

February 25, 2010

Holiday Alaska, Inc.  
P.O. Box 1224  
4567 American Boulevard West  
Minneapolis, MN 55437

Attn: Mr. Bruce Anthony

**RE: MAY 2009 GROUNDWATER MONITORING, FORMER WILLIAMS EXPRESS  
SITE NO. 5009, 1209 GAMBELL STREET, ANCHORAGE, ALASKA**

*ADEC File No. 2100.26.024; FacID No. 0756*

This letter report presents the results of our annual groundwater monitoring at former Williams Express Site No. 5009 (WES 5009), 1209 Gambell Street, Anchorage, Alaska. A site plan illustrating pertinent site features is presented as Figure 1.

### **GROUNDWATER MONITORING**

The sampling program consists of annual monitoring from three on-site wells and one off-site well. In a letter dated March 10, 2008, the ADEC approved proposed changes to the sampling program, including suspending sampling of off-site Wells MW-1OS and MW-2OS, removing BTEX analyses from all wells, and reducing the sampling frequency to an annual basis (spring).

#### **Sampling Event Summary**

Groundwater samples were collected from Monitoring Wells MW-3, MW-5, MW-6, and MW-3OS on May 5, 2009. No sample was collected from Monitoring Well MW-4 due to an obstruction in the well.

Groundwater samples were collected without purging the monitoring wells, as approved by the Alaska Department of Environmental Conservation (ADEC) in June 2000. May 2009 field measurements of temperature, specific conductance, pH, turbidity, and dissolved oxygen (DO) are listed in Table 1.

#### **Groundwater Flow Data**

Groundwater levels collected on May 5, 2009 ranged from 23.60 to 24.20 feet below the top of the well casings. The average change in depth to water was 0.26 foot shallower than the

April 2008 event. Groundwater elevations during the 2009 sampling event are generally consistent with historical averages.

### **Well Maintenance**

Well maintenance is conducted on an as-needed basis by Discovery Drilling of Anchorage, Alaska. Although no well maintenance was conducted, one new well, designated Well MW7 was installed southwest of the site in December 2009. In addition, Monitoring Wells MW1, MW2, and MW4 and Vapor Extraction Wells VE-1 and VE-2 were decommissioned (as approved by ADEC) in December 2009. Details of the installation and decommissioning efforts will be provided under separate cover.

### **LABORATORY ANALYSES**

The May 2009 groundwater samples were submitted to SGS Environmental Services (SGS) of Anchorage, Alaska using chain-of-custody procedures and analyzed for diesel range organics (DRO) by Alaska Method 102 (AK 102). The analytical results for the May 2009 groundwater samples are shown on Figure 1. Historical data for the last 7 years are listed in Table 2.

Shannon and Wilson conducted limited data assessment to review laboratory's compliance with precision, accuracy, sensitivity, and completeness data quality objectives. Results of this assessment are summarized in completed ADEC Lab Data Review Checklist and laboratory data reports, which are provided in Attachment 1.

### **DISCUSSION OF ANALYTICAL RESULTS**

DRO was detected in the groundwater samples from two of the sampled wells. DRO concentrations that exceed the ADEC Table C criterion were measured in groundwater samples from Wells MW-3 and MW-5. The DRO chromatograph patterns for Samples MW-3 and MW-5 are "consistent with a weathered middle distillate," based on notations to the laboratory reports. Trends in DRO concentrations for Wells MW-3, MW-5, and MW-6 are shown in Graphs 1 through 3, respectively. As shown on these graphs, samples from Wells MW3 and MW5 showed an increase in DRO concentrations from the last monitoring event, but remain within historical range. Well MW-5 in the last several years shows an inverse correlation with groundwater change, which is common for downgradient wells. The last 10 years' data from these three wells do not comprise clearly increasing or decreasing trends, and thus indicate a stable plume.

Further inspection of the Well MW-5 data, as presented in Graph 2, indicates that temporary increases in DRO are observed every several years. Thus, a potentially better method

of evaluating current and future groundwater data is a trailing average concentration. We have included a 10-event trailing average trend line on Graph 2.

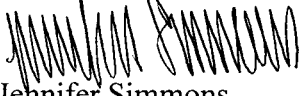
### STATUS OF THE SITE REMEDIATION EFFORT

A petition for conditional closure with institutional controls was submitted to the ADEC in January 2008. Following discussions with the ADEC, the petition was tabled due to ADEC concerns regarding plume stability, and off-site Well MW-5 in particular. The ADEC agreed to revisit the petition following additional groundwater sampling that indicated stable or decreasing trends. A downgradient well was installed in December 2009. Based on the soil and water analytical results, Shannon & Wilson will submit a petition for conditional closure with institutional controls in 2010. The next annual groundwater monitoring event at WES 5009 is scheduled for May 2010.

We appreciate this opportunity to be of service and your confidence in our firm. If you have questions or comments concerning this submittal, please call Ms. Jessica Busey or Mr. Matt Hemry at (907) 561-2120.

Sincerely,

**SHANNON & WILSON, INC.**



Jennifer Simmons  
Environmental Scientist

srb: MSH

encl.: Tables 1 and 2; Figure 1; and Graphs 1 through 3; Attachment 1

cc: Ms. Keather McLoone, ADEC  
Ms. Becky Brown, Williams RMID

**TABLE 1 - MAY 2009 GROUNDWATER SAMPLING LOG****WATER LEVEL MEASUREMENT DATA**

Well Number	MW-3	MW-5	MW-6	MW-3 OS
Date Water Level Measured	5/5/2009	5/5/2009	5/5/2009	5/5/2009
Time Water Level Measured	12:27	12:41	12:32	12:55
Surveyed MP Elevation (ft)	98.69	98.26	98.83	99.66
Measured Depth to Water (ft below MP)	23.91	23.60	23.96	24.20
Water Level Elevation (ft)	74.78	74.66	74.87	75.46

Note: The most recent well survey was conducted prior to the March 2007 event (Shannon & Wilson)

**SAMPLING DATA**

Well Number	MW-3	MW-5	MW-6	MW-3 OS
Date Sampled	5/5/2009	5/5/2009	5/5/2009	5/5/2009
Time Sampled	13:59	13:37	14:30	13:17
Measured Depth to Water (ft below MP)	23.91	23.60	23.96	24.20
Total Depth of Well (ft below MP)	27.53	27.06	33.30	28.61
Water Column in Well (ft)	3.62	3.46	9.34	4.41
Gallons per Foot	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	0.58	0.55	1.49	0.71
Total Volume Pumped/Bailed (gallons)	0	0	0	0
Sampling Method	bailer	bailer	bailer	bailer
Diameter of Well Casing	2-inch	2-inch	4-inch	2-inch
Remarks				

**WATER QUALITY DATA**

Well Number	MW-3	MW-5	MW-6	MW-3 OS
Temperature (°C)	8.9	9.1	9.9	9.1
Conductivity (µS/cm)	363	662	404	384
Turbidity (NTU)	22.1	62.6	37.5	99.2
Dissolved Oxygen (mg/L)	2.60	2.08	3.08	2.89
pH (Standard Units)	6.38	6.45	6.15	6.54

Note: Water quality parameters were measured with Hanna and YSI DO Meters

**KEY DESCRIPTION**

°C	Degrees Celsius
ft	Feet
MP	Measuring Point
µS/cm	Microsiemens per Centimeter
mg/L	Milligrams per Liter
NTU	Nephelometric Turbidity Unit

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Groundwater Depth^ (ft)	Target Analyte Concentrations (mg/L)		
			Benzene	Total BTEX	DRO
MW-1	3/13/2003	23.34	ND	ND	ND
	9/4/2003	23.46	ND	ND	ND
	5/4/2004	23.57	-	-	ND
	9/24/2004	23.55	-	-	ND
	3/18/2005	Sampling suspended indefinitely			
MW-2	3/13/2003	23.73	ND	ND	ND
	9/4/2003	23.82	ND	ND	ND
	5/4/2004	23.96	-	-	ND
	9/24/2004	23.94	-	-	ND
	3/18/2005	Sampling suspended			
	7/10/2007	24.30	-	-	ND
MW-3	9/4/2003	23.52	ND	ND	<b>8.60</b>
	3/25/2004	23.96	ND	ND	<b>9.24</b>
	9/24/2004	23.92	ND	ND	<b>10.0</b>
	3/18/2005	23.46	ND	ND	<b>16.1</b>
	10/3/2005	23.47	-	-	<b>3.58</b>
	4/6/2006	23.81	-	-	<b>3.76</b>
	9/20/2006	23.01	-	-	<b>3.02</b>
	3/27/2007	23.96	-	-	<b>18.4</b>
	7/10/2007	24.06	-	-	<b>7.54</b>
	9/21/2007	24.80	-	-	<b>5.59</b>
	4/22/2008	24.15	-	-	<b>5.59</b>
	5/5/2009	23.91	-	-	<b>14.1 J</b>
MW-4	9/4/2003	24.03	ND	ND	1.40
	5/4/2004	23.29	0.000664	0.000664	-
	9/24/2004	24.04	ND	ND	0.87
	4/28/2005	23.96	ND	ND	ND
	10/3/2005	23.93	-	-	0.510
	4/6/2006	24.33	-	-	1.49*
	9/20/2006	23.45	-	-	ND
	5/4/2007	24.44	-	-	<b>2.85</b>
	9/21/2007	24.30	Well obstruction	-	-
	4/22/2008	24.67	Well obstruction	-	-
	3/18/2009	Well removed from sampling program			

**KEY****DESCRIPTION**

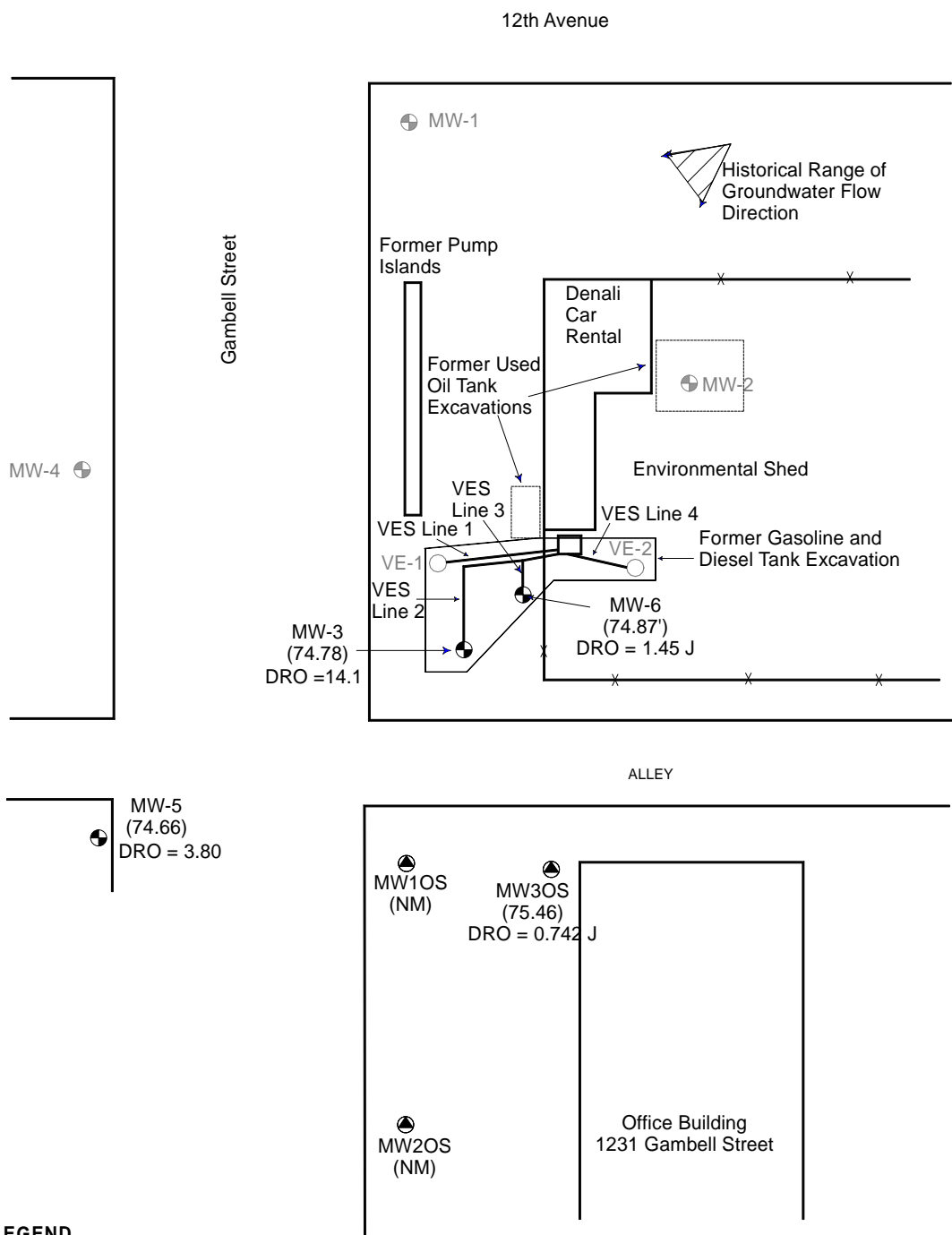
- \* Not a part of the 2006 groundwater sampling event
- Sample was either not collected, or not analyzed for this parameter, or information was not available
- ^ Depth of static groundwater level below the measuring point or top of casing
- ND Not detected
- mg/L Milligrams per liter
- 8.60** Analyte concentration exceeds current cleanup criteria (0.005 mg/L benzene, 1.5 mg/L DRO) by 18 AAC 75.345 (October 2008 revision)
- J Estimated concentration due to sample extraction past the hold time

TABLE 2 - GROUNDWATER SAMPLING HISTORICAL DATA

Well No.	Sample Date	Depth^ (ft)	Target Analyte Concentrations (mg/L)		
			Benzene	Total BTEX	DRO
MW-5	9/4/2003	23.33	ND	ND	2.00
	3/25/2004	24.41	ND	ND	2.52
	9/24/2004	23.35	ND	ND	0.709
	3/18/2005	23.21	0.000890	0.000890	3.52
	10/3/2005	23.22	-	-	4.47
	4/6/2006	23.56	-	-	3.34
	9/20/2006	23.09	-	-	ND
	3/27/2007	23.14	-	-	8.90
	7/10/2007	23.75	-	-	1.71
	10/5/2007	23.41	-	-	2.26
	4/22/2008	23.85	-	-	1.88
5/5/2009	23.60	-	-	3.80 J	
MW-6	9/4/2003	23.63	ND	ND	4.00
	3/25/2004	24.03	0.00143	0.00143	3.38
	9/24/2004	23.70	0.00115	0.00115	4.10
	3/18/2005	23.55	0.00129	0.00129	3.30
	10/3/2005	23.58	0.000783	0.000783	2.56
	4/6/2006	23.87	0.000592	0.000592	4.16
	9/20/2006	23.43	ND	ND	2.82
	3/27/2007	23.94	0.00125	0.00125	9.52
	7/10/2007	23.89	-	-	2.79
	9/21/2007	23.95	-	-	3.55
	4/22/2008	24.24	-	-	2.56
5/5/2009	23.96	-	-	1.45 J	
MW 1 (Off Site)	2/9/2007**	23.95	ND	ND	0.915
	3/27/2007	24.20	ND	ND	0.957
	10/21/2007	24.13	ND	0.00254	-
	4/10/2008	Sampling Suspended Indefinitely		-	-
MW 2 (Off Site)	2/9/2007**	23.29	ND	ND	0.675
	3/27/2007	24.56	ND	ND	0.597
	10/22/2007	23.48	ND	ND	-
	4/10/2008	Sampling Suspended Indefinitely		-	-
MW 3 (Off Site)	2/9/2007**	23.90	ND	ND	5.99
	3/27/2007	24.20	ND	ND	2.00
	10/21/2007	24.15	ND	0.00341	-
	4/22/2008	24.42	-	-	0.844
	5/5/25009	24.20	-	-	0.742 J

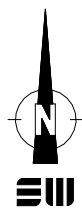
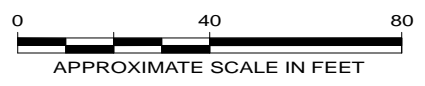
**KEY****DESCRIPTION**

**	Sample collected by Shannon & Wilson under contract to third party
-	Sample was either not collected, or 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
<b>2.00</b>	Analyte concentration exceeds current cleanup criteria (0.005 mg/L benzene, 1.5 mg/L DRO) by 18 AAC 75.345 (October 2008)
J	Estimated concentration due to sample extraction past the hold time or the concentration was detected below the reporting limit but above the detection limit



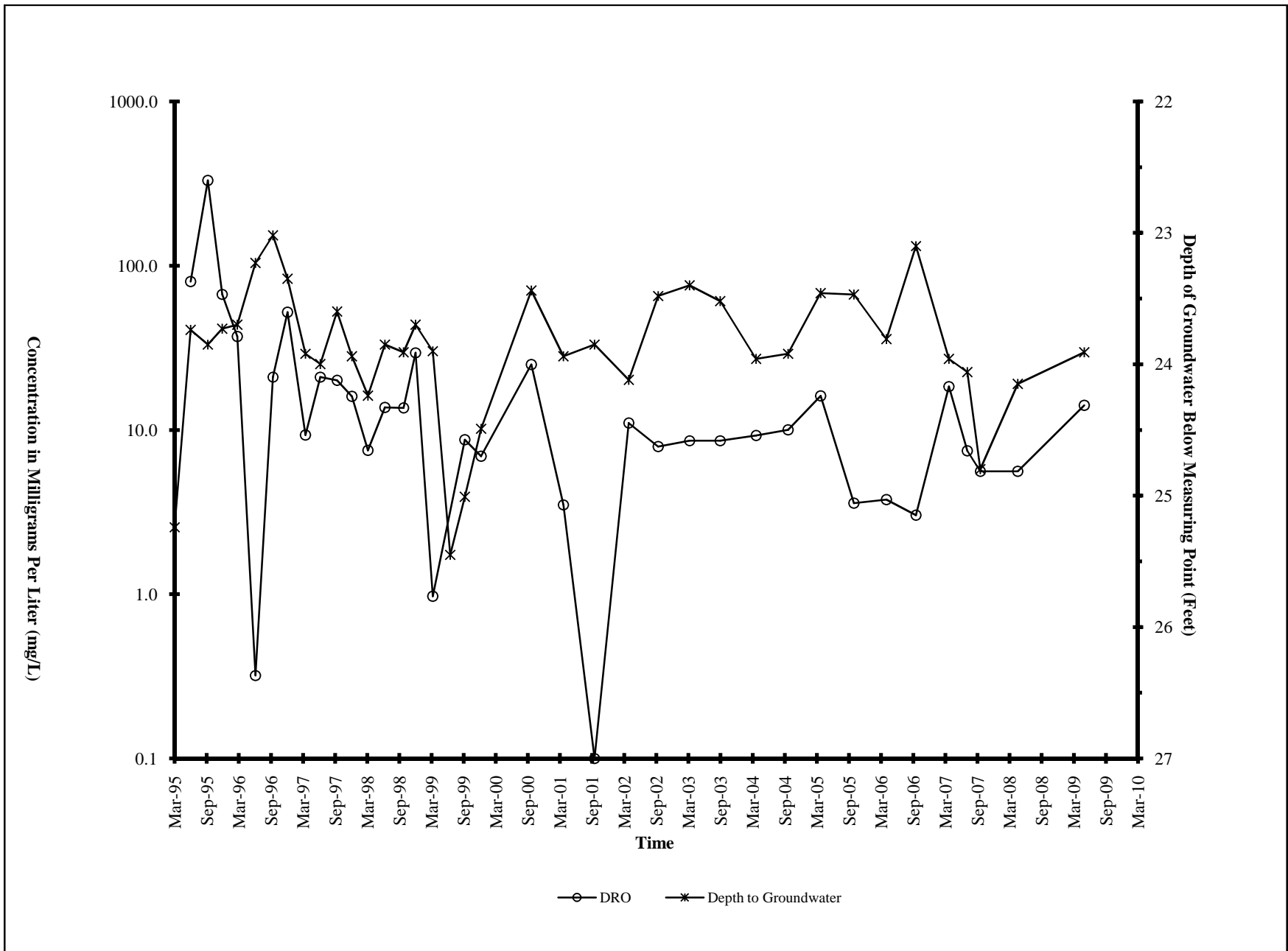
**LEGEND**

- MW-3 Approximate location and number of Monitoring Well MW-3.
- Groundwater elevation in feet measured May 2009 and based on March 2007 survey.  
(74.78)
- DRO = 14.1 DRO concentrations in mg/L for May 2009 groundwater monitoring event.
- NM Groundwater elevation not measured.
- Approximate location and number of Vapor Extraction Well VE-1 decommissioned by Shannon & Wilson December 18, 2009 (documented under sperate cover)
- Monitoring well installed by Shannon and Wilson in February 2007, under contract to third party  
MW1OS
- J Estimated concentrations detected at concentrations less than reporting limit but greater than the detection limit.



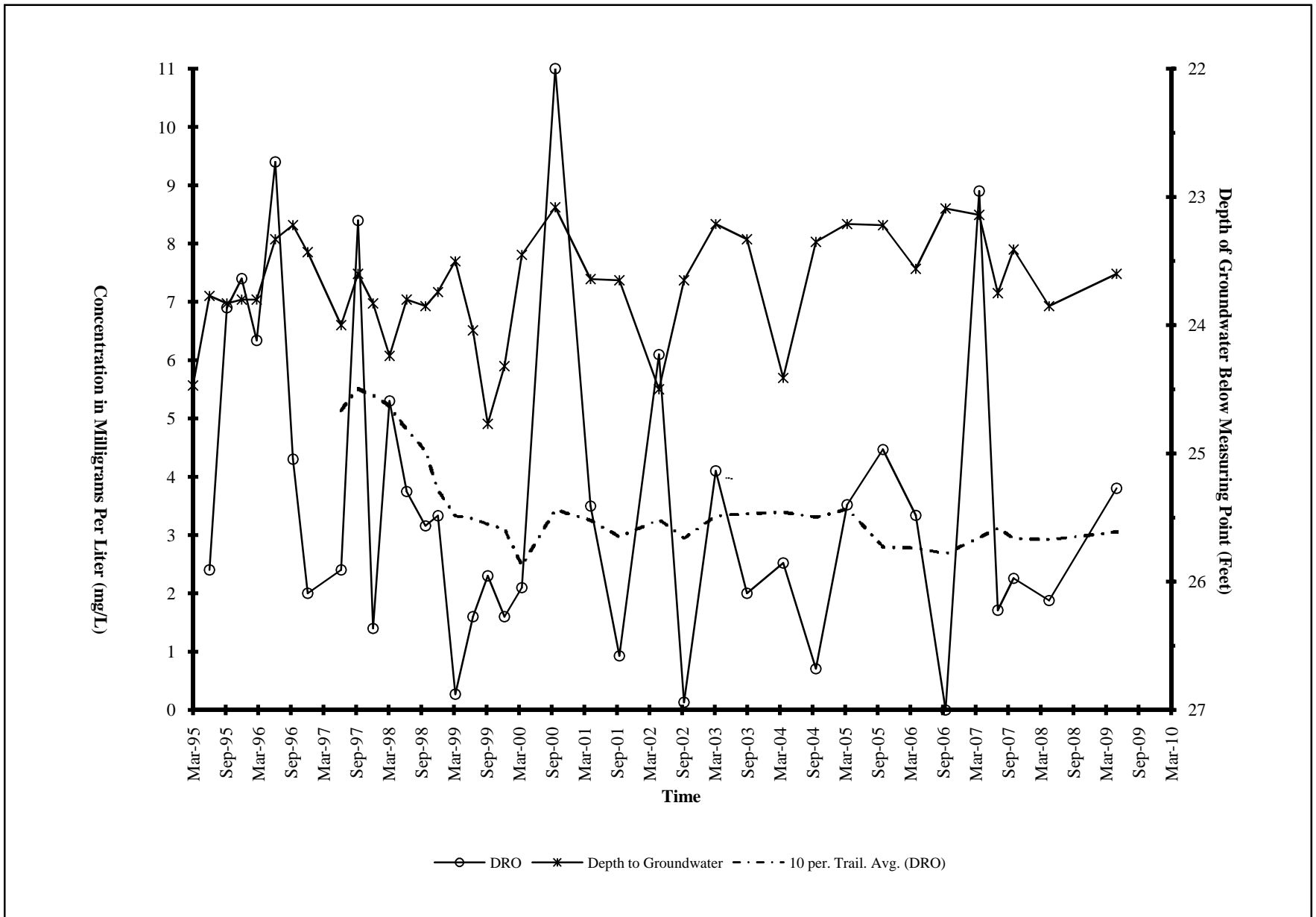
1209 Gambell Street Anchorage, Alaska	
<b>SITE PLAN</b> <b>APRIL 2009</b>	
February 2010	32-1-17310-095
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	<b>Fig. 1</b>

GRAPH 1 - MONITORING WELL MW-3 TRENDS

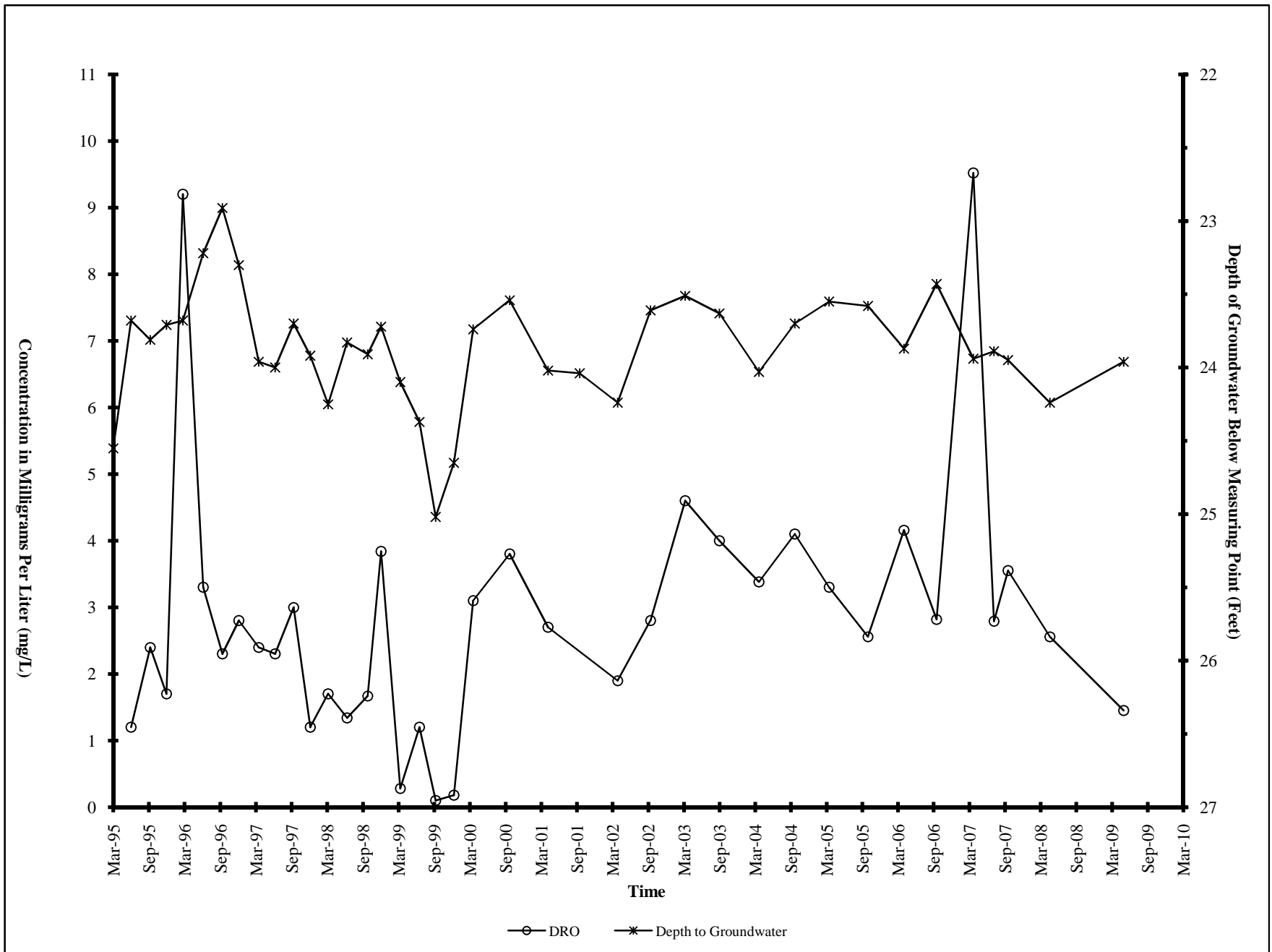




GRAPH 2 - MONITORING WELL MW-5 TRENDS



GRAPH 3 - MONITORING WELL MW-6 TRENDS



**ATTACHMENT 1**

**RESULTS OF ANALYTICAL TESTING**

**BY SGS ENVIRONMENTAL SERVICES OF ANCHORAGE, ALASKA AND**

**ADEC LABORATORY DATA REVIEW CHECKLIST**



**SGS North America Inc.**  
**Alaska Division**  
**Level II Laboratory Data Report**

Project: 17309-091 WES 5009  
Client: Holiday Alaska, Inc.  
SGS Work Order: 1091752

Released by:

**Contents:**

Cover Page  
Case Narrative  
Final Report Pages  
Quality Control Summary Forms  
Chain of Custody/Sample Receipt Forms

**Note:**  
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

## Case Narrative

**Customer: MCOEXPS**                      **Holiday Alaska, Inc.**  
**Project: 1091752**                        **17309-091 WES 5009**

Refer to the sample receipt form for information on sample condition.

Revised Report - Report format updated to report J-values and DL values at client's request. Sample comments for AK102 were changed/added to reflect hold time failures.

**1091752001 PS**                              **17309-091-MW30S**  
AK102 - Sample was extracted past the hold time due to a sample prep error.  
Sample ID changed to reflect COC at client's request.

**1091752002 PS**                              **17309-091-MW5**  
AK102 - The pattern is consistent with a weathered middle distillate.  
AK102 - Sample was extracted past the hold time due to a sample prep error.

**1091752003 PS**                              **17309-091-MW3**  
AK102 - The pattern is consistent with a weathered middle distillate.  
AK102 - Sample was extracted past the hold time due to a sample prep error.

**1091752004 PS**                              **17309-091-MW6**  
AK102- Sample was diluted due to dark color of extract;therefore the PQL was elevated.  
AK102 - Sample was extracted past the hold time due to a sample prep error.

**895101 LCS**                                **XXX/20819]**  
AK102 - LCSD recovery for DRO does not meet QC criteria (biased low). LCS/LCSD RPD for DRO does not meet QC criteria (biased high).

**895102 LCSD**                               **XXX/20819**  
AK102 - LCSD recovery for DRO does not meet QC criteria (biased low). LCS/LCSD RPD for DRO does not meet QC criteria (biased high).



## Laboratory Analytical Report

Client: **Holiday Alaska, Inc.**  
5430 Fairbanks Street, Suite 3  
Anchorage, AK 99518

Attn: **Jessica Busey**  
T: (907)561-2120 F:(907)561-4483

Project: **17309-091 WES 5009**  
Workorder No.: **1091752**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Jennifer Serna

Project Manager

Enclosed are the analytical results associated with the above work order. 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](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 AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 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, the National Environmental Laboratory Accreditation Program and 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
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., 2xDL)
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.



SAMPLE SUMMARY

Print Date: 2/18/2010 10:55 am

Client Name: Holiday Alaska, Inc.  
Project Name: 17309-091 WES 5009  
Workorder No.: 1091752

Analytical Methods

<u>Method Description</u>	<u>Analytical Method</u>
Diesel Range Organics (W)	AK102

Sample ID Cross Reference

<u>Lab Sample ID</u>	<u>Client Sample ID</u>
1091752001	17309-091-MW30S
1091752002	17309-091-MW5
1091752003	17309-091-MW3
1091752004	17309-091-MW6





### Detectable Results Summary

Print Date: 2/18/2010 10:55 am

Client Sample ID: **17309-091-MW30S**

SGS Ref. #: 1091752001

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	0.742 J	mg/L

Client Sample ID: **17309-091-MW5**

SGS Ref. #: 1091752002

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	3.80	mg/L

Client Sample ID: **17309-091-MW3**

SGS Ref. #: 1091752003

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	14.1	mg/L

Client Sample ID: **17309-091-MW6**

SGS Ref. #: 1091752004

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>Units</u>
Diesel Range Organics	1.45 J	mg/L



Holiday Alaska, Inc.

Print Date: 2/18/2010 10:55 am

Client Sample ID: **17309-091-MW30S**

SGS Ref. #: 1091752001

Project ID: 17309-091 WES 5009

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 05/05/09 13:17

Receipt Date/Time: 05/05/09 16:18

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	0.742 J	0.800	0.250	mg/L	1	XFC8550	XXX20849	
5a Androstane <sur>	74.8	50-150		%	1	XFC8550	XXX20849	

**Batch Information**

Analytical Batch: XFC8550

Analytical Method: AK102

Analysis Date/Time: 05/27/09 06:31

Dilution Factor: 1

Prep Batch: XXX20849

Prep Method: SW3520C

Prep Date/Time: 05/23/09 09:10

Initial Prep Wt./Vol.: 1000 mL

Prep Extract Vol.: 1 mL

Container ID:1091752001-B

Analyst: KDC



Holiday Alaska, Inc.

Print Date: 2/18/2010 10:55 am

Client Sample ID: **17309-091-MW5**

SGS Ref. #: 1091752002

Project ID: 17309-091 WES 5009

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 05/05/09 13:37

Receipt Date/Time: 05/05/09 16:18

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	3.80	3.20	1.00	mg/L	4	XFC8550	XXX20849	
5a Androstane <sur>	70	50-150		%	4	XFC8550	XXX20849	

**Batch Information**

Analytical Batch: XFC8550

Analytical Method: AK102

Analysis Date/Time: 05/27/09 06:49

Dilution Factor: 4

Prep Batch: XXX20849

Prep Method: SW3520C

Prep Date/Time: 05/23/09 09:10

Initial Prep Wt./Vol.: 1000 mL

Prep Extract Vol.: 1 mL

Container ID:1091752002-B

Analyst: KDC



Holiday Alaska, Inc.

Print Date: 2/18/2010 10:55 am

Client Sample ID: **17309-091-MW3**

SGS Ref. #: 1091752003

Project ID: 17309-091 WES 5009

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 05/05/09 13:59

Receipt Date/Time: 05/05/09 16:18

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	14.1	3.37	1.05	mg/L	4	XFC8550	XXX20849	
5a Androstane <sur>	76.1	50-150		%	4	XFC8550	XXX20849	

**Batch Information**

Analytical Batch: XFC8550

Analytical Method: AK102

Analysis Date/Time: 05/27/09 06:59

Dilution Factor: 4

Prep Batch: XXX20849

Prep Method: SW3520C

Prep Date/Time: 05/23/09 09:10

Initial Prep Wt./Vol.: 950 mL

Prep Extract Vol.: 1 mL

Container ID:1091752003-B

Analyst: KDC



Holiday Alaska, Inc.

Print Date: 2/18/2010 10:55 am

Client Sample ID: **17309-091-MW6**

SGS Ref. #: 1091752004

Project ID: 17309-091 WES 5009

Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 05/05/09 14:30

Receipt Date/Time: 05/05/09 16:18

**Semivolatile Organic Fuels Department**

<u>Parameter</u>	<u>Result</u>	<u>LOQ/CL</u>	<u>DL</u>	<u>Units</u>	<u>DF</u>	<u>Analytical Batch</u>	<u>Prep Batch</u>	<u>Qualifiers</u>
Diesel Range Organics	1.45 J	3.52	1.10	mg/L	4	XFC8550	XXX20849	
5a Androstane <sur>	71.3	50-150		%	4	XFC8550	XXX20849	

**Batch Information**

Analytical Batch: XFC8550

Analytical Method: AK102

Analysis Date/Time: 05/27/09 07:17

Dilution Factor: 4

Prep Batch: XXX20849

Prep Method: SW3520C

Prep Date/Time: 05/23/09 09:10

Initial Prep Wt./Vol.: 910 mL

Prep Extract Vol.: 1 mL

Container ID:1091752004-B

Analyst: KDC



SGS Ref.# 896429 Method Blank  
Client Name Holiday Alaska, Inc.  
Project Name/# 17309-091 WES 5009  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 02/18/2010 10:55  
Prep Batch XXX20849  
Method SW3520C  
Date 05/23/2009

QC results affect the following production samples:  
1091752001, 1091752002, 1091752003, 1091752004

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics	0.500 U	0.800	0.250	mg/L	05/27/09
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**Surrogates**

5a Androstane <surr>	77.1	60-120		%	05/27/09
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Batch XFC8550  
Method AK102  
Instrument HP 6890 Series II FID SV D R



SGS Ref.# 896430 Lab Control Sample  
896431 Lab Control Sample Duplicate  
Client Name Holiday Alaska, Inc.  
Project Name/# 17309-091 WES 5009  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 02/18/2010 10:55  
Prep Batch XXX20849  
Method SW3520C  
Date 05/23/2009

QC results affect the following production samples:

1091752001, 1091752002, 1091752003, 1091752004

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics	LCS	4.31	86	( 75-125 )		5 mg/L	05/27/2009
	LCSD	4.22	84		2	(< 20 )	5 mg/L 05/27/2009

**Surrogates**

5a Androstane <surr>	LCS		90	( 60-120 )			05/27/2009
	LCSD		90		1		05/27/2009

Batch XFC8550  
Method AK102  
Instrument HP 6890 Series II FID SV D R

1091752



Page 1 of 1  
 Laboratory SGS-Anech  
 Attn: Heidi

# CHAIN-OF-CUSTODY RECORD

**SHANNON & WILSON, INC.**  
 Geotechnical and Environmental Consultants

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

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

1200 17th Street, Suite 1024  
 Portland, OR 97201-2498  
 (503) 223-6147

303 Weilsian 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	Total Number of Containers	Remarks/Matrix
17309-091-MW305	① A,B	13:17	5-5-09	+	2	H <sub>2</sub> O
17309-091-MW5	② ↓	13:37	↓	+	2	
17309-091-MW-3	③ ↓	13:57	↓	+	2	
17309-091-MW-6	④ ↓	14:30	↓	+	2	

Project Information	Sample Receipt	Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Project Number: 17309-091	Total Number of Containers	Signature: <u>Amadeo</u>	Signature: _____	Signature: _____
Project Name: WES 5009	COC Seals/Intact? Y/N/NA	Printed Name: <u>AMANDA COMPTON</u>	Printed Name: _____	Printed Name: _____
Contact: <u>Jessica</u>	Received Good Cond./Cold	Date: <u>5-5-09</u>	Date: _____	Date: _____
Ongoing Project? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Delivery Method:	Company: <u>S/W - Anech</u>	Company: _____	Company: _____
Sampler: <u>ATK</u>	(attach shipping bill, if any)	Received By: 1.	Received By: 2.	Received By: 3.
Instructions		Signature: _____	Signature: _____	Signature: <u>[Signature]</u>
Requested Turnaround Time: <u>Standard</u>		Printed Name: _____	Printed Name: _____	Printed Name: <u>JAMES PUGH</u>
Special Instructions: <u>Level # Deliv.</u>		Date: _____	Date: _____	Date: <u>5-5-09</u>
Distribution: White - w/shipment - returned to Shannon & Wilson w/ laboratory report		Company: _____	Company: _____	Company: <u>SGS</u>
Yellow - w/shipment - for consignee files				
Pink - Shannon & Wilson - Job File				





SAMPLE RECEIPT FORM

SGS WO#:

Yes	No	NA	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are samples <b>RUSH</b> , priority or <i>w/in 72 hrs of hold time</i> ?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, have you done <i>e-mail ALERT</i> notification?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are samples <i>within 24 hrs. of hold time or due date</i> ?
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes, have you also <i>spoken with supervisor</i> ?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Archiving bottles: Are lids marked w/ red "X"?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Were samples collected with proper preservative?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Any problems (ID, cond'n, HT, etc)? Explain:</b>

**TAT (circle one):** Standard -or- Rush  
**Received Date:** 5.5.09  
**Received Time:** 1618

Cooler ID	Temperature	Measured w/ (Therm/IR ID#)
<u>1</u>	<u>5.6</u> °C	<u>#6</u>
_____	_____ °C	_____
_____	_____ °C	_____
_____	_____ °C	_____

Note: Temperature readings include thermometer correction factors

**Delivery method** (circle all that apply):  
 Client /  Alert Courier /  Lynden /  SGS  
 UPS /  FedEx /  USPS /  DHL /  Carllie  
 AkAir Goldstreak /  NAC /  ERA /  PenAir  
 Other: \_\_\_\_\_

**Additional Sample Remarks:** ( if applicable)  
 Extra Sample Volume?  
 Limited Sample Volume?  
 Multi-Incremental Samples?  
 Lab-filtered for dissolved \_\_\_\_\_  
 Ref Lab required for \_\_\_\_\_  
 Foreign Soil?

If this is for PWS, provide **PWSID:** \_\_\_\_\_  
 Payment received: \$ \_\_\_\_\_ by Check or Credit Card  
 Will courier charges apply?  
 Data package required? (Level: 1 2 / 3 / 4)  
 Notes: \_\_\_\_\_  
 Is this a DoD project? (USACE, Navy, AFCEE)

**This section must be filled out for DoD projects (USACE, Navy, AFCEE):**

Yes	No	
<input type="checkbox"/>	<input type="checkbox"/>	Is received temperature <6°C?
<input type="checkbox"/>	<input type="checkbox"/>	Were containers ice-free? <i>Notify PM immediately of any ice in samples.</i> If some cooler temperatures are non-compliant, see form FS-0029 (attached) for samples/analyses affected.
<input type="checkbox"/>	<input type="checkbox"/>	Was there an airbill? ( <i>If "yes," see attached.</i> )
<input type="checkbox"/>	<input type="checkbox"/>	Was cooler sealed with custody seals & were they intact? # / where: _____
<input type="checkbox"/>	<input type="checkbox"/>	Was there a COC with cooler?
<input type="checkbox"/>	<input type="checkbox"/>	Was COC sealed in plastic bag & taped inside lid of cooler?
<input type="checkbox"/>	<input type="checkbox"/>	Was the COC filled out properly? Did labels correspond?
<input type="checkbox"/>	<input type="checkbox"/>	Did the COC indicate USACE / Navy / AFCEE project?
<input type="checkbox"/>	<input type="checkbox"/>	Samples were packed to prevent breakage with: ( <i>circle one</i> ): Bubble Wrap Vermiculite Other (specify): _____
<input type="checkbox"/>	<input type="checkbox"/>	Were all samples sealed in separate plastic bags?
<input type="checkbox"/>	<input type="checkbox"/>	Were all VOCs free of headspace and/or MeOH preserved?
<input type="checkbox"/>	<input type="checkbox"/>	Were correct container / sample sizes submitted?
<input type="checkbox"/>	<input type="checkbox"/>	Was the PM notified of arrival so they can send Sample Receipt Acknowledgement to client?

**This section must be completed if problems are noted.**

Was client notified of problems? Yes / No \_\_\_\_\_  
 By (SGS PM): \_\_\_\_\_  
 Individual contacted: \_\_\_\_\_  
 Via: Phone / Fax / E-mail (*circle one*) \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Reason for contact: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Change Order Required? Yes / No \_\_\_\_\_

**Notes:**  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Completed by (sign): [Signature] (print): MARK MCCOY  
 Login proof: Self-check completed  Peer-reviewer's Initials JJR



## LABORATORY DATA REVIEW CHECKLIST

**CS Report Name:** May 2009 Groundwater Monitoring, Former Williams Express Site No. 5009

**Date:** February 2010

**Laboratory Report Date:** May 29, 2009

**Consultant Firm:** Shannon & Wilson, Inc.

**Completed by:** Jennifer Simmons

**Title:** Environmental Scientist

**Laboratory Name:** SGS Environmental Services, Inc.

**Work Order Number:** 1091752

**ADEC File Number:** 2100.26.024

(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

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?

**NA** / Yes / No

Comments:

### 2. Chain of Custody (COC)

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

**Yes** / No

Comments:

- b. Correct analyses requested? **Yes** / No

Comments:

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )? **Yes** / No
- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? NA / **Yes** / No  
Comments:
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** / No  
Comments:  
The laboratory did not note any problems.
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside range, insufficient sample size, missing samples)? **NA** / Yes / No  
Comments:  
There were no discrepancies noted by laboratory.
- e. Data quality or usability affected? Explain. **NA**  
Comments:

### 4. Case Narrative

- a. Present and understandable? **Yes** / No  
Comments:
- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**  
Comments:  
All project samples were analyzed past the hold times due to sample preparation error.  
Project Sample MW6 was diluted due to dark color of the extract.
- c. Were corrective actions documented? **None Noted** / Yes  
Comments:
- d. What is the effect on data quality/usability, according to the case narrative? **NA**  
Comments:  
Case narrative does not comment on the data usability.

### 5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No  
Comments:

- b. All applicable holding times met? Yes **No**

Comments:

Laboratory noted that holding times were not met due to sample preparation error.

- c. All soils reported on a dry-weight basis? **NA** / Yes / No

Comments:

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? Yes **No**

Comments:

The PQL for sample MW6 is greater than the cleanup level for DRO.

- e. Data quality or usability affected? Explain.

Comments:

Shannon & Wilson requested an MDL report which indicated a J-flagged DRO concentration for MW6 that is greater than the MDL but less than the LOQ. The data is considered to be useable and estimated.

## 6. QC Samples

### a. Method Blank

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

**Yes** / No

Comments:

- ii. All method blank results less than PQL? **Yes** / No

Comments:

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

Comments:

- iv. Do the affected sample(s) have data flags? **NA** / Yes / No

Comments:

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

Comments:

- v. Data quality or usability affected? 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) N/A / **Yes** / No

- ii. Metals/Inorganics - One LCS and one sample duplicate reported per matrix, analysis and 20 samples? **NA** / Yes / No

Comments:

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

Comments:

- iv. Precision – All relative percent differences (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

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? **NA** / Yes / No

Comments:

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

Comments:

- vii. 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? **NA** / **Yes** / No

Comments:

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

Comments:

- iii. Do the sample results with failed surrogate recoveries have data flags? **NA** / **Yes** / No

Comments:

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

Comments:

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

**d. Trip Blank** - Volatile analyses only (GRO, BTEX, VOCs, etc.) [soil and water]

- i. One trip blank reported per matrix, analysis and cooler? **NA / Yes / No**  
Comments:

A trip blank was not necessary because the samples were only analyzed for DRO.

- ii. Is the cooler used to transport the trip blank and volatile samples clearly indicated on the CoC? ? **NA / Yes / No (if no explain)**

- iii. All results less than PQL? **NA / Yes / No**  
Comments:

- iv. If above PQL, 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**  
Comments:

A field duplicate sample was not collected as part of this groundwater monitoring program.

- ii. Were the field duplicates submitted blind to the lab? **NA / Yes / No**  
Comments:

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

- iv. Data quality or usability affected? Explain. **NA**

**f. Decontamination or Equipment Blank** (if not applicable, a comment stating why must be entered below) **NA / Yes / No**

Field decontamination was not performed; disposable tubing and/or bailers were used in groundwater sample collection.

- i. All results less than PQL? **NA / Yes / No**  
Comments:

Work Order Number: 1091752

ii. If results are above PQL, 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? **NA** / Yes / No  
Comments: