

November 21, 2018

Holiday Companies
4567 American Boulevard West
Bloomington, MN 55437

Attn: Ms. Camie Pederson, P.E.

**RE: 2018 GROUNDWATER MONITORING, HOLIDAY STATION STORE NO. 602,
10630 OLD SEWARD HIGHWAY, ANCHORAGE, ALASKA**

ADEC FILE NO. 2100.26.018; FACID NO. 1498

This letter report presents the results of our 2018 annual groundwater monitoring conducted at Holiday Station Store (HSS) No. 602, 10630 Old Seward Highway, Anchorage, Alaska (the Property).

BACKGROUND

HSS 602 is utilized as a fueling station and is located in an industrial/commercial area. The western portion of the property is currently utilized by a third party for equipment storage. An active Alaska Department of Environmental Conservation (ADEC) listed contaminated site (Forsythe Transportation, Inc. at 10570 Old Seward Highway) borders HSS 602 to the north. Further north at 10460 Old Seward Highway is a closed contaminated site identified as Airport Equipment Rentals. HSS 602 is bound by the Old Seward Highway to the east, an undeveloped parcel to the south, and the Alaska Railroad to the west.

Three underground storage tanks (USTs) and associated dispensers were removed from the site in June 1989. The current facility was constructed during 1997, and uses three USTs with volumes between 10,000 and 20,000 gallons to store unleaded gasoline and diesel fuel. At that time, a combined vapor extraction system (VES) and air injection system (AIS) was installed at the site. The primary remedial objective of the VES and AIS was to inhibit off-Property migration of impacted groundwater, with a secondary objective of treating impacted soil in the source areas. As documented in our December 30, 2016 *Remediation System Decommissioning, Holiday Station Store No. 602, 10630 Old Seward Highway, Anchorage, Alaska* report, the VES and AIS remediation systems were decommissioned in 2016.

As documented in our November 20, 2017 *Monitoring Well Installation, Decommissioning, and Repair Activities, Holiday Station Store No. 602, 10630 Old Seward Highway, Anchorage,*

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Alaska report, Monitoring Well MW-35 was installed downgradient of Well MW-32, on the Airport Equipment Rentals, Inc. property in September 2017. In addition, Monitoring Well MW-16 was decommissioned and Well MW-22 was repaired. Locations of the site's groundwater monitoring wells are shown on Figure 1.

GROUNDWATER MONITORING

Groundwater sampling is conducted on an annual basis to evaluate the plume boundaries and trends in dissolved-phase hydrocarbon contamination throughout the site and adjacent properties to the north.

Sampling Event Summary

Groundwater samples were collected from 13 monitoring wells between September 17 and 19, 2018. Groundwater samples were not collected from Monitoring Well MW-20, MW-22, MW-26, and MW-30. Although an attempt to repair Monitoring Well MW-22 was conducted in September 2017, bentonite was documented in the well casing, preventing sampling. Monitoring Wells MW-20 and MW-26 could not be located. Monitoring Well MW-26 was last sampled in 2013 and is assumed to be destroyed. Prior to the 2018 sampling event, approximately 6 inches of compacted gravel was placed above MW-20 and the area was re-graded. As a result, it appears that Monitoring Well MW-20 was destroyed. The monument and well plug were missing from Monitoring Well MW-30, and the well was filled with sediment.

The groundwater wells were purged prior to sample collection. With the exception of Wells MW-32, MW-33, MW-34, and MW-35, purging consisted of removing approximately three well volumes from each well with disposable bailers. A submersible pump was used to purge Wells MW-32, MW-33, MW-34, and MW-35 because the well screens are intentionally set below the water table to target specific depth intervals. The pump was placed near the midpoint of the well screens during purging and sampling. At each well, field parameters including temperature, specific conductivity, pH, dissolved oxygen, and turbidity were measured following removal of three well volumes. Field measurements of water quality parameters for the September 2018 groundwater samples are listed in Table 1.

The purge water from wells which historically contained contaminant concentrations less than the applicable cleanup levels (MW-31B, MW-33, and MW-35) was discharged to unpaved portions of the property, as approved by Mr. O'Connell in an August 19, 2013 email. Purge water from wells which historically contained contaminant concentrations in excess of the

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applicable ADEC cleanup levels (Wells MW-14, MW-15, MW-17, MW-21, MW-23, MW-27, MW-28, MW-29, MW-32, and MW-34) was containerized in a 55-gallon drum and temporarily stored onsite.

Groundwater Flow Data

The September 2018 groundwater depths ranged from 17.14 (Well MW-18) to 26.97 (Well MW-15) feet below the tops of the well casings. The average September 2018 water level was about 1.0 foot deeper than the average water level of the same wells measured in October 2017. The historical groundwater flow direction is to the northwest in the immediate vicinity of HSS No. 602, with a general regional direction to the west.

Product Observations

Free product (0.02 foot) was observed in Monitoring Well MW-34 during the October 2017 monitoring event. However, free product was not observed in the 2018 sampling event. Although the 2017 free product observation appears to be an isolated encounter in this well, previous the current contaminant concentrations have been greater than the solubility limits, which is indicative of non-aqueous phase liquids (NAPLs) in the groundwater and/or soil.

Investigate-Derived Waste

Investigation derived waste (IDW) generated during the 2018 groundwater monitoring event included one 55-gallon drum of purge water. The purge water generated from the 2016, 2017, and 2018 sampling events were collected by NRC Alaska LLC on October 9, 2018 for disposal/treatment at an off-site facility. The waste manifest is included in Attachment 2.

LABORATORY ANALYSES

The groundwater samples from the September monitoring event were submitted to SGS North America, Inc. (SGS) of Anchorage, Alaska using chain-of-custody procedures. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes BTEX by Environmental Protection Agency (EPA) Method 8021B. The BTEX results for the September 2018 samples are shown on Figure 1, and historical benzene and total BTEX trends for selected wells are presented in Graphs 1 through 16. Historical BTEX data obtained since 2004 are listed in Table 3.

DISCUSSION OF ANALYTICAL RESULTS

Multiple potential source areas are considered in this evaluation. One or more plume(s) originate from on-Property source area(s), including the former and/or active UST and pump island areas. One or more discrete plume(s) also appear to originate at off-Property locations north of HSS No. 602. Wells are screened within three zones which are potentially hydraulically connected. The “shallow” zone consists of thin, discontinuous sand stringers imbedded in silt-rich soil between about 20 and 30 feet below ground surface (bgs); the “intermediate” zone appears to be located between about 35 and 45 feet bgs; and the “deep” zone is located below 45 feet bgs.

The analytical groundwater sample results are used to evaluate source areas, delineate plume boundaries, track changes in hydrocarbon distribution throughout the plume(s), and to evaluate differences between discrete water-bearing intervals. The following general observations are noted from a comparison of the 2018 monitoring data to the historical trends, based on a qualitative interpretation of the data presented on Graphs 1 through 16 and Table 2.

1. The following observations were noted regarding the extents and trends observed in the on-Property plume:
 - Of the three on-Property wells, Well MW-28 has generally contained the greatest benzene and total BTEX concentrations. Well MW-28 is located at the northwest corner (downgradient) of the former pump islands. As shown on Graph 2, benzene and BTEX in samples from Well MW-28 have appeared stable since 2015.
 - Benzene and BTEX concentrations in samples from Well MW-27 have been variable in recent years. The 2018 results are consistent with historical averages.
 - Historically, the lowest benzene and BTEX concentrations in the three on-Property wells have been observed in samples from Well MW-30, which is located approximately 90 feet downgradient (northwest) from source-area Well MW-28. During the 2018 sampling event it was observed that Well MW-30 was damaged. Therefore, it could not be sampled.
2. The following observations were noted regarding the off-Property “shallow” plume:
 - Benzene concentrations in Well MW-14 appear to be on a decreasing trend since 2015. For the for time since the 2014 sampling event, benzene concentrations were less than the ADEC cleanup level. Therefore, MW-14 bounds the benzene plume to the north.

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- During previous sampling events, Well MW-22 has appeared to exhibit results typical of a source area well due to consistently higher BTEX concentration magnitudes relative to other nearby and downgradient wells. Currently, the well cannot be sampled and appears to be broken below ground surface allowing bentonite to enter the well casing.
- Historical results indicate that the “shallow” off-Property plume’s leading edge is in the vicinity of Wells MW-15 and MW-17 and former Well MW-16. Historically, low levels of benzene and total BTEX concentrations have been intermittently detected in Wells MW-15, MW-16, and MW-17. During the 2018 sampling event, benzene and total BTEX were either not detected or were detected at concentrations less than the cleanup levels in Wells MW-15 and MW-17.
- Benzene concentrations in Wells MW-23 and MW-29 have decreased since the previous sampling event. However, results vary in each of these wells historically, but contaminants consistently exceed ADEC cleanup levels.
- BTEX concentrations in Well MW-15 have increased from the previous sampling event and currently exceed the ADEC cleanup level for benzene.

3. The following observations were noted regarding the off-Property “intermediate” plume:

- The greatest BTEX concentration of the on-Property and off-Property wells have been measured consistently in samples from “intermediate” Well MW-31A (which was replaced by Well MW-34 in 2013), which is downgradient of the former Southeast UST array at the First Student Property. Historically Wells MW31A/MW-34 have either contained free product or contaminant concentrations which are indicative of free product.
- Generally, data from Well MW-32 has been stable since 2013. This well appears to represent the leading edge of the “intermediate” plume.
- The sample results from Well MW-35 bound the “intermediate” plume to the northwest.

4. The following observation was noted regarding the “deep” plume:

- Concentrations in each sample from “deep” Well MW-33, located adjacent to MW-16, have been less than the ADEC cleanup level since 2007, and are typically not detected, including in 2018. Based on these results, the well can be considered a sentry well for the deep water bearing formation.

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5. The potentiometric groundwater surface was above the top of the well screen in Wells MW-17, MW-18, MW-29, and MW-32 through MW-35. 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), although this is potentially mitigated by purging three well volumes prior to sampling. For Wells MW-32 through MW-35, this is intentional to target specific water bearing intervals.

QUALITY CONTROL

The project laboratory follows on-going quality assurance/quality control procedures to evaluate conformance to applicable ADEC data quality objectives (DQOs). Internal laboratory controls to assess data quality for this project include surrogates, method blanks, matrix spike/matrix spike duplicates (MS/MSD), and laboratory control sample/laboratory control sample duplicates (LCS/LCSD) to assess precision, accuracy, and matrix bias. If a DQO was not met, the project laboratory provides a brief narrative concerning the problem in the case narrative of their laboratory report (see Attachment 1).

A laboratory-prepared trip blank sample accompanied the project sample bottles from the laboratory to the site during sampling activities and back again to SGS. The trip blank did not contain detectable target analytes.

Shannon & Wilson conducted a limited data assessment to review the laboratory's compliance with precision, accuracy, sensitivity, and completeness to the DQOs. Shannon & Wilson reviewed the SGS data deliverables and completed the ADEC's Laboratory Data Review Checklist, which is included in Attachment 1. Non-conformances that would adversely affect the quality or usability of the data were not noted.

SUMMARY AND RECOMMENDATIONS

The 2018 groundwater sample data continue to indicate elevated dissolved-phase hydrocarbon concentrations in both on-Property and off-Property monitoring wells. Concentration gradients and distribution patterns remain consistent with the presence of discrete on-Property and off-Property source areas. The data also indicate different plume characteristics at discrete depth intervals. The plume in the "shallow" zone has historically been defined, with the leading edge in the approximate vicinity of Well MW-15 and former Well MW-16. The leading edge of the

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plume of the 'intermediate' zone is located in the vicinity of Well MW-32. With the exception of the October 2007 sample, BTEX concentrations in samples from Well MW-33, which is screened in the "deep" zone, have either been non-detect or less than the ADEC cleanup level.

The following actions are recommended:

- Screen Wells MW-28 and MW-34 for the presence of measurable product, prior to sampling. If product is measured, the wells will not be sampled.
- Due to the damage to the well casing, decommission Well MW-22.
- Well MW-26 has not been located and sampled since 2013. Remove the well from the sampling program.
- Well MW-30 is currently damaged and filled with sediment. Repair well, attempt to remove the sediment, and re-develop the well.


We appreciate this opportunity to be of service and your continued confidence in our firm. Please contact the undersigned at (907) 561-2120 with questions or comments concerning this report.

Sincerely,

SHANNON & WILSON, INC.



Schylar Healy
Environmental Scientist



Dan P. McMahon
Associate

Enc: Tables 1 and 2; Figure 1; Graphs 1 through 16; and Attachments 1 and 2

cc: Mr. Robert Weimer, ADEC
Mr. Rick Johnson, Forsythe Transportation, Inc.
Mr. Jay Sadler, Airport Equipment Rentals

TABLE 1
OCTOBER 2018 GROUNDWATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-14	MW-15	MW-17	MW-18	MW-20
Date Water Level Measured	9/17/2018	9/17/2018	9/18/2018	9/18/2018	-
Time Water Level Measured	14:31	15:03	14:12	14:00	-
Measured Depth to Water (ft below MP)	23.54	26.97	19.20	17.14	-

SAMPLING DATA

Well Number	MW-14	MW-15	MW-17	MW-18	MW-20
Date Sampled	9/17/2018	9/17/2018	9/18/2018	NS	NS
Time Sampled	14:41	15:22	14:22	NS	NS
Measured Depth to Water (ft below MP)	23.54	26.97	19.20	17.14	-
Total Depth of Well (ft below MP)	34.79	34.68	33.84	34.14	-
Water Column in Well (ft)	11.25	7.71	14.64	17.00	-
Screened interval (ft below GS)*	19-34.5	20-34.8	23.9-33.7	24.7-34.5	20-35
Diameter of Well Casing (in)	2	2	2	2	2
Gallons per Foot	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	1.80	1.23	2.34	-	-
Total Volume Pumped/Bailed (gallons)	2.2	1.5	2.5	-	-
Sampling Method	Bailer	Bailer	Bailer	NS	NS

WATER QUALITY DATA

Well Number	MW-14	MW-15	MW-17	MW-18	MW-20
Temperature (°C)	7.07	7.86	6.16	-	-
Specific Conductivity (µS/cm)	428	541	358	-	-
pH (Standard Units)	6.92	6.74	6.89	-	-
Turbidity (NTU)	898	629	968	-	-
Dissolved Oxygen (mg/L)	6.97	4.01	3.97	-	-
Remarks				Could not sample-damaged casing	Could not locate

Note: Water quality parameters were measured with a YSI 556 and Hach Turbidimeter

KEY DESCRIPTION

°C	Degrees Celsius
ft	Feet
in	Inches
MP	Measuring Point; Measurements taken from the top of well casing
GS	Ground Surface
µS/cm	Microsiemens per Centimeter
NTU	Nephelometric Turbidity Unit
mg/L	Milligrams per Liter
*	At time of well installation
NS	Not Sampled
-	Not measured or not applicable

TABLE 1
OCTOBER 2018 GROUNDWATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-21	MW-22	MW-23	MW-26	MW-27	MW-28
Date Water Level Measured	9/17/2018	9/17/2018	9/18/2018	-	9/17/2018	9/17/2018
Time Water Level Measured	17:04	15:51	12:03	-	13:16	12:25
Measured Depth to Water (ft below MP)	22.76	19.89	23.91	-	21.28	17.58

SAMPLING DATA

Well Number	MW-21	MW-22	MW-23	MW-26	MW-27	MW-28
Date Sampled	9/17/2018	NS	9/18/2018	NS	9/17/2018	9/17/2018
Time Sampled	17:15	NS	12:30	NS	13:30	12:45
Measured Depth to Water (ft below MP)	22.76	19.89	23.91	-	21.28	17.58
Total Depth of Well (ft below MP)	29.05	27.68	32.54	-	29.22	31.44
Water Column in Well (ft)	6.29	7.79	8.63	-	7.94	13.86
Screened interval (ft below GS)*	19-35	23-33	23-32.8	9.5-29.7	9.5-29.9	12.9-33.1
Diameter of Well Casing (in)	2	2	2	2	2	2
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	1.01	1.25	1.38	-	1.27	2.22
Total Volume Pumped/Bailed (gallons)	1.6	-	1.6	-	1.4	2.3
Sampling Method	Bailer	NS	Bailer	NS	Bailer	Bailer

WATER QUALITY DATA

Well Number	MW-21	MW-22	MW-23	MW-26	MW-27	MW-28
Temperature (°C)	5.81	-	6.04	-	7.93	7.50
Specific Conductivity (µS/cm)	469	-	826	-	209	764
pH (Standard Units)	6.83	-	6.86	-	7.95	7.55
Turbidity (NTU)	88	-	677	-	88.1	62
Dissolved Oxygen (mg/L)	5.7	-	4.11	-	3.80	2.92
Remarks		Could not sample-bentonite in well		Could not locate		

Note: Water quality parameters were measured with YSI 556 and Hach Turbidimeter

KEY DESCRIPTION

°C	Degrees Celsius
ft	Feet
in	Inches
MP	Measuring Point; Measurements taken from the top of well casing
GS	Ground Surface
µS/cm	Microsiemens per Centimeter
NTU	Nephelometric Turbidity Unit
mg/L	Milligrams per Liter
*	At time of well installation
NS	Not Sampled
-	Not measured or not applicable

TABLE 1
OCTOBER 2018 GROUNDWATER SAMPLING LOG

WATER LEVEL MEASUREMENT DATA

Well Number	MW-29	MW-30	MW-31B	MW-32	MW-33	MW-34	MW-35
Date Water Level Measured	9/17/2018	9/18/2018	9/18/2018	9/19/2018	9/18/2018	9/18/2018	9/18/2018
Time Water Level Measured	16:21	-	10:30	8:00	15:35	11:10	14:33
Measured Depth to Water (ft below MP)	19.99	-	23.43	19.51	17.57	24.44	20.39

SAMPLING DATA

Well Number	MW-29	MW-30	MW-31B	MW-32	MW-33	MW-34	MW-35
Date Sampled	9/17/2018	NS	9/18/2018	9/19/2018	9/18/2018	9/18/2018	9/18/2018
Time Sampled	16:41	NS	10:55	8:20	16:35	11:30	14:58
Measured Depth to Water (ft below MP)	19.99	-	23.43	19.51	17.57	24.44	20.39
Total Depth of Well (ft below MP)	29.07	-	25.44	44.30	61.73	44.24	47.96
Water Column in Well (ft)	9.08	-	2.01	24.79	44.16	20.85	27.57
Screened interval (ft below GS)*	20.3-30.3	13.3-28.3	15.8-25.8	35-45	58-68	35-45	38-48
Diameter of Well Casing (in)	2	2	2	2	2	2	2
Gallons per Foot	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	1.45	-	0.32	3.97	7.07	3.34	4.41
Total Volume Pumped/Bailed (gallons)	1.7	-	0.5	4.5	7.5	3.5	4.2
Sampling Method	Bailer	NS	Bailer	Submersible Pump	Submersible Pump	Submersible Pump	Submersible Pump

WATER QUALITY DATA

Well Number	MW-29	MW-30	MW-31B	MW-32	MW-33	MW-34	MW-35
Temperature (°C)	7.80	-	7.37	5.08	6.01	5.74	7.19
Specific Conductivity (µS/cm)	556	-	337	657	166	740	620
pH (Standard Units)	7.77	-	6.56	5.67	9.45	6.44	7.31
Turbidity (NTU)	329	-	152	34.2	269.0	174	5.51
Dissolved Oxygen (mg/L)	2.87	-	3.39	0.91	3.22	6.82	1.47
Remarks		Could not sample- well filled with mud					

Note: Water quality parameters were measured with YSI 556 and Hach Turbidimeter

KEY DESCRIPTION

- °C Degrees Celsius
- ft Feet
- in Inches
- MP Measuring Point; Measurements taken from the top of well casing
- GS Ground Surface
- µS/cm Microsiemens per Centimeter
- NTU Nephelometric Turbidity Unit
- mg/L Milligrams per Liter
- * At time of well installation
- NS Not Sampled
- Not measured or not applicable
- ~ Well screen intentionally placed below groundwater interface

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth ^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MWP-3	9/21/2004	23.75	ND	ND	ND	ND
	4/4/2005	18.98	ND	ND	-	-
	Removed from groundwater sampling program October 2005 Decommissioned on May 29, 2014					
MW-11	3/23/2004	29.71	ND	ND	-	-
	9/21/2004	29.89	ND	ND	ND	ND
	4/4/2005	26.47	ND	ND	-	-
	Removed from groundwater sampling program October 2005 Decommissioned on May 29, 2014					
MW-12	5/5/2004	30.82	0.280	0.498	-	-
	9/21/2004	27.40	0.009	0.0110	ND	ND
	4/4/2005	-	-	-	-	-
	10/5/2005	24.56	ND	ND	-	-
	4/14/2006	26.87	ND	ND	-	-
	9/15/2006	25.40	ND	ND	-	-
Removed from groundwater sampling program September 2008 Decommissioned on May 29, 2014						
MW-13	9/21/2004	19.57	ND	ND	ND	ND
	4/4/2005	19.25	ND	ND	-	-
	Removed from groundwater sampling program October 2005 Decommissioned on May 29, 2014					
MW-14	10/5/2005	22.95	ND	ND	-	-
	4/14/2006	26.16	0.0167	0.540	-	-
	9/15/2006	23.50	0.00825	0.0268	-	-
	5/3/2007	25.01	0.0206	0.1170	-	-
	9/29/2008	22.79	0.000524	0.000524	-	-
	9/24/2009	24.28	0.0168 J	0.0346 J	-	-
	9/8/2010	23.34	ND	ND	-	-
	9/21/2011	23.04	ND	ND	-	-
	9/28/2012	18.61	ND	ND	-	-
	10/8/2013	20.30	0.00240	0.0200	-	-
	9/4/2014	21.20	0.000150 J	0.00123 J	-	-
	9/9/2015	24.79	0.0247 J+	0.210 J+	-	-
	9/29/2016	22.82	0.0168 J+	0.040 J+	-	-
	10/13/2017	22.02	0.0137 J+	0.0418 J+, B	-	-
9/17/2018	23.54	0.00278 J+	0.00687 J+	-	-	
MW-15	4/14/2006	28.72	ND	ND	-	-
	9/15/2006	27.82	0.0366	0.0851	-	-
	5/4/2007	24.23	ND	ND	-	-
	10/8/2007	27.85	ND	0.00216	-	-
	4/29/2008	28.02	0.00121	0.00121	-	-
	9/29/2008	26.90	0.00584	0.00584	-	-
	9/24/2009	27.92	0.000791	0.000791	-	-
	9/8/2010	27.20	ND	ND	-	-
	9/21/2011	27.56	ND	ND	-	-
	9/28/2012	25.56	0.00213	0.00341 J	-	-
	10/8/2013	25.31	0.0603	0.117	-	-
	9/4/2014	25.31	0.179	0.228	-	-
	9/9/2015	27.89	0.0131	0.0272 J	-	-
	9/29/2016	26.85	0.00052	0.00052	-	-
10/13/2017	26.15	0.00238	0.00296 J	-	-	
9/17/2018	26.97	0.0206	0.0312 J	-	-	

Key provided on Page 7.

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-16	4/4/2005	23.89	ND	ND	-	-
	10/4/2005	22.62	ND	ND	-	-
	4/14/2006	24.72	ND	ND	-	-
	9/15/2006	-	Could not locate		-	-
	5/3/2007	28.54	0.00961	0.00961	-	-
	10/10/2007	18.02	0.00499*	0.0226*	-	-
	4/28/2008	24.01	ND	ND	-	-
	9/30/2008	22.81	ND	ND	-	-
	9/24/2009	23.71	ND	ND	-	-
	9/7/2010	22.80	ND	ND	-	-
	9/22/2011	23.32	ND	0.00151	-	-
	9/27/2012	20.81	ND	ND	-	-
	10/8/2013	20.59	0.0703	0.236	-	-
	9/4/2014	21.58	0.00934	0.0246	-	-
	9/9/2015	23.80	Not Sampled - Damaged			
9/29/2016	21.82	Not Sampled - Damaged				
Decommissioned on September 22, 2017						
MW-17	4/4/2005	22.36	0.00596	0.00596	-	-
	10/4/2005	20.80	ND	ND	-	-
	4/14/2006	21.19	ND	ND	-	-
	9/18/2006	19.05	ND	ND	-	-
	5/4/2007	28.66	0.126	0.204	-	-
	10/10/2007	19.15	0.00257*	0.0117*	-	-
	4/28/2008	20.48	0.00837	0.0120	-	-
	9/30/2008	19.45	ND	ND	-	-
	9/24/2009	20.30	ND	0.00261	-	-
	9/7/2010	19.15	ND	ND	-	-
	9/22/2011	19.72	ND	ND	-	-
	9/27/2012	16.99	ND	ND	-	-
	10/8/2013	17.07	0.000200 J	0.000200 J	-	-
	9/4/2014	18.51	0.000160 J	0.000160 J	-	-
	9/10/2015	20.38	0.00847	0.00980	-	-
9/29/2016	18.02	ND	0.000830 J	-	-	
10/13/2017	17.53	ND	ND	-	-	
9/18/2018	19.20	ND	ND	-	-	
MW-18	4/4/2005	21.77	ND	ND	-	-
	10/4/2005	-	-	-	-	-
	4/14/2006	20.40	ND	ND	-	-
	9/18/2006	16.60	ND	ND	-	-
	5/4/2007	28.58	0.00285	0.00285	-	-
	4/28/2008	18.98	ND	ND	-	-
	9/30/2008	16.97	0.000571	0.000571	-	-
	9/24/2009	18.25	ND	0.00564	-	-
	9/8/2010	16.48	ND	ND	-	-
	9/22/2011	17.29	ND	ND	-	-
	9/27/2012	13.67	ND	ND	-	-
	10/8/2013	13.41	0.000150 J	0.000610 J	-	-
	9/4/2014	15.71	ND	ND	-	-
	9/10/2015	18.98	ND	ND	-	-
	9/29/2016	15.85	ND	ND	-	-
10/12/2017	15.08	ND	ND	-	-	
9/18/2018	17.14	Not sampled- Damaged				
MW-19	3/23/2004	19.82	ND	ND	-	-
	9/21/2004	18.79	-	-	-	-
Removed from groundwater sampling program April 2005						

Key provided on Page 7.

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-20	5/3/2007	23.84	ND	ND	-	-
	4/28/2008	23.78	ND	ND	-	-
	9/29/2008	23.56	ND	ND	-	-
	9/24/2009	24.13	ND	ND	-	-
	9/8/2010	23.50	ND	ND	-	-
	9/21/2011	23.70	ND	ND	-	-
	9/28/2012	22.45	ND	ND	-	-
	10/7/2013	22.37	0.000210 J	0.000540 J	-	-
	9/4/2014	23.12	ND	ND	-	-
	9/9/2015	23.97	ND	ND	-	-
	9/29/2016	22.66	ND	0.000330 J	-	-
	10/11/2017	22.36	ND	ND	-	-
9/18/2018	Could not locate	-	-	-	-	
MW-21	10/5/2005	21.21	3.89	3.89	-	-
	9/15/2006	Could not locate	-	-	-	-
	10/10/2007	18.25	0.631	2.99	-	-
	9/29/2008	24.78	0.125	0.125	-	-
	9/24/2009	22.71	0.907	0.914	-	-
	9/7/2010	22.28	0.00367	0.00367	-	-
	9/21/2011	23.36	0.0895	0.0895	-	-
	9/28/2012	19.88	ND	0.000310 J	-	-
	10/9/2013	20.02	0.000320 J	0.00209 J	-	-
	9/4/2014	20.08	0.379	0.380 J	-	-
	9/9/2015	22.87	0.423	0.423	-	-
	9/29/2016	22.5	1.14	1.140	-	-
10/12/2017	22.10	0.688	0.688 J	-	-	
9/17/2018	22.76	0.0292	0.0292	-	-	
MW-22	10/5/2005	18.94**	6.15	55.5	-	-
	4/14/2006	22.05**	5.36	48.2	-	-
	9/25/2006	20.36	5.16	60.6	-	-
	5/3/2007	21.32	4.83	69.7	-	-
	10/10/2007	19.54	14.0	92.2	-	-
	9/30/2008	22.19	6.40	58.4	-	-
	9/24/2009	-	3.67	30.9	-	-
	9/7/2010	19.55	3.18	27.4	-	-
	9/21/2011	19.67	1.63	28.0	-	-
	9/28/2012	16.75	0.0319	2.57	-	-
	10/9/2013	16.69	1.55	32.4	-	-
	9/3/2014	17.53	Not sampled - Contained 0.01 foot of product		-	-
	9/9/2015	20.29	0.680	28.4	-	-
	9/29/2016	-	Not sampled - Damaged		-	-
10/11/2017	18.98	Not sampled - Damaged		-	-	
9/17/2018	19.89	Not sampled - Damaged		-	-	
MW-23	10/5/2005	23.58	ND	ND	-	-
	4/14/2006	26.22	0.00280	0.0750	-	-
	9/15/2006	23.91	7.83	37.6	-	-
	5/3/2007	25.19	0.311	0.985	-	-
	10/8/2007	23.99	ND	ND	-	-
	9/29/2008	23.50	ND	ND	-	-
	9/24/2009	24.65	0.0477	0.0593	-	-
	9/8/2010	23.74	0.232 J	0.400 J	-	-
	9/21/2011	23.36	0.00201	0.0113	-	-
	9/28/2012	19.67	0.285	2.60	-	-
	10/8/2013	21.45	3.38	27.5	-	-
	9/4/2014	21.69	0.157	0.885	-	-

Key provided on Page 7.

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-23	9/9/2015	24.84	0.422	1.76	-	-
	9/29/2016	23.62	0.0233	0.0233	-	-
	10/13/2017	22.92	4.09	24.6	-	-
	9/18/2018	23.91	0.0918	0.456	-	-
MW-26	9/21/2004	23.49	0.374	30.6	2.71	0.679
	4/4/2005	23.26	0.195	21.1	-	-
	10/5/2005	-	-	-	-	-
	4/14/2006	24.79	0.249	17.81	-	-
	9/25/2006	22.35	0.0695	10.91	-	-
	5/3/2007	24.25	0.172	11.79	-	-
	9/29/2008	21.11	0.00761	0.425	-	-
	9/24/2009	22.71	0.0497 J	4.84 J	-	-
	9/8/2010	22.19	0.0333	2.39	-	-
	9/22/2011	21.73	0.00260	0.157	-	-
	9/27/2012	18.28	ND	0.000370 J	-	-
	10/9/2013	19.03	0.0134	7.11	-	-
	9/2/2014	Not sampled - Could not locate	-	-	-	-
	9/9/2015	Not sampled - Could not locate	-	-	-	-
	9/29/2016	Not sampled - Could not locate	-	-	-	-
10/11/2017	Not sampled - Could not locate	-	-	-	-	
9/18/2018	Not sampled - Could not locate	-	-	-	-	
MW-27	4/4/2005	21.12	0.0665	0.0665	-	-
	10/5/2005	19.56	1.04	1.23	-	-
	4/14/2006	22.84	2.94	3.94	-	-
	9/15/2006	20.70	3.05	5.94	-	-
	5/3/2007	22.95	4.60	7.64	-	-
	10/8/2007	19.82	0.136	0.153	-	-
	9/29/2008	20.59	0.342	0.422	-	-
	9/23/2009	21.56	2.22	7.12	-	-
	9/8/2010	20.04	0.0151	0.0224	-	-
	9/22/2011	20.64	2.01	3.50	-	-
	9/28/2012	17.19	0.0149	0.0205 J	-	-
	10/8/2013	17.12	0.453	0.667	-	-
	9/5/2014	17.75	0.304	0.437 J	-	-
	9/10/2015	21.25	1.43	2.90	-	-
9/30/2016	20.92	0.50	0.85	-	-	
10/12/2017	20.75	1.66	3.22	-	-	
9/17/2018	21.28	1.69 J+	3.51 J+	-	-	
MW-28	1/5/2005	15.09	23.6	59.6	-	-
	4/4/2005	17.71	4.81	10.6	-	-
	10/5/2005	14.71	15.4	44.1	-	-
	4/14/2006	18.93	12.6	28.2	-	-
	9/15/2006	15.79	14.0	47.21	-	-
	5/3/2007	28.36	14.8	33.72	-	-
	10/8/2007	15.59	9.28	29.76	-	-
	9/29/2008	15.12	0.756	3.19	-	-
	9/23/2009	18.50	4.92 J	22.4 J	-	-
	5/5/2010*	19.61	0.0274	0.0678	-	-
	5/6/2010*	19.41	1.59	5.24	-	-
	7/6/2010*	17.20	5.56	32.2	-	-
	7/8/2010*	17.95	2.60	9.80	-	-
	9/8/2010	15.24	0.644	7.09	-	-
	9/22/2011	16.44	4.65	33.0	-	-
	9/28/2012	12.18	0.00348	0.154	-	-
	10/8/2013	12.69	0.121	1.57	-	-
9/5/2014	14.18	0.612	8.93	-	-	

Key provided on Page 7.

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-28	9/10/2015	18.30	2.96	40.4	-	-
	9/30/2016	17.69	3.78	49.6	-	-
	10/12/2017	17.20	3.38	41.4	-	-
	9/17/2018	17.58	3.44	36.0	-	-
MW-29	4/4/2005	19.92	1.31	9.54	-	-
	10/5/2005	19.02	0.775	3.73	-	-
	4/14/2006	22.03	1.42	10.9	-	-
	9/15/2006	16.70	1.07	6.98	-	-
	5/3/2007	22.11	1.13	7.53	-	-
	10/8/2007	19.98	2.85	17.8	-	-
	9/30/2008	20.75	0.797	14.8	-	-
	9/24/2009	20.10	0.0425	0.199	-	-
	9/7/2010	19.03	0.0295	0.125	-	-
	9/21/2011	19.48	0.0259	0.285	-	-
	9/28/2012	16.31	0.223	1.12 J	-	-
	10/8/2013	15.78	0.852	7.33	-	-
	9/3/2014	17.35	0.574	4.23	-	-
	9/9/2015	20.03	0.671	4.35	-	-
9/29/2016	19.29	0.0561	0.46	-	-	
10/12/2017	18.90	0.370	3.45	-	-	
9/17/2018	19.99	0.228	1.85	-	-	
MW-30	4/4/2005	19.51	0.0111	0.0466	-	-
	10/5/2005	17.56	0.00221	0.00654	-	-
	4/14/2006	21.34	0.000563	0.000563	-	-
	9/15/2006	19.60	0.0162	0.118	-	-
	5/3/2007	21.41	0.0496	0.0496	-	-
	10/8/2007	17.91	0.00839	0.0402	-	-
	9/29/2008	18.46	0.000996	0.000996	-	-
	9/23/2009	19.64	0.00104 J	0.00104 J	-	-
	9/8/2010	18.13	ND	ND	-	-
	9/22/2011	18.57	0.000550	0.00213	-	-
	9/28/2012	14.96	ND	ND	-	-
	10/8/2013	14.93	0.00114	0.0185	-	-
	9/4/2014	15.89	0.000340 J	0.000940 J	-	-
	9/9/2015	19.64	0.0110	0.0313	-	-
9/30/2016	19.00	0.000280 J	0.00108 J	-	-	
10/12/2017	18.95	0.00203	0.0219 J, B	-	-	
9/18/2018	Could not sample - well has filled with mud					-
MW-31A	4/14/2006	26.21	30.3	79.7	-	-
	9/15/2006	Could not locate	-	-	-	-
	10/10/2007	24.10	22.1	63.4	-	-
	9/30/2008	24.35	17.7	34.7	-	-
	9/24/2009	24.91	14.7	34.2	-	-
	9/8/2010	24.17	30.0	85.2	-	-
	9/21/2011	24.11	Obstructed	-	-	-
	9/28/2012	-	Obstructed	-	-	-
Decommissioned on 8/23/2013 and replaced with Well MW-34						
MW-31B	4/14/2006	25.20	0.0058	0.0210	-	-
	9/15/2006	Could not locate	-	-	-	-
	10/30/2007	22.75	ND	ND	-	-
	9/30/2008	22.99	ND	ND	-	-
	9/24/2009	23.68	ND	ND	-	-
	9/8/2010	23.35	ND	ND	-	-
	9/21/2011	23.20	0.000570	0.00220	-	-
9/28/2012	20.92	ND	ND	-	-	

Key Provided on Page 7

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-31B	10/9/2013	21.42	0.000320 J	0.000710 J	-	-
	9/3/2014	21.18	0.00104	0.00144 J	-	-
	9/9/2015	24.01	0.000190 J	0.00214 J	-	-
	9/29/2016	23.56	0.000230 J	0.000650 J	-	-
	10/12/2017	23.10	ND	ND	-	-
	9/18/2018	23.43	ND	ND	-	-
MW-32	2/10/2005	21.47	0.510	2.96	-	-
	4/4/2005	21.70	0.333	1.70	-	-
	10/4/2005	19.22	0.383	1.54	-	-
	4/14/2006	21.41	0.194	0.756	-	-
	9/15/2006	Could not locate	-	-	-	-
	5/4/2007	20.98	ND	ND	-	-
	10/10/2007	19.88	0.783	3.89	-	-
	4/28/2008	20.63	ND	ND	-	-
	9/30/2008	17.85	ND	ND	-	-
	9/24/2009	20.60	ND	ND	-	-
	9/7/2010	19.44	0.000730	0.000730	-	-
	9/22/2011	19.98	0.00296	0.00792	-	-
	9/28/2012	17.26	0.00760	0.0219 J	-	-
	10/9/2013	17.36	0.154	1.37	-	-
	9/3/2014	18.68	0.279	2.72	-	-
	9/10/2015	20.69	0.295	2.27	-	-
9/29/2016	18.57	0.177	1.87	-	-	
10/13/2017	17.92	0.166	1.60	-	-	
9/19/2018	19.51	0.184	1.68	-	-	
MW-33	2/10/2005	20.15	0.00385	0.00858	-	-
	4/4/2005	18.67	ND	ND	-	-
	10/4/2005	17.68	ND	ND	-	-
	4/14/2006	18.75	0.00153	0.00832	-	-
	9/18/2006	22.73	ND	ND	-	-
	5/4/2007	18.39	ND	ND	-	-
	10/10/2007	23.73	1.40	6.98	-	-
	4/28/2008	17.85	ND	ND	-	-
	9/30/2008	17.16	ND	ND	-	-
	9/24/2009	18.20	ND	0.00282	-	-
	9/7/2010	16.82	ND	ND	-	-
	9/22/2011	17.25	ND	ND	-	-
	9/28/2012	14.63	ND	ND	-	-
	10/9/2013	14.92	0.000160 J	0.000160 J	-	-
	9/3/2014	16.40	ND	ND	-	-
	9/11/2015	18.80	0.000420 J	0.00386 J	-	-
9/29/2016	17.19	ND	ND	-	-	
10/12/2017	15.91	ND	ND	-	-	
9/18/2018	17.57	ND	ND	-	-	

Key Provided on Page 7

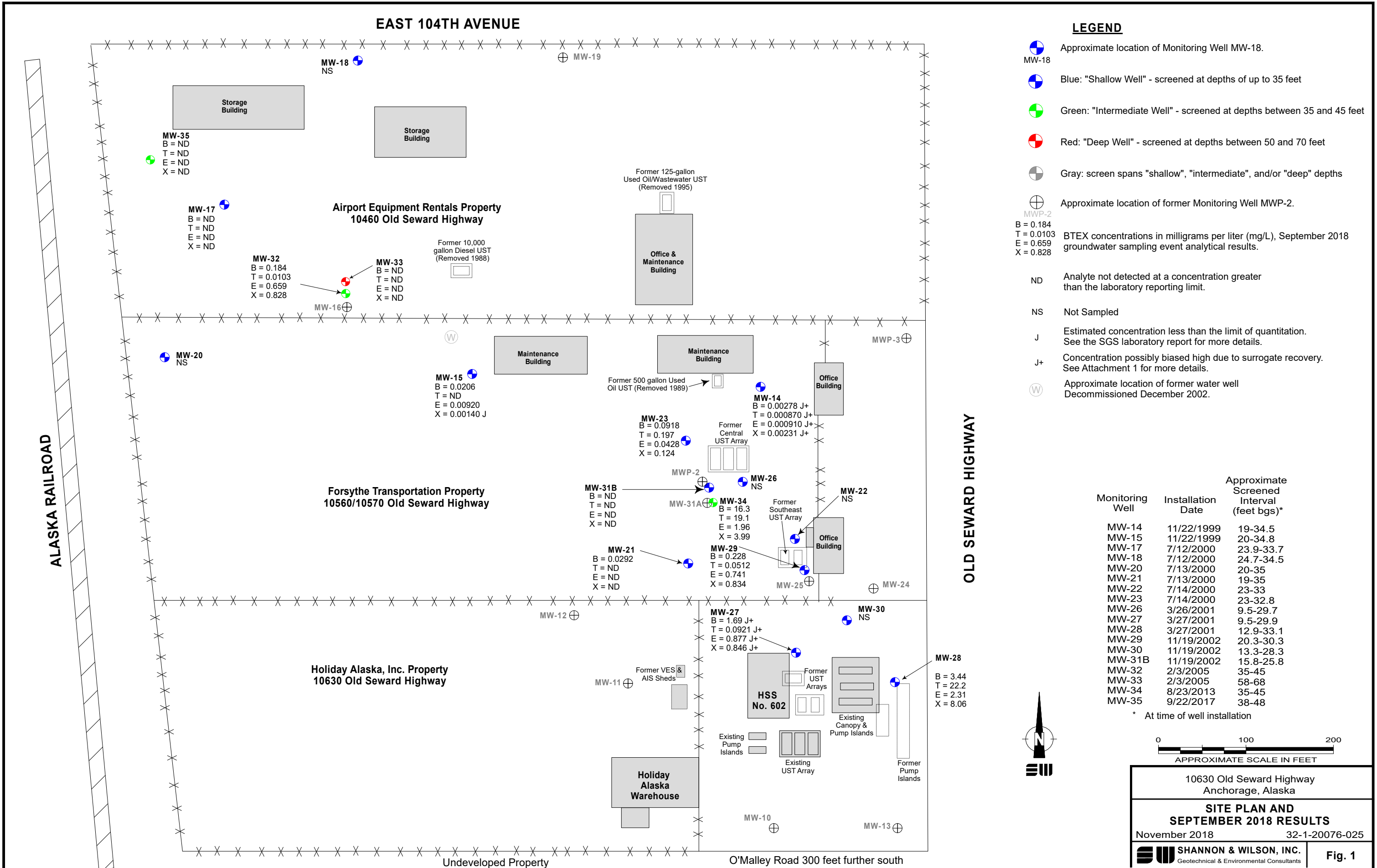
TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (feet)	Target Analyte Concentrations (mg/L)			
			Benzene	Total BTEX	1,2,4-Tri-methylbenzene	1,3,5-Tri-methylbenzene
MW-34	Replacement of Well MW-31A					
	10/9/2013	21.63	16.1	37.9	-	-
	9/3/2014	21.77	18.4	42.9	-	-
	9/10/2015	24.53	19.1	43.2	-	-
	9/29/2016	23.53	18.3	43.1	-	-
	10/11/2017	23.50	Not Sampled - Contained 0.2 foot of product			
	9/18/2018	24.44	16.300	45.35	-	-
MW-35	10/13/2017	18.68	ND	0.000330 J	-	-
	9/18/2018	20.39	ND	ND	-	-

KEY**DESCRIPTION**

- Sample was either not collected, not analyzed for this parameter, or information was not available
- ^ Depth of static groundwater level below the measuring point or top of casing
- ND Not detected
- mg/L Milligrams per Liter
- 0.510** Analyte concentration exceeds current cleanup criterion (0.0046 mg/L benzene, 0.056 mg/L 1,2,4- trimethylbenzene or 0.060 mg/L 1,3,5-trimethylbenzene) by 18 AAC 75.345 (September 2018)
- J Concentration is estimated
- J+ Concentration is potentially biased high due to surrogate recovery failure
- B Concentration is potentially affected by trip blank detection

EAST 104TH AVENUE

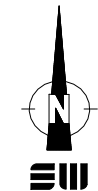


LEGEND

- Approximate location of Monitoring Well MW-18.
- Blue: "Shallow Well" - screened at depths of up to 35 feet
- Green: "Intermediate Well" - screened at depths between 35 and 45 feet
- Red: "Deep Well" - screened at depths between 50 and 70 feet
- Gray: screen spans "shallow", "intermediate", and/or "deep" depths
- Approximate location of former Monitoring Well MWP-2.
- MWP-2**
B = 0.184
T = 0.0103
E = 0.659
X = 0.828
BTEX concentrations in milligrams per liter (mg/L), September 2018 groundwater sampling event analytical results.
- ND Analyte not detected at a concentration greater than the laboratory reporting limit.
- NS Not Sampled
- J Estimated concentration less than the limit of quantitation. See the SGS laboratory report for more details.
- J+ Concentration possibly biased high due to surrogate recovery. See Attachment 1 for more details.
- Approximate location of former water well Decommissioned December 2002.

Monitoring Well	Installation Date	Approximate Screened Interval (feet bgs)*
MW-14	11/22/1999	19-34.5
MW-15	11/22/1999	20-34.8
MW-17	7/12/2000	23.9-33.7
MW-18	7/12/2000	24.7-34.5
MW-20	7/13/2000	20-35
MW-21	7/13/2000	19-35
MW-22	7/14/2000	23-33
MW-23	7/14/2000	23-32.8
MW-26	3/26/2001	9.5-29.7
MW-27	3/27/2001	9.5-29.9
MW-28	3/27/2001	12.9-33.1
MW-29	11/19/2002	13.3-28.3
MW-30	11/19/2002	20.3-30.3
MW-31B	11/19/2002	15.8-25.8
MW-32	2/3/2005	35-45
MW-33	2/3/2005	58-68
MW-34	8/23/2013	35-45
MW-35	9/22/2017	38-48

* At time of well installation



10630 Old Seward Highway
Anchorage, Alaska

**SITE PLAN AND
SEPTEMBER 2018 RESULTS**

November 2018 32-1-20076-025

SHANNON & WILSON, INC.
Geotechnical & Environmental Consultants

Fig. 1

OLD SEWARD HIGHWAY

ALASKA RAILROAD

**Airport Equipment Rentals Property
10460 Old Seward Highway**

**Forsythe Transportation Property
10560/10570 Old Seward Highway**

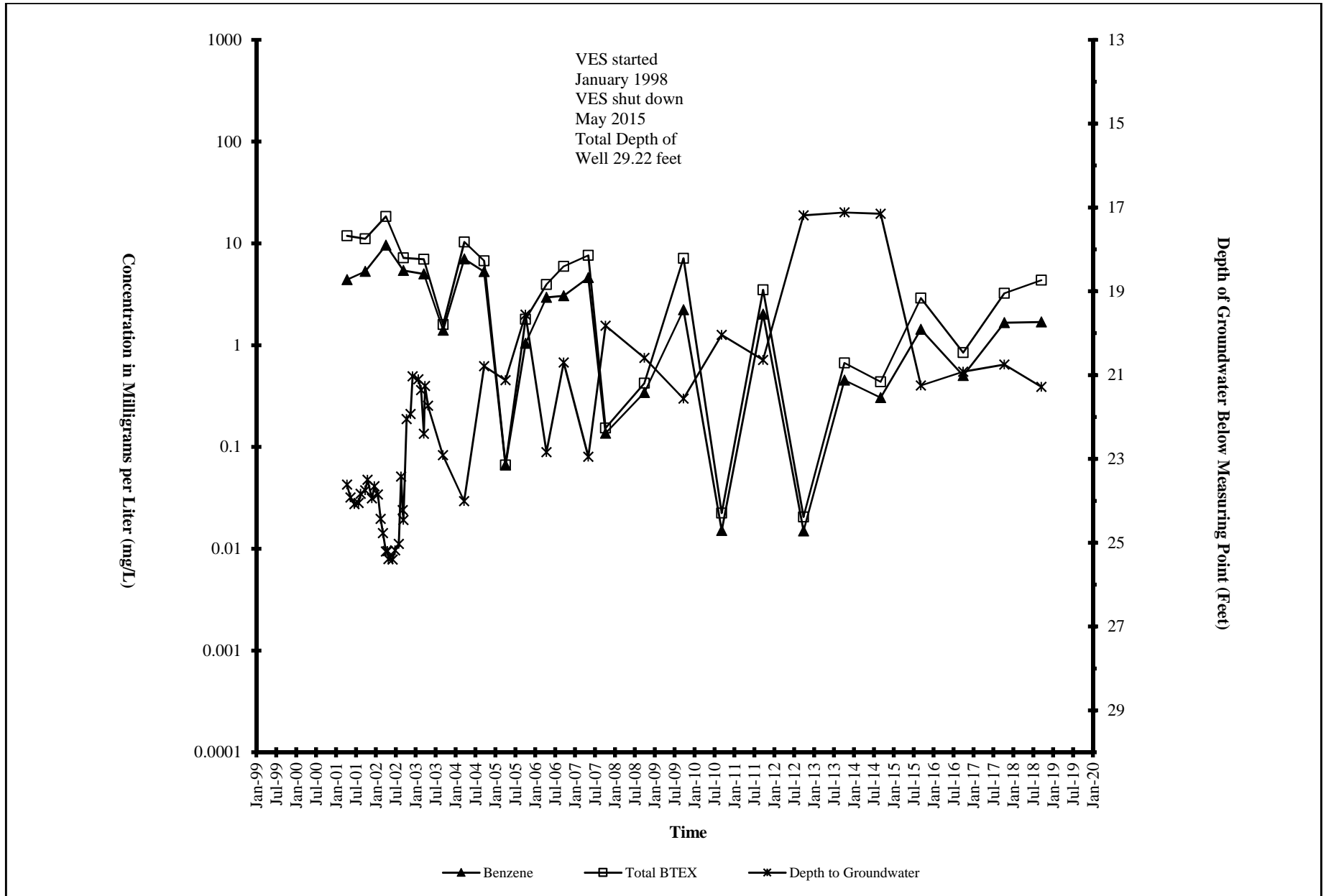
**Holiday Alaska, Inc. Property
10630 Old Seward Highway**

Undeveloped Property

O'Malley Road 300 feet further south

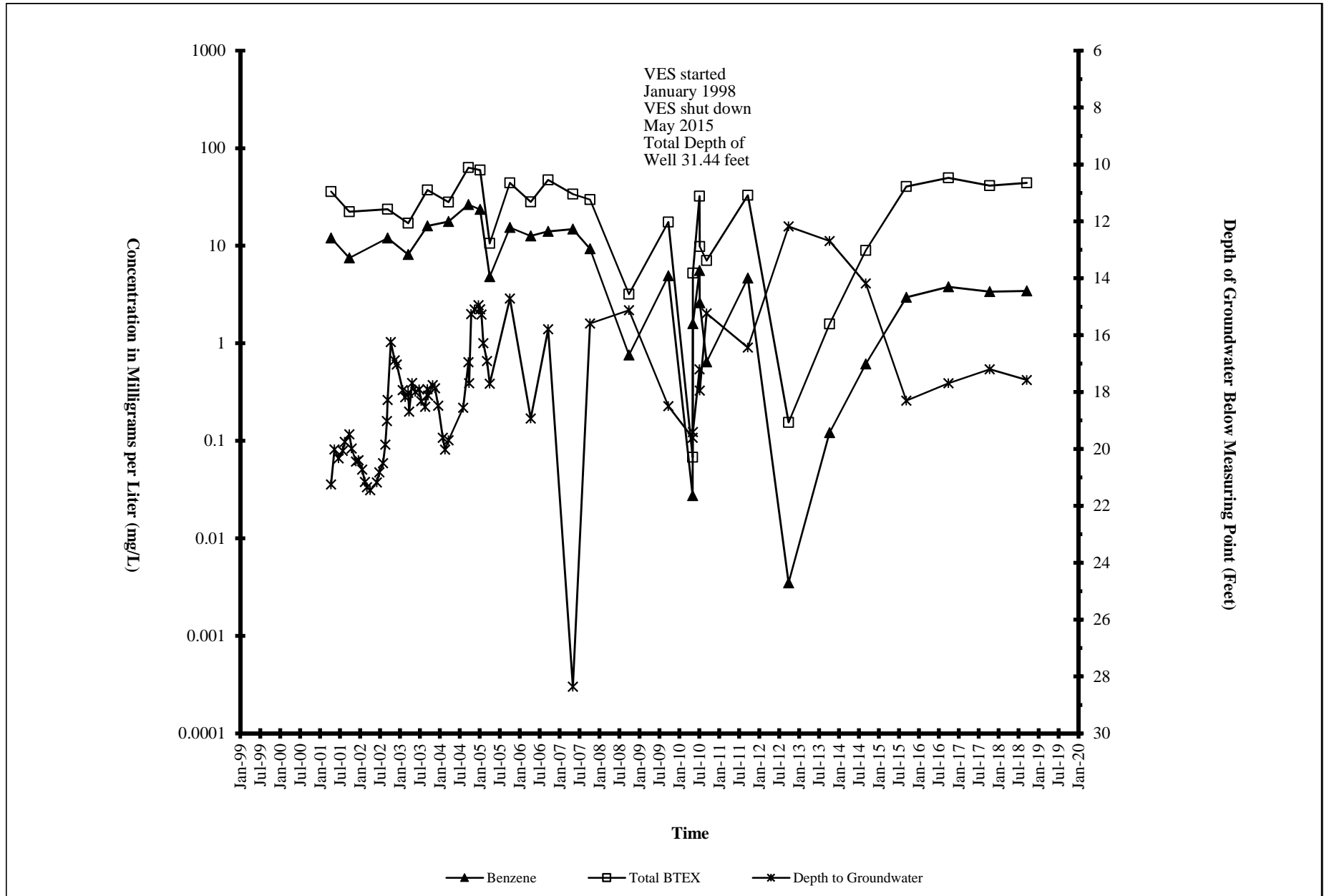
GRAPH 1 - MONITORING WELL MW-27 TRENDS

SHANNON & WILSON, INC.



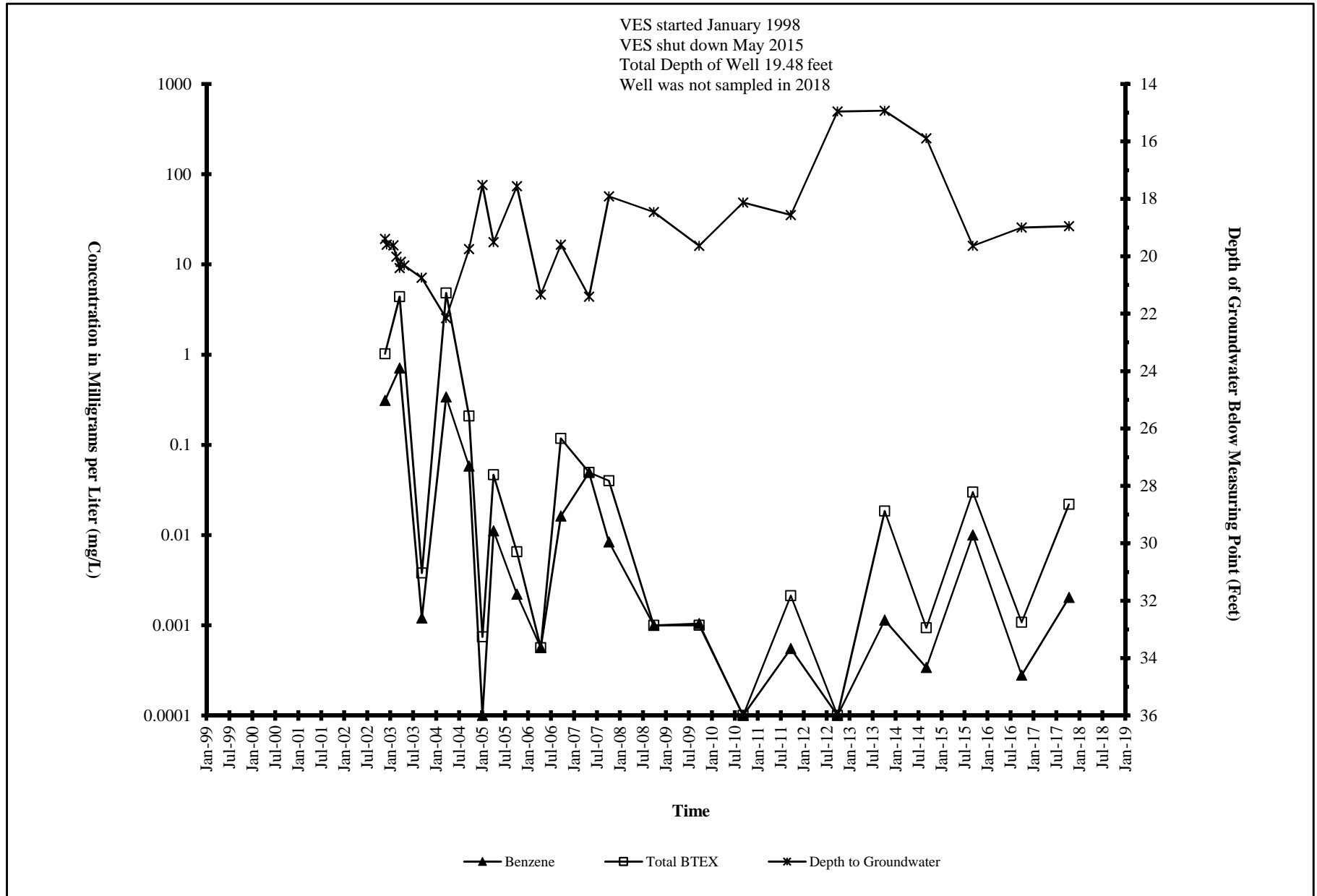
GRAPH 2 - MONITORING WELL MW-28 TRENDS

SHANNON & WILSON, INC.



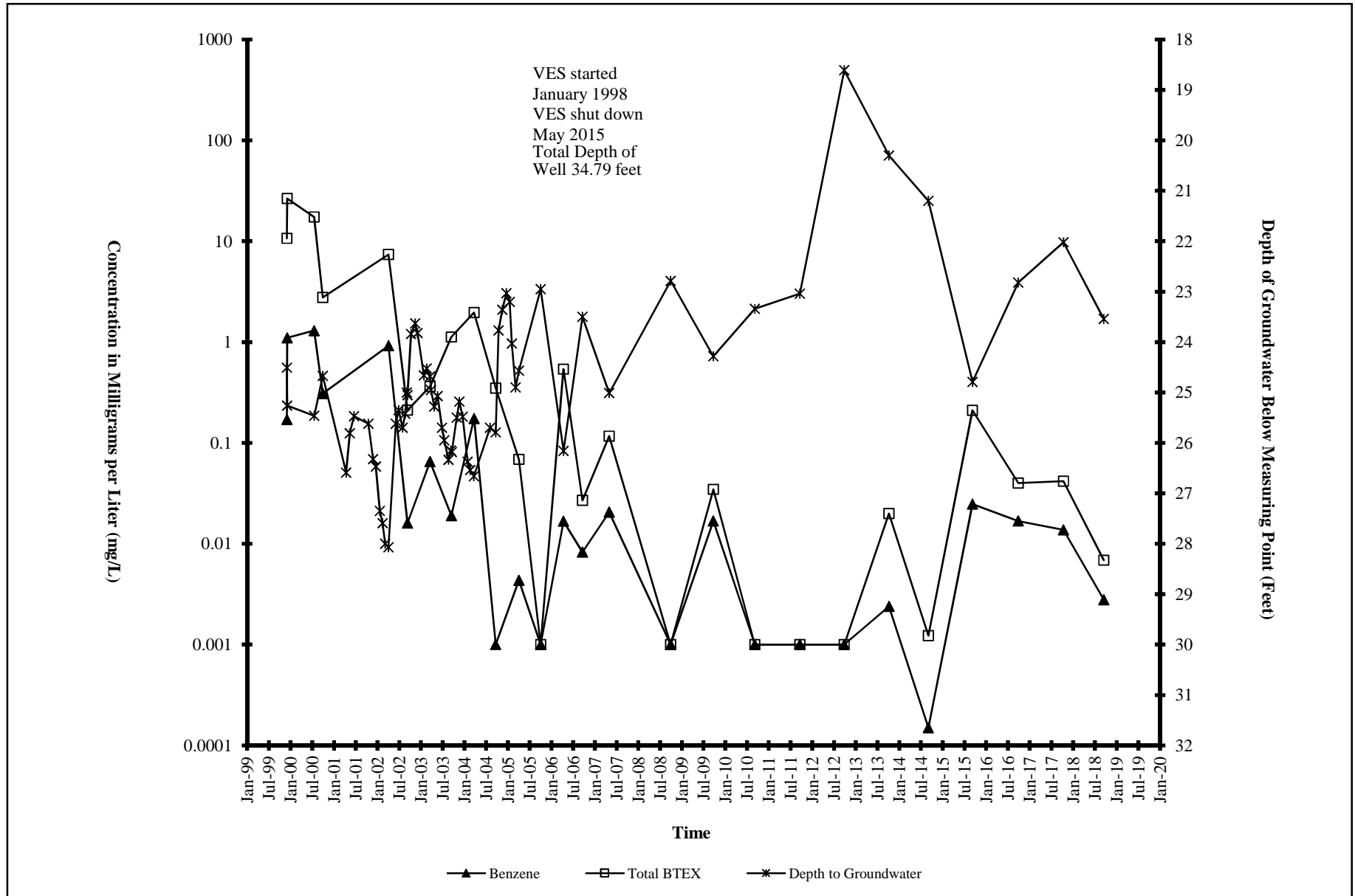
GRAPH 3 - MONITORING WELL MW-30 TRENDS

SHANNON & WILSON, INC.



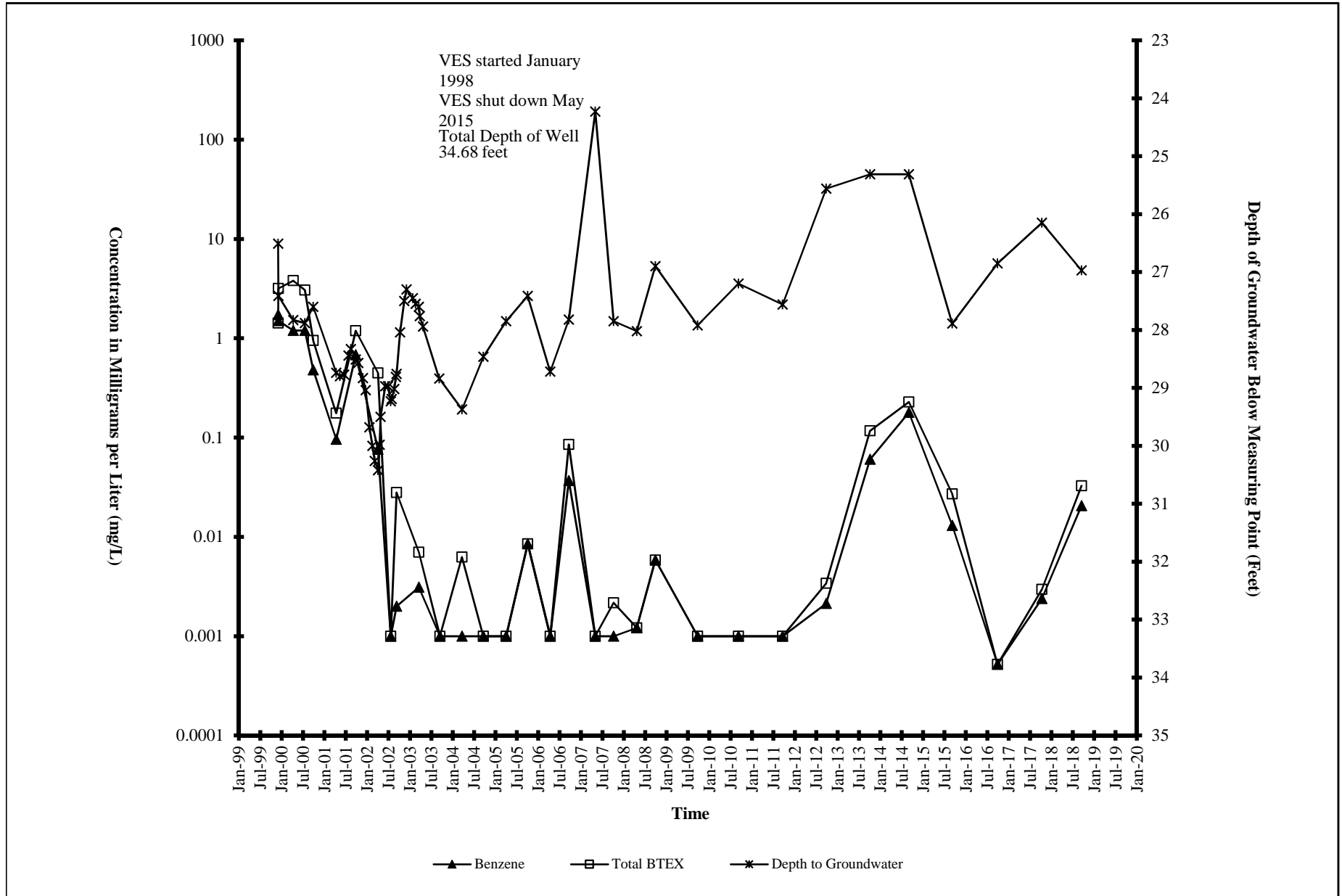
GRAPH 4 - MONITORING WELL MW-14 TRENDS

SHANNON & WILSON, INC.



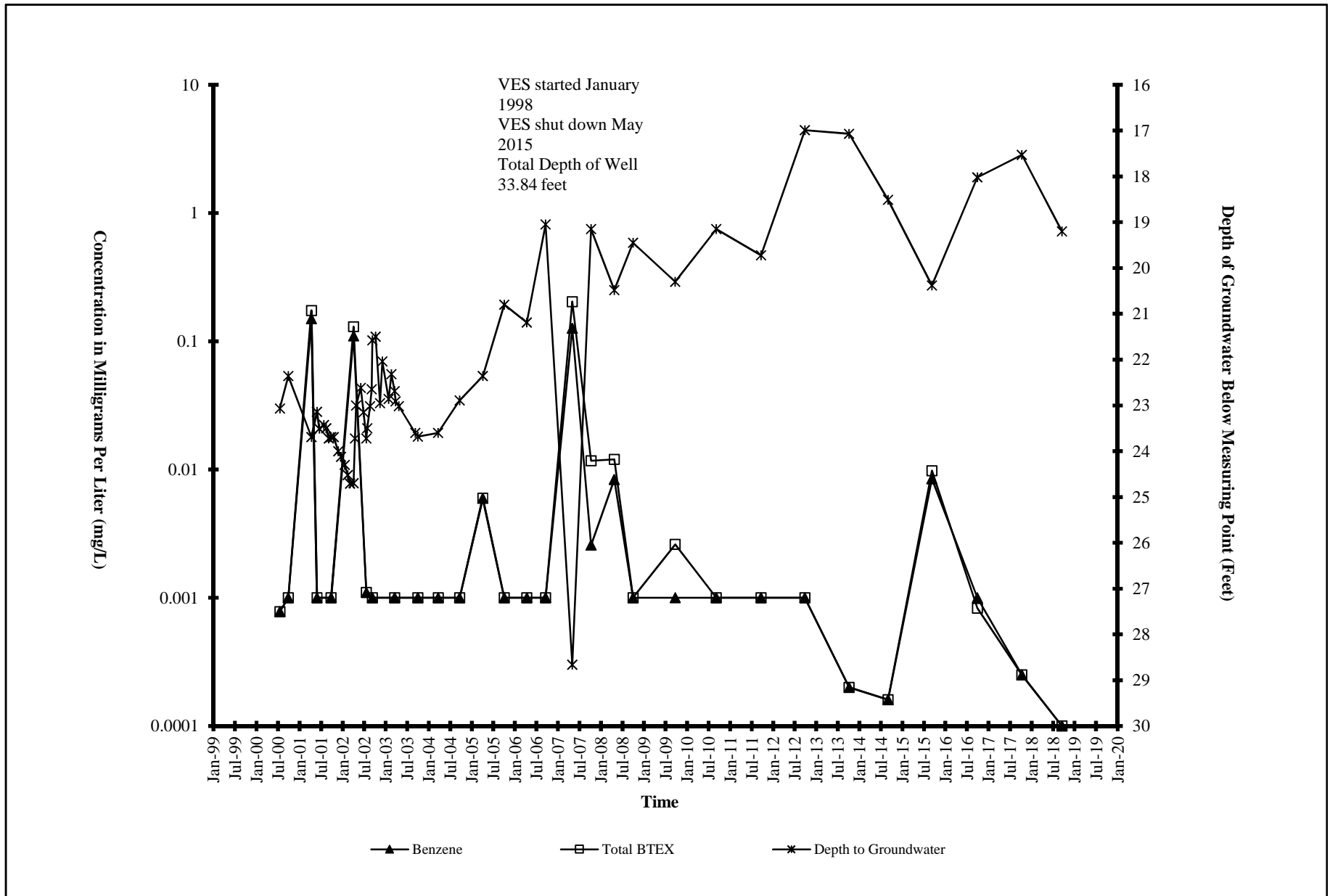
GRAPH 5 - MONITORING WELL MW-15 TRENDS

SHANNON & WILSON, INC.



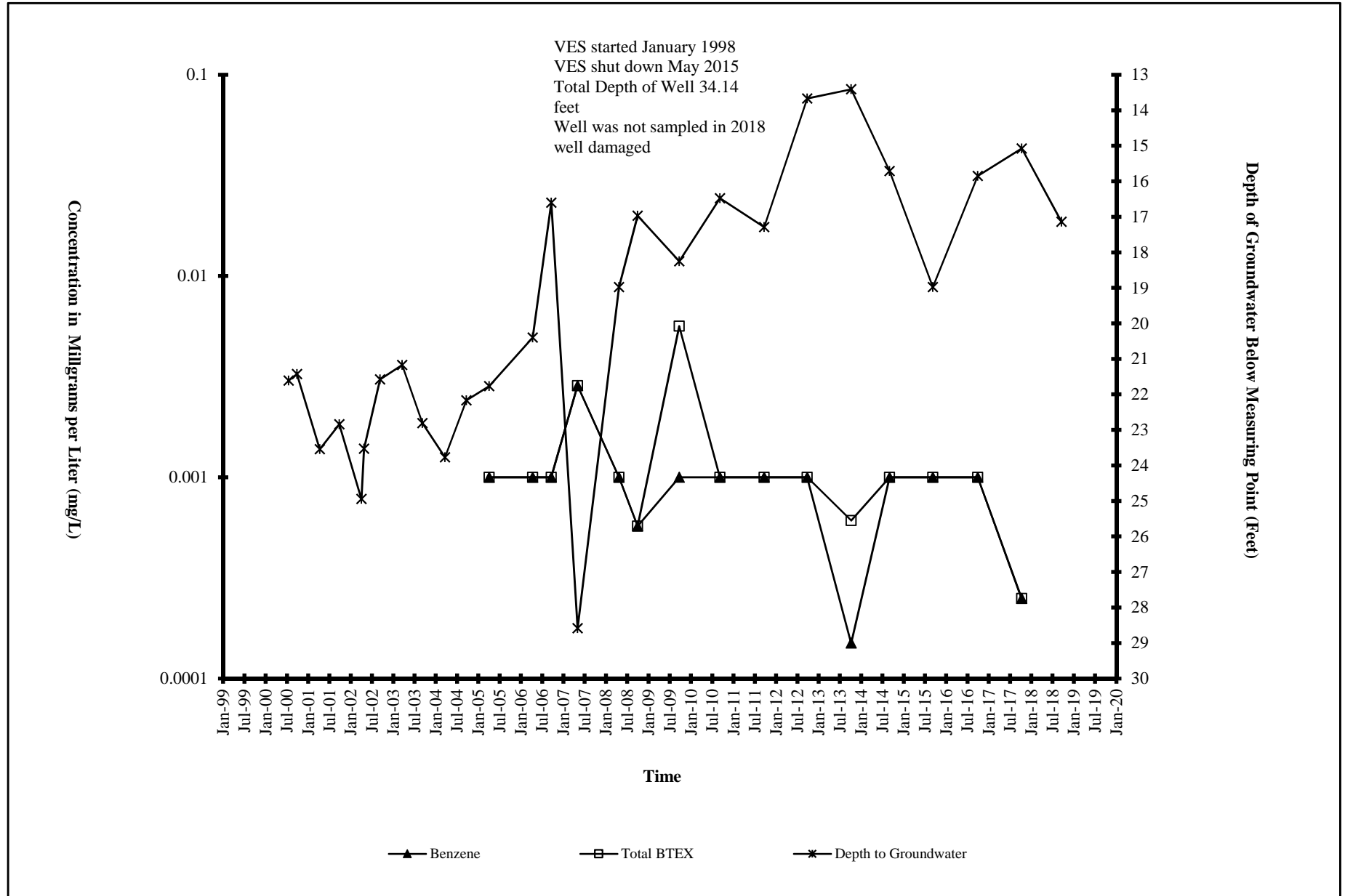
GRAPH 6 - MONITORING WELL MW-17 TRENDS

SHANNON & WILSON, INC.



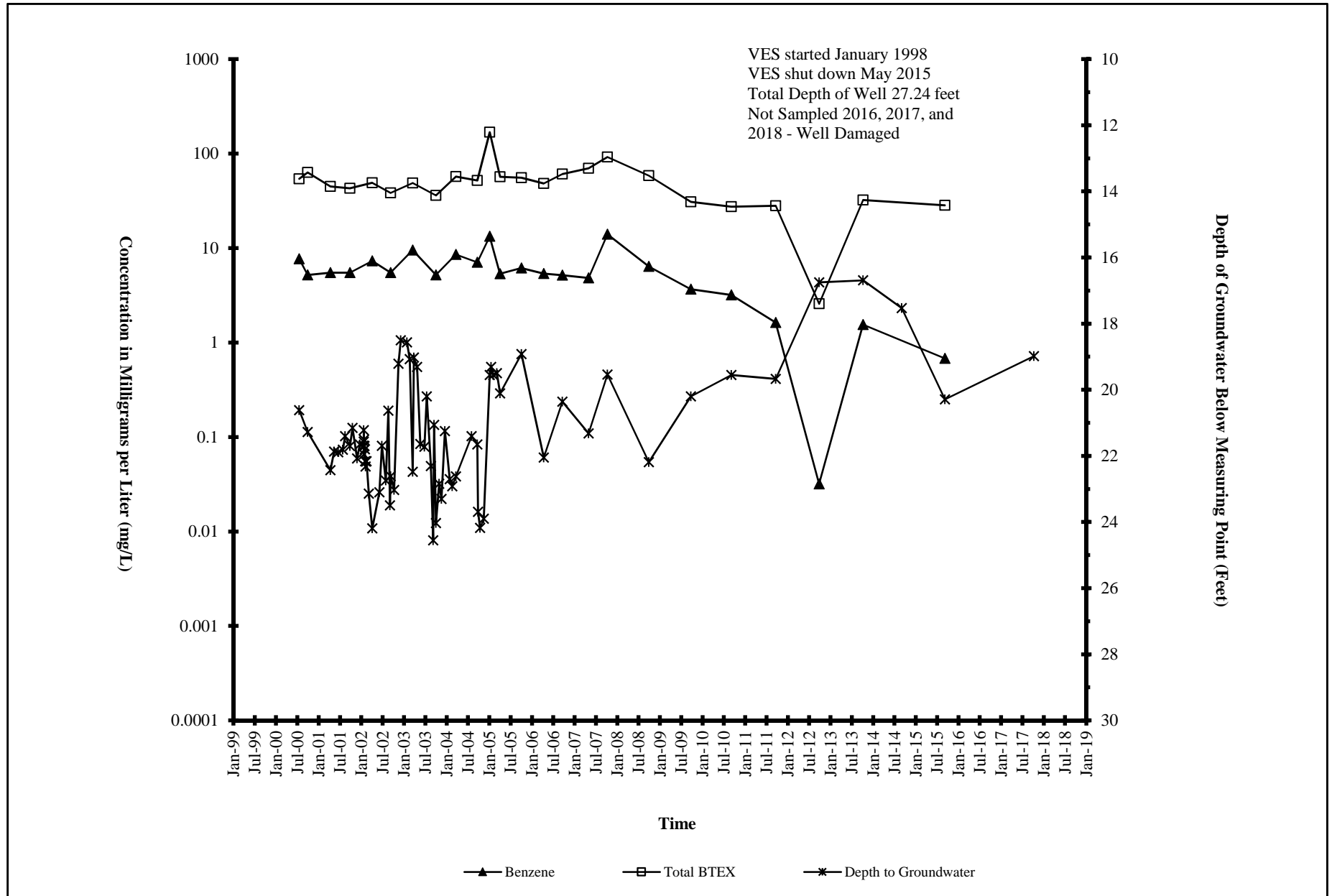
GRAPH 7 - MONITORING WELL MW-18 TRENDS

SHANNON & WILSON, INC.



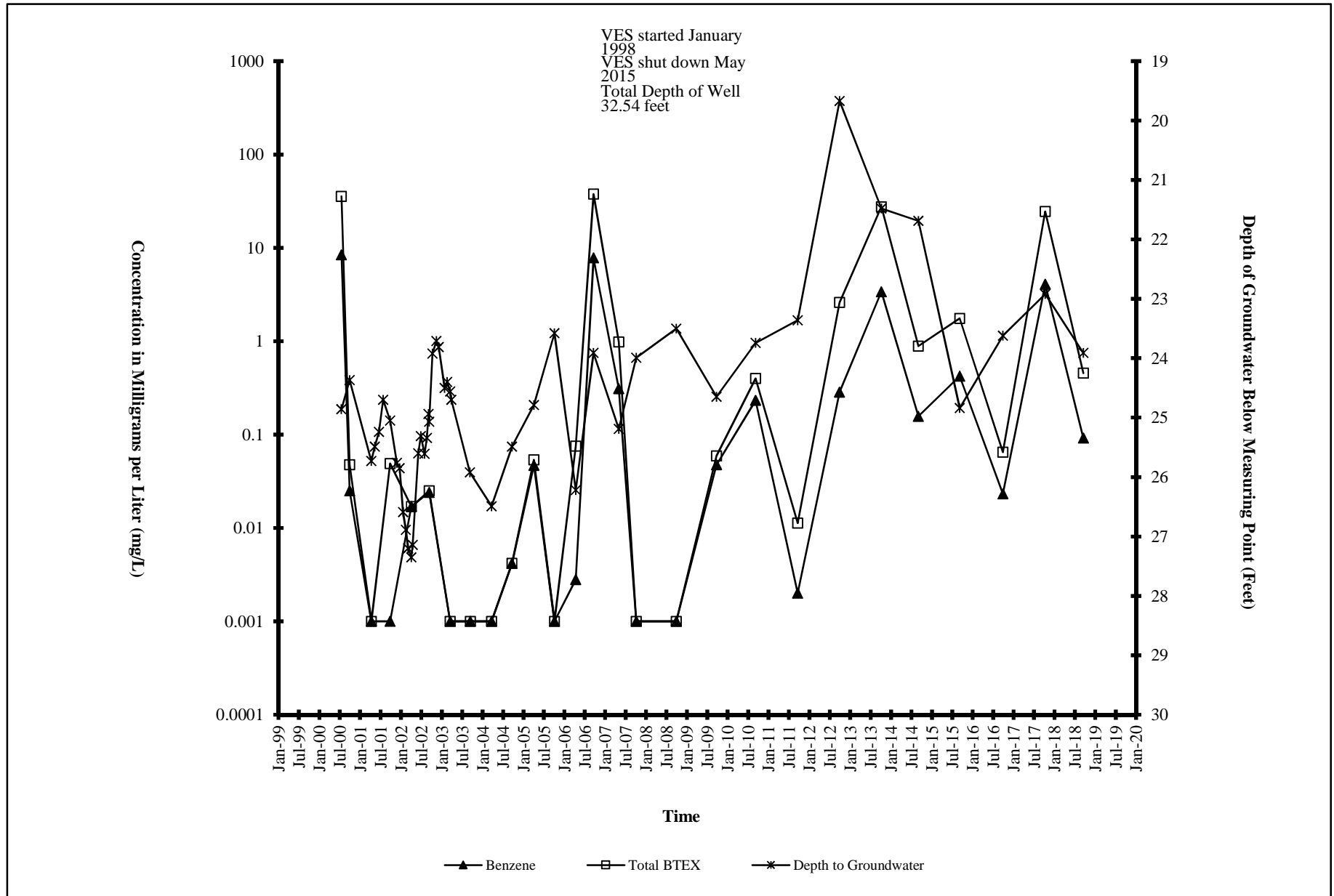
GRAPH 8 - MONITORING WELL MW-22 TRENDS

SHANNON & WILSON, INC.



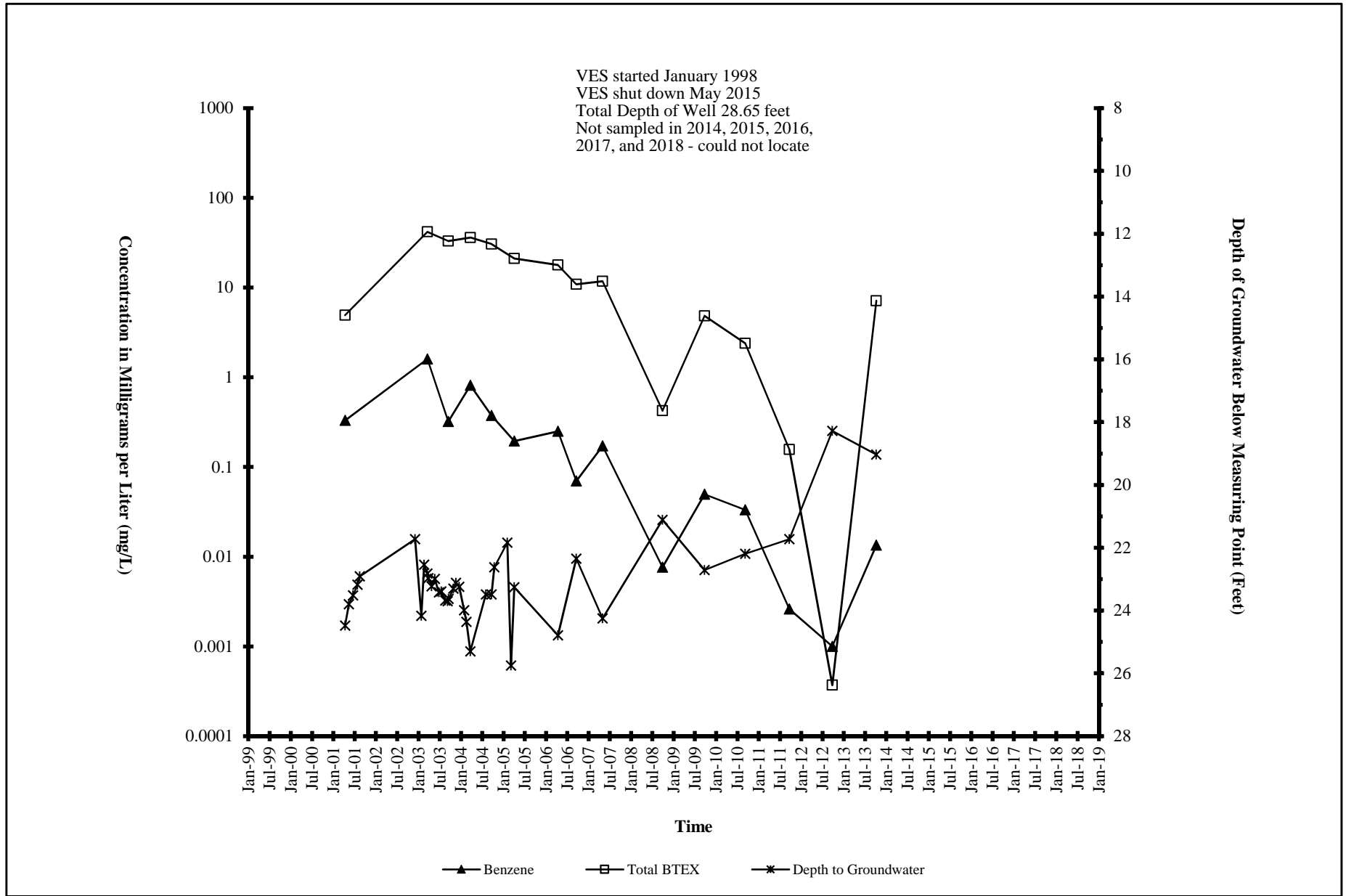
GRAPH 9 - MONITORING WELL MW-23 TRENDS

SHANNON & WILSON, INC.



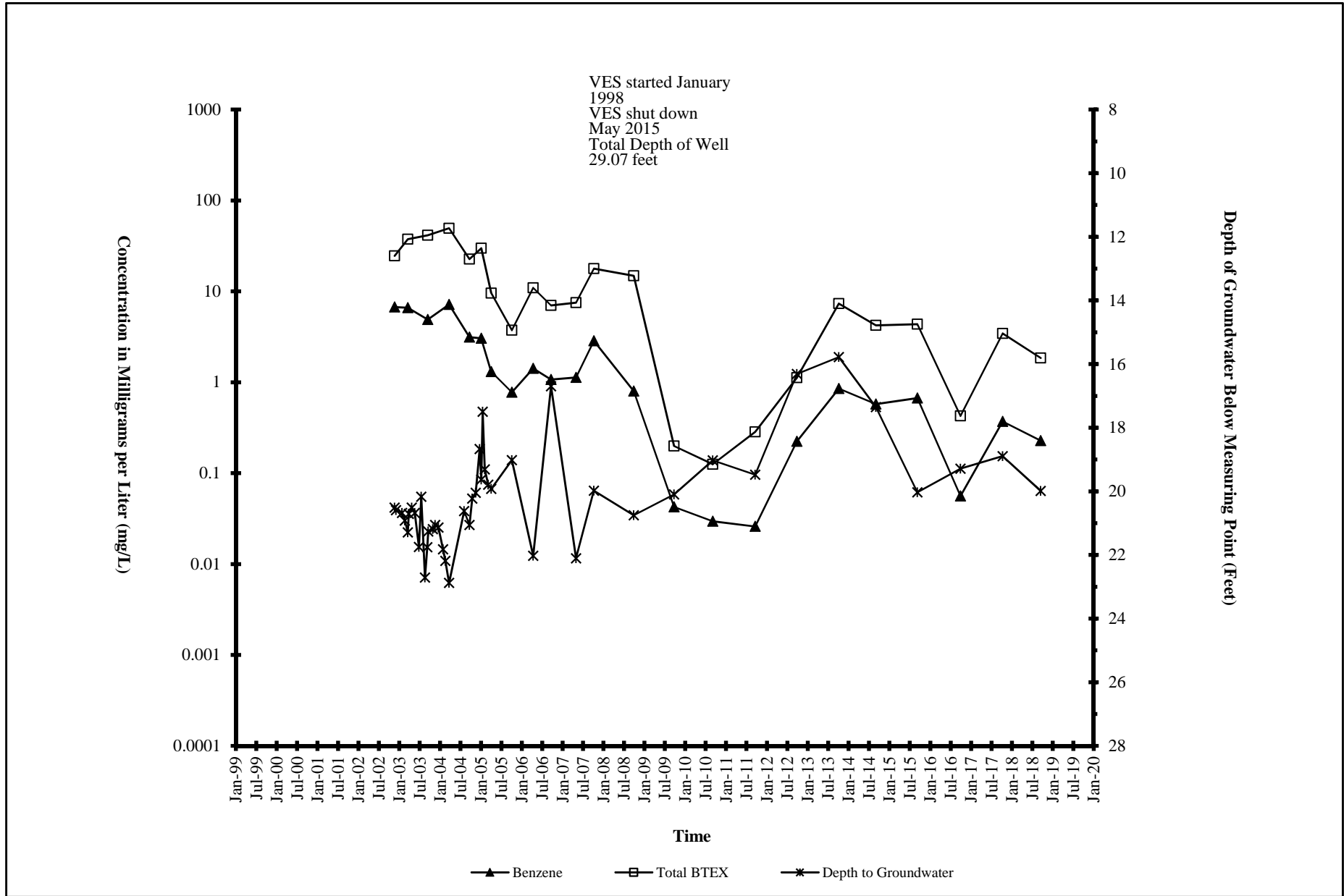
GRAPH 10 - MONITORING WELL MW-26 TRENDS

SHANNON & WILSON, INC.



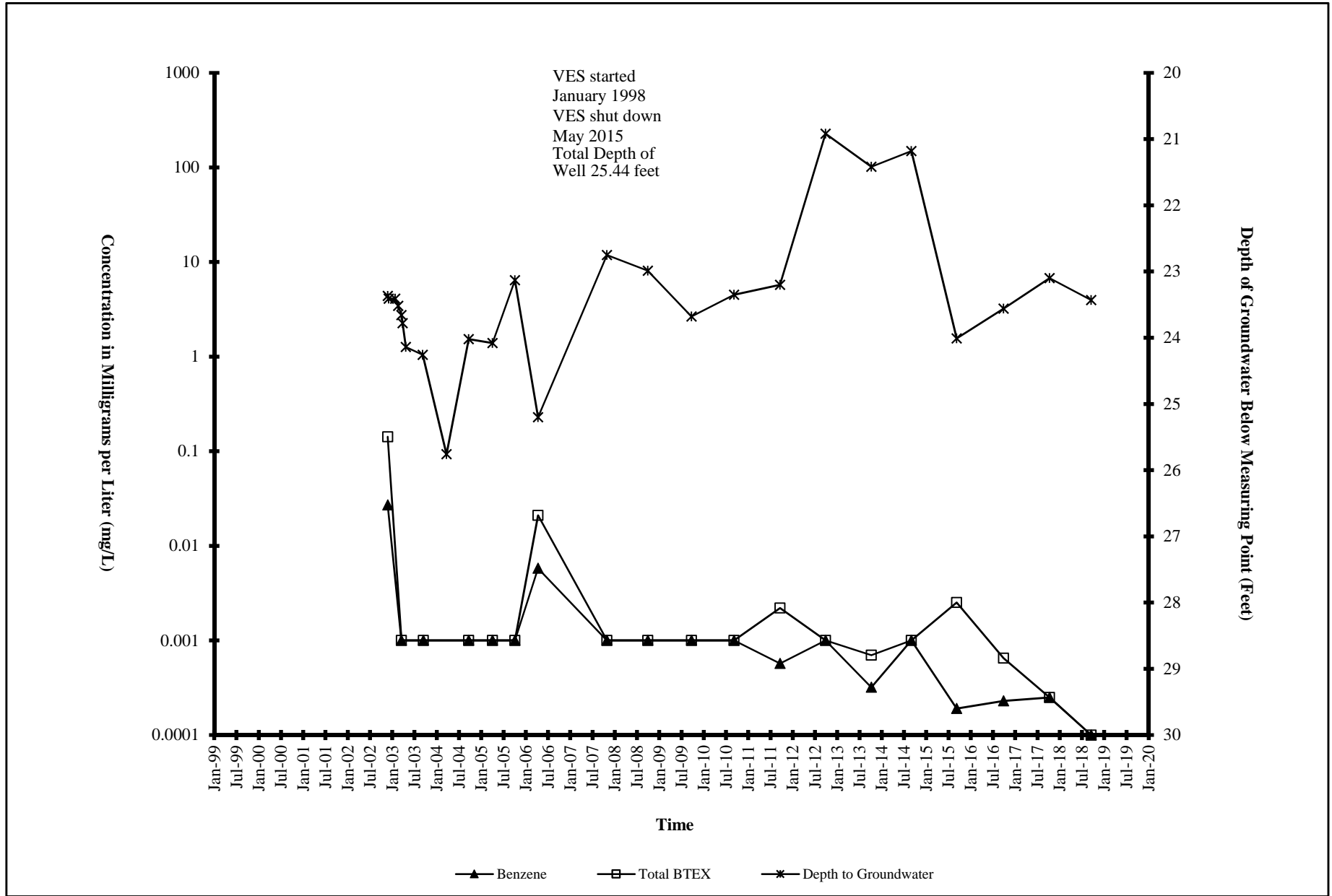
GRAPH 11 - MONITORING WELL MW-29 TRENDS

SHANNON & WILSON, INC.



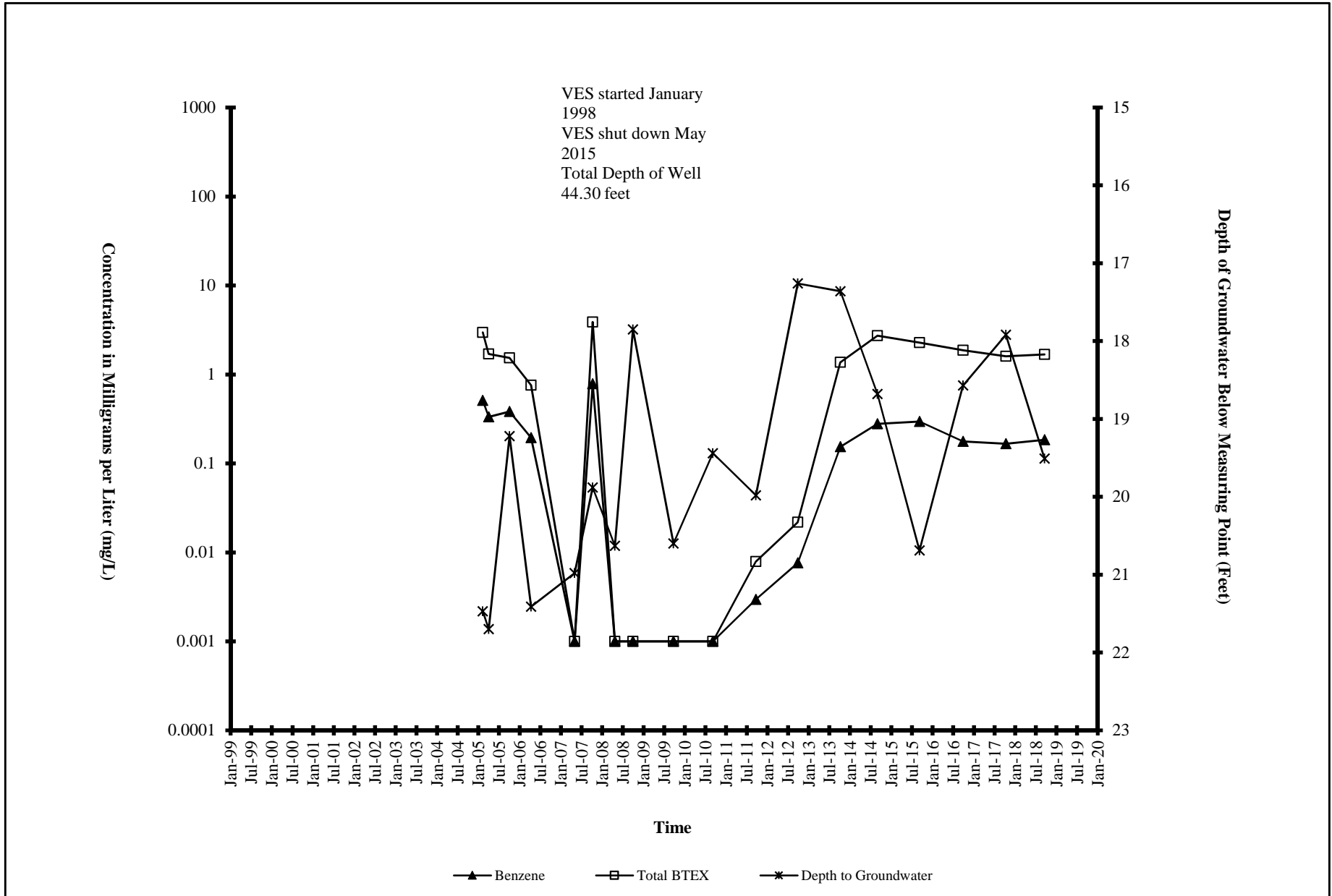
GRAPH 12 - MONITORING WELL MW-31B TRENDS

SHANNON & WILSON, INC.



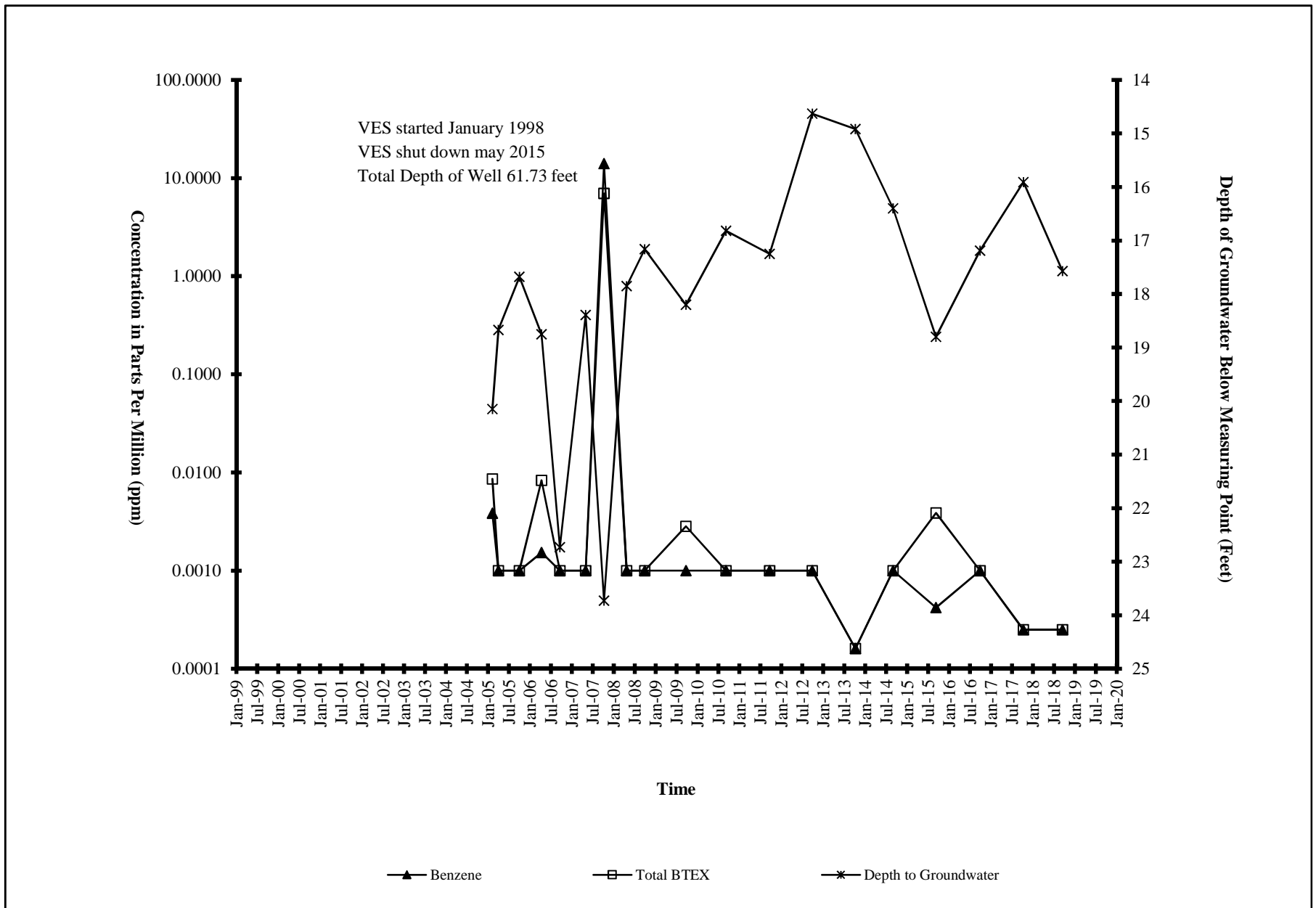
GRAPH 13 - MONITORING WELL MW-32 TRENDS

SHANNON & WILSON, INC.



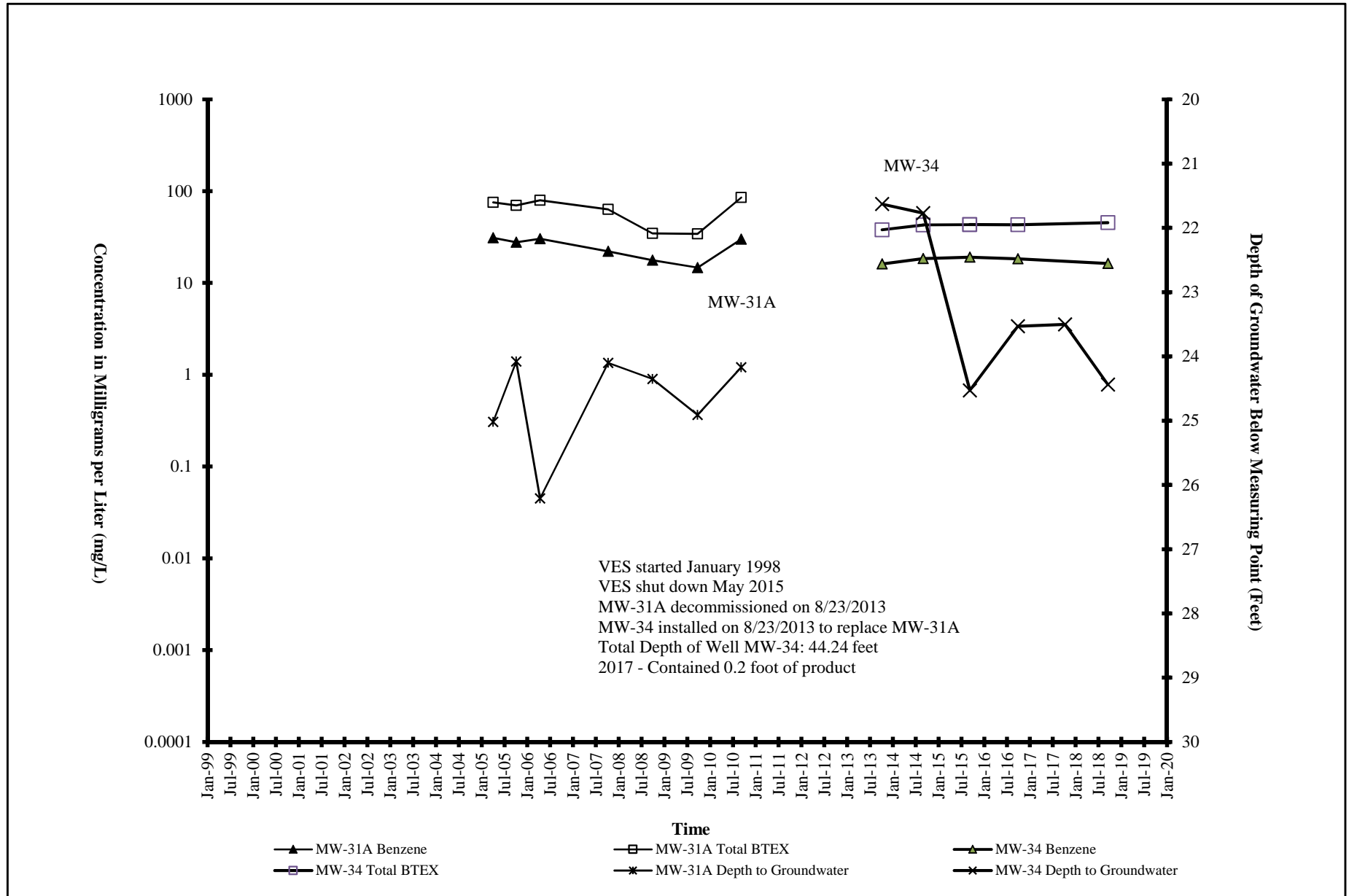
GRAPH 14 - MONITORING WELL MW-33 TRENDS

SHANNON & WILSON, INC.



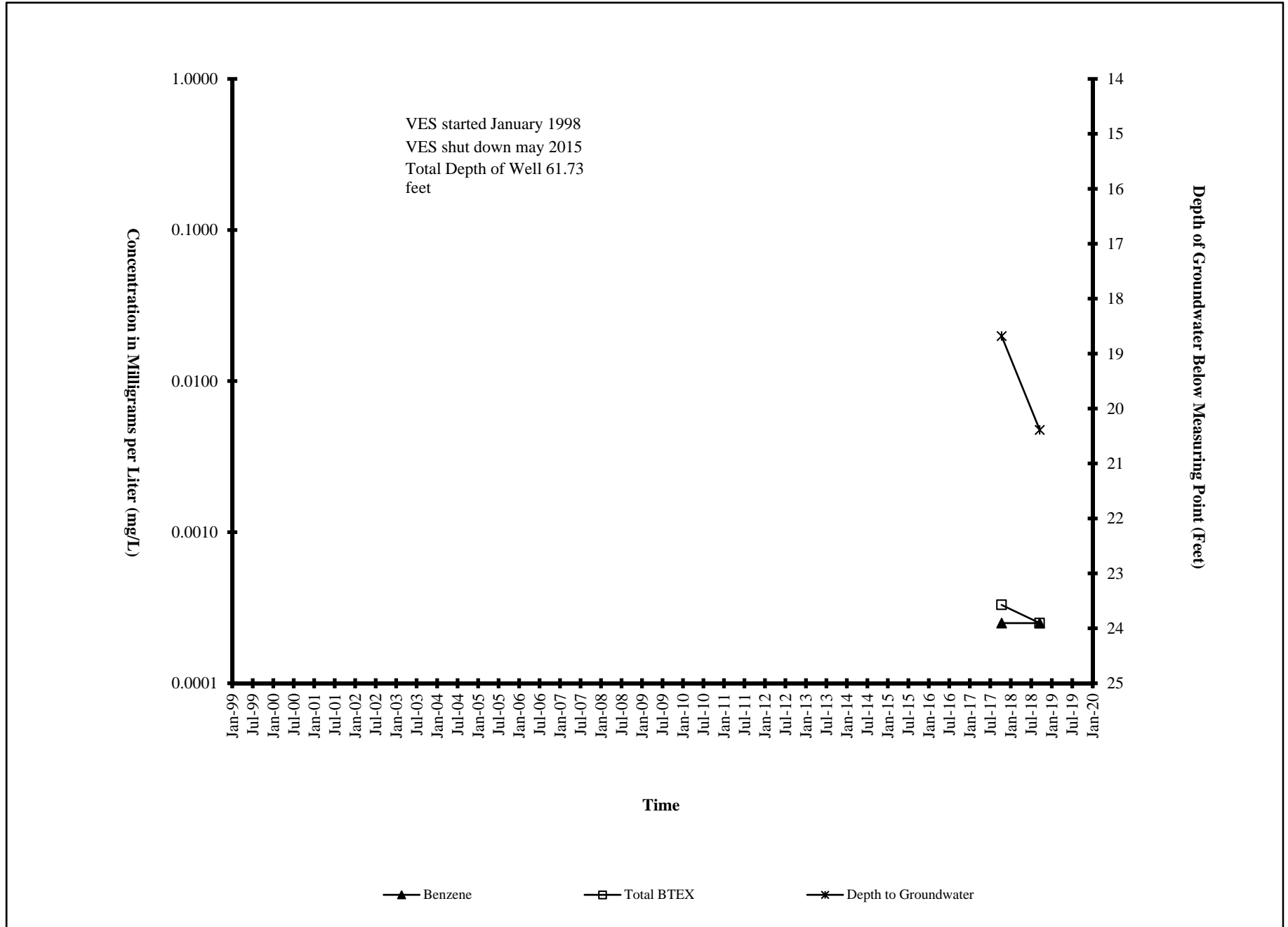
GRAPH 15 - MONITORING WELL MW-31A AND MW-34 TRENDS

SHANNON & WILSON, INC.



GRAPH 16 MONITORING WELL MW-35 TRENDS

SHANNON WILSON, INC.



ATTACHMENT 1
RESULTS OF ANALYTICAL TESTING
BY SGS NORTH AMERICA, INC
OF ANCHORAGE ALASKA
AND
ADEC LABORATORY DATA REVIEW CHECKLIST



Laboratory Report of Analysis

To: Holiday Alaska, Inc.
5430 Fairbanks St Ste 3
Anchorage, AK 99518
(907)561-2120

Report Number: **1185345**

Client Project: **Holiday Station #2 20076-021**

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

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

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

Sincerely,
SGS North America Inc.

Jillian Vlahovich
Project Manager
Jillian.Vlahovich@sgs.com

Date

Case Narrative

SGS Client: **Holiday Alaska, Inc.**
SGS Project: **1185345**
Project Name/Site: **Holiday Station #2 20076-021**
Project Contact: **Dan McMahon**

Refer to sample receipt form for information on sample condition.

20076-021-MW-14 (1185345001) PS

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

20076-021-MW-27 (1185345006) PS

8021B - Surrogate recovery for 1,4-difluorobenzene does not meet QC criteria due to matrix interference.

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

Print Date: 09/26/2018 2:16:03PM

Laboratory Qualifiers

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

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

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

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

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

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

Sample Summary

<u>Client Sample ID</u>	<u>Lab Sample ID</u>	<u>Collected</u>	<u>Received</u>	<u>Matrix</u>
20076-021-MW-14	1185345001	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-15	1185345002	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-17	1185345003	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-21	1185345004	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-23	1185345005	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-27	1185345006	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-28	1185345007	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-29	1185345008	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-31B	1185345009	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-32	1185345010	09/19/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-33	1185345011	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-34	1185345012	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
20076-021-MW-35	1185345013	09/18/2018	09/19/2018	Water (Surface, Eff., Ground)
Trip Blank	1185345014	09/17/2018	09/19/2018	Water (Surface, Eff., Ground)

Method
SW8021B

Method Description
BTEX 8021

Detectable Results Summary

Client Sample ID: **20076-021-MW-14**

Lab Sample ID: 1185345001

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	2.78	ug/L
Ethylbenzene	0.910J	ug/L
P & M -Xylene	2.03	ug/L
Toluene	0.870J	ug/L
Xylenes (total)	2.31J	ug/L

Client Sample ID: **20076-021-MW-15**

Lab Sample ID: 1185345002

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	20.6	ug/L
Ethylbenzene	9.20	ug/L
o-Xylene	0.370J	ug/L
P & M -Xylene	1.03J	ug/L
Xylenes (total)	1.40J	ug/L

Client Sample ID: **20076-021-MW-21**

Lab Sample ID: 1185345004

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	29.2	ug/L

Client Sample ID: **20076-021-MW-23**

Lab Sample ID: 1185345005

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	91.8	ug/L
Ethylbenzene	42.8	ug/L
o-Xylene	36.7	ug/L
P & M -Xylene	87.5	ug/L
Toluene	197	ug/L
Xylenes (total)	124	ug/L

Client Sample ID: **20076-021-MW-27**

Lab Sample ID: 1185345006

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	1690	ug/L
Ethylbenzene	877	ug/L
o-Xylene	19.3	ug/L
P & M -Xylene	826	ug/L
Toluene	92.1	ug/L
Xylenes (total)	846	ug/L

Client Sample ID: **20076-021-MW-28**

Lab Sample ID: 1185345007

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	3440	ug/L
Ethylbenzene	2310	ug/L
o-Xylene	3200	ug/L
P & M -Xylene	4860	ug/L
Toluene	22200	ug/L
Xylenes (total)	8060	ug/L

Print Date: 09/26/2018 2:16:06PM

Detectable Results Summary

Client Sample ID: **20076-021-MW-29**

Lab Sample ID: 1185345008

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	228	ug/L
Ethylbenzene	741	ug/L
o-Xylene	130	ug/L
P & M -Xylene	703	ug/L
Toluene	51.2	ug/L
Xylenes (total)	834	ug/L

Client Sample ID: **20076-021-MW-32**

Lab Sample ID: 1185345010

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	184	ug/L
Ethylbenzene	659	ug/L
o-Xylene	71.6	ug/L
P & M -Xylene	756	ug/L
Toluene	10.3	ug/L
Xylenes (total)	828	ug/L

Client Sample ID: **20076-021-MW-34**

Lab Sample ID: 1185345012

Volatile Fuels

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Benzene	16300	ug/L
Ethylbenzene	1960	ug/L
o-Xylene	1610	ug/L
P & M -Xylene	2380	ug/L
Toluene	19100	ug/L
Xylenes (total)	3990	ug/L

Results of 20076-021-MW-14

Client Sample ID: **20076-021-MW-14**
 Client Project ID: **Holiday Station #2 20076-021**
 Lab Sample ID: 1185345001
 Lab Project ID: 1185345

Collection Date: 09/17/18 14:41
 Received Date: 09/19/18 10:35
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	2.78	0.500	0.150	ug/L	1		09/21/18 05:51
Ethylbenzene	0.910 J	1.00	0.310	ug/L	1		09/21/18 05:51
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/18 05:51
P & M -Xylene	2.03	2.00	0.620	ug/L	1		09/21/18 05:51
Toluene	0.870 J	1.00	0.310	ug/L	1		09/21/18 05:51
Xylenes (total)	2.31 J	3.00	0.930	ug/L	1		09/21/18 05:51

Surrogates

1,4-Difluorobenzene (surr)	119	*	77-115	%	1		09/21/18 05:51
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Batch Information

Analytical Batch: VFC14441
 Analytical Method: SW8021B
 Analyst: ACL
 Analytical Date/Time: 09/21/18 05:51
 Container ID: 1185345001-A

Prep Batch: VXX33156
 Prep Method: SW5030B
 Prep Date/Time: 09/20/18 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Results of 20076-021-MW-15

Client Sample ID: **20076-021-MW-15**
 Client Project ID: **Holiday Station #2 20076-021**
 Lab Sample ID: 1185345002
 Lab Project ID: 1185345

Collection Date: 09/17/18 15:22
 Received Date: 09/19/18 10:35
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	20.6	0.500	0.150	ug/L	1		09/21/18 06:09
Ethylbenzene	9.20	1.00	0.310	ug/L	1		09/21/18 06:09
o-Xylene	0.370 J	1.00	0.310	ug/L	1		09/21/18 06:09
P & M -Xylene	1.03 J	2.00	0.620	ug/L	1		09/21/18 06:09
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/18 06:09
Xylenes (total)	1.40 J	3.00	0.930	ug/L	1		09/21/18 06:09

Surrogates

1,4-Difluorobenzene (surr)	93.1	77-115		%	1		09/21/18 06:09
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Batch Information

Analytical Batch: VFC14441
 Analytical Method: SW8021B
 Analyst: ACL
 Analytical Date/Time: 09/21/18 06:09
 Container ID: 1185345002-A

Prep Batch: VXX33156
 Prep Method: SW5030B
 Prep Date/Time: 09/20/18 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL



Results of 20076-021-MW-17

Client Sample ID: 20076-021-MW-17
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345003
Lab Project ID: 1185345

Collection Date: 09/18/18 14:22
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, and Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row includes 1,4-Difluorobenzene (surr).

Batch Information

Analytical Batch: VFC14441
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 06:27
Container ID: 1185345003-A

Prep Batch: VXX33156
Prep Method: SW5030B
Prep Date/Time: 09/20/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-21

Client Sample ID: 20076-021-MW-21
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345004
Lab Project ID: 1185345

Collection Date: 09/17/18 17:15
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, and Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row includes 1,4-Difluorobenzene (surr).

Batch Information

Analytical Batch: VFC14441
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 06:45
Container ID: 1185345004-A

Prep Batch: VXX33156
Prep Method: SW5030B
Prep Date/Time: 09/20/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-23

Client Sample ID: 20076-021-MW-23
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345005
Lab Project ID: 1185345

Collection Date: 09/18/18 12:30
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14441
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 07:03
Container ID: 1185345005-A

Prep Batch: VXX33156
Prep Method: SW5030B
Prep Date/Time: 09/20/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-27

Client Sample ID: 20076-021-MW-27
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345006
Lab Project ID: 1185345

Collection Date: 09/17/18 13:30
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14441
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 07:20
Container ID: 1185345006-A

Prep Batch: VXX33156
Prep Method: SW5030B
Prep Date/Time: 09/20/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VFC14446
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 22:08
Container ID: 1185345006-B

Prep Batch: VXX33166
Prep Method: SW5030B
Prep Date/Time: 09/21/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-28

Client Sample ID: 20076-021-MW-28
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345007
Lab Project ID: 1185345

Collection Date: 09/17/18 12:45
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14453
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/25/18 04:59
Container ID: 1185345007-C

Prep Batch: VXX33183
Prep Method: SW5030B
Prep Date/Time: 09/24/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Analytical Batch: VFC14446
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 23:02
Container ID: 1185345007-B

Prep Batch: VXX33166
Prep Method: SW5030B
Prep Date/Time: 09/21/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-29

Client Sample ID: 20076-021-MW-29
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345008
Lab Project ID: 1185345

Collection Date: 09/17/18 16:41
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14446
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 22:26
Container ID: 1185345008-B

Prep Batch: VXX33166
Prep Method: SW5030B
Prep Date/Time: 09/21/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of 20076-021-MW-31B

Client Sample ID: **20076-021-MW-31B**
 Client Project ID: **Holiday Station #2 20076-021**
 Lab Sample ID: 1185345009
 Lab Project ID: 1185345

Collection Date: 09/18/18 10:55
 Received Date: 09/19/18 10:35
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.250 U	0.500	0.150	ug/L	1		09/21/18 23:20
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:20
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:20
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/21/18 23:20
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:20
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		09/21/18 23:20

Surrogates

1,4-Difluorobenzene (surr)	96.3	77-115		%	1		09/21/18 23:20
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Batch Information

Analytical Batch: VFC14446
 Analytical Method: SW8021B
 Analyst: ACL
 Analytical Date/Time: 09/21/18 23:20
 Container ID: 1185345009-B

Prep Batch: VXX33166
 Prep Method: SW5030B
 Prep Date/Time: 09/21/18 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL



Results of 20076-021-MW-32

Client Sample ID: 20076-021-MW-32
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345010
Lab Project ID: 1185345

Collection Date: 09/19/18 08:20
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14446
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/21/18 22:44
Container ID: 1185345010-B

Prep Batch: VXX33166
Prep Method: SW5030B
Prep Date/Time: 09/21/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of 20076-021-MW-33

Client Sample ID: **20076-021-MW-33**
 Client Project ID: **Holiday Station #2 20076-021**
 Lab Sample ID: 1185345011
 Lab Project ID: 1185345

Collection Date: 09/18/18 16:35
 Received Date: 09/19/18 10:35
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.250 U	0.500	0.150	ug/L	1		09/21/18 23:38
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:38
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:38
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/21/18 23:38
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/18 23:38
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		09/21/18 23:38

Surrogates

1,4-Difluorobenzene (surr)	90.6	77-115		%	1		09/21/18 23:38
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Batch Information

Analytical Batch: VFC14446
 Analytical Method: SW8021B
 Analyst: ACL
 Analytical Date/Time: 09/21/18 23:38
 Container ID: 1185345011-A

Prep Batch: VXX33166
 Prep Method: SW5030B
 Prep Date/Time: 09/21/18 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL



Results of 20076-021-MW-34

Client Sample ID: 20076-021-MW-34
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345012
Lab Project ID: 1185345

Collection Date: 09/18/18 11:30
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14453
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/25/18 05:17
Container ID: 1185345012-C

Prep Batch: VXX33183
Prep Method: SW5030B
Prep Date/Time: 09/24/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL



Results of 20076-021-MW-35

Client Sample ID: 20076-021-MW-35
Client Project ID: Holiday Station #2 20076-021
Lab Sample ID: 1185345013
Lab Project ID: 1185345

Collection Date: 09/18/18 14:58
Received Date: 09/19/18 10:35
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by Volatile Fuels

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Rows include Benzene, Ethylbenzene, o-Xylene, P & M -Xylene, Toluene, Xylenes (total).

Surrogates

Table with 8 columns: Parameter, Result Qual, LOQ/CL, DL, Units, DF, Allowable Limits, Date Analyzed. Row: 1,4-Difluorobenzene (surr)

Batch Information

Analytical Batch: VFC14453
Analytical Method: SW8021B
Analyst: ACL
Analytical Date/Time: 09/25/18 05:35
Container ID: 1185345013-B

Prep Batch: VXX33183
Prep Method: SW5030B
Prep Date/Time: 09/24/18 08:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of Trip Blank

Client Sample ID: **Trip Blank**
 Client Project ID: **Holiday Station #2 20076-021**
 Lab Sample ID: 1185345014
 Lab Project ID: 1185345

Collection Date: 09/17/18 12:45
 Received Date: 09/19/18 10:35
 Matrix: Water (Surface, Eff., Ground)
 Solids (%):
 Location:

Results by Volatile Fuels

<u>Parameter</u>	<u>Result Qual</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Allowable Limits</u>	<u>Date Analyzed</u>
Benzene	0.250 U	0.500	0.150	ug/L	1		09/21/18 20:56
Ethylbenzene	0.500 U	1.00	0.310	ug/L	1		09/21/18 20:56
o-Xylene	0.500 U	1.00	0.310	ug/L	1		09/21/18 20:56
P & M -Xylene	1.00 U	2.00	0.620	ug/L	1		09/21/18 20:56
Toluene	0.500 U	1.00	0.310	ug/L	1		09/21/18 20:56
Xylenes (total)	1.50 U	3.00	0.930	ug/L	1		09/21/18 20:56

Surrogates

1,4-Difluorobenzene (surr)	92.9	77-115		%	1		09/21/18 20:56
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Batch Information

Analytical Batch: VFC14446
 Analytical Method: SW8021B
 Analyst: ACL
 Analytical Date/Time: 09/21/18 20:56
 Container ID: 1185345014-A

Prep Batch: VXX33166
 Prep Method: SW5030B
 Prep Date/Time: 09/21/18 08:00
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1786419 [VXX/33156]
 Blank Lab ID: 1477066

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
 1185345001, 1185345002, 1185345003, 1185345004, 1185345005, 1185345006

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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
Xylenes (total)	1.50U	3.00	0.930	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	93.8	77-115		%

Batch Information

Analytical Batch: VFC14441
 Analytical Method: SW8021B
 Instrument: Agilent 7890A PID/FID
 Analyst: ACL
 Analytical Date/Time: 9/20/2018 4:08:00PM

Prep Batch: VXX33156
 Prep Method: SW5030B
 Prep Date/Time: 9/20/2018 8:00:00AM
 Prep Initial Wt./Vol.: 5 mL
 Prep Extract Vol: 5 mL

Print Date: 09/26/2018 2:16:10PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1185345 [VXX33156]
 Blank Spike Lab ID: 1477067
 Date Analyzed: 09/20/2018 16:44

Spike Duplicate ID: LCSD for HBN 1185345 [VXX33156]
 Spike Duplicate Lab ID: 1477068
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1185345001, 1185345002, 1185345003, 1185345004, 1185345005, 1185345006

Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	106	106	100	101	101	(80-120)	4.50	(< 20)
Ethylbenzene	100	104	104	100	104	104	(75-125)	0.52	(< 20)
o-Xylene	100	104	104	100	106	106	(80-120)	2.10	(< 20)
P & M -Xylene	200	207	104	200	210	105	(75-130)	1.40	(< 20)
Toluene	100	102	102	100	99.1	99	(75-120)	3.00	(< 20)
Xylenes (total)	300	311	104	300	316	105	(79-121)	1.60	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	50	104	104	50	101	101	(77-115)	3.00	

Batch Information

Analytical Batch: **VFC14441**
 Analytical Method: **SW8021B**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ACL**

Prep Batch: **VXX33156**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/20/2018 08:00**
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



Method Blank

Blank ID: MB for HBN 1786495 [VXX/33166]
Blank Lab ID: 1477408

Matrix: Water (Surface, Eff., Ground)

QC for Samples:

1185345006, 1185345007, 1185345008, 1185345009, 1185345010, 1185345011, 1185345014

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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
Xylenes (total)	1.50U	3.00	0.930	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	97.6	77-115		%

Batch Information

Analytical Batch: VFC14446
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ACL
Analytical Date/Time: 9/21/2018 10:47:00AM

Prep Batch: VXX33166
Prep Method: SW5030B
Prep Date/Time: 9/21/2018 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/26/2018 2:16:13PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1185345 [VXX33166]
 Blank Spike Lab ID: 1477409
 Date Analyzed: 09/21/2018 11:23

Spike Duplicate ID: LCSD for HBN 1185345 [VXX33166]
 Spike Duplicate Lab ID: 1477410
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1185345006, 1185345007, 1185345008, 1185345009, 1185345010, 1185345011, 1185345014

Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	108	108	100	106	106	(80-120)	2.40	(< 20)
Ethylbenzene	100	108	108	100	105	105	(75-125)	3.30	(< 20)
o-Xylene	100	106	106	100	103	103	(80-120)	3.10	(< 20)
P & M -Xylene	200	212	106	200	206	103	(75-130)	3.20	(< 20)
Toluene	100	104	104	100	102	102	(75-120)	1.80	(< 20)
Xylenes (total)	300	319	106	300	309	103	(79-121)	3.20	(< 20)
Surrogates									
1,4-Difluorobenzene (surr)	50	103	103	50	103	103	(77-115)	0.31	

Batch Information

Analytical Batch: **VFC14446**
 Analytical Method: **SW8021B**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ACL**

Prep Batch: **VXX33166**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/21/2018 08:00**
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



Method Blank

Blank ID: MB for HBN 1786678 [VXX/33183]
Blank Lab ID: 1477952

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1185345007, 1185345012, 1185345013

Results by SW8021B

<u>Parameter</u>	<u>Results</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>
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
Xylenes (total)	1.50U	3.00	0.930	ug/L
Surrogates				
1,4-Difluorobenzene (surr)	91.7	77-115		%

Batch Information

Analytical Batch: VFC14453
Analytical Method: SW8021B
Instrument: Agilent 7890A PID/FID
Analyst: ACL
Analytical Date/Time: 9/24/2018 8:58:00AM

Prep Batch: VXX33183
Prep Method: SW5030B
Prep Date/Time: 9/24/2018 8:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 09/26/2018 2:16:15PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1185345 [VXX33183]
 Blank Spike Lab ID: 1477953
 Date Analyzed: 09/24/2018 13:45

Spike Duplicate ID: LCSD for HBN 1185345 [VXX33183]
 Spike Duplicate Lab ID: 1477954
 Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1185345007, 1185345012, 1185345013

Results by SW8021B

Parameter	Blank Spike (ug/L)			Spike Duplicate (ug/L)			CL	RPD (%)	RPD CL
	Spike	Result	Rec (%)	Spike	Result	Rec (%)			
Benzene	100	97.5	98	100	102	102	(80-120)	4.10	(< 20)
Ethylbenzene	100	91.7	92	100	98.3	98	(75-125)	7.00	(< 20)
o-Xylene	100	95.3	95	100	101	101	(80-120)	5.40	(< 20)
P & M -Xylene	200	184	92	200	195	97	(75-130)	5.60	(< 20)
Toluene	100	93.3	93	100	95.2	95	(75-120)	2.00	(< 20)
Xylenes (total)	300	280	93	300	295	99	(79-121)	5.50	(< 20)

Surrogates

1,4-Difluorobenzene (surr)	50	101	101	50	107	107	(77-115)	6.40	
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Batch Information

Analytical Batch: **VFC14453**
 Analytical Method: **SW8021B**
 Instrument: **Agilent 7890A PID/FID**
 Analyst: **ACL**

Prep Batch: **VXX33183**
 Prep Method: **SW5030B**
 Prep Date/Time: **09/24/2018 08:00**
 Spike Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL
 Dupe Init Wt./Vol.: 100 ug/L Extract Vol: 5 mL



SGS North America Inc.
CHAIN OF CUSTODY RECORD

REVIEWED S.D

1185345



Locations Nationwide
 ka Maryland
 Jersey New York
 h Carolina Indiana
 t Virginia Kentucky
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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 1 of 2

Section 1

CLIENT: Shannon + Wilson
 CONTACT: Schuyler Healy
 PROJECT: 907-433-3237
 PHONE NO: 443-605-4098
 PWSID/ PERMIT#: 20070-021
 PROJECT: 20070-021
 NAME: 20070-021
 REPORTS TO: E-MAIL: [Don McMahon Don.McMahon@emissions.com](mailto:Don.McMahon@emissions.com)
 INVOICE TO: QUOTE #: P.O. #:

Section 2

RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	Type C = COMP G = GRAB MI = Incre- mental Soils	#	C O N T A I N E R S	HCL	Preservative	REMARKS/ LOC ID
① A-C	20070-021-MW-14	9/17/18	14:41			3				
② A-C	-15	9/17/18	15:22							
③ A-C	-17	9/18/18	14:22							
④ A-C	-21	9/17/18	17:15							
⑤ A-C	-23	9/18/18	12:30							
⑥ A-C	-27	9/17/18	13:30							
⑦ A-C	-28	9/17/18	12:45							
⑧ A-C	-29	9/17/18	16:41							
⑨ A-C	-310	9/18/18	10:55							
⑩ A-C	-32	9/19/18	8:20							

Section 3

Relinquished By: (1) *[Signature]* Received By: *[Signature]*
 Relinquished By: (2) *[Signature]* Received By: *[Signature]*
 Relinquished By: (3) *[Signature]* Received By: *[Signature]*
 Relinquished By: (4) *[Signature]* Received By: *[Signature]*

Section 4

Section 4 DOD Project? Yes No
 Cooler ID: _____
 Requested Turnaround Time and/or Special Instructions: _____

Section 5

Temp Blank °C: 10 D35
 or Ambient []
 Chain of Custody Seal: (Circle) ABSENT
 INTACT BROKEN
 (See attached Sample Receipt Form) (See attached Sample Receipt Form)



SGS North America Inc.
CHAIN OF CUSTODY RECORD

1185345



Locations Nationwide
 ka Maryland
 Jersey New York
 h Carolina Indiana
 t Virginia Kentucky
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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Page 2 of 2

CLIENT: Shannon + Wilson CONTACT: Schryer Healy PROJECT NAME: Holiday Station #2 REPORTS TO: Schryer Healy INVOICE TO: Schryer Healy		PHONE NO: 907-433-3299 PROJECT PWSID/PERMIT#: 443-605-4098 E-MAIL: Sshannon@shannonwil.com QUOTE #: 20070-024 P.O. #:		Section 3 Preservative Type: C=COMP, G=GRAB, MI=Multi-Incremental Soils # CONTAINERS: 3 HCL BT EX 3 ↓		Section 4 DOD Project? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		Data Deliverable Requirements:	
RESERVED for lab use (1) A-C 20070-021-MW-32 (2) A-C ↓-34 (3) A-C ↓-35 (4) A-C		DATE mm/dd/yy 9/18/18 10:35 9/18/18 11:30 9/18/18 14:54		MATRIX/MATRIX CODE 		Section 5 Relinquished By: (1) [Signature] Relinquished By: (2) [Signature] Relinquished By: (3) [Signature] Relinquished By: (4) [Signature]		Cooler ID: Requested Turnaround Time and/or Special Instructions:	
Relinquished By: (1) [Signature] Relinquished By: (2) [Signature] Relinquished By: (3) [Signature] Relinquished By: (4) [Signature]		Date 9/19/18 10:33 		Received By: 		Chain of Custody Seal: (Circle) <input checked="" type="radio"/> D INTACT <input type="checkbox"/> BROKEN <input checked="" type="checkbox"/>		Temp Blank °C: 10 D35 or Ambient [] (See attached Sample Receipt Form)	

http://www.sgs.com/terms-and-conditions

[] 200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fax: (907) 561-5301
 [] 5500 Business Drive Wilmington, NC 28405 Tel: (910) 350-1903 Fax: (910) 350-1557



e-Sample Receipt Form

SGS Workorder #:

1185345



1 1 8 5 3 4 5

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements	YES	Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	ABSENT
COC accompanied samples?	YES	
N/A **Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required		
Temperature blank compliant* (i.e., 0-6 °C after CF)?	YES	Cooler ID: 1 @ 1.0 °C Therm. ID: D35
	N/A	Cooler ID: @ °C Therm. ID:
	N/A	Cooler ID: @ °C Therm. ID:
	N/A	Cooler ID: @ °C Therm. ID:
	N/A	Cooler ID: @ °C Therm. ID:
*If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
If samples received <u>without</u> a temperature blank, the "cooler temperature" will be documented in lieu of the temperature blank & "COOLER TEMP" will be noted to the right. In cases where neither a temp blank nor cooler temp can be obtained, note "ambient" or "chilled".		
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	YES	
Do samples match COC ** (i.e., sample IDs, dates/times collected)?	NO	See Notes.
**Note: If times differ <1hr, record details & login per COC.		
Were analyses requested unambiguous? (i.e., method is specified for analyses with >1 option for analysis)	YES	Logged in for BTEX 8021 per containers.
Were proper containers (type/mass/volume/preservative***) used?	N/A	***Exemption permitted for metals (e.g. 200.8/6020A).
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	YES	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	YES	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	
Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.		
Additional notes (if applicable):		
Sample 10C is labelled 20076-021-MW-33 on label and 20076-021-MW-32 on COC. Matched up by time taken. Sample 13C label is illegible. Matched by process of elimination. Logged in per COC per JKV.		



Sample Containers and Preservatives

<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>	<u>Container Id</u>	<u>Preservative</u>	<u>Container Condition</u>
1185345001-A	HCL to pH < 2	OK			
1185345001-B	HCL to pH < 2	OK			
1185345001-C	HCL to pH < 2	OK			
1185345002-A	HCL to pH < 2	OK			
1185345002-B	HCL to pH < 2	OK			
1185345002-C	HCL to pH < 2	OK			
1185345003-A	HCL to pH < 2	OK			
1185345003-B	HCL to pH < 2	OK			
1185345003-C	HCL to pH < 2	OK			
1185345004-A	HCL to pH < 2	OK			
1185345004-B	HCL to pH < 2	OK			
1185345004-C	HCL to pH < 2	OK			
1185345005-A	HCL to pH < 2	OK			
1185345005-B	HCL to pH < 2	OK			
1185345005-C	HCL to pH < 2	OK			
1185345006-A	HCL to pH < 2	OK			
1185345006-B	HCL to pH < 2	OK			
1185345006-C	HCL to pH < 2	OK			
1185345007-A	HCL to pH < 2	OK			
1185345007-B	HCL to pH < 2	OK			
1185345007-C	HCL to pH < 2	OK			
1185345008-A	HCL to pH < 2	OK			
1185345008-B	HCL to pH < 2	OK			
1185345008-C	HCL to pH < 2	OK			
1185345009-A	HCL to pH < 2	OK			
1185345009-B	HCL to pH < 2	OK			
1185345009-C	HCL to pH < 2	OK			
1185345010-A	HCL to pH < 2	OK			
1185345010-B	HCL to pH < 2	OK			
1185345010-C	HCL to pH < 2	OK			
1185345011-A	HCL to pH < 2	OK			
1185345011-B	HCL to pH < 2	OK			
1185345011-C	HCL to pH < 2	OK			
1185345012-A	HCL to pH < 2	OK			
1185345012-B	HCL to pH < 2	OK			
1185345012-C	HCL to pH < 2	OK			
1185345013-A	HCL to pH < 2	OK			
1185345013-B	HCL to pH < 2	OK			
1185345013-C	HCL to pH < 2	OK			
1185345014-A	HCL to pH < 2	OK			
1185345014-B	HCL to pH < 2	OK			
1185345014-C	HCL to pH < 2	OK			

Container Id

Preservative

Container
Condition

Container Id

Preservative

Container
Condition

Container Condition Glossary

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

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

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

DM - The container was received damaged.

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

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

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

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

LABORATORY DATA REVIEW CHECKLIST

Completed by: Schylar Healy

Title: Environmental Scientist

Date: October 2018

CS Report Name: 2018 Groundwater Monitoring, Holiday Station No. 602, 10630 Old Seward Highway, Anchorage, Alaska

Laboratory Report Date: September 27, 2018

Consultant Firm: Shannon & Wilson, Inc.

Laboratory Name: SGS North America Inc.

Laboratory Report Number: 1185345

ADEC File Number: 2100.26.018

ADEC RecKey Number: NA

(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** (please explain)
Comments: *Samples were not transferred.*

2. Chain of Custody (COC)

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

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

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)? **Yes** / No / NA (please explain)
Comments: *The cooler temperature blank was documented at 1.0 degrees Celsius.*

- b. Sample preservation acceptable - acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)? **Yes** / No / NA (please explain)

Comments:

- c. Sample condition documented - broken, leaking (Methanol), zero headspace (VOC vials)? **Yes** / No / NA (please explain)

Comments: *No discrepancies noted.*

- d. If there were any discrepancies, were they documented? – For example, incorrect sample containers/preservation, sample temperature outside acceptance range, insufficient or missing samples, etc.? **Yes** / No / NA (please explain)

Comments: *Sample 10C is labelled 20076-021-MW-33 on label and 20076-021-MW-32 on COC. Matched up by time taken. Sample 13C label is illegible. Matched by process of elimination.*

- e. Data quality or usability affected? Please explain.

Comments: *The laboratory was able to analyze the correct samples. Therefore, data usability is not affected.*

4. Case Narrative

- a. Present and understandable? **Yes** / No / NA (please explain)

Comments:

- b. Discrepancies, errors or QC failures identified by the lab? **Yes** / No / NA (please explain)

Comments: *The laboratory noted the following:*

- *Sample MW-14: 8021B - Surrogate recovery for 1,4-difluorobenzene (103%) does not meet QC criteria due to matrix interference.*
- *Sample MW-27: 8021B - Surrogate recovery for 1,4-difluorobenzene (136%) does not meet QC criteria due to matrix interference.*

- c. Were corrective actions documented? Yes / **No** / NA (please explain)

Comments: *Corrective actions were not noted.*

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

Comments: *The case narrative does not comment on data quality/usability.*

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:

All soils reported on a dry weight basis? Yes / No / **NA** (please explain)

Comments: *No soil samples submitted as part of this project.*

- c. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / No / NA (please explain)

Comments:

- d. Data quality or usability affected? **NA** Please explain.

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:

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

Comments:

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

Yes / No / **NA** (please explain)

Comments:

- v. Data quality or usability affected? Please explain. **NA**

Comments:

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: *No metal/inorganic samples analyzed.*

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

Comments:

iv. Precision – All relative percent differences (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%, VOCs 20%; all other analyses see the laboratory QC pages) **Yes** / No / NA (please explain)

Comments:

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

Comments:

vi. Do the affected samples(s) have data flags? If so, are the data flags clearly defined? **Yes** / No / **NA** (please explain)

Comments:

vii. Data quality or usability affected? Please explain. **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: *The 1,4-difluorobenzene (BTEX surrogate) recoveries for Samples MW-14 and MW-27 were 103%. and 136%, respectively.*

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined? **Yes** / No / NA (please explain)

Comments: *The affected samples were flagged “J+” on Table 2 and Figure 1.*

iv. Data quality or usability affected? Please explain. **NA**

Comments: *Although the BTEX results are potentially biased high, the results are consistent with recent results and are considered usable for the purpose of the project.*

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

i. One trip blank reported per matrix, analysis and cooler? (If not, enter explanation below.) **Yes** / No / NA (please explain)

Comments:

- ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment stating why must be entered below.) **Yes** / **No** / **NA** (please explain)

Comments: *Only one cooler was used to store and transport the samples.*

- 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? Please explain. **NA**

Comments:

e. Field Duplicate

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

Yes / **No** / **NA** (please explain)

Comments: *Field duplicates are not collected as part of this ongoing project.*

- ii. 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? Please explain. **NA**

Comments:

f. Decontamination or Equipment Blank (if not applicable)

Yes / **No** / **NA** (please explain)

Comments: *The use of a decontamination or equipment blank was beyond the scope of this project.*

- i. All results less than LOQ? **Yes** / **No** / **NA** (please explain)

Comments:

- ii. If above LOQ, what samples are affected? **NA**

Comments:

- iii. Data quality or usability affected? Please explain. **NA**

Comments:

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

- a. Defined and appropriate? **Yes** / **No** / **NA** (please explain)

Comments: *A key is provided on page 3 of the laboratory report.*

ATTACHMENT 2
NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE MANIFEST

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

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NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. EXEMPT		Manifest Document No. 131328		2. Page 1 of 1	
3. Generator's Name and Mailing Address HOLIDAY COMPANY PO BOX 1224 MINNEAPOLIS, MN 55440 4. Generator's Phone (907) 351-4385				HOLIDAY STATION # 602 10630 OLD SEWARD HIGHWAY ANCHORAGE, AK 99515			
5. Transporter 1 Company Name NRC ALASKA LLC		6. US EPA ID Number AKR000004184		A. State Transporter's ID 907 258 1558		B. Transporter 1 Phone	
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 NRC ALASKA LLC 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		13. Total Quantity	
HM				No. Type		14. Unit Wt./Vol.	
a. UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (BENZENE), 9, PGIII ERG#171				3 DM		1100 P	
b.							
c.							
d.							
G. Additional Descriptions for Materials Listed Above EA0306 WATER CONTAMINATED WITH BENZENE				H. Handling Codes for Wastes Listed Above D 9687			
15. Special Handling Instructions and Additional Information Shipper's Certification: This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation							
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 Schylor Healy				Signature <i>[Signature]</i>		Date 3 27 1997	
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name ROY C TRISWALE JR		Signature <i>[Signature]</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature	
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		Signature	
						Date	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY