

April 20, 2009

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

Attn: Mr. Bruce Anthony

**RE: APRIL 2008 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 our 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 two on-site wells and three off-site wells. 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 April 22, 2008. No sample was collected from monitoring well MW-4 due to an obstruction in the well. The analytical sample collected from Well MW5 was inadvertently labeled MW4 in the chain-of-custody and lab report, but the lab results are correctly labeled in the tables, graphs, and figures.

Groundwater samples were collected without purging the monitoring wells, as approved by the Alaska Department of Environmental Conservation (ADEC) in June 2000. April 2008 field measurements of temperature, specific conductance, pH, and dissolved oxygen (DO) are listed in Table 1.

### **Groundwater Flow Data**

Groundwater levels collected on April 22, 2008 ranged from 23.85 to 24.67 feet below the top of the well casings. The average change in depth to water was 0.14 foot deeper than the September 2007 event. Groundwater elevations during the 2008 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. No well maintenance was conducted in 2008.

## **LABORATORY ANALYSES**

The April 2008 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 April 2008 groundwater samples are shown on Figure 1. Historical data for the last 6 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 as electronic attachments to this report.

## **DISCUSSION OF ANALYTICAL RESULTS**

DRO was detected in the groundwater sample from each well sampled. DRO concentrations that exceed the ADEC Table C criterion were measured in groundwater samples from Wells MW-3, MW-5 and MW-6. The DRO chromatograph patterns are "consistent with a highly weathered middle distillate" or "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. Concentrations in the April 2008 samples are similar to historical concentrations in each well. The last 10 years' data from these four 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 moving average trend line on Graph 2. The last three sample results for Well MW-5 are less than the trailing average.

### STATUS OF THE SITE REMEDIATION EFFORT


A petition for conditional closure 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. The potential installation of another downgradient well is being discussed.

The next annual groundwater monitoring event at WES 5009 is scheduled for May 2009. We recommend decommissioning Well MW-4, which has not been sampled in the last two events due to an obstruction in the well casing.

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 Henry at (907) 561-2120.

Sincerely,

**SHANNON & WILSON, INC.**



Jake Gano  
Environmental Engineer

srb: MSH

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

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

TABLE 1 - MARCH 2008 GROUNDWATER SAMPLING LOG

**WATER LEVEL MEASUREMENT DATA**

Well Number	MW-3	MW-4	MW-5	MW-6	MW-3 OS
Date Water Level Measured	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008
Time Water Level Measured	14:59	15:45	14:50	14:55	14:43
Surveyed MP Elevation (ft)	98.69	99.75	98.26	98.83	99.66
Measured Depth to Water (ft below MP)	24.15	24.67	23.85	24.24	24.42
Water Level Elevation (ft)	74.54	75.08	74.41	74.59	75.24

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

**SAMPLING DATA**

Well Number	MW-3	MW-4	MW-5	MW-6	MW-3 OS
Date Sampled	4/22/2008	4/22/2008	4/22/2008	4/22/2008	4/22/2008
Time Sampled	15:08	-	15:50	15:21	16:17
Measured Depth to Water (ft below MP)	24.15	24.67	23.85	24.24	24.42
Total Depth of Well (ft below MP)	27.53	27.30	27.05	33.03	28.61
Water Column in Well (ft)	3.38	2.63	3.20	8.79	4.19
Gallons per Foot	0.16	0.16	0.16	0.16	0.16
Water Column Volume (gallons)	0.54	0.42	0.51	1.41	0.67
Total Volume Pumped/Bailed (gallons)	0	0	0	0	0
Sampling Method	bailer	-	bailer	bailer	bailer
Diameter of Well Casing	2-inch	2-inch	2-inch	4-inch	2-inch
Remarks		Obstruction in well			

**WATER QUALITY DATA**

Well Number	MW-3	MW-4	MW-5	MW-6	MW-3 OS
Temperature (°C)	9.8	-	11.4	9.1	9.5
Conductivity (µS/cm)	423	-	378	289	344
Dissolved Oxygen (mg/L)	2.06	-	3.86	1.80	2.26
pH (Standard Units)	6.63	-	6.55	6.42	6.82

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 indefinitely			
	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>
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	Obstruction in Well		-
4/22/2008	24.67	Obstruction in Well		-	

**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
<b>9.52</b>	Analyte concentration exceeds current cleanup criteria (0.005 mg/L benzene, 1.5 mg/L DRO) by 18 AAC 75.345 (December 2006 revision)

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	
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	
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

**KEY****DESCRIPTION**

\*\*

Sample collected by Shannon &amp; 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

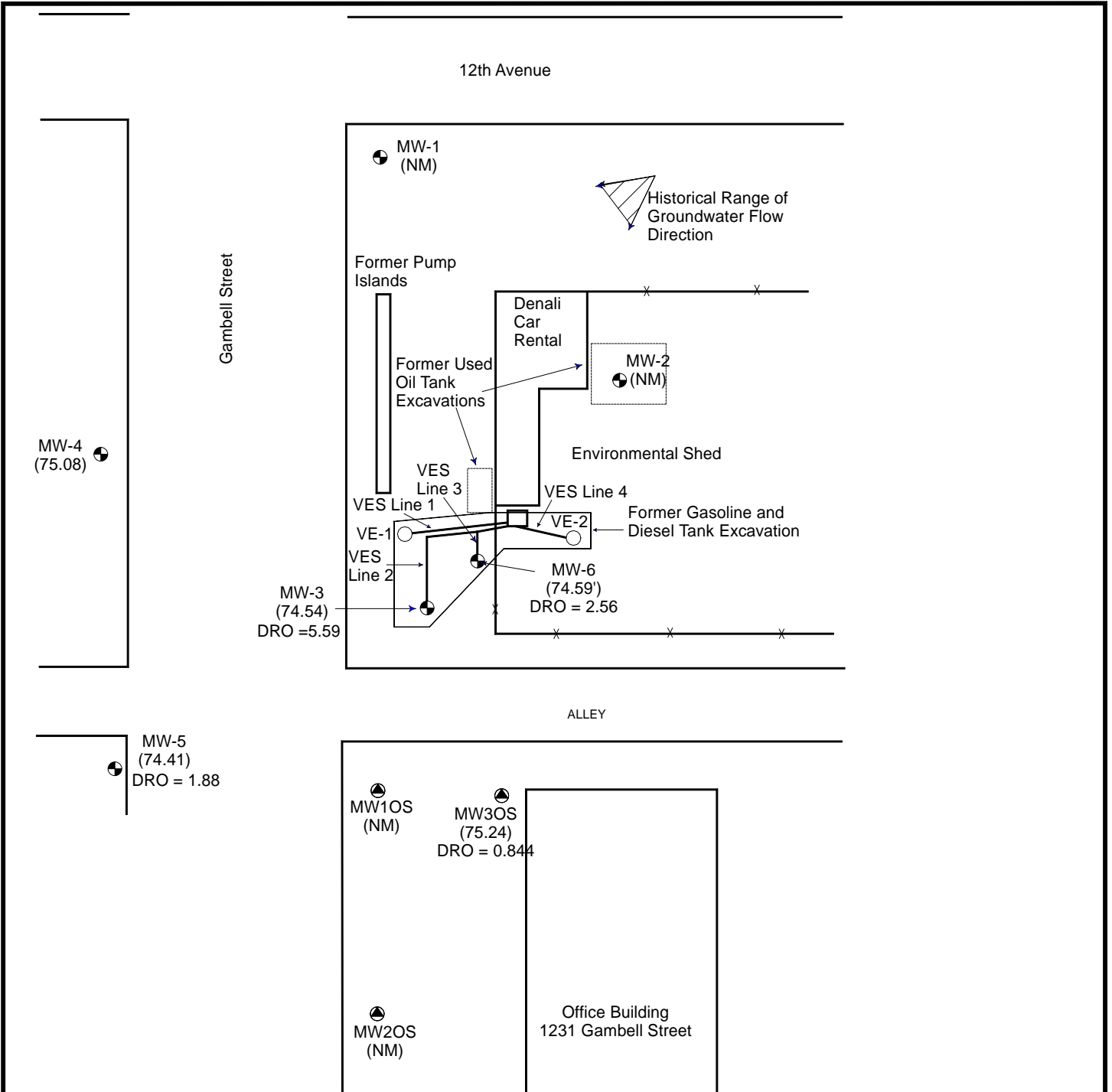
Not detected

mg/L

Milligrams per liter

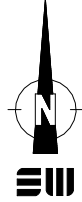
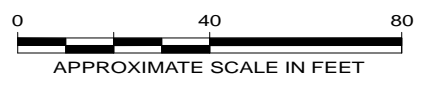
**10.0**

Analyte concentration exceeds current cleanup criteria (0.005 mg/L benzene, 1.5 mg/L DRO) by 18 AAC 75.345 (December 2006 revision)



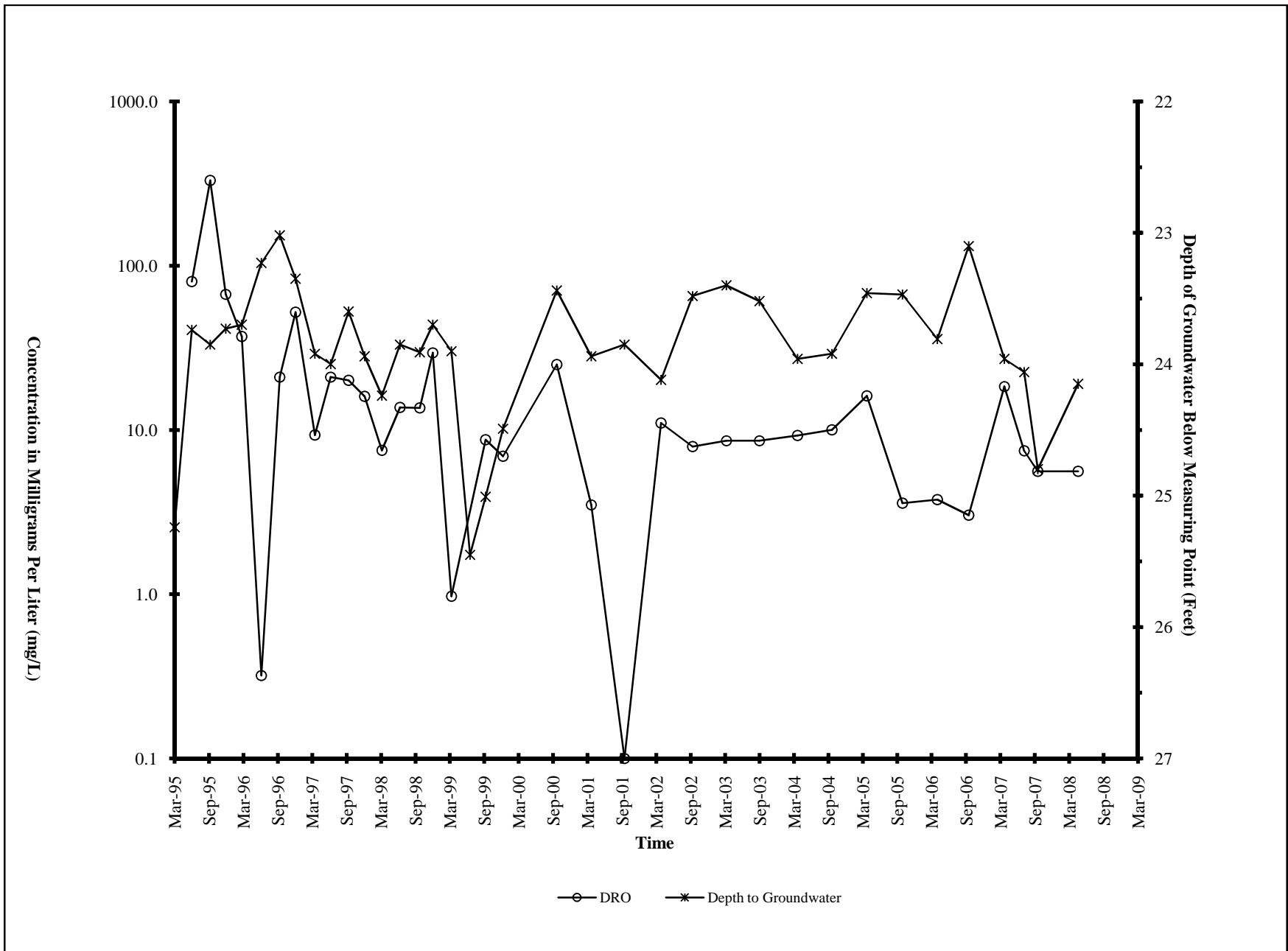
**LEGEND**

- MW-6 Approximate location and number of Monitoring Well MW-6.
- (74.89') Groundwater elevation in feet measured April 2008 and based on March 2007 survey.
- DRO = 5.59 DRO concentrations in mg/L for April 2008 groundwater monitoring event.
- NM Groundwater elevation not measured.
- Approximate location and number of Vapor Extraction Well VE-1.
- MW1 Monitoring well installed by Shannon and Wilson in February 2007, under contract to third party



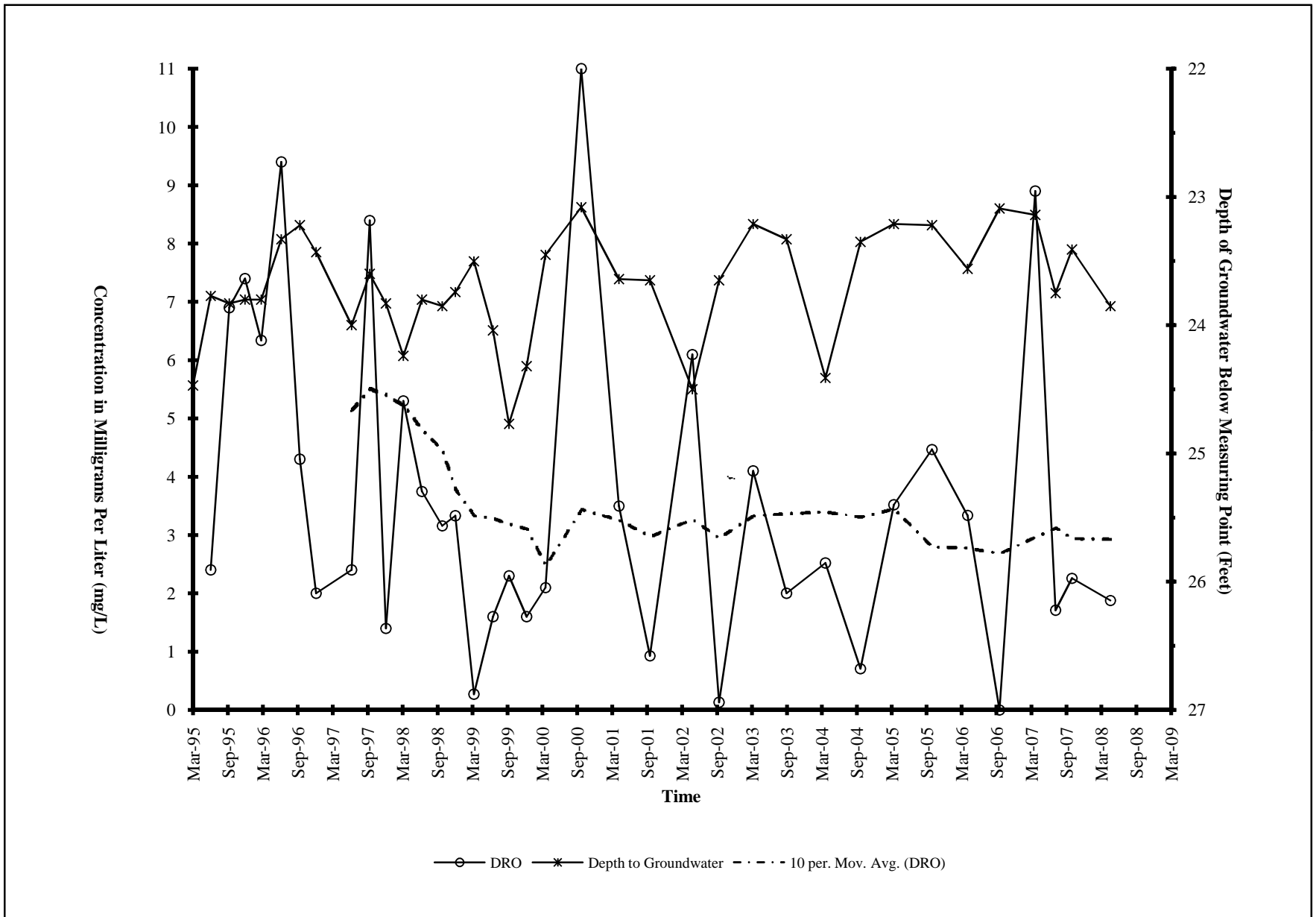
1209 Gambell Street Anchorage, Alaska	
<b>SITE PLAN</b> <b>APRIL 2008</b>	
April 2009	32-1-17309-095
<b>SHANNON &amp; WILSON, INC.</b> Geotechnical & Environmental Consultants	
<b>Fig. 1</b>	

GRAPH 1 - MONITORING WELL MW-3 TRENDS

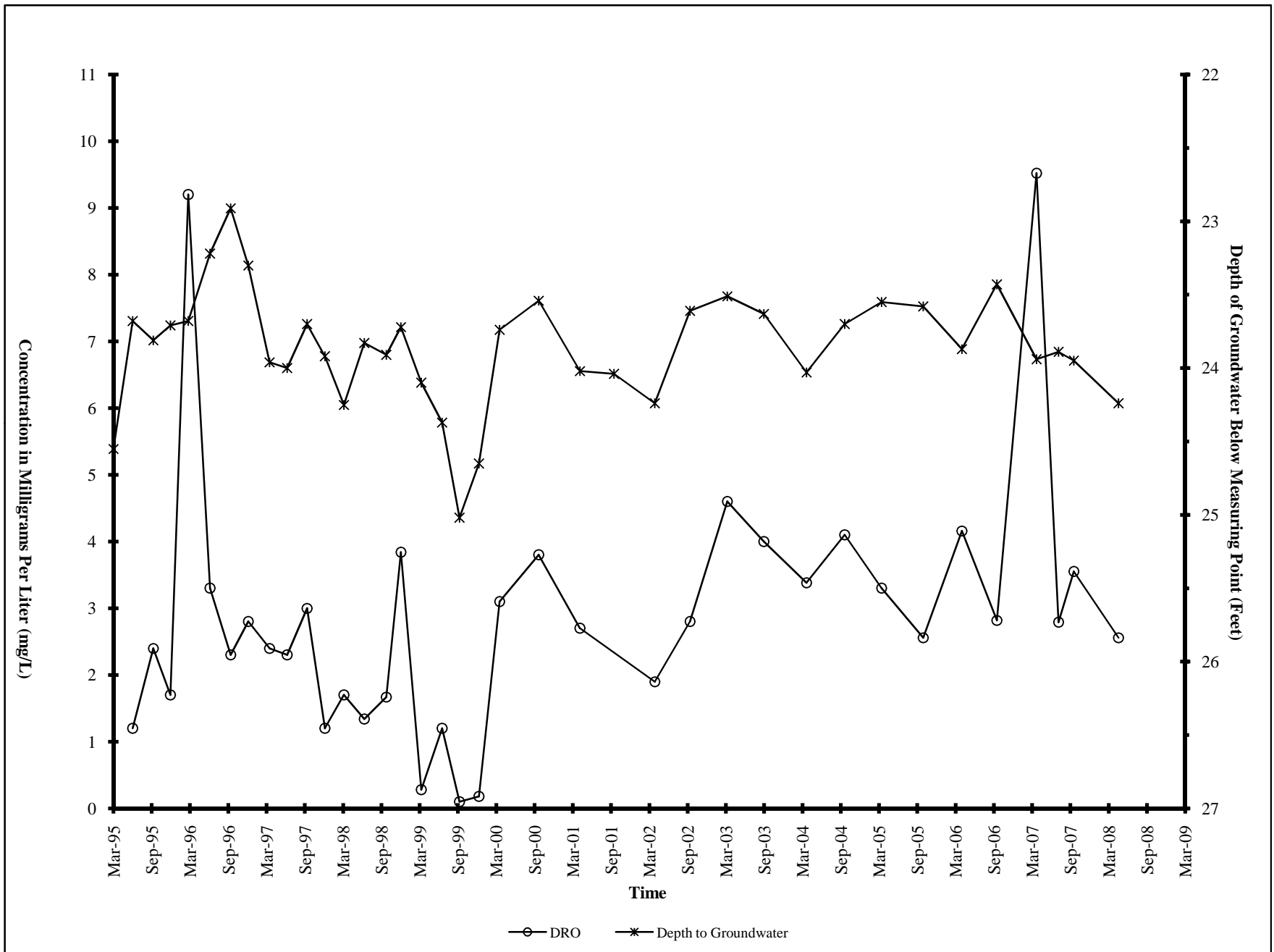




GRAPH 2 - MONITORING WELL MW-5 TRENDS



GRAPH 3 - MONITORING WELL MW-6 TRENDS



**ATTACHMENT 1**

**ADEC LABORATORY DATA REVIEW CHECKLIST**



**SGS Environmental Services  
Alaska Division  
Level II Laboratory Data Report**

Project: 16309-091 WES 5009  
Client: Holiday Alaska, Inc.  
SGS Work Order: 1081615

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

Client MCOEXPS Holiday Alaska, Inc.  
Workorder 1081615 16309-091 WES 5009

Printed Date/Time 4/29/2008 8:58

Sample ID Client Sample ID

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

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**1081615001 PS 16309-091 MW3OS**

AK102 - The pattern is consistent with a highly weathered middle distillate.  
AK102 - 5a-Androstane (surrogate) recovery is outside QC goals (biased high) due to hydrocarbon interference.

**1081615002 PS 16309-091 MW3**

AK102 - The pattern is consistent with a weathered middle distillate.

**1081615003 PS 16309-091 MW4**

AK102 - The pattern is consistent with a highly weathered middle distillate.

**1081615004 PS 16309-091 MW6**

AK102 - The pattern is consistent with a highly weathered middle distillate.



# Laboratory Analysis Report

200 W. Potter Drive  
Anchorage, AK 99518-1605  
Tel: (907) 562-2343  
Fax: (907) 561-5301  
Web: <http://www.us.sgs.com>

Jennifer Firmstone  
Shannon & Wilson Inc.  
5430 Fairbanks St Suite 3  
Anchorage, AK 99518

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<b>Work Order:</b>	1081615	
	16309-091 WES 5009	<b>Released by:</b>
<b>Client:</b>	Holiday Alaska, Inc.	
<b>Report Date:</b>	April 29, 2008	

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Enclosed are the analytical results associated with the above workorder.

As required by the state of Alaska and the USEPA, a formal Quality Assurance/Quality Control Program is maintained by SGS. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request.

The laboratory certification numbers are AK971-05 (DW), UST-005 (CS) and AK00971 (Micro) for ADEC and 001992 for NELAP (RCRA methods: 1020A, 1311, 6000/7000, 9040B/9045C, 9056A, 9060A, 9065, 8015C, 8021B, 8081B/8082A, 8260B, 8270D).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP, the National Environmental Laboratory Accreditation Program and, when applicable, other regulatory authorities.

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.

The following descriptors may be found on your report which will serve to further qualify the data.

PQL	Practical Quantitation Limit (reporting limit).
U	Indicates the analyte was analyzed for but not detected.
F	Indicates value that is greater than or equal to the MDL.
J	The quantitation is an estimation.
ND	Indicates the analyte is not detected.
B	Indicates the analyte is found in a blank associated with the sample.
*	The analyte has exceeded allowable regulatory or control limits.
GT	Greater Than
D	The analyte concentration is the result of a dilution.
LT	Less Than
!	Surrogate out of control limits.
Q	QC parameter out of acceptance range.
M	A matrix effect was present.
JL	The analyte was positively identified, but the quantitation is a low estimation.
E	The analyte result is above the calibrated range.
R	Rejected

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.



SGS Ref.# 1081615001  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Client Sample ID 16309-091 MW3OS  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 04/29/2008 8:58  
Collected Date/Time 04/22/2008 16:17  
Received Date/Time 04/22/2008 16:45  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a highly weathered middle distillate.

AK102 - 5a-Androstane (surrogate) recovery is outside QC goals (biased high) due to hydrocarbon interference.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	0.844	0.308	mg/L	AK102	A		04/24/08	04/24/08	BME
<b>Surrogates</b>									
5a Androstane <surrogate>	151	!	%	AK102	A	50-150	04/24/08	04/24/08	BME



SGS Ref.# 1081615002  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Client Sample ID 16309-091 MW3  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 04/29/2008 8:58  
Collected Date/Time 04/22/2008 15:08  
Received Date/Time 04/22/2008 16:45  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	5.59	0.309	mg/L	AK102	A		04/24/08	04/24/08	BME
<b>Surrogates</b>									
5a Androstane <surr>	78.4		%	AK102	A	50-150	04/24/08	04/24/08	BME





SGS Ref.# 1081615003  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Client Sample ID 16309-091 MW4  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 04/29/2008 8:58  
Collected Date/Time 04/22/2008 16:02  
Received Date/Time 04/22/2008 16:45  
Technical Director Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a highly weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	1.88	0.305	mg/L	AK102	A		04/24/08	04/25/08	BME
<b>Surrogates</b>									
5a Androstane <surr>	85.4		%	AK102	A	50-150	04/24/08	04/25/08	BME



SGS Ref.# 1081615004  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Client Sample ID 16309-091 MW6  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 04/29/2008 8:58  
Collected Date/Time 04/22/2008 15:21  
Received Date/Time 04/22/2008 16:45  
Technical Director Stephen C. Ede

Sample Remarks:  
AK102 - The pattern is consistent with a highly weathered middle distillate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	2.56	0.306	mg/L	AK102	A		04/24/08	04/25/08	BME
<b>Surrogates</b>									
5a Androstane <surr>	72.8		%	AK102	A	50-150	04/24/08	04/25/08	BME



SGS Ref.# 824674 Method Blank  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 04/29/2008 8:58  
Prep Batch XXX19250  
Method SW3520C  
Date 04/24/2008

QC results affect the following production samples:  
1081615001, 1081615002, 1081615003, 1081615004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>					
Diesel Range Organics	0.0892 J	0.300	0.0600	mg/L	04/24/08
<b>Surrogates</b>					
5a Androstane <surr>	90.3	60-120		%	04/24/08
Batch	XFC7888				
Method	AK102				
Instrument	HP 5890 Series II FID SV A F				



SGS Ref.# 824675 Lab Control Sample  
824676 Lab Control Sample Duplicate  
Client Name Holiday Alaska, Inc.  
Project Name/# 16309-091 WES 5009  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 04/29/2008 8:58  
Prep Batch XXX19250  
Method SW3520C  
Date 04/24/2008

QC results affect the following production samples:

1081615001, 1081615002, 1081615003, 1081615004

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 4.16	83	( 75-125 )			5 mg/L	04/24/2008
	LCSD 3.98	80		4	(< 20 )	5 mg/L	04/24/2008

**Surrogates**

5a Androstane <surr>	LCS	95	( 60-120 )				04/24/2008
	LCSD	90		6			04/24/2008

Batch XFC7888  
Method AK102  
Instrument HP 5890 Series II FID SV A F

1081615



/ RECORD

Page 1 of 1

**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  
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 2255 S.W. Canyon Road  
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 (503) 223-6147

CI

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

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

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

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

Sample Identity	Lab No.	Time	Date Sampled	Comp.	Grab	Total Number of Containers	Remarks/Matrix
16309-091 mw305 ① A, B		1617	4/22/08				water
16309-091 mw303 ②		1508	4/22/08				
16309-091 mw304 ③		1602	4/22/08				
mw306 ④ ↓		1521	4/22/08				

**Project Information**

Project Number: 16309-091  
 Project Name: WFS 5009  
 Contact: Jennifer  
 Ongoing Project? Yes  No   
 Sampler: ATC

**Sample Receipt**

Total Number of Containers  
 COC Seats/Intact? Y/N/NA  
 Received Good Cond./Cold  
 Delivery Method:  
 (attach shipping bill, if any)

**Instructions**

Requested Turnaround Time: 30 days.  
 Special Instructions: level # deliverables  
 E-mail Results: SCF@shannonwil.com

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

Relinquished By: 1.	Relinquished By: 2.	Relinquished By: 3.
Signature: <i>Audrey</i> Printed Name: AMANDA CAMPION Company: S + W	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____
Time: 4:45 Date: 4-22-08	Time: _____ Date: _____	Time: _____ Date: _____
Received By: 1.	Received By: 2.	Received By: 3.
Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: _____ Company: _____	Signature: _____ Printed Name: Joe Kudi Company: SGJ
Time: _____ Date: _____	Time: _____ Date: _____	Time: 1645 Date: 4/22/08



SAMPLE RECEIPT FORM

SGS WO#:

Yes No NA

- Are samples RUSH, priority or w/in 72 hrs of hold time?
If yes, have you done e-mail ALERT notification?
Are samples within 24 hrs. of hold time or due date?
If yes, have you also spoken with supervisor?
Archiving bottles (if req'd): Are they properly marked?
Are there any problems? PM Notified?
Were samples preserved correctly and pH verified?
If this is for PWS, provide PWSID.
Will courier charges apply?
Method of payment?
Data package required? (Level: 1 / 2 / 3 / 4)
Notes:
Is this a DoD project? (USACE, Navy, AFCEE)

TAT (circle one): (Standard) -or- Rush
Received Date: 4/22/08
Received Time: 1645
Is date/time conversion necessary? NO
# of hours to AK Local Time: -

Table with 3 columns: Cooler ID, Temp Blank, Cooler Temp. Row 1: 1, 4.9 C, 9.3 C

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client
Alert Courier / UPS / FedEx / USPS / DHL /
AA Goldstreak / NAC / ERA / PenAir / Carlisle /
Lynden / SGS / Other:

Airbill #

- Additional Sample Remarks: (sqrt if applicable)
Extra Sample Volume?
Limited Sample Volume?
MeOH field preserved for volatiles?
Field-filtered for dissolved
Lab-filtered for dissolved
Ref Lab required?
Foreign Soil?

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

- Is received temperature 4 +/- 2 C?
Exceptions: Samples/Analyses Affected:
If temperature(s) < 0 C, were containers ice-free? N/A
Was there an airbill?
Was cooler sealed with custody seals?
Were seal(s) intact upon arrival?
Was there a COC with cooler?
Was COC sealed in plastic bag & taped inside lid of cooler?
Was the COC filled out properly?
Did the COC indicate USACE / Navy / AFCEE project?
Did the COC and samples correspond?
Were all sample packed to prevent breakage?
Packing material:
Were all samples unbroken and clearly labeled?
Were all samples sealed in separate plastic bags?
Were all VOCs free of headspace and/or MeOH preserved?
Were correct container / sample sizes submitted?
Is sample condition good?
Was copy of CoC, SRF, and custody seals given to PM to fax?

This section must be filled if problems are found.

Yes No
Was client notified of problems?

Individual contacted:
Via: Phone / Fax / Email (circle one)
Date/Time:
Reason for contact:

Change Order Required?
SGS Contact:

Notes:

Completed by (sign): (print): Joe Rudi
Login proof (check one): waived required performed by:



## LABORATORY DATA REVIEW CHECKLIST

**CS Report Name:** 32-1-17309-095; WES No. 5009      **Date:** February 4, 2009

**Laboratory Report Date:** April 29, 2008

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

**Completed by:** Jake Gano  
**Title:** Environmental Engineer

**Laboratory Name:** SGS Environmental Services, Inc.  
**SGS Work Order Number:** 1081615

**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?  
**N/A** / 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 ( $4^{\circ} \pm 2^{\circ}$  C)?  
**Yes** / **No**  
Comments: Temperature blank 4.9°C, cooler temp 9.3°C.



- b. Sample preservation acceptable - acidified waters, Methanol-preserved VOC soil (GRO, BTEX, VOCs, etc.)? *N/A* / **Yes** / **No**  
Comments:
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **Yes** **No**  
Comments: No problems noted.
- d. If there were any discrepancies, were they documented (e.g., incorrect sample containers/preservation, sample temperatures outside of acceptable range, insufficient or missing samples etc.)? *N/A* / **Yes** / **No**  
Comments:
- e. Data quality or usability affected? Explain.  
Comments: Samples were delivered within 1 hour of collection, so the cooler temperature should not affect the data quality.

#### 4. Case Narrative

- a. Present and understandable? **Yes** / **No**  
Comments:
- b. Discrepancies, errors or QC failures noted by the lab? *None Noted* / **Yes**  
Comments:  
In sample MW3OS, the surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference. See Section 6 for details.
- c. Were all corrective actions documented? *None Noted* / **Yes**  
Comments:
- d. What is the effect on data quality/usability, according to the case narrative? *N/A*  
Comments:

#### 5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / **No**  
Comments:
- b. All applicable holding times met? **Yes** / **No**  
Comments:
- c. All soils reported on a dry-weight basis? *N/A* / **Yes** / **No**  
Comments:
- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection

level for the project? **Yes** / **No** *List non-detect instances.*  
Comments:

- e. Data quality or usability affected? Explain. **N/A**  
Comments:

## 6. QC Samples

### a. Method Blank

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

**Yes** / **No**

Comments:

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

Comments:

- iii. If above PQL, what samples are affected? **N/A**

Comments:

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

Comments:

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

Comments:

- v. Data quality or usability affected? Explain. *N/A*

Comments: An estimated concentration of DRO was detected below the PQL in the method blank.

### 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**

Comments:

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

Comments:

- vi. Do the affected samples(s) have data flags? **N/A** / Yes / No

Comments:

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

Comments:

- vii. Data quality or usability affected? Explain. **N/A**

Comments:

**c. Surrogates - Organics Only**

- i. Are surrogate recoveries reported for organic analyses, field, QC and laboratory samples? **N/A** / **Yes** / No

Comments:

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

Comments: Surrogate recovery in sample MW3OS is biased high.

- iii. Do the sample results with failed surrogate recoveries have data flags?

**N/A** / **Yes** / No

Comments:

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

Comments:

- iv. Data quality or usability affected? Explain.

Comments: Surrogate recovery biased high due to hydrocarbon interference. See LCS/LCSD for accuracy. Note DRO concentration is less than the cleanup level.

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

- i. One trip blank reported per matrix, analysis and cooler? **N/A** / Yes / No

Comments:

- ii. All results less than PQL? **N/A** / **Yes** / No

Comments:

- iii. If above PQL, what samples are affected? **N/A**

Comments:

- iv. Data quality or usability affected? Explain. **N/A**

Comments:

**e. Field Duplicate**

- i. One field duplicate submitted per matrix, analysis and 10 project samples? **Yes/No**

Comments: Duplicate sample not collected as part of this monitoring program.

- ii. Submitted blind to the lab? **N/A** / Yes / No

Comments:

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

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

Where  $R_1$  = Sample Concentration

$R_2$  = Field Duplicate Concentration

**N/A** / Yes / No

Comments:

- iv. Data quality or usability affected? Explain. **N/A**

**f. Decontamination or Equipment Blank (if applicable)**

**NA** / Yes / No

- i. All results less than PQL? **N/A** / Yes / No

Comments: Decontamination and/or Equipment Blanks are not requested as part of this sampling program due to use of disposable sampling equipment.

- ii. If *results are* above PQL, what samples are affected? **N/A**

Comments:

- iii. Data quality or usability affected? **N/A**

Comments:

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

- a. Are they defined and appropriate? **N/A** / Yes / No

Comments: