

October 25, 2007

Via E-mail: [justinireys@alaska.gov](mailto:justinireys@alaska.gov)

Alaska Department of Natural Resources  
Division of Water and Mining  
550 West 7<sup>th</sup> Avenue, Suite 900D  
Anchorage, Alaska 99501

Attn: Mr. Justin Ireys

**RE: 2007 GROUNDWATER SAMPLING AT SUNTRANA COAL MINE, HEALY,  
ALASKA**

We are pleased to submit the results of our 2007 groundwater samples from the monitoring wells at the former Suntrana Coal Mine tipple near Healy, Alaska. The site is approximately 4 miles east of Healy in Township 12 South, Range 7 West, Section 24 of the Fairbanks Meridian. Our work was conducted in accordance with our proposal dated August 7, 2007, and our Alaska Department of Environmental Conservation (ADEC) approved work plan for the site.

We sampled monitoring wells MW-1, -4, -9, -10, and -11; the samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), and benzene, toluene, ethylbenzene, and xylenes (BTEX); MW-10 and MW-11 were also analyzed for polychlorinated biphenyls (PCBs) at the request of the ADEC. Our proposal specified the sampling of MW-7; however, poor recharge precluded sample collection. We therefore substituted a sample from MW-1.

Using a peristaltic pump, a minimum of three well volumes was purged from the wells prior to sampling. Purge water was discharged to the ground surface through an oil-sorbent pillow. Samples were placed in a cooler maintained at or near 4°C and hand-delivered to SGS Environmental Laboratories in Fairbanks.

We have attached a site map, a data summary table, a historical data summary table, an ADEC Data Quality Control Checklist, and the complete analytical laboratory reports.

ADNR  
Attn: Mr. Justin Ireys  
October 25, 2007  
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SHANNON & WILSON, INC.

### LIMITATIONS

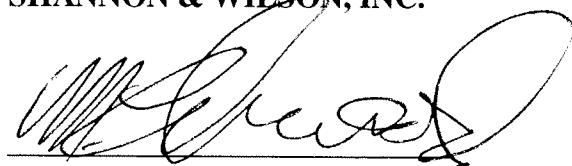
This report presents the analytical results from a limited number of groundwater samples and should not be construed as a comprehensive study of groundwater quality at the site. The samples were intended to evaluate the presence or absence of contaminants at the locations selected. Detectable levels of petroleum hydrocarbons may be present at other locations. It was also not the intent of our sampling and testing to detect the presence of groundwater affected by contaminants other than those for which laboratory analyses were performed. No conclusions can be drawn on the presence or absence of other contaminants.

The data presented in this letter report should be considered representative of the time of our site observations and sample collection. Changes in site conditions can occur with time because of natural forces or human activity. We have based some of our conclusions on third-party data; however, we cannot attest to its accuracy.

This report was prepared for the exclusive use of the Alaska Department of Natural Resources, Division of Water and Mining. If it is made available to others, it should be for information on factual data only and not as a warranty of subsurface conditions.

Sincerely,

**SHANNON & WILSON, INC.**



Mark S. Lockwood, C.P.G.  
Principal Geologist

Enclosures:   Summary of Groundwater Sample Results – September 2007  
                  Historical Groundwater Summary  
                  Monitoring Well Locations  
                  ADEC Laboratory Data Review Checklist  
                  SGS Analytical Laboratory Report – September 28, 2007

31-1-11378-001

Summary of Groundwater Sample Results  
September 2007  
Suntrana Mine Tipple Site

WELL NUMBER	SAMPLE NUMBER	DATE	EPA 8021B					AK 102	AK 103	AK 101	SW 8082
			Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	P & M - Xylene (µg/L)	o-Xylene (µg/L)	DRO (mg/L)	RRO (mg/L)	GRO (mg/L)	PCBs* (mg/L)
<i>ADEC Cleanup level<sup>1</sup></i>			<b>5</b>	<b>1,000</b>	<b>700</b>	<b>Total 10,000</b>		<b>1.5</b>	<b>1.1</b>	<b>1.3</b>	<b>1.1</b>
MW-1	1378-090607-001	9/6/2007	<b>10.9</b>	< 2.00	< 2.00	8.01	2.25	<b>2.55</b>	0.999	0.129	NA
MW-4	1378-090607-002	9/6/2007	<b>21.3</b>	< 2.00	< 2.00	< 2.00	< 2.00	< 0.341	< 0.568	0.115	NA
Dup MW-4	1378-090607-003	9/6/2007	<b>21.0</b>	< 2.00	< 2.00	< 2.00	< 2.00	< 0.333	< 0.556	0.110	NA
MW-9	1378-090607-004	9/6/2007	0.607 B	< 2.00	< 2.00	< 2.00	< 2.00	< 0.333	< 0.556	< 0.100	NA
MW-10	1378-090607-005	9/6/2007	4.17	< 2.00	< 2.00	< 2.00	< 2.00	< 0.330	< 0.549	< 0.100	<0.000105
Dup MW-10	1378-090607-006	9/6/2007	NA	NA	NA	NA	NA	NA	NA	NA	<0.000114
MW-11	1378-090607-007	9/6/2007	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00	< 0.300	< 0.500	< 0.100	<0.000116

Notes:

<- Analyte was not detected above the laboratory PQL

<sup>1</sup>- ADEC Groundwater Cleanup levels, *Oil and Other Hazardous Substance Pollution Control* - 18AAC75.345 Table C

**bold**- Exceeds ADEC Cleanup level<sup>1</sup>

NA- Not Analyzed

B- Analyte biased high due to the presence of benzene in associated method blank.

\*- All PCB analytes less than PQL shown. For a complete list of PCB analytes see laboratory report.

Suntrana 2007

WELL NUMBER	DATE	EPA 8021B					AK 102	AK 103	AK 101
		Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	P & M - Xylene (µg/L)	o-Xylene (µg/L)	DRO (mg/L)	RRO (mg/L)	GRO (mg/L)
<i>ADEC Cleanup level<sup>1</sup></i>		5	1,000	700	Total 10,000		1.5	1.1	1.3
MW-1	5/31/2006	3.90	< 2.00	< 2.00	< 2.00	< 2.00	0.799	0.642	< 0.100
	9/6/2007	10.9	< 2.00	< 2.00	8.01	2.25	<b>2.55</b>	0.999	0.129
MW-2	5/30/2006	1.25	< 2.00	3.90	8.34	< 2.00	0.434	< 0.521	0.263
MW-3	5/30/2006	4.90	2.40	6.02	11.8	4.14	0.579	< 0.515	0.157
MW-4	5/30/2006	<b>20.7</b>	< 2.00	< 2.00	< 2.00	< 2.00	0.369	< 0.500	0.102
	9/6/2007	<b>21.3</b>	< 2.00	< 2.00	< 2.00	< 2.00	< 0.341	< 0.568	0.115
Dup MW-4	9/6/2007	<b>21.0</b>	< 2.00	< 2.00	< 2.00	< 2.00	< 0.333	< 0.556	0.110
MW-5	5/30/2006	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00	< 0.316	< 0.526	< 0.100
MW-6	5/30/2006	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00	< 0.316	< 0.526	< 0.100
MW-7	5/31/2006	<b>10.9</b>	< 2.00	2.15	4.04	< 2.00	0.413	< 0.500	0.216
Dup MW-7	5/31/2006	<b>11.1</b>	< 2.00	2.19	4.13	< 2.00	0.438	< 0.521	0.245
MW-9	7/7/2006	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00	< 0.380	< 0.633	< 0.100
	9/6/2007	0.607 B	< 2.00	< 2.00	< 2.00	< 2.00	< 0.333	< 0.556	< 0.100
MW-10	7/7/2006	<b>6.68</b>	< 2.00	< 2.00	< 2.00	< 2.00	< 0.323	< 0.538	< 0.100
	9/6/2007	4.17	< 2.00	< 2.00	< 2.00	< 2.00	< 0.330	< 0.549	< 0.100
MW-11	7/7/2006	3.88	< 2.00	< 2.00	< 2.00	< 2.00	< 0.326	< 0.543	< 0.100
Dup MW-11	7/7/2002	3.84	< 2.00	< 2.00	< 2.00	< 2.00	< 0.330	< 0.549	< 0.100
	9/6/2007	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00	< 0.300	< 0.500	< 0.100

Notes:

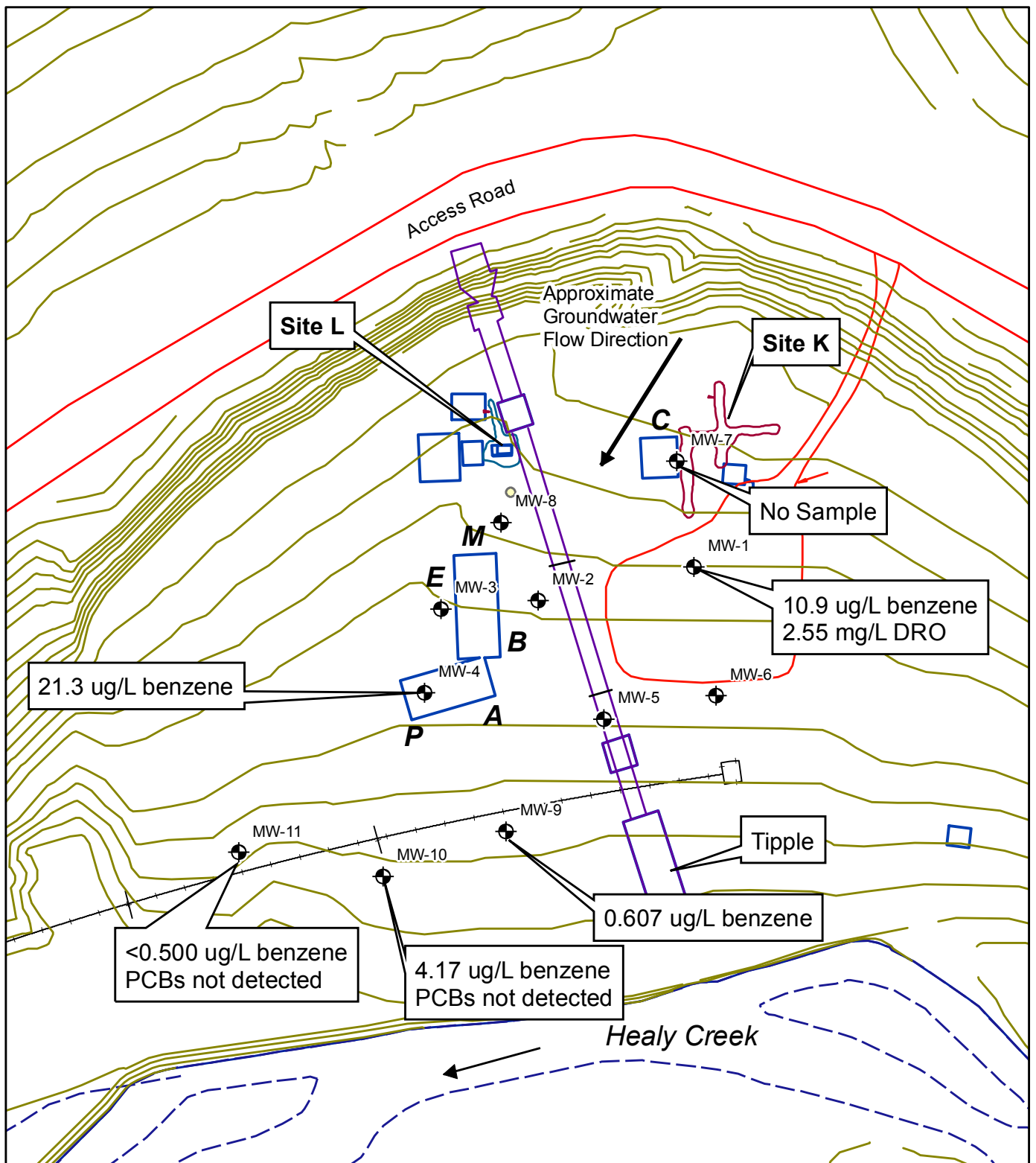
<- Analyte was not detected above the laboratory PQL

<sup>1</sup>- ADEC Groundwater Cleanup levels, *Oil and Other Hazardous Substance Pollution Control* - 18AAC75.345 Table C

**bold**- Exceeds ADEC Cleanup level<sup>1</sup>


NA- Not Applicable

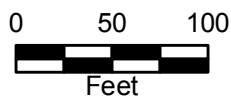
B- Analyte biased high due to the presence of benzene in associated method blank.



Sample results from September 2007

**Legend**

-  Monitoring well
-  Former Buildings
- A** Nortech Site ID



Alaska Department of Natural Resources  
Suntrana Tipple  
Healy, Alaska

**MONITORING  
WELL LOCATIONS**

October 2007

31-1-11378-001

 **SHANNON & WILSON, INC.**  
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

**Figure 1**

## LABORATORY DATA REVIEW CHECKLIST

(NOTE: NA = not applicable)

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses? **Yes** / No
- 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**

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)? **Yes** / No
- b. Were the correct analyses requested? **Yes** / No

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{ C}$ )? **Yes** **No**; *One of the temp blanks was  $1^{\circ} \text{ C}$  when the samples were dropped off in Fairbanks; cooler temperatures were  $6.6^{\circ} \text{ C}$  and  $6.2^{\circ} \text{ C}$  when the samples were delivered to Anchorage; the temp blanks were within the acceptable range. There was no indication the samples had frozen or were overheated.*
- b. Sample preservation acceptable - acidified waters, MeOH-preserved VOC soil (GRO, BTEX, VOCs, etc.)? **Yes** / No
- c. Sample condition documented - broken, leaking (soil MeOH), zero headspace (VOC vials)? **NA** / Yes / No
- 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**
- e. Data quality or usability affected? Yes (explain) **No**

### 4. Case Narrative

- a. Present and understandable? **Yes** / No (explain)
- b. Discrepancies, errors or QC failures noted by the lab? **NA** / **Yes** / No (explain)

SGS Laboratory Report Numbers: 1074657

- c. Were all corrective actions documented? **NA** / Yes / No (explain)
- d. Is there an effect on data quality/usability, according to the case narrative? **No** / Yes

### 5. Sample Results

- a. Correct analyses performed/reported as requested on COC? **Yes** / No (explain)
- b. All applicable holding times met? **Yes** / No
- c. All soils reported on a dry weight basis? **NA** / Yes / No
- e. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project? **Yes** / No (explain only for non-detects with elevated PQLs)
- e. Data quality or usability affected? **No** / Yes (explain)

### 6. QC Samples

#### **a. Method Blank**

- i. Is at least one method blank (MB) reported per matrix, analysis, and 20 samples? **Yes** / No
- ii. Are all method blank results less than PQL? **Yes** / No
- iii. If MB above PQL, what samples are affected?

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

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

iv. Are data quality or usability affected? No / **Yes; see below for explanation**

*Benzene was detected in the Method Blank sample at an estimated concentration of 0.197 µg/L. Therefore, since the benzene concentration in sample 31-1-11378-004 (MW-9) is less than 5-fold higher than that of the Method Blank concentration, this sample result is **biased high**.*

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

- i. Organics - Is at least one LCS/LCSD reported per matrix, analysis, and 20 samples? **NA** / Yes / No
- ii. Metals/Inorganics - Is at least one LCS and one sample duplicate reported per matrix, analysis and 20 samples? **NA** / Yes / No

SGS Laboratory Report Numbers: 1074657

- iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? [~~AK petroleum methods %R < 20%, other analyses refer to lab QC pages~~] **Yes / No** (The %R in the LCS with respect to DRO is below the limits)
- iv. Precision – Are all relative percent differences (RPDs) reported and less than method or laboratory limits, or project-specified DQOs? **Yes / No, see below**

RPD for DRO is 84% which is above the required <20%

- v. If %R or RPD is outside of acceptable limits, what samples are affected? **NA** or **list**  
SAMPLES: 31-1-11378-001, -002, -003, -004, -005, -007

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

If so, are the data flags clearly defined?

- vi. Is the data quality or usability affected? **NA** or **explain.**

The data quality is not considered to be affected by the LCS/LCSD RPD because the MS/MSD and surrogates were both within limits for DRO in all of the associated samples

#### **c. Surrogates - Organics Only**

- i. Are surrogate recoveries reported for organic analyses, including field, QC and laboratory samples? **Yes / No**
- ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits or project-specified DQOs? **Yes / No**
- iii. Do the sample results with failed surrogate recoveries have data flags? **NA / Yes / No** (**explain**)

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

- iv. Is the data quality or usability affected? **No** or **explain.**

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

- i. Is at least one trip blank (TB) reported per matrix, analysis and cooler? **NA / Yes / No**
- ii. Are all results less than the PQL? **Yes / No**



SGS Laboratory Report Numbers: 1074657

iii. If TB is above the PQL, what samples are affected? **NA** or **list samples**

iv. Is the data quality or usability affected? **No** or **explain**.

**e. Field Duplicate**

i. Was at least one field duplicate submitted per matrix, analysis and 10 project samples?  
**Yes** / No

ii. Was the field duplicate submitted blind to the lab? **Yes** / No

iii. Precision – Are all relative percent differences (RPDs) less than specified DQOs (recommended: 30% for water, 50% for soil) ? **Yes** / **No**; see text

iv. Is the data quality or usability affected? **No** / **Yes** (explain)

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

**Not Applicable** or ...

i. Are all results less than the PQL? **Yes** / **No**

ii. If results are above PQL, what samples are affected? **NA** or **list**

iii. Is the data quality or usability affected? Explain.

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

**Not applicable** or ...

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

SGS Laboratory Report Numbers: 1074657

**Completed by:** Kristen Williams

**Title:** Environmental Chemist

**Date:** October 22<sup>nd</sup>, 2007

**CS Report Name:** *Groundwater Contamination Assessment at Suntrana, Healy, Alaska*

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

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

**Laboratory Report Dates:** September 28<sup>th</sup>, 2007

**Laboratory Report Numbers:** 1074657

**ADEC File Number:** 150.38.027

**ADEC RecKey Number:** 1990310915701



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

Project: 31-1-11378-001 Suntrana  
Client: Shannon & Wilson-Fairbanks  
SGS Work Order: 1074657

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 SHANFBK Shannon & Wilson-Fairbanks  
Workorder 1074657 31-1-11378-001 Suntrana

Printed Date/Time 9/28/2007 15:24

**Sample ID** **Client Sample ID**

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

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**1074657001 PS 1378-090607-001**  
AK102 - The pattern is consistent with a weathered middle distillate.  
AK103 - Unknown hydrocarbon with several peaks is present.

**791496 LCS LCS for HBN 191630 [XXX/18585]**  
AK102 - LCS spike recovery is outside controls. See the associated LCSD and MS/MSD recoveries for precision and accuracy.

**791497 LCSD LCSD for HBN 191630 [XXX/1858]**  
AK102 - LCS/LCSD recovery does not meet QC RPD goals. See the associated LCSD and MS/MSD recoveries for precision and accuracy.



# 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>

Mark Lockwood  
Shannon & Wilson-Fairbanks  
2355 Hill Rd  
Fairbanks, AK 99709

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<b>Work Order:</b>	1074657	
	31-1-11378-001 Suntrana	<b>Released by:</b>
<b>Client:</b>	Shannon & Wilson-Fairbanks	
<b>Report Date:</b>	September 28, 2007	

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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 001828 for NELAP (RCRA methods: 1010/1020, 1311, 6000/7000, 9040/9045, 9056, 9060, 9065, 8015B, 8021B, 8081A/8082, 8260B, 8270C).

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.

Note: Soil samples are reported on a dry weight basis unless otherwise specified.



**SGS Ref.#** 1074657001  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** 1378-090607-001  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 11:55  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

AK102 - The pattern is consistent with a weathered middle distillate.  
 AK103 - Unknown hydrocarbon with several peaks is present.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	0.129	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	10.9	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	8.01	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	2.25	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	119		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	103		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	2.55	0.343	mg/L	AK102	E		09/17/07	09/19/07	HKG
Residual Range Organics	0.999	0.571	mg/L	AK103	E		09/17/07	09/19/07	HKG
<b>Surrogates</b>									
5a Androstane <surr>	82.3		%	AK102	E	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	93.2		%	AK103	E	50-150	09/17/07	09/19/07	HKG



SGS Ref.# 1074657002  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11378-001 Suntrana  
Client Sample ID 1378-090607-002  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 09/28/2007 15:24  
Collected Date/Time 09/06/2007 12:36  
Received Date/Time 09/11/2007 10:30  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	0.115	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	21.3	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	110		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	95.4		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.341	mg/L	AK102	E		09/17/07	09/19/07	HKG
Residual Range Organics	ND	0.568	mg/L	AK103	E		09/17/07	09/19/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	74.6		%	AK102	E	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	99.9		%	AK103	E	50-150	09/17/07	09/19/07	HKG



**SGS Ref.#** 1074657003  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** 1378-090607-003  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 12:47  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	0.110	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	21.0	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	110		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	96.9		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.333	mg/L	AK102	E		09/17/07	09/19/07	HKG
Residual Range Organics	ND	0.556	mg/L	AK103	E		09/17/07	09/19/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	53.1		%	AK102	E	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	97.1		%	AK103	E	50-150	09/17/07	09/19/07	HKG





**SGS Ref.#** 1074657004  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** 1378-090607-004  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 13:17  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	0.607	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	105		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	93.8		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.333	mg/L	AK102	E		09/17/07	09/19/07	HKG
Residual Range Organics	ND	0.556	mg/L	AK103	E		09/17/07	09/19/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	79.6		%	AK102	E	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	105		%	AK103	E	50-150	09/17/07	09/19/07	HKG



**SGS Ref.#** 1074657005  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** 1378-090607-005  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 13:58  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	4.17	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	107		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	94.3		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.330	mg/L	AK102	G		09/17/07	09/19/07	HKG
Residual Range Organics	ND	0.549	mg/L	AK103	G		09/17/07	09/19/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	61.5		%	AK102	G	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	91.7		%	AK103	G	50-150	09/17/07	09/19/07	HKG
<b><u>Polychlorinated Biphenyls</u></b>									
Aroclor-1016	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1221	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1232	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1242	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1248	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1254	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM



SGS Ref.# 1074657005  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11378-001 Suntrana  
Client Sample ID 1378-090607-005  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 09/28/2007 15:24  
Collected Date/Time 09/06/2007 13:58  
Received Date/Time 09/11/2007 10:30  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Polychlorinated Biphenyls</b>									
Aroclor-1260	ND	0.105	ug/L	SW8082	D		09/25/07	09/27/07	MCM
<b>Surrogates</b>									
Decachlorobiphenyl <surr>	86.9		%	SW8082	D	42-120	09/25/07	09/27/07	MCM



**SGS Ref.#** 1074657006  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** 1378-090607-006  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 14:20  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Polychlorinated Biphenyls</u></b>									
Aroclor-1016	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1221	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1232	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1242	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1248	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1254	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
Aroclor-1260	ND	0.114	ug/L	SW8082	A		09/25/07	09/27/07	MCM
<b>Surrogates</b>									
Decachlorobiphenyl <surr>	89.9		%	SW8082	A	42-120	09/25/07	09/27/07	MCM



SGS Ref.# 1074657007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11378-001 Suntrana  
Client Sample ID 1378-090607-007  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 09/28/2007 15:24  
Collected Date/Time 09/06/2007 14:53  
Received Date/Time 09/11/2007 10:30  
Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b><u>Surrogates</u></b>									
4-Bromofluorobenzene <surr>	105		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	92.8		%	SW8021B	A	80-120	09/13/07	09/13/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.300	mg/L	AK102	G		09/17/07	09/19/07	HKG
Residual Range Organics	ND	0.500	mg/L	AK103	G		09/17/07	09/19/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	76.1		%	AK102	G	50-150	09/17/07	09/19/07	HKG
n-Triacontane-d62 <surr>	94		%	AK103	G	50-150	09/17/07	09/19/07	HKG
<b><u>Polychlorinated Biphenyls</u></b>									
Aroclor-1016	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1221	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1232	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1242	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1248	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
Aroclor-1254	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM



SGS Ref.# 1074657007  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11378-001 Suntrana  
Client Sample ID 1378-090607-007  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 09/28/2007 15:24  
Collected Date/Time 09/06/2007 14:53  
Received Date/Time 09/11/2007 10:30  
Technical Director Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b>Polychlorinated Biphenyls</b>									
Aroclor-1260	ND	0.116	ug/L	SW8082	D		09/25/07	09/27/07	MCM
<b>Surrogates</b>									
Decachlorobiphenyl <surr>	88.6		%	SW8082	D	42-120	09/25/07	09/27/07	MCM



**SGS Ref.#** 1074657008  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Client Sample ID** Trip Blank  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 09/28/2007 15:24  
**Collected Date/Time** 09/06/2007 11:55  
**Received Date/Time** 09/11/2007 10:30  
**Technical Director** Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Gasoline Range Organics	ND	0.100	mg/L	AK101	A		09/13/07	09/13/07	HM
Benzene	ND	0.500	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		09/13/07	09/13/07	HM
<b>Surrogates</b>									
4-Bromofluorobenzene <surr>	111		%	AK101	A	50-150	09/13/07	09/13/07	HM
1,4-Difluorobenzene <surr>	94		%	SW8021B	A	80-120	09/13/07	09/13/07	HM



**SGS Ref.#** 790676 Method Blank  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** VXX17296  
**Method** SW5030B  
**Date** 09/13/2007

QC results affect the following production samples:

1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007, 1074657008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Gasoline Range Organics	0.0213J	0.100	0.0100	mg/L	09/13/07
<b>Surrogates</b>					
4-Bromofluorobenzene <surr>	106	50-150		%	09/13/07
<b>Batch</b>	VFC8605				
<b>Method</b>	AK101				
<b>Instrument</b>	HP 5890 Series II PID+HECD VBA				
Benzene	0.197 J	0.500	0.150	ug/L	09/13/07
Toluene	0.726 J	2.00	0.620	ug/L	09/13/07
Ethylbenzene	ND	2.00	0.620	ug/L	09/13/07
P & M -Xylene	0.896 J	2.00	0.620	ug/L	09/13/07
o-Xylene	ND	2.00	0.620	ug/L	09/13/07
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	93.5	80-120		%	09/13/07
<b>Batch</b>	VFC8605				
<b>Method</b>	SW8021B				
<b>Instrument</b>	HP 5890 Series II PID+HECD VBA				





**SGS Ref.#** 791495 Method Blank  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** XXX18585  
**Method** SW3520C  
**Date** 09/17/2007

QC results affect the following production samples:

1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b>Semivolatile Organic Fuels Department</b>					
Diesel Range Organics	0.0698 J	0.300	0.0600	mg/L	09/19/07
<b>Surrogates</b>					
5a Androstane <surr>	75.8	60-120		%	09/19/07
Batch	XFC7596				
Method	AK102				
Instrument	HP 5890 Series II FID SV D F				
Residual Range Organics	ND	0.500	0.100	mg/L	09/19/07
<b>Surrogates</b>					
n-Triacontane-d62 <surr>	94.5	60-120		%	09/19/07
Batch	XFC7596				
Method	AK103				
Instrument	HP 5890 Series II FID SV D F				



SGS Ref.# 794003 Method Blank  
Client Name Shannon & Wilson-Fairbanks  
Project Name/# 31-1-11378-001 Suntrana  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 09/28/2007 15:24  
Prep Batch XXX18619  
Method SW3510C  
Date 09/25/2007

QC results affect the following production samples:  
1074657005, 1074657006, 1074657007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b>Polychlorinated Biphenyls</b>					
Aroclor-1016	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1221	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1232	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1242	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1248	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1254	ND	0.100	0.0310	ug/L	09/27/07
Aroclor-1260	ND	0.100	0.0310	ug/L	09/27/07
<b>Surrogates</b>					
Decachlorobiphenyl <surr>	89.6	42-120		%	09/27/07

Batch XGC5963  
Method SW8082  
Instrument HP 5890 Series II ECD SV I F



**SGS Ref.#** 790677 Lab Control Sample  
 790678 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** VXX17296  
**Method** SW5030B  
**Date** 09/13/2007

QC results affect the following production samples:

1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007, 1074657008

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

**Surrogates**

4-Bromofluorobenzene <surr>	LCS	124	( 50-150 )				09/13/2007
	LCSD						

**Batch** VFC8605  
**Method** AK101  
**Instrument** HP 5890 Series II PID+HECD VBA

Benzene	LCS	87.2	87	( 80-120 )			100 ug/L	09/13/2007
	LCSD	87.5	88		0	(< 20 )	100 ug/L	09/14/2007
Toluene	LCS	88.9	89	( 80-120 )			100 ug/L	09/13/2007
	LCSD	89.2	89		0	(< 20 )	100 ug/L	09/14/2007
Ethylbenzene	LCS	94.3	94	( 87-125 )			100 ug/L	09/13/2007
	LCSD	94.7	95		0	(< 20 )	100 ug/L	09/14/2007
P & M -Xylene	LCS	186	93	( 87-125 )			200 ug/L	09/13/2007
	LCSD	188	94		1	(< 20 )	200 ug/L	09/14/2007
o-Xylene	LCS	92.6	93	( 85-120 )			100 ug/L	09/13/2007
	LCSD	93.6	94		1	(< 20 )	100 ug/L	09/14/2007

**Batch** VFC8605  
**Method** SW8021B  
**Instrument** HP 5890 Series II PID+HECD VBA



**SGS Ref.#** 790679 Lab Control Sample  
 790680 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** VXX17296  
**Method** SW5030B  
**Date** 09/13/2007

QC results affect the following production samples:

1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007, 1074657008

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

Gasoline Range Organics	LCS	0.215	108	( 60-120 )		0.200 mg/L	09/13/2007
	LCSD	0.218	109		1	(< 20 )	0.200 mg/L 09/14/2007

**Surrogates**

4-Bromofluorobenzene <surr>	LCS		107	( 50-150 )			09/13/2007
	LCSD		112		5		09/14/2007

**Batch** VFC8605  
**Method** AK101  
**Instrument** HP 5890 Series II PID+HECD VBA



**SGS Ref.#** 791496 Lab Control Sample  
 791497 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** XXX18585  
**Method** SW3520C  
**Date** 09/17/2007

QC results affect the following production samples:

1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007

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	0.397	40 *	( 75-125 )			1 mg/L	09/19/2007
	LCSD	0.967	97		84 *	(< 20 )	1 mg/L	09/19/2007

**Surrogates**

5a Androstane <surr>	LCS		57 *	( 60-120 )				09/19/2007
	LCSD		86		42			09/19/2007

**Batch** XFC7596  
**Method** AK102  
**Instrument** HP 5890 Series II FID SV D F

Residual Range Organics	LCS	0.973	97	( 60-120 )			1 mg/L	09/19/2007
	LCSD	1.01	101		4	(< 20 )	1 mg/L	09/19/2007

**Surrogates**

n-Triacontane-d62 <surr>	LCS		95	( 60-120 )				09/19/2007
	LCSD		99		4			09/19/2007

**Batch** XFC7596  
**Method** AK103  
**Instrument** HP 5890 Series II FID SV D F



**SGS Ref.#** 794004 Lab Control Sample  
 794005 Lab Control Sample Duplicate  
**Client Name** Shannon & Wilson-Fairbanks  
**Project Name/#** 31-1-11378-001 Suntrana  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** XXX18619  
**Method** SW3510C  
**Date** 09/25/2007

QC results affect the following production samples:

1074657005, 1074657006, 1074657007

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Polychlorinated Biphenyls</u></b>							
Aroclor-1016	LCS	0.945	95	( 62-116 )		1 ug/L	09/27/2007
	LCSD	0.987	99		4 (< 25)	1 ug/L	09/27/2007
Aroclor-1260	LCS	1.04	104	( 60-113 )		1 ug/L	09/27/2007
	LCSD	1.03	103		2 (< 25)	1 ug/L	09/27/2007
<b>Surrogates</b>							
Decachlorobiphenyl <surr>	LCS		88	( 42-120 )			09/27/2007
	LCSD		89		1		09/27/2007

**Batch** XGC5963  
**Method** SW8082  
**Instrument** HP 5890 Series II ECD SV I F



**SGS Ref.#** 791498 Matrix Spike  
 791499 Matrix Spike Duplicate  
**Printed Date/Time** 09/28/2007 15:24  
**Prep Batch** XXX18585  
**Method** Continuous Liq Extra. AK102/1  
**Date** 09/17/2007  
**Original** 1074721002  
**Matrix** Water (Surface, Eff., Ground)

QC results affect the following production samples:  
 1074657001, 1074657002, 1074657003, 1074657004, 1074657005, 1074657007

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics	MS	ND	.95	91	( 75-125 )			1.04	mg/L 09/19/2007
	MSD		1.02	99		7	(< 30 )	1.03	mg/L 09/19/2007

**Surrogates**

5a Androstane <surr>	MS		.0826	79	( 50-150 )				09/19/2007
	MSD		0.085	83		3			09/19/2007

**Batch** XFC7596  
**Method** AK102  
**Instrument** HP 5890 Series II FID SV D F

**Surrogates**

n-Triacontane-d62 <surr>	MS		.0897	86	( 50-150 )				09/19/2007
	MSD		0.086	83		4			09/19/2007

**Batch** XFC7596  
**Method** AK103  
**Instrument** HP 5890 Series II FID SV D F

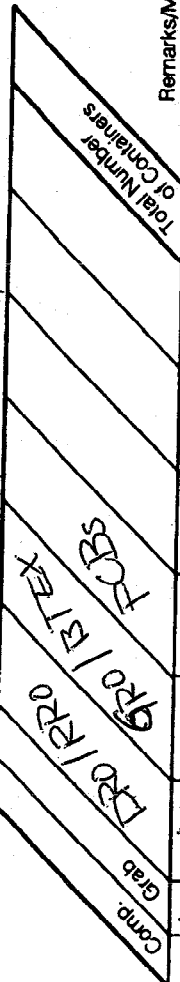
**Shannon & Wilson, Inc.**  
 400 N. 34th Street, Suite 100 1150 Olive Blvd., Suite 276  
 Seattle, WA 98103 St. Louis, MO 63141  
 (206) 632-8020 (314) 872-8170  
 2355 Hill Road 5430 Fairbanks Street, Suite 3  
 Fairbanks, AK 99707 Anchorage, AK 99518  
 (907) 479-9600 (907) 561-2120

# Chain of Custody Record

1074657  


Page 1 of Laboratory SOCS  
 Name: KLINT

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



Sample Identity	Lab No.	Time	Date Sampled	Comp. Grab	TPO/FRP	GPO/STEX	PCBs	Total Number of Containers	Remarks/Matrix
1378-090607-001	1A-E	11:55	9-6-07	X	X	X		5	GW
1378-090607-002	2	12:36	9-6-07	X	X	X		5	
1378-090607-003	3	12:47	9-6-07	X	X	X		5	
1378-090607-004	4 V	13:17	9-6-07	X	X	X		5	
1378-090607-005	5A-G	13:58	9-6-07	X	X	X		7	
1378-090607-006	6A-B	14:20	9-6-07	X	X	X		2	
1378-090607-007	7A-G	14:53	9-6-07	X	X	X		7	
TRIP BANK	8A-F			X	X	X		6	

**Project Information**





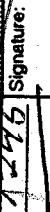
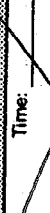
Project Number: S1-11378-001  
 Project Name: Suntrana  
 Contact: MARK LUKENOOD  
 Ongoing Project? Yes  No   
 Sampler: ANDREA CARLSON

**Sample Receipt**

Total Number of Containers: 42  
 COC Seals/Intact? Y/M/N/A  
 Received Good Cond./Cold  
 Delivery Method: HAND  
 (attach shipping bill, if any)

**Instructions**

Requested Turn Around Time: STANDARD  
 Special Instructions: LEVEL II - 2 COOLERS IN.

Relinquished By: 1	Relinquished By: 2	Relinquished By: 3
Signature:  Printed Name: ANDREA CARLSON Company: S&W	Signature:  Printed Name: KLINT FRIEDLANDER Company: SOCS	Signature:  Printed Name: KLINT FRIEDLANDER Company: SOCS
Time: 12:42 Date: 9-7-07	Time: 17:30 Date: 9/10/07	Time: _____ Date: _____
Received By: 1	Received By: 2	Received By: 3
Signature:  Printed Name: KLINT FRIEDLANDER Company: SOCS	Signature:  Printed Name: KLINT FRIEDLANDER Company: SOCS	Signature:  Printed Name: KLINT FRIEDLANDER Company: SOCS
Time: 1:27 Date: _____	Time: _____ Date: _____	Time: 10:30 Date: 9/11/07

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

Account 2.5 TB 2.3  
 2 11 1.0 TB 4.6



SAMPLE RECEIPT FORM

SGS WO#:



- Yes No NA
- Are samples RUSH, priority, or w/n 72 hrs. of hold time?
- If yes have you done e-mail notification?
- Are samples within 24 hrs. of hold time or due date?
- If yes, have you spoken with Supervisor?
- Archiving bottles - if req., are they properly marked?
- Are there any problems? PM Notified? \_\_\_\_\_
- Were samples preserved correctly and pH verified?

Due Date: 9/21  
 Received Date: 9/21/07  
 Received Time: 12:45  
 Is date/time conversion necessary?       
 # of hours to AK Local Time:     

Thermometer ID: 4206 Stou 716

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>2.5</u> °C	<u>2.3</u> °C
<u>2</u>	<u>1.0</u> °C	<u>4.5</u> °C

- 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)

\*Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client

Alert Courier / UPS / FedEx / USPS /  
 AA Goldstreak / NAC / ERA / PenAir / Carlile  
 Lynden / SGS / Other: \_\_\_\_\_

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

- |                          |                          |   |                                  |
|--------------------------|--------------------------|---|----------------------------------|
| Yes                      | No                       |   |                                  |
| <input type="checkbox"/> | <input type="checkbox"/> | Is received temperature 4 ± 2°C?                              |                                  |
|                          |                          | Exceptions: _____   | Samples/Analyses Affected: _____ |
|                          |                          | _____   | _____                            |
|                          |                          | _____   | _____                            |
|                          |                          | Rad Screen performed? Result: _____                           |                                  |
|                          |                          | Was there an airbill? (Note # above in the right hand column) |                                  |
|                          |                          | Was cooler sealed with custody seals?                         |                                  |
|                          |                          | # / where: _____  |                                  |
|                          |                          | 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 COE / AFCEE / Navy 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?   |                                  |

Airbill # \_\_\_\_\_

Additional Sample Remarks: (*√ if applicable*)

Extra Sample Volume?

Limited Sample Volume?

Field preserved for volatiles?

Field-filtered for dissolved?

Lab-filtered for dissolved?

Ref Lab required?

Foreign Soil?

***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): [Signature] (print): HELEN FRIEDENTHAL

Login proof (check one): waived  required  performed by: \_\_\_\_\_

1074657



#	Container ID	Matrix	Test	QC	TB	Container Volume								Container Type							Preservative																									
						1 L	500 mL	250 mL	125 mL	60 mL	40 mL	8oz (250 mL)	4oz (125 mL)	Other	AG	CG	HDPH	Nalgene	Cubie	Coil	Septa	Other	None	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	MeOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	NaOH	Other																
1-4	A-C	1	Geo/BTEX								12																																			
1	D-E	1	DRO/PCO			8																																								
5-7	A-C	1	Geo/BTEX								6																																			
	D-E	1	PCB			4																																								
	F-G	1	DRO/PCO			4																																								
6	A-B	1	PCB			2																																								
8	A-C	1	Geo/BTEX								3																																			

Bottle Totals											

Completed by:

*[Signature]*

Date:

9/11/07



1074657

SGS WO#:



**SAMPLE RECEIPT FORM FOR TRANSFERS**  
**From**  
**FAIRBANKS, ALASKA OR HONOLULU, HAWAII**  
**To**  
**ANCHORAGE, AK**

**TO BE COMPLETED IN ANCHORAGE UPON ARRIVAL FROM FAIRBANKS OR HAWAII.**  
**NOTES RECORDED BELOW ARE ACTIONS NEEDED UPON ARRIVAL IN ANCHORAGE.**

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

Receipt Date / Time: 9/11/07 1030  
 Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No   
 Number of Hours From Alaska Local Time: \_\_\_\_\_  
 Foreign Soil? Yes \_\_\_\_\_ No

Delivery method to Anchorage (circle all that apply):  
 Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir / Carlile Lynden / SGS  
 Other: \_\_\_\_\_  
 Airbill # \_\_\_\_\_

**COOLER AND TEMP BLANK READINGS\***

<u>Cooler ID</u>	<u>Temp Blank (°C)</u>	<u>Cooler (°C)</u>	<u>Cooler ID</u>	<u>Temp Blank (°C)</u>	<u>Cooler (°C)</u>
<u>1</u>	<u>5.7</u>	<u>6.6</u>	_____	_____	_____
<u>2</u>	<u>4.7</u>	<u>6.2</u>	_____	_____	_____
<u>3 BWR</u>	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT: YES / NO  
 # / WHERE: Front/back of cooler

COMPLETED BY: \_\_\_\_\_

\*Temperature readings include thermometer correction factors.