Xylene	191		10.0	3.10	ug/L	10		08/31/14 14:49
P & M -Xylene	1110		20.0	6.20	ug/L	10		08/31/14 14:49
Toluene	4.36	J	10.0	3.10	ug/L	10		08/31/14 14:49
Surrogates								
1,4-Difluorobenzene	102		77-115		%	10		08/31/14 14:49

Batch Information

Analytical Batch: VFC12078
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/31/14 14:49
Container ID: 1144102004-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW32**

Client Sample ID: **17314-211-MW32**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102005
Lab Project ID: 1144102

Collection Date: 08/26/14 16:30
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.313	U	0.625	0.188	mg/L	1		08/29/14 04:47
Surrogates								
5a Androstane	90.2		50-150		%	1		08/29/14 04:47

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 04:47
Container ID: 1144102005-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW32**

Client Sample ID: **17314-211-MW32**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102005
Lab Project ID: 1144102

Collection Date: 08/26/14 16:30
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/31/14 12:37
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		08/31/14 12:37

Batch Information

Analytical Batch: VFC12078
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/31/14 12:37
Container ID: 1144102005-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/31/14 12:37
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:37
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:37
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/31/14 12:37
Toluene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:37
Surrogates								
1,4-Difluorobenzene	97.8		77-115		%	1		08/31/14 12:37

Batch Information

Analytical Batch: VFC12078
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/31/14 12:37
Container ID: 1144102005-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW33**

Client Sample ID: **17314-211-MW33**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102006
Lab Project ID: 1144102

Collection Date: 08/26/14 13:00
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.311	U	0.622	0.187	mg/L	1		08/29/14 04:57
Surrogates								
5a Androstane	84		50-150		%	1		08/29/14 04:57

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 04:57
Container ID: 1144102006-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 965 mL
Prep Extract Vol: 1 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW33**

Client Sample ID: **17314-211-MW33**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102006
Lab Project ID: 1144102

Collection Date: 08/26/14 13:00
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0431	J	0.100	0.0310	mg/L	1		08/30/14 05:06
Surrogates								
4-Bromofluorobenzene	99.9		50-150		%	1		08/30/14 05:06

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 05:06
Container ID: 1144102006-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 05:06
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:06
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:06
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 05:06
Toluene	0.310	J	1.00	0.310	ug/L	1		08/30/14 05:06
Surrogates								
1,4-Difluorobenzene	96.1		77-115		%	1		08/30/14 05:06

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 05:06
Container ID: 1144102006-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW34**

Client Sample ID: **17314-211-MW34**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102007
Lab Project ID: 1144102

Collection Date: 08/26/14 13:25
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		08/29/14 05:07
Surrogates								
5a Androstane	85.8		50-150		%	1		08/29/14 05:07

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 05:07
Container ID: 1144102007-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW34**

Client Sample ID: **17314-211-MW34**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102007
Lab Project ID: 1144102

Collection Date: 08/26/14 13:25
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0441	J	0.100	0.0310	mg/L	1		08/30/14 05:25
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		08/30/14 05:25

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 05:25
Container ID: 1144102007-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 05:25
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:25
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:25
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 05:25
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:25
Surrogates								
1,4-Difluorobenzene	97.2		77-115		%	1		08/30/14 05:25

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 05:25
Container ID: 1144102007-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17314-211-MW35**

Client Sample ID: **17314-211-MW35**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102008
Lab Project ID: 1144102

Collection Date: 08/25/14 16:45
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		08/29/14 05:16
Surrogates								
5a Androstane	84.1		50-150		%	1		08/29/14 05:16

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 05:16
Container ID: 1144102008-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW35**

Client Sample ID: **17314-211-MW35**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102008
Lab Project ID: 1144102

Collection Date: 08/25/14 16:45
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0416	J	0.100	0.0310	mg/L	1		08/30/14 05:44
Surrogates								
4-Bromofluorobenzene	101		50-150		%	1		08/30/14 05:44

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 05:44
Container ID: 1144102008-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 05:44
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:44
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:44
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 05:44
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 05:44
Surrogates								
1,4-Difluorobenzene	98.1		77-115		%	1		08/30/14 05:44

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 05:44
Container ID: 1144102008-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW36**

Client Sample ID: **17314-211-MW36**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102009
Lab Project ID: 1144102

Collection Date: 08/25/14 15:30
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.310	U	0.619	0.186	mg/L	1		08/29/14 05:26
Surrogates								
5a Androstane	79.8		50-150		%	1		08/29/14 05:26

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 05:26
Container ID: 1144102009-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 970 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW36**

Client Sample ID: **17314-211-MW36**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102009
Lab Project ID: 1144102

Collection Date: 08/25/14 15:30
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0334	J	0.100	0.0310	mg/L	1		08/30/14 06:03
Surrogates								
4-Bromofluorobenzene	99.9		50-150		%	1		08/30/14 06:03

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 06:03
Container ID: 1144102009-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 06:03
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:03
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:03
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 06:03
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:03
Surrogates								
1,4-Difluorobenzene	96.1		77-115		%	1		08/30/14 06:03

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 06:03
Container ID: 1144102009-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW37**

Client Sample ID: **17314-211-MW37**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102010
Lab Project ID: 1144102

Collection Date: 08/26/14 14:15
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		08/29/14 05:36
Surrogates								
5a Androstane	80.9		50-150		%	1		08/29/14 05:36

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 05:36
Container ID: 1144102010-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW37**

Client Sample ID: **17314-211-MW37**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102010
Lab Project ID: 1144102

Collection Date: 08/26/14 14:15
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/30/14 06:22
Surrogates								
4-Bromofluorobenzene	101		50-150		%	1		08/30/14 06:22

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 06:22
Container ID: 1144102010-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 06:22
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:22
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:22
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 06:22
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:22
Surrogates								
1,4-Difluorobenzene	96.3		77-115		%	1		08/30/14 06:22

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 06:22
Container ID: 1144102010-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW38**

Client Sample ID: **17314-211-MW38**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102011
Lab Project ID: 1144102

Collection Date: 08/26/14 15:05
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		08/29/14 06:05
Surrogates								
5a Androstane	85.4		50-150		%	1		08/29/14 06:05

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 06:05
Container ID: 1144102011-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW38**

Client Sample ID: **17314-211-MW38**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102011
Lab Project ID: 1144102

Collection Date: 08/26/14 15:05
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/30/14 06:41
Surrogates								
4-Bromofluorobenzene	109		50-150		%	1		08/30/14 06:41

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 06:41
Container ID: 1144102011-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 06:41
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:41
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:41
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 06:41
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:41
Surrogates								
1,4-Difluorobenzene	97.1		77-115		%	1		08/30/14 06:41

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 06:41
Container ID: 1144102011-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-MW39**

Client Sample ID: **17314-211-MW39**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102012
Lab Project ID: 1144102

Collection Date: 08/26/14 10:25
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.328	U	0.656	0.197	mg/L	1		08/29/14 06:15
Surrogates								
5a Androstane	75.4		50-150		%	1		08/29/14 06:15

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 06:15
Container ID: 1144102012-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 915 mL
Prep Extract Vol: 1 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW39**

Client Sample ID: **17314-211-MW39**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102012
Lab Project ID: 1144102

Collection Date: 08/26/14 10:25
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/30/14 06:59
Surrogates								
4-Bromofluorobenzene	102		50-150		%	1		08/30/14 06:59

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 06:59
Container ID: 1144102012-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 06:59
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:59
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:59
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 06:59
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 06:59
Surrogates								
1,4-Difluorobenzene	95.2		77-115		%	1		08/30/14 06:59

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 06:59
Container ID: 1144102012-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/08/2014 4:05:26PM

Results of **17314-211-MW40**

Client Sample ID: **17314-211-MW40**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102013
Lab Project ID: 1144102

Collection Date: 08/26/14 10:55
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.313	U	0.625	0.188	mg/L	1		08/29/14 06:25
Surrogates								
5a Androstane	85		50-150		%	1		08/29/14 06:25

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 06:25
Container ID: 1144102013-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 960 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW40**

Client Sample ID: **17314-211-MW40**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102013
Lab Project ID: 1144102

Collection Date: 08/26/14 10:55
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/30/14 07:18
Surrogates								
4-Bromofluorobenzene	101		50-150		%	1		08/30/14 07:18

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 07:18
Container ID: 1144102013-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	4.01		0.500	0.150	ug/L	1		08/30/14 07:18
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:18
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:18
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 07:18
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:18
Surrogates								
1,4-Difluorobenzene	97.3		77-115		%	1		08/30/14 07:18

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 07:18
Container ID: 1144102013-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17314-211-MW41**

Client Sample ID: **17314-211-MW41**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102014
Lab Project ID: 1144102

Collection Date: 08/26/14 11:35
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.316	U	0.632	0.189	mg/L	1		08/29/14 06:35
Surrogates								
5a Androstane	83		50-150		%	1		08/29/14 06:35

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 08/29/14 06:35
Container ID: 1144102014-D

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 08/28/14 09:10
Prep Initial Wt./Vol.: 950 mL
Prep Extract Vol: 1 mL

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Results of **17314-211-MW41**

Client Sample ID: **17314-211-MW41**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102014
Lab Project ID: 1144102

Collection Date: 08/26/14 11:35
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/30/14 07:37
Surrogates								
4-Bromofluorobenzene	101		50-150		%	1		08/30/14 07:37

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/30/14 07:37
Container ID: 1144102014-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/30/14 07:37
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:37
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:37
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/30/14 07:37
Toluene	0.500	U	1.00	0.310	ug/L	1		08/30/14 07:37
Surrogates								
1,4-Difluorobenzene	94.9		77-115		%	1		08/30/14 07:37

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/30/14 07:37
Container ID: 1144102014-A

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 08/29/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Results of **17314-211-DW2014**

Client Sample ID: **17314-211-DW2014**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102015
Lab Project ID: 1144102

Collection Date: 08/22/14 10:35
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.300	U	0.600	0.180	mg/L	1		09/06/14 02:27
Surrogates								
5a Androstane	86.3		50-150		%	1		09/06/14 02:27

Batch Information

Analytical Batch: XFC11550
Analytical Method: AK102
Analyst: AYC
Analytical Date/Time: 09/06/14 02:27
Container ID: 1144102015-D

Prep Batch: XXX31867
Prep Method: SW3520C
Prep Date/Time: 08/30/14 09:20
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Residual Range Organics	0.250	U	0.500	0.150	mg/L	1		09/06/14 02:27
Surrogates								
n-Triacontane-d62	87.8		50-150		%	1		09/06/14 02:27

Batch Information

Analytical Batch: XFC11550
Analytical Method: AK103
Analyst: AYC
Analytical Date/Time: 09/06/14 02:27
Container ID: 1144102015-D

Prep Batch: XXX31867
Prep Method: SW3520C
Prep Date/Time: 08/30/14 09:20
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Results of **17314-211-DW2014**

Client Sample ID: **17314-211-DW2014**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102015
Lab Project ID: 1144102

Collection Date: 08/22/14 10:35
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/31/14 12:56
Surrogates								
4-Bromofluorobenzene	98.2		50-150		%	1		08/31/14 12:56

Batch Information

Analytical Batch: VFC12078
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/31/14 12:56
Container ID: 1144102015-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/31/14 12:56
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:56
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:56
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/31/14 12:56
Toluene	0.500	U	1.00	0.310	ug/L	1		08/31/14 12:56
Surrogates								
1,4-Difluorobenzene	97.7		77-115		%	1		08/31/14 12:56

Batch Information

Analytical Batch: VFC12078
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/31/14 12:56
Container ID: 1144102015-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **17314-211-WTB**

Client Sample ID: **17314-211-WTB**
Client Project ID: **32-1-17314-211 WES 5021**
Lab Sample ID: 1144102016
Lab Project ID: 1144102

Collection Date: 08/22/14 09:00
Received Date: 08/27/14 09:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		08/31/14 13:14
Surrogates								
4-Bromofluorobenzene	100		50-150		%	1		08/31/14 13:14

Batch Information

Analytical Batch: VFC12078
Analytical Method: AK101
Analyst: ST
Analytical Date/Time: 08/31/14 13:14
Container ID: 1144102016-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Benzene	0.250	U	0.500	0.150	ug/L	1		08/31/14 13:14
Ethylbenzene	0.500	U	1.00	0.310	ug/L	1		08/31/14 13:14
o-Xylene	0.500	U	1.00	0.310	ug/L	1		08/31/14 13:14
P & M -Xylene	1.00	U	2.00	0.620	ug/L	1		08/31/14 13:14
Toluene	0.500	U	1.00	0.310	ug/L	1		08/31/14 13:14
Surrogates								
1,4-Difluorobenzene	98.5		77-115		%	1		08/31/14 13:14

Batch Information

Analytical Batch: VFC12078
Analytical Method: SW8021B
Analyst: ST
Analytical Date/Time: 08/31/14 13:14
Container ID: 1144102016-B

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 08/31/14 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1629462 [VXX/26358]
Blank Lab ID: 1230682

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102002, 1144102003, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0452J	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	97.9	50-150		%

Batch Information

Analytical Batch: VFC12076
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 8/30/2014 1:57:00AM

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 8/29/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [VXX26358]
Blank Spike Lab ID: 1230685
Date Analyzed: 08/29/2014 22:12

Spike Duplicate ID: LCSD for HBN 1144102 [VXX26358]
Spike Duplicate Lab ID: 1230686
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102002, 1144102003, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	1.03	103	1.00	1.02	102	(60-120)	1.30	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		109	0.0500		101	(50-150)	7.20	

Batch Information

Analytical Batch: **VFC12076**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX26358**
Prep Method: **SW5030B**
Prep Date/Time: **08/29/2014 08:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dup Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1629462 [VXX/26358]
Blank Lab ID: 1230682

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102002, 1144102003, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **SW8021B**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.280J	0.500	0.150	ug/L
Ethylbenzene	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
Toluene	0.700J	1.00	0.310	ug/L
Surrogates				
1,4-Difluorobenzene	93.2	77-115		%

Batch Information

Analytical Batch: VFC12076
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 8/30/2014 1:57:00AM

Prep Batch: VXX26358
Prep Method: SW5030B
Prep Date/Time: 8/29/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [VXX26358]
Blank Spike Lab ID: 1230683
Date Analyzed: 08/29/2014 21:53

Spike Duplicate ID: LCSD for HBN 1144102 [VXX26358]
Spike Duplicate Lab ID: 1230684
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102002, 1144102003, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **SW8021B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	100	99.2	99	100	95.9	96	(80-120)	3.40	(< 20)
Ethylbenzene	100	102	102	100	100	100	(75-125)	1.70	(< 20)
o-Xylene	100	102	102	100	98.7	99	(80-120)	2.90	(< 20)
P & M -Xylene	200	203	102	200	198	99	(75-130)	2.70	(< 20)
Toluene	100	108	108	100	101	101	(75-120)	6.00	(< 20)
Surrogates									
1,4-Difluorobenzene	50		104	50		105	(77-115)	1.30	

Batch Information

Analytical Batch: **VFC12076**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX26358**
Prep Method: **SW5030B**
Prep Date/Time: **08/29/2014 08:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dup Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1630262 [VXX/26366]
Blank Lab ID: 1230767

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102004, 1144102005, 1144102015, 1144102016

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene	99.1	50-150		%

Batch Information

Analytical Batch: VFC12078
Analytical Method: AK101
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 8/31/2014 10:57:00AM

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 8/31/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [VXX26366]
Blank Spike Lab ID: 1230770
Date Analyzed: 08/31/2014 11:59

Spike Duplicate ID: LCSD for HBN 1144102 [VXX26366]
Spike Duplicate Lab ID: 1230771
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102004, 1144102005, 1144102015, 1144102016

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.981	98	1.00	0.948	95	(60-120)	3.50	(< 20)
Surrogates									
4-Bromofluorobenzene	0.0500		105	0.0500		102	(50-150)	2.80	

Batch Information

Analytical Batch: **VFC12078**
Analytical Method: **AK101**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX26366**
Prep Method: **SW5030B**
Prep Date/Time: **08/31/2014 08:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dup Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1630262 [VXX/26366]
Blank Lab ID: 1230767

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102004, 1144102005, 1144102015, 1144102016

Results by **SW8021B**

Parameter	Results	LOQ/CL	DL	Units
Benzene	0.250U	0.500	0.150	ug/L
Ethylbenzene	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
Toluene	0.500U	1.00	0.310	ug/L
Surrogates				
1,4-Difluorobenzene	95	77-115		%

Batch Information

Analytical Batch: VFC12078
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ST
Analytical Date/Time: 8/31/2014 10:57:00AM

Prep Batch: VXX26366
Prep Method: SW5030B
Prep Date/Time: 8/31/2014 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [VXX26366]
Blank Spike Lab ID: 1230768
Date Analyzed: 08/31/2014 11:40

Spike Duplicate ID: LCSD for HBN 1144102 [VXX26366]
Spike Duplicate Lab ID: 1230769
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102004, 1144102005, 1144102015, 1144102016

Results by **SW8021B**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Benzene	100	97.5	98	100	101	101	(80-120)	3.60	(< 20)
Ethylbenzene	100	102	102	100	106	106	(75-125)	3.90	(< 20)
o-Xylene	100	99.1	99	100	104	104	(80-120)	4.80	(< 20)
P & M -Xylene	200	200	100	200	208	104	(75-130)	4.10	(< 20)
Toluene	100	102	102	100	106	106	(75-120)	3.90	(< 20)
Surrogates									
1,4-Difluorobenzene	50		105	50		110	(77-115)	4.00	

Batch Information

Analytical Batch: **VFC12078**
Analytical Method: **SW8021B**
Instrument: **Agilent 7890A PID/FID**
Analyst: **ST**

Prep Batch: **VXX26366**
Prep Method: **SW5030B**
Prep Date/Time: **08/31/2014 08:00**
Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
Dup Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1626663 [XXX/31842]
Blank Lab ID: 1230091

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102002, 1144102004, 1144102005, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane	89.1	60-120		%

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: AYC
Analytical Date/Time: 8/29/2014 3:19:00AM

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 8/28/2014 9:10:44AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [XXX31842]
Blank Spike Lab ID: 1230092
Date Analyzed: 08/29/2014 03:29

Spike Duplicate ID: LCSD for HBN 1144102 [XXX31842]
Spike Duplicate Lab ID: 1230093
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102002, 1144102004, 1144102005, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	5	4.26	85	5	4.37	87	(75-125)	2.50	(< 20)
Surrogates									
5a Androstane	0.1		110	0.1		108	(60-120)	1.30	

Batch Information

Analytical Batch: **XFC11538**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **AYC**

Prep Batch: **XXX31842**
Prep Method: **SW3520C**
Prep Date/Time: **08/28/2014 09:10**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dup Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1626663 [XXX/31842]
Blank Lab ID: 1230091

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102001, 1144102002, 1144102004, 1144102005, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
5a Androstane	89.1	60-120		%
n-Triacontane-d62	104	60-120		%

Batch Information

Analytical Batch: XFC11538
Analytical Method: AK103
Instrument: HP 6890 Series II FID SV D R
Analyst: AYC
Analytical Date/Time: 8/29/2014 3:19:00AM

Prep Batch: XXX31842
Prep Method: SW3520C
Prep Date/Time: 8/28/2014 9:10:44AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [XXX31842]
Blank Spike Lab ID: 1230092
Date Analyzed: 08/29/2014 03:29

Spike Duplicate ID: LCSD for HBN 1144102 [XXX31842]
Spike Duplicate Lab ID: 1230093
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102001, 1144102002, 1144102004, 1144102005, 1144102006, 1144102007, 1144102008, 1144102009, 1144102010, 1144102011, 1144102012, 1144102013, 1144102014

Results by **AK103**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	5	4.26	85	5	4.37	87	(75-125)	2.50	(< 20)
Residual Range Organics	5	5.56	111	5	5.66	113	(60-120)	1.80	(< 20)
Surrogates									
5a Androstane	0.1		110	0.1		108	(60-120)	1.30	
n-Triacontane-d62	0.1		116	0.1		113	(60-120)	2.70	

Batch Information

Analytical Batch: **XFC11538**
Analytical Method: **AK103**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **AYC**

Prep Batch: **XXX31842**
Prep Method: **SW3520C**
Prep Date/Time: **08/28/2014 09:10**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dup Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

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Method Blank

Blank ID: MB for HBN 1629261 [XXX/31867]
Blank Lab ID: 1230666

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102015

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane	101	60-120		%

Batch Information

Analytical Batch: XFC11550
Analytical Method: AK102
Instrument: HP 6890 Series II FID SV D R
Analyst: AYC
Analytical Date/Time: 9/6/2014 12:10:00AM

Prep Batch: XXX31867
Prep Method: SW3520C
Prep Date/Time: 8/30/2014 9:20:44AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

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t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [XXX31867]
Blank Spike Lab ID: 1230667
Date Analyzed: 09/06/2014 00:20

Spike Duplicate ID: LCSD for HBN 1144102 [XXX31867]
Spike Duplicate Lab ID: 1230668
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102015

Results by **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	5	4.56	91	5	4.41	88	(75-125)	3.40	(< 20)
Surrogates									
5a Androstane	0.1		109	0.1		106	(60-120)	2.50	

Batch Information

Analytical Batch: **XFC11550**
Analytical Method: **AK102**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **AYC**

Prep Batch: **XXX31867**
Prep Method: **SW3520C**
Prep Date/Time: **08/30/2014 09:20**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dup Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Method Blank

Blank ID: MB for HBN 1629261 [XXX/31867]
Blank Lab ID: 1230666

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1144102015

Results by **AK103**

Parameter	Results	LOQ/CL	DL	Units
Residual Range Organics	0.250U	0.500	0.150	mg/L
Surrogates				
n-Triacontane-d62	102	60-120		%

Batch Information

Analytical Batch: XFC11550
Analytical Method: AK103
Instrument: HP 6890 Series II FID SV D R
Analyst: AYC
Analytical Date/Time: 9/6/2014 12:10:00AM

Prep Batch: XXX31867
Prep Method: SW3520C
Prep Date/Time: 8/30/2014 9:20:44AM
Prep Initial Wt./Vol.: 1000 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1144102 [XXX31867]
Blank Spike Lab ID: 1230667
Date Analyzed: 09/06/2014 00:20

Spike Duplicate ID: LCSD for HBN 1144102 [XXX31867]
Spike Duplicate Lab ID: 1230668
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1144102015

Results by **AK103**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Residual Range Organics	5	5.22	104	5	5.00	100	(60-120)	4.50	(< 20)
Surrogates									
n-Triacontane-d62	0.1		103	0.1		97	(60-120)	5.70	

Batch Information

Analytical Batch: **XFC11550**
Analytical Method: **AK103**
Instrument: **HP 6890 Series II FID SV D R**
Analyst: **AYC**

Prep Batch: **XXX31867**
Prep Method: **SW3520C**
Prep Date/Time: **08/30/2014 09:20**
Spike Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL
Dup Init Wt./Vol.: 5 mg/L Extract Vol: 1 mL

Print Date: 09/08/2014 4:05:36PM

1144102

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Teri

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

2355 Hill Road
Fairbanks, AK 99709
(907) 479-0600

2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

2043 Westport Center Drive
St. Louis, MO 63146-3564
(314) 699-9660

5430 Fairbanks Street, Suite 3
Anchorage, AK 99518
(907) 561-2120

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

303 Wellsian Way
Richland, WA 99352
(509) 946-6309

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO AK101	BTEX EPA 8021B	DRO AK 102	RRO AK 103			Total Number of Containers	Remarks/Matrix
17314-211-MW9	① A-E	1115	8/26/14		X	X	X		X			5	water
17314-211-MW10	② A-E	1205					X		X			5	
-MW25	③ A-C	935					X					3	
-MW31	④ A-E	1545				X	X	X				5	
-MW32	⑤ A-E	1630				X	X	X				5	
-MW33	⑥ A-E	1300				X	X	X				5	
-MW34	⑦ A-E	1325				X	X	X				5	
-MW35	⑧ A-E	1645	8/25/14			X	X	X				5	
-MW36	⑨ A-E	1530	8/25/14			X	X	X				5	
-MW37	⑩ A-E	1415	8/26/14			X	X	X				5	

Project Information		Sample Receipt	
Project Number:	32-1-17314-211	Total Number of Containers	
Project Name:	WES 5021	COC Seals/Intact? Y/N/NA	
Contact:	Dan McMahon	Received Good Cond./Cold	
Ongoing Project?	Yes ☐ No ☒	Delivery Method:	
Sampler:	EJK / JHT	(attach shipping bill, if any)	

Instructions	
Requested Turnaround Time:	standard
Special Instructions:	Level IV deliverables Invoice Holiday

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Erika J Knight Time: 933	Signature: Time:	Signature: Time:
Printed Name: Erika Knight Date: 8/27/14	Printed Name: Date:	Printed Name: Date:
Company: Shannon & Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Time: 9:33
Printed Name: Date:	Printed Name: Date:	Printed Name: Teri Draeger Date: 8/27/14
Company:	Company:	Company: SGS

F-19-91/UR

1.6 #71
5.4 #71
5.7 #71

No. 30401

1144102

SHANNON & WILSON, INC.
Geotechnical and Environmental Consultants

CHAIN-OF-CUSTODY RECORD

Laboratory SGS
Attn: Teri

400 N. 34th Street, Suite 100
Seattle, WA 98103
(206) 632-8020

2043 Westport Center Drive
St. Louis, MO 63146-3564
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(907) 561-2120

2255 S.W. Canyon Road
Portland, OR 97201-2498
(503) 223-6147

1200 17th Street, Suite 1024
Denver, Co 80202
(303) 825-3800

Analysis Parameters/Sample Container Description
(include preservative if used)

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	GRO AK 101	BTEX EPA 8021B	DRO AK 102	RRO AK 103			Total Number of Containers	Remarks/Matrix
17314-211-MW38	(11) A-E	1505	8/26/14			X	X	X				5	water
-MW39	(12) A-E	1025	"			X	X	X				5	"
-MW40	(13) A-E	1055	"			X	X	X				5	"
-MW41	(14) A-E	1135	"			X	X	X				5	"
-DW2014	(15) A-E	1035	8/22/14			X	X	X	X			5	"
-WTB	(16) ~~A-E~~ A-C	900	8/22/14			X	X						trip blank

Project Information		Sample Receipt	
Project Number:	32-1-17314-211	Total Number of Containers	
Project Name:	WES 5021	COC Seals/Intact? Y/N/NA	
Contact:	Dan McMahon	Received Good Cond./Cold	
Ongoing Project?	Yes ☐ No ☒	Delivery Method:	
Sampler:	EJK/JHT	(attach shipping bill, if any)	

Instructions
Requested Turnaround Time:
Special Instructions:

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: Erika Knight Time: 933	Signature: Time:	Signature: Time:
Printed Name: Erika Knight Date: 8/27/14	Printed Name: Date:	Printed Name: Date:
Company: Shannon + Wilson	Company:	Company:

Received By: 1.	Received By: 2.	Received By: 3.
Signature: Time:	Signature: Time:	Signature: Terri Draeger Time: 9:33
Printed Name: Date:	Printed Name: Date:	Printed Name: Terri Draeger Date: 8/27/14
Company:	Company:	Company: SGS

Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report
Yellow - w/shipment - for consignee files
Pink - Shannon & Wilson - Job File

F-19-91/UR

trip blank in cooler w/ VOAs

No. 30402

SGS

1144102

SAMPLE RECEIPT FORM

Review Criteria:	Condition:	Comments/Action Taken:
Were **custody seals** intact? Note # & location, if applicable. COC accompanied samples?	Yes No (N/A) (Yes) No	☐ *Exemption permitted if sampler hand carries/delivers.*
Temperature blank compliant* (i.e., 0-6°C after CF)? *If >6°C, were samples collected <8 hours ago?* *If <0°C, were all sample containers ice free?* Cooler ID: 1 @ 1.6 w/ Therm.ID: 71 Cooler ID: 2 @ 5.4 w/ Therm.ID: 71 Cooler ID: 3 @ 5.7 w/ Therm.ID: 71 Cooler ID: _____ @ _____ w/ Therm.ID: _____ Cooler ID: _____ @ _____ w/ Therm.ID: _____ If samples are received without a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "**COOLER TEMP**" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled."	(Yes) No Yes No (N/A) Yes No (N/A)	☐ *Exemption permitted if chilled & collected <8 hrs ago.* *Note: Identify containers received at non-compliant temperature. Use form FS-0029 if more space is needed.*
Delivery method (specify all that apply): (Client (hand carried) USPS Lynden AK Air Alert Courier UPS FedEx RAVN C&D Delivery Carlile Pen Air Warp Speed Other: _____ → *For WO# with airbills, was the WO# & airbill info recorded in the Front Counter eLog?*	Tracking/AB # or see attached or (N/A) Yes No (N/A)	
→ For samples received with payment, note amount ($) and whether cash / check / CC (**circle one**) was received.		
→ For samples **received in FBKS**, ANCH staff will verify all criteria are reviewed. SRF initiated in FBKS by:		
Were samples received within hold time? Do samples **match COC*** (i.e., sample IDs, dates/times collected)? Were analyses requested unambiguous?	(Yes) No N/A (Yes) No N/A (Yes) No N/A	*Note: Refer to form F-083 "Sample Guide" for hold times.* *Note: If times differ <1hr, record details and login per COC.*
Were samples in **good condition** (no leaks/cracks/breakage)? Packing material used (specify all that apply): Bubble Wrap Separate plastic bags Vermiculite Other:	(Yes) No	
Were **proper containers** (type/mass/volume/preservative*) used? Were **Trip Blanks** (i.e., VOAs, LL-Hg) in cooler with samples? Were all VOA vials **free of headspace** (i.e., bubbles ≤6 mm)? Were all soil VOAs **field extracted** with MeOH+BFB?	(Yes) No N/A (Yes) No N/A Yes (No) N/A Yes No (N/A)	☐ *Exemption permitted for metals (e.g., 200.8/6020A).* (15)C has Bubble.
For preserved waters (other than VOA vials, LL-Mercury or microbiological analyses), was **pH verified and compliant**? If pH was adjusted, were bottles flagged (i.e., stickers)?	(Yes) No N/A Yes No (N/A)	
For **special handling** (e.g., "MI" soils, foreign soils, lab filter for dissolved…, lab extract for volatiles, Ref Lab, limited volume), were bottles/paperwork flagged (e.g., sticker)?	Yes No (N/A)	
For **RUSH/SHORT Hold Time**, were COC/Bottles flagged accordingly? Was Rush/Short HT email sent, if applicable?	Yes No (N/A)	
For **SITE-SPECIFIC QC, e.g. BMS/BMSD/BDUP**, were containers / paperwork flagged accordingly?	Yes No (N/A)	
For any question answered "No," has the PM been notified and the problem resolved (or paperwork put in their bin)?	Yes No (N/A)	SRF Completed by: TKD PM notified: N/A
Was **PEER REVIEW** of ***sample numbering/labeling completed?***	Yes No (N/A)	Peer Reviewed by: N/A
Additional notes (if applicable):		

Note to Client: *Any "no" circled above indicates non-compliance with standard procedures and may impact data quality.*

Sample Containers and Preservatives

Container Id	Preservative	Container Condition
1144102001-A	HCL to pH < 2	OK
1144102001-B	HCL to pH < 2	OK
1144102001-C	HCL to pH < 2	OK
1144102001-D	HCL to pH < 2	OK
1144102001-E	HCL to pH < 2	OK
1144102002-A	HCL to pH < 2	OK
1144102002-B	HCL to pH < 2	OK
1144102002-C	HCL to pH < 2	OK
1144102002-D	HCL to pH < 2	OK
1144102002-E	HCL to pH < 2	OK
1144102003-A	HCL to pH < 2	OK
1144102003-B	HCL to pH < 2	OK
1144102003-C	HCL to pH < 2	OK
1144102004-A	HCL to pH < 2	OK
1144102004-B	HCL to pH < 2	OK
1144102004-C	HCL to pH < 2	OK
1144102004-D	HCL to pH < 2	OK
1144102004-E	HCL to pH < 2	OK
1144102005-A	HCL to pH < 2	OK
1144102005-B	HCL to pH < 2	OK
1144102005-C	HCL to pH < 2	OK
1144102005-D	HCL to pH < 2	OK
1144102005-E	HCL to pH < 2	OK
1144102006-A	HCL to pH < 2	OK
1144102006-B	HCL to pH < 2	OK
1144102006-C	HCL to pH < 2	OK
1144102006-D	HCL to pH < 2	OK
1144102006-E	HCL to pH < 2	OK
1144102007-A	HCL to pH < 2	OK
1144102007-B	HCL to pH < 2	OK
1144102007-C	HCL to pH < 2	OK
1144102007-D	HCL to pH < 2	OK
1144102007-E	HCL to pH < 2	OK
1144102008-A	HCL to pH < 2	OK
1144102008-B	HCL to pH < 2	OK
1144102008-C	HCL to pH < 2	OK
1144102008-D	HCL to pH < 2	OK
1144102008-E	HCL to pH < 2	OK
1144102009-A	HCL to pH < 2	OK
1144102009-B	HCL to pH < 2	OK
1144102009-C	HCL to pH < 2	OK
1144102009-D	HCL to pH < 2	OK
1144102009-E	HCL to pH < 2	OK
1144102010-A	HCL to pH < 2	OK
1144102010-B	HCL to pH < 2	OK
1144102010-C	HCL to pH < 2	OK
1144102010-D	HCL to pH < 2	OK
1144102010-E	HCL to pH < 2	OK
1144102011-A	HCL to pH < 2	OK
1144102011-B	HCL to pH < 2	OK
1144102011-C	HCL to pH < 2	OK
1144102011-D	HCL to pH < 2	OK
1144102011-E	HCL to pH < 2	OK
1144102012-A	HCL to pH < 2	OK
1144102012-B	HCL to pH < 2	OK
1144102012-C	HCL to pH < 2	OK
1144102012-D	HCL to pH < 2	OK
1144102012-E	HCL to pH < 2	OK
1144102013-A	HCL to pH < 2	OK
1144102013-B	HCL to pH < 2	OK
1144102013-C	HCL to pH < 2	OK
1144102013-D	HCL to pH < 2	OK
1144102013-E	HCL to pH < 2	OK
1144102014-A	HCL to pH < 2	OK
1144102014-B	HCL to pH < 2	OK
1144102014-C	HCL to pH < 2	OK
1144102014-D	HCL to pH < 2	OK
1144102014-E	HCL to pH < 2	OK
1144102015-A	HCL to pH < 2	OK
1144102015-B	HCL to pH < 2	OK
1144102015-C	HCL to pH < 2	BU
1144102015-D	HCL to pH < 2	OK
1144102015-E	HCL to pH < 2	OK
1144102016-A	HCL to pH < 2	OK
1144102016-B	HCL to pH < 2	OK
1144102016-C	HCL to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

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

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.

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

LABORATORY DATA REVIEW CHECKLIST

CS Report Name: 6010 Old Seward Highway, Anchorage, Alaska **Date:** February 2015

Laboratory Report Date: September 9, 2014

Consultant Firm: Shannon & Wilson, Inc.

Completed by: Erika Knight
Title: Environmental Scientist
Laboratory Name: SGS North America Inc.
Work Order Number: 1144102
ADEC File Number: 2100.26.030

(**NOTE**: ***NA*** = not applicable; Text in *italics* added by Shannon & Wilson, Inc.)

1. Laboratory

a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes / No / NA (Please explain.)**
Comments:

b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS-approved?
Yes / No / NA
Comments: *The samples were not transferred to another "network" laboratory or sub-contracted to an alternate laboratory.*

2. Chain of Custody (COC)

a. COC information completed, signed, and dated (including released/received by)?
Yes / No / NA (Please explain.)
Comments**:**

b. Correct analyses requested? **Yes / No / *NA* (Please explain.)**
Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
Yes / No / NA (Please explain.)
Comments: *The temperature of one of the three coolers submitted to the laboratory was outside range. The cooler temperatures were 1.6°C, 5.4°C, and 5.7°C.*

b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes / No / NA (Please explain.)**
Comments: *No problems noted.*

c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes / No / NA (Please explain.)**
Comments: *The laboratory noted that one VOA vial for Sample DW2014 contained bubbles.*

d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **Yes / No / NA (Please explain.)**
Comments: *The temperature of one cooler was outside range.*

e. Data quality or usability affected? **NA (Please Explain.)**
Comments:

- *The remaining VOA vials for Sample DW2014 did not contain bubbles and the analysis was completed using these headspace-free vials; therefore, data quality/usability is unaffected.*
- *Although the temperature blank was outside of QC range, it is our opinion that data quality/usability is not affected by this slight temperature difference.*

4. Case Narrative

a. Present and understandable? **Yes / No / NA (Please explain.)**
Comments:

b. Discrepancies, errors or QC failures noted by the lab? **Yes / No / NA (Please explain.)**
Comments: *No discrepancies, errors or QC failures were noted by the lab.*

c. Were corrective actions documented? **Yes / No / NA (Please explain.)**
Comments:

d. What is the effect on data quality/usability, according to the case narrative?
Comments: *No discrepancies, errors or QC failures were noted by the lab.*

5. Sample Results

a. Correct analyses performed/reported as requested on COC? **Yes / No / NA (Please explain.)**
Comments:

b. All applicable holding times met? **Yes / No / NA (Please explain.)**
Comments:

c. All soils reported on a dry-weight basis? **Yes / No / NA (Please explain.)**
Comments: *Soil samples were not analyzed as part of this report.*

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes / No / NA (Please explain.)**
Comments*:*

e. Data quality or usability affected? **(Please explain.) NA**
Comments:

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis, and 20 samples?
Yes / No / NA (Please explain.)
Comments:

ii. All method blank results less than LOQ? **Yes / No / NA (Please explain.)**
Comments: *Although less than the LOQ, estimated (J-flagged) concentrations of GRO (0.0452 mg/kg), benzene (0.280 mg/kg), and toluene (0.700 mg/kg) were detected in method blanks.*

iii. If above LOQ, what samples are affected? ***NA***
Comments:

iv. Do the affected sample(s) have data flags? **Yes / No / NA**
Comments: *The samples associated with the method blank detections are flagged "B" and reported as non-detect at the LOQ in Table 2 of the Shannon & Wilson report when the reported sample concentration is less than the LOQ and within 5x the method blank concentration.*

If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

v. Data quality or usability affected? **(Please explain.)** ***NA***
Comments: *Each of the affected sample results are less than the ADEC groundwater cleanup levels; therefore, the affected data are acceptable for the purposes of this report.*

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

i. Organics - One LCS/LCSD reported per matrix, analysis, and 20 samples?
(LCS/LCSD required per AK methods, LCS required per SW846) **Yes / No / *NA***
(Please explain.)
Comments:

ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **Yes / No / NA (Please explain.)**
Comments: *The project samples were not analyzed for metals/inorganics.*

iii. Accuracy – All percent recoveries (%R) reported *and w*ithin method or laboratory limits? And project specified DQOs, if applicable. (AK petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages) **Yes / No / NA (Please explain.)**
Comments:

Precision – All relative percent differences (RPDs) 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 / NA (Please explain.)**
Comments:

iv. If %R or RPD is outside of acceptable limits, what samples are affected? ***NA***
Comments:

v. Do the affected samples(s) have data flags? **Yes / No / NA**
Comments:

If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

vi. Data quality or usability affected? Explain. ***NA***
Comments:

c. Surrogates - Organics Only

i. Are surrogate recoveries reported for organic analyses, field, QC, and laboratory samples? **Yes / No / NA (Please explain.)**
Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages) **Yes / No / NA (Please explain.)**
Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? **Yes / No / NA (Please explain.)**
Comments:

If so, are the data flags clearly defined? **Yes / No / NA**
Comments:

iv. Data quality or usability affected? Explain. ***NA***
Comments:

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

i. One trip blank reported per matrix, analysis and cooler? **Yes / No / NA (Please explain.)**
Comments: *A trip blank was included in the cooler with the groundwater samples submitted for volatile analyses.*

ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the COC? **Yes / No / NA (Please explain if NA or no.)**
Comments:

iii. All results less than LOQ? **Yes / No / NA (Please explain.)**
Comments:

iv. If above LOQ, what samples are affected? **NA**
Comments**:**

v. Data quality or usability affected? Explain. **NA**
Comments:

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?
Yes / No / NA (Please explain.)
Comments: *Duplicate samples are not included as part of this ongoing project.*

ii. Were the field duplicates submitted blind to the lab? **Yes / No / NA (Please explain.)**
Comments:

iii. Precision – All relative percent differences (RPDs) less than specified DQOs? (Recommended: 30% for water, 50% for soil) **Yes / No / NA (Please explain.)**
Comments:

iv. Data quality or usability affected? Explain. ***NA***
Comments:

f. Decontamination or Equipment Blank (if not applicable, a comment stating why must be entered below)
Yes / No / NA (Please explain.) *Equipment blanks are not included as part of this ongoing project.*

i. All results less than LOQ? **Yes / No / NA (Please explain.)**
Comments:

ii. If results are above LOQ, what samples are affected? ***NA***
Comments:

iii. Data quality or usability affected? Explain. ***NA***
Comments:

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

a. Are they defined and appropriate? **Yes / No / NA**
Comments: *Laboratory-specific flags are defined in the Laboratory Qualifiers section on page 3 of the laboratory report.*