



April 2, 2007



Mr. Roy Johnson c/o Borgeson & Burns 100 Cushman Street, Suite 311 Fairbanks, Alaska 99701 APR 0 6 2097

CONTAMINATED SITES FAIRBANKS

Attn: Mr. Roy Johnson

RE: RELEASE CHARACTERIZATION, SUNRISE BAGEL, 223 ILLINOIS STREET, FAIRBANKS, ALASKA

We have completed our characterization of previously identified diesel contamination along the northern boundary of the Sunrise Bagel Property, 223 Illinois Street, Fairbanks, Alaska (Figure 1). Our work included a review of relevant environmental records, utility locates, soil sampling from four borings, and groundwater sampling from one temporary well, in general accordance with the Alaska Department of Environmental Conservation (ADEC) Underground Storage Tank (UST) Regulations 18 AAC 78 and our proposal dated October 4, 2006. The objective of our work was to characterize current soil and groundwater conditions in the area where diesel contaminated soil was identified in 1992.

#### **BACKGROUND**

Diesel contamination was identified along the northern boundary of the subject property during the Alaska Department of Transportation and Public Facilities (ADOT&PF) Illinois Street Hazardous Waste Investigation in 1992. The seven soil borings shown in Figure 2 were completed as part of that investigation. Soil collected from Boring B-7 had concentrations of diesel range organics (DRO) up to 29,000 parts per million (ppm), gasoline range organics (GRO) up to 550 ppm, and benzene and ethylbenzene up to 4.2 ppm and 12 ppm, respectively. These analytes exceeded their ADEC soil cleanup levels.

In 2004 a right-of-way study conducted by Golder and Associates advanced five borings along the western and southern property boundaries. Soil samples from these borings did not exceed cleanup levels for residual range organics (RRO), DRO, GRO, or BTEX (benzene, toluene,

ethylbenzene, and xylenes). Arsenic exceeded its cleanup level in one sample, but was consistent with background levels typical for the Fairbanks area.

#### **Historical Records Review**

To determine the possible sources of diesel contamination along the northern property boundary we reviewed select aerial photographs from 1938 to 1999, the Fairbanks North Star Borough (FNSB) assessment records from 1965 to the present, and ADEC environmental records.

A 1938 aerial photograph shows Illinois Street, the Alaska Railroad coalbunkers, and a slough north of the subject property; two small building were located on the property. According to the FNSB records, Jerry's Body Shop, also called Tennessee Garage (workshop and apartment), was built on the property near the northern boundary in 1961 (Figure 3); a storage shed (1952) and Polar Electric Supply (1965) occupied the site north of the subject property (Figure 3). A 1963 aerial photograph show the apartment building to the northeast. The 1970 aerial photograph shows the site to the north was cleared, except for the apartment building.

According to the FNSB records, a self-service gas station (Downtown Gas) occupied the site in 1987; however, it was not apparent in our May 1987 aerial photo. In 1988 the Tennessee Garage was dismantled. In 1999, Gilfilian Engineering supervised the removal of three USTs and the dispensing island from the property. Twelve soil samples collected from the limits of the UST excavation did not contain GRO, DRO, or BTEX in excess of their ADEC cleanup levels. ADEC environmental records report the leaking underground storage tank (LUST) site associated with Downtown Gas as closed in 1999 with "No Further Action" status. The inclusion of the site on the LUST database was based on the 1992 boring data, not on a documented release from the UST system.

The site is currently paved, and Sunrise Bagel and Espresso has occupied the site since 2002.

#### FIELD ACTIVITIES

On November 10, 2006, Angela Miller, an environmental specialist with Shannon & Wilson, collected soil samples from four soil borings (B-1, B-2, B-3, and B-4) installed in the vicinity

of previously identified soil contamination (Figure 3). A groundwater sample was collected from a temporary well point installed in soil boring B-1, which was advanced in the location of former soil boring B-7. GeoTek, Inc., an Anchorage based drilling contractor, assisted with field activities.

A Geoprobe® 66 Series track-mounted, direct-push drill rig was mobilized to the site. The Geoprobe® used static weight and percussion to advance a steel rod 20 feet below the ground surface while collecting continuous core samples of unconsolidated material. Samples were recovered in 5-foot intervals in Teflon®-lined push rods. Samples from the liner were field screened using a photoionization detector (PID) to assess relative abundance of total volatile organic compounds. Field screening results ranged from less than 1 part per million (ppm) to 455 ppm. Samples with the highest field screening result in each boring were submitted for analytical testing; two samples were submitted from boring B-1. A bentonite seal was placed above the water table, and drill cuttings were returned to the soil borings from which they were removed. Boring logs and photographs are attached to this report.

Geoprobe® Screen Point tooling with reusable well screen and riser tubes was inserted into the push rods advanced in Boring B-1. The well was purged prior to analytical sample collection to remove fine sediment entrained during installation. Purging was accomplished using a battery-powered variable-speed peristaltic pump fitted with new single-use silicon tubing. Purge water was discharged to the ground surface, and the boring was sealed with bentonite.

Analytical soil and groundwater samples were collected in laboratory-supplied sampling containers, placed into a cooler with chain-of-custody documentation, and kept cold during hand delivery to SGS Environmental Services (SGS) in Fairbanks, Alaska. Samples were analyzed as shown in the following table.

#### **SOIL SAMPLE ANALYSIS**

	GRO	DRO	RRO	втех	Polynuclear Aromatic Hydrocarbons	RCRA Metals
	AK 101	AK 102	AK103	EPA 8021	EPA 8270	EPA 6000
Boring B-1*	2	2		2		
Boring B-2 <sup>^</sup>	ı	ı	ı	ı	ı	1
Boring B-3	1	ı		1		
Boring B-4	1	1		1		
Quality Control	1	1		I		
Total	6	6	1	6	1	1

te: \* Boring B-1 was advanced where petroleum contamination was previously identified in soil boring B-7.

^ Boring B-2 field screening result exhibited the highest degree of contamination

#### **GROUNDWATER SAMPLE ANALYSIS**

	GRO AK 101	DRO AK 102	BTEX EPA 8021
Boring B-1	ı	ı	1
Quality Control	ı	1	1
Total	2	2	2

#### **RESULTS**

#### **Subsurface Conditions**

Soils at the site consist of brown, sandy silt to a depth of about 13.5 feet below the ground surface (bgs), underlain by slightly silty, sandy gravel. Groundwater was encountered in boring B-1 at a depth of 15.68 feet bgs.

#### **Analytical Results**

Soil sample results are summarized in Table 1, and groundwater sample results are summarized in Table 2. A copy of the SGS laboratory report is also provided as an attachment to this report.

The ADEC Method 2 soil cleanup levels for migration to groundwater in the under 40-inch precipitation zone are established in 18 AAC 75.341, and ADEC groundwater cleanup levels are established in 18 AAC 75.345. These cleanup levels are presented in Tables 1 and 2 for reference.

The soil samples collected from Boring B-1 had concentrations of DRO of 26,800 mg/kg (12.5 feet bgs) and 2,540 mg/kg (17.5 feet bgs), both exceeding the soil cleanup level. GRO and xylenes were reported at concentrations above the laboratory practical quantitation limit (PQL), but below cleanup levels. Other BTEX constituents were not detected above the PQL; however, benzene in one sample from Boring B-1 had a PQL above the cleanup level (PQL = 0.0609 mg/kg; cleanup level = 0.02 mg/kg).

Soil collected from Boring B-2 had GRO, DRO, 1-methylnaphthalene, and arsenic in excess of their cleanup levels. GRO were detected at 663 mg/kg, and DRO were detected at 18,800 mg/kg. Ethylbenzene, xylenes, 2-methylnaphthalene, phenanthrene, naphthalene, barium, cadmium, chromium, lead, and selenium were detected at concentrations below cleanup levels. RRO, benzene, toluene, and silver were not detected above the PQL; however, benzene had PQLs above the cleanup level (PQL = 0.150 mg/kg; cleanup level = 0.02 mg/kg).

Soil collected from Boring B-3 contained DRO at 9,600 mg/kg above the cleanup level; GRO, ethylbenzene, and xylenes were reported at concentrations below their cleanup levels; and benzene and toluene were not detected above their PQLs.

Soil collected from Boring B-4 did not contain analytes at concentrations above their PQLs.

The groundwater sample and duplicate sample from the temporary well point contained DRO at 0.702 and 1.120 mg/L, respectively, both below the DRO groundwater cleanup level. GRO were not detected above the cleanup level, and BTEX constituents were not reported above the PQL in either sample or duplicate sample.

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#### QUALITY ASSURANCE AND QUALITY CONTROL

Field quality control (QC) procedures for this project included the collection and analysis of duplicate pairs of soil and groundwater samples, and temperature and trip blanks that accompanied the samples during collection activities and transportation. The temperature blank demonstrated the samples were delivered to the laboratory within the acceptable temperature limits. The cooler temperature was below the acceptable limit when the samples arrived in Anchorage by SGS transfer from Fairbanks; however, the temperature blank was within acceptable limits. The trip blanks did not contain analytes above PQLs, indicating cross-contamination among samples was unlikely.

The duplicate soil samples 1343-111006-B22/1343-111006-B23 and duplicate groundwater samples 1343-111006-B11/1343-111006-B12 were analyzed to evaluate error associated with sampling and laboratory variability. Field duplicate precision can be expressed as a relative percent difference (RPD) between duplicates if both samples contain analytes above their PQL. The RPDs for GRO, DRO, ethylbenzene, and o-xylene detected in soil duplicate samples were within Shannon & Wilson's acceptable range of ±50 for soil samples; p&m Xylenes were outside our acceptable range, and other analytes were not detected above the PQL. The RPD for DRO detected in the groundwater duplicate samples was outside Shannon & Wilson's acceptable range of ±30 for water samples. Other analytes were not detected above the laboratory PQL.

The SGS Laboratory Data Report and the ADEC Laboratory Data Review Checklist (attached) identify and discuss analytical anomalies associated with the data. In summary, DRO in soil and groundwater samples were consistent with a weathered middle distillate. Surrogate recoveries were outside laboratory QC goals (biased high) due to hydrocarbon interference in samples 1343-111006-B13, 1343-111006-B14, 1343-111006-B22, 1343-111006-B23, and 1343-111006-B32. Naphthalene, 1-methylnaphthalene, and 2- methylnaphthalene were detected above the PQL in the soil method blank (a measure of analytical sensitivity); however the concentration in associated sample 1343-111006-B22 was greater than five times the method blank concentration. The matrix spike (MS) and matrix spike duplicate (MSD) sample recoveries (measures of accuracy) were outside laboratory controls; however, the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) samples (measures of

accuracy) met laboratory QC requirements. MS/MSD surrogate recoveries and RPDs (measure of precision) were outside laboratory control limits due to sample dilution. Additional analytical anomalies discussed in the SGS Laboratory Data Report do not directly affect project samples.

The data from the GRO, DRO, RRO, PAH, and metals analyses conducted on the project samples had PQLs below the ADEC soil and groundwater cleanup levels, with the exception of benzene, which had a PQL above its soil cleanup level in two of the soil samples and field duplicate. Due to the elevated PQL for benzene we cannot assess its presence or absence in samples 1343-111006-B13 and 1343-111006-B22/B23, between the respective cleanup level and its PQL.

Based on our review of analytical anomalies in relation to the data objectives for this assessment it is our opinion that although the results may be biased high, the overall utility of the laboratory data are valid for characterizing contamination at the sampled locations.

#### CONCLUSIONS AND RECOMMENDATIONS

Soil contamination was discovered near the northern boundary of the site in 1992 during a ADOT&PF Hazardous Waste Investigation. Soil samples collected at the excavation limits during the Downtown Gas UST closures in 1999 were below the ADEC cleanup levels. The ADEC made a determination of No Further Action required for the UST site. A 2004 site right-of-way study indicated soil contamination was not present near the southern and western property boundaries.

Our historical record review revealed that several former buildings were located close to the contamination identified near the northern property boundary. Heating-oil USTs may have been used at the buildings, and the sites were used for vehicle maintenance and storage. The source of the contamination may have been on the site and/or on the property to the north.

In our assessment, GRO were detected above its soil cleanup level in Boring B-2. DRO were detected above its soil cleanup level in borings B-1, B-2, and B-3. Benzene had PQLs above its soil cleanup level in Borings B-1 and B-2. 1-Methyl-naphthalene was detected above its soil cleanup level in Boring B-2. Arsenic was detected at a concentration above its soil cleanup

level in Boring B-2, but was within the background range typical for Fairbanks. No other analytes were detected above their soil cleanup levels. No groundwater analytes exceeded their cleanup levels. DRO exceed the maximum allowable soil concentration (12,500 mg/kg) set by the ADEC. If that material is left in place, a deed notice would be required to notify prospective buyers.

Based on these conclusions we provide the following recommendations:

- Develop a corrective action plan to remove the soil exceeding the ADEC cleanup levels. Once removed, soil should be handled and treated in accordance with applicable regulations. Collect samples from the limits of the excavation to document conditions.
- Due the proximity of the contamination to the northern property boundary, the corrective action should attempt to coordinate with the property owner to the north to determine the northern extent of contamination.

#### LIMITATIONS

This report presents conclusions based on limited sampling and analysis that we performed at Sunrise Bagel, 223 Illinois Street, Fairbanks, Alaska. The data presented in this letter report should be considered representative of the time our site observations and sample collection. Changes in the observed site conditions can occur with the passage of time. In addition, changes in government codes, regulations, or laws may occur. Due to such changes, our observations and conclusions regarding this site may need to be revised. In addition, there can be no assurance that a regulatory agency or its staff will reach the same conclusions as Shannon & Wilson.

This report was prepared for the exclusive use of Roy Johnson. If it is made available to others, it should be for information on factual data only and not as a warranty of conditions described in this report. The interpretations and recommendations are based solely upon information available to Shannon & Wilson at the time of this report.

We trust this information is sufficient for your needs at the present time. If you have any questions, please do not hesitate to call.

Sincerely,

SHANNON & WILSON, INC.

Mark S. Lockwood Principal Geologist DONATION

David M. McDowell Vice President

Reviewed by:

Enclosures: Table 1 Analytical Soil Sample Results

 Table 2
 Analytical Water Sample Results

Figure 1 Site Location

Figure 2 1992 Boring Locations

Figure 3 Site Plan Soil Boring Logs Site Photographs

Laboratory Data Review Checklist SGS Laboratory Data Report

# TABLE 1 ANALYTICAL SOIL SAMPLE RESULTS SUNRISE BAGEL FAIRBANKS, ALAKSA

					AK101	AK102		EP	A 8021 (BTEX	)	
									Ethyl	p&m-	O-
	Boring		Depth	PID	GRO	DRO	Benzene	Toluene	benzene	Xylenes	Xylene
Sample Number	Number	Location	(ft bgs)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
1343-111006-B13	B-1	Former B-7	12.5	244	109	26,800	< 0.0609	< 0.244	< 0.244	0.882	0.616
1343-111006-B14	B-1	Former B-7	17.5	106	21.8	2,540	< 0.00809	< 0.0324	< 0.0324	0.136	0.475
1343-111006-B22	2	6 feet south of B-1	7.5	455	663	18,800	< 0.150	< 0.602	2.06	10.6	35.2
1343-111006-B23	2	Duplicate of 1343-111006-B22	7.5	455	419	18,100	< 0.137	< 0.550	1.80	2.56	33.5
1343-111006-B32	3	12 feet west of B-1	7.5	206	74.0	9,600	< 0.0178	< 0.0713	0.0778	0.963	3.64
1343-111006-B44	4	18.5 feet east of B-1	18.0	1	< 1.69	< 22.2	< 0.00843	< 0.0337	< 0.0337	< 0.0337	< 0.0337
ADEC Cleanup Levels-	Migration to	o Groundwater			300	250	0.02	5.4	5.5	Tota	il 78
			***************************************				0.022 mg/kg	6.7 mg/kg	0.13 mg/kg	1.5 n	ng/kg

					AK103		EPA 8270	SIM (PAH)	
	Boring		Depth	PID	RRO	2-Methyl- naphthalene	Phen- anthrene	Naphth- alene	1-Methyl- naphthalene
Sample Number	Number	Location			(mg/kg)	1 ' 1	(mg/kg)	(mg/kg)	(mg/kg)
1343-111006-B22	2	6 feet south of B-1	7.5	455	< 1,090	52.0	6.69	19.3	47.2
ADEC Cleanup Levels-	Migration to	o Groundwater			11,000	60.9	4,300	21	43
						1.3 mg/kg	39 mg/kg	0.038 mg/kg	0.41 mg/kg

								RCRA Metal	s EPA 6000			
Sample Number	Boring Number	Location	Depth (ft bgs)	PID (ppm)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Mercury (mg/kg)
1343-111006-B22	2	6 feet south of B-1	7.5	455	11.3	111	0.373	18.8	7.63	1.04	< 0.109	<0.0439
ADEC Cleanup Levels-	Migration t	o Groundwater			2	1,100	5	26	400*	3.5	21	1.4
					0.20 mg/kg	2100 mg/kg	9.1 mg/kg	NA		6.9 mg/kg	11 mg/kg	0.36 mg/kg

Notes: ADEC Soil Cleanup levels, Oil and Other Hazardous Substance Pollution Control - 18 AAC 75.341, Method 2, Under 40 Inch Zone

- \*- Injestion/Inhalation Cleanup level (migration to groundwater value not reported in ADEC 18 AAC 75.341, Method 2, Under 40 Inch Zone
- EPA- Environemtnal Protection Agency
- GRO- Gasoline Range Organics
- DRO- Diesel Range Organics
- RRO- Residual Range Organics
- BTEX- Benzene, Toluene, Ethlybenzene, and Xylenes analyzed by method EPA 8260B
- PAH- polynuclear aromatic compunds analytes detected above their practical quantitation limit (PQL)
- ft bgs- feet below ground surface
- PID (ppm)- Photionization Detector (parts per million)
  - mg/kg- milligrams per killogram
  - < 1.69- value is less than the laboratory practical quantitation limit (PQL) also known as method reporting limit (MRL)
  - bold- value exceeds the ADEC cleanup level

#### TABLE 1 ANALYTICAL SOIL SAMPLE RESULTS SUNRISE BAGEL FAIRBANKS, ALAKSA

	T				AK101	AK102		EP	A 8021 (BTEX	)	
									Ethyl	p&m-	0-
	Boring		Depth	PID	GRO	DRO	Benzene	Toluene	benzene	Xylenes	Xylenes
Sample Number	Number	Location	(ft bgs)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	( <b>m</b> g/kg)
1343-111006-B13	1	Former B-7	12.5	244	109	26,800	< 0.0609	< 0.244	< 0.244	0.882	0.616
1343-111006-B14	1	Former B-7	17.5	106	21.8	2,540	< 0.00809	< 0.0324	< 0.0324	0.136	0.475
1343-111006-B22	2	6 feet south of B-1	7.5	455	663	18,800	< 0.150	< 0.602	2.06	10.6	35.2
1343-111006-B23	2	Duplicate of 1343-111006-B22	7.5	455	419	18,100	< 0.137	< 0.550	1.80	2.56	33.5
1343-111006-B32	3	12 feet west of B-1	7.5	206	74.0	9,600	< 0.0178	< 0.0713	0.0778	0.963	3.64
1343-111006-B44	4	18.5 feet east of B-1	18.0	1	< 1.69	< 22.2	< 0.00843	< 0.0337	< 0.0337	< 0.0337	< 0.0337
ADEC Cleanup Levels- Migration to Groundwater					300	250	0.02	5.4	5.5	Tota	al 78

					AK103		EPA 8270	SIM (PAH)	
						2-Methyl-	Phen-	Naphth-	1-Methyl-
	Boring		Depth	PID	RRO	naphthalene	anthrene	alene	naphthalene
Sample Number	Number	Location	(ft bgs)	(ppm)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
1343-111006-B22	2	6 feet south of B-1	7.5	455	< 1,090	52.0	6.69	19.3	47.2
ADEC Cleanup Levels- I	Migration t	o Groundwater			11,000	60.9	4,300	21	43

	<u> </u>						RCR/	A Metals EP	A 6000		
Sample Number	Boring Number	Location	Depth (ft bgs)	PID (ppm)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)
1343-111006-B22	2	6 feet south of B-1	7.5	455	11.3	111	0.373	18.8	7.63	1.04	< 0.109
ADEC Cleanup Levels- I	Migration t	o Groundwater			2	1,100	5	26	400*	3.5	21

Notes: ADEC Soil Cleanup levels, Oil and Other Hazardous Substance Pollution Control - 18 AAC 75.341, Method 2, Under 40 Inch Zone

\*- Injestion/Inhalation Cleanup level (migration to groundwater value not reported in ADEC 18 AAC 75.341, Method 2, Under 40 Inch Zone

EPA- Environemtnal Protection Agency

GRO- Gasoline Range Organics

DRO- Diesel Range Organics

RRO- Residual Range Organics

BTEX- Benzene, Toluene, Ethlybenzene, and Xylenes analyzed by method EPA 8260B

PAH- polynuclear aromatic compunds - analytes detected above their practical quantitation limit (PQL)

ft bgs- feet below ground surface

PID (ppm)- Photionization Detector (parts per million)

mg/kg- milligrams per killogram

< 1.69- value is less than the laboratory practical quantitation limit (PQL) also known as method reporting limit (MRL)

bold- value exceedes the ADEC cleanup level

#### TABLE 2 ANALYTICAL WATER SAMPLE RESULTS SUNRISE BAGEL FAIRBANKS, ALAKSA

			AK101	AK102		EPA 8	3021B (BT	EX)	
		Depth to					Ethyl	p&m-	0-
		Water	GRO	DRO	Benzene	Toluene	benzene	Xylenes	Xylenes
Sample Number	Location	(ft bgs)	(mg/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
1343-111006-B11	Temporary Well Point in Soil Boring B-1	15.68	< 0.100	0.702	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00
1343-111006-B12	Duplicate of 1343-111006-B11	15.68	<0.109	1.12	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00
ADEC Cleanup Level	S		1.3	1.5	5	1,000	700	Total 1	10,000
			2.2 ug/L		4.6 ug/L	1100 ug/L	15 ug/L	190 ເ	ıg/L

Notes: ADEC Groundwater Cleanup levels, *Oil and Other Hazardous Substance Pollution Control -* 18 AAC 75.345, Table C

EPA- Environemenal Protection Agency

**GRO-** Gasoline Range Organics

DRO- Diesel Range Organics

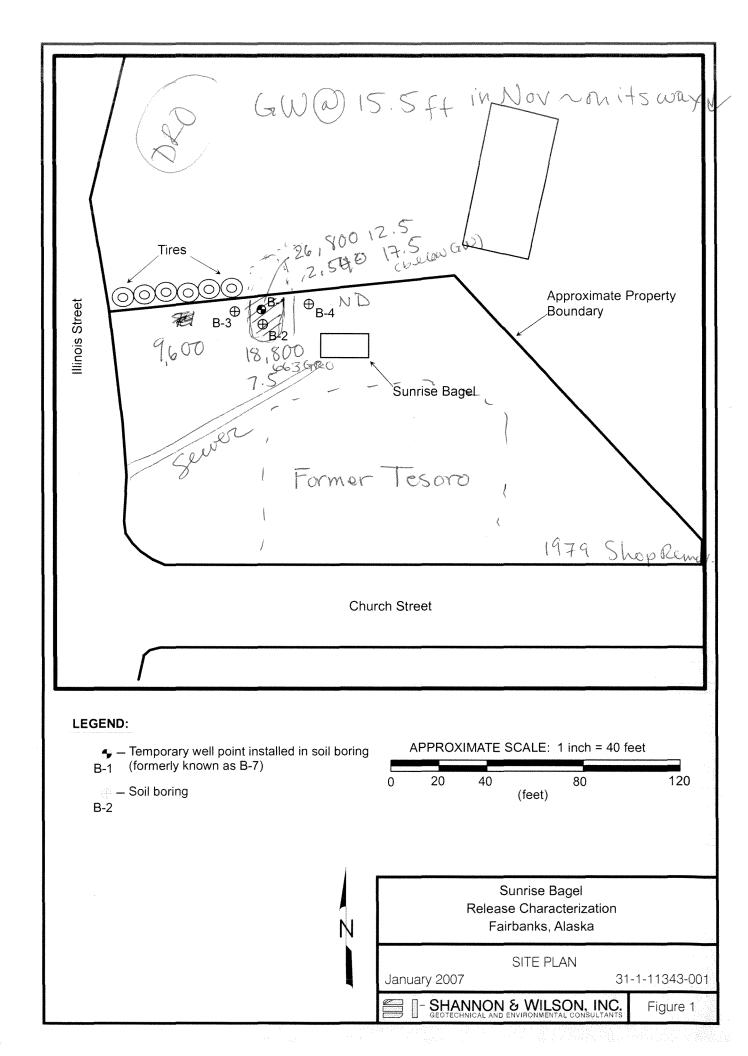
BTEX- Benzene, Toluene, Ethlybenzene, and Xylenesanalyzed by method EPA 8260B

ft bgs- feet below ground surface

ug/L- micrograms per liter

value is less than the laboratory practical quantitation limit (PQL) also known as method reporting limit (MRL)

bold- value exceedes the ADEC cleanup level



#### TABLE 2 ANALYTICAL WATER SAMPLE RESULTS SUNRISE BAGEL FAIRBANKS, ALAKSA

			AK101	AK102		EPA 8	3021B (BT	EX)	
		Depth to					Ethyl	p&m-	0-
		Water	GRO	DRO	Benzene	Toluene	benzene	Xylenes	Xylene
Sample Number	Location	(ft bgs)	(mg/L)	(mg/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
1343-111006-B11	Temporary Well Point in Soil Boring B-1	15.68	< 0.100	0.702	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00
1343-111006-B12	Duplicate of 1343-111006-B11	15.68	0.109	1.12	< 0.500	< 2.00	< 2.00	< 2.00	< 2.00
ADEC Cleanup Levels		1.3	1.5	5	1,000	700	Total	10,000	

Notes: ADEC Groundwater Cleanup levels, *Oil and Other Hazardous Substance Pollution Control -* 18 AAC 75.345, Table C

EPA- Environemental Protection Agency

GRO- Gasoline Range Organics

DRO- Diesel Range Organics

BTEX- Benzene, Toluene, Ethlybenzene, and Xylenesanalyzed by method EPA 8260B

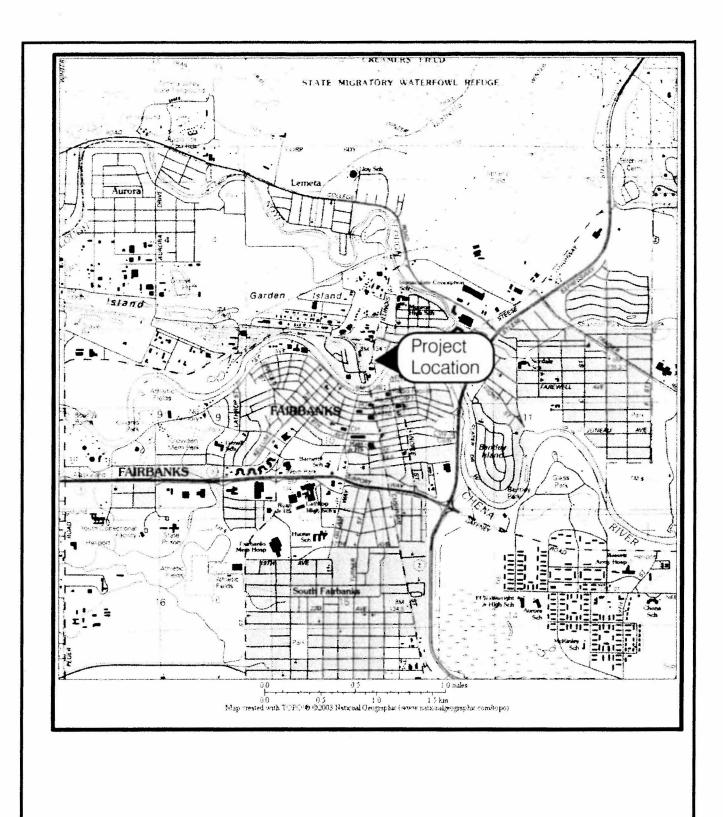
ft bgs- feet below ground surface

ug/L- micrograms per liter

< 100-

value is less than the laboratory practical quantitation limit (PQL) also known as method reporting limit (MRL)

bold- value exceeds the ADEC cleanup level



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Sunrise Bagel Release Characterization Fairbanks, Alaska

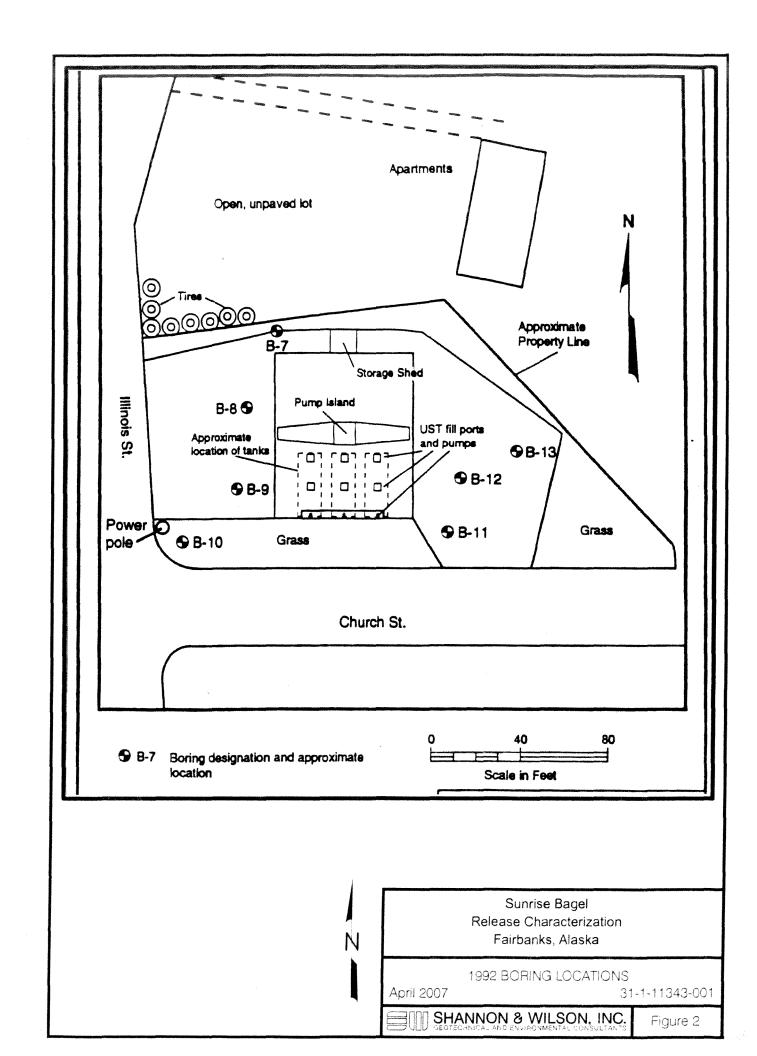
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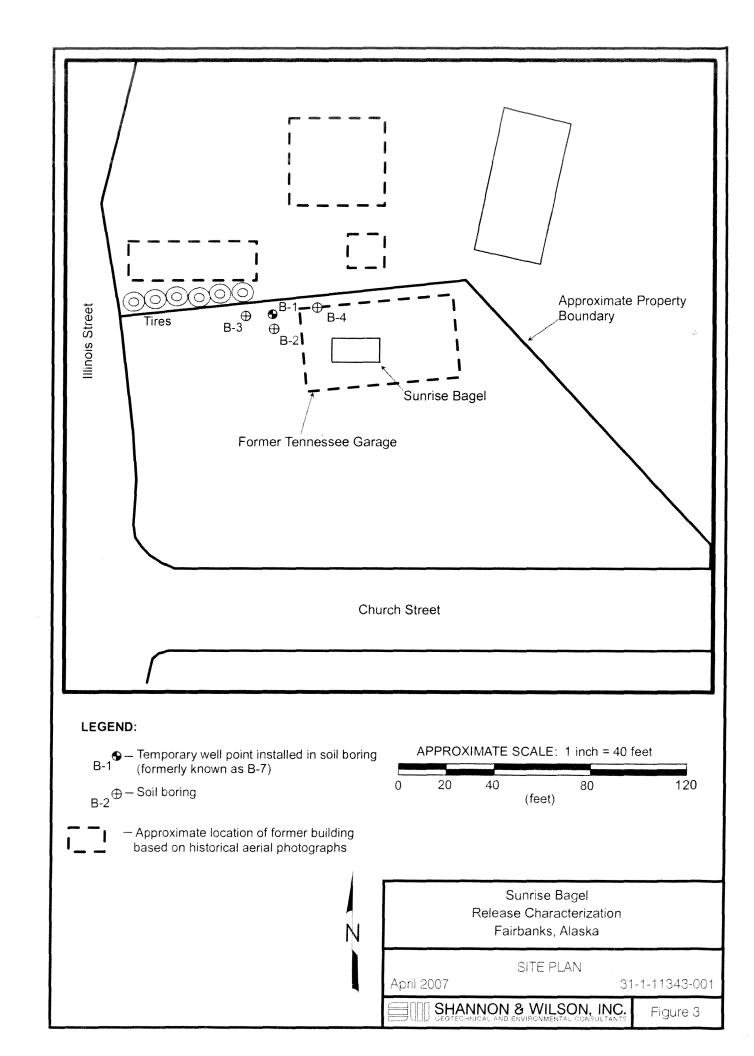
April 2007

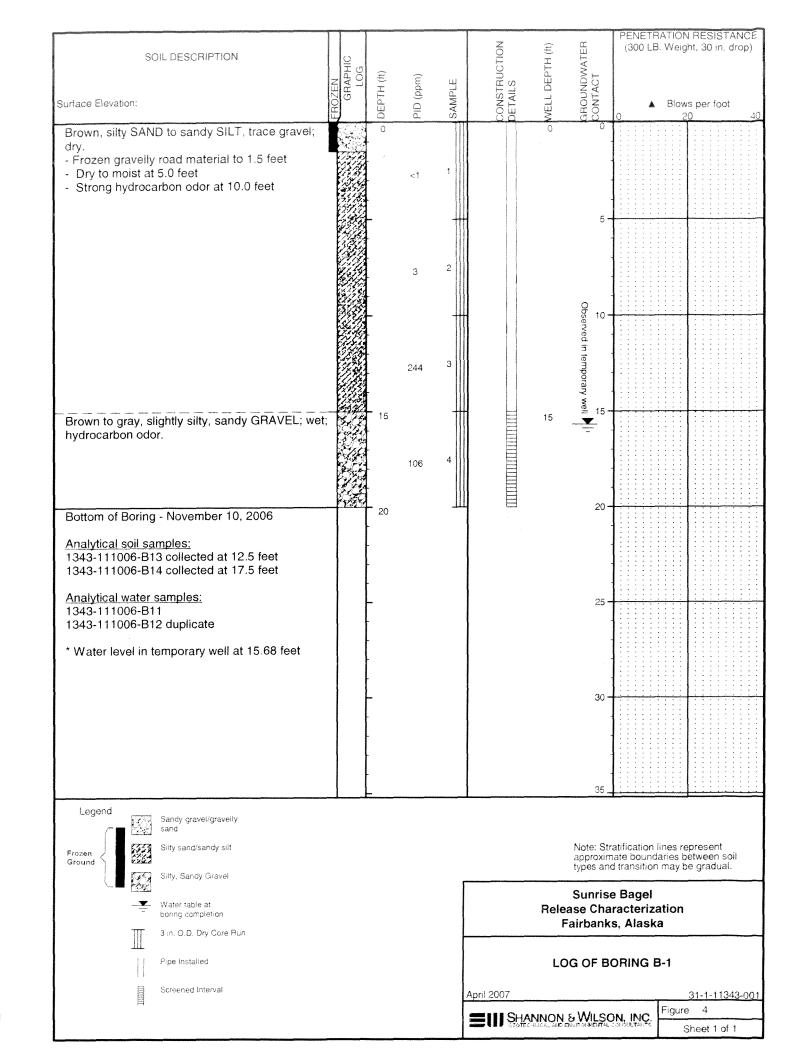
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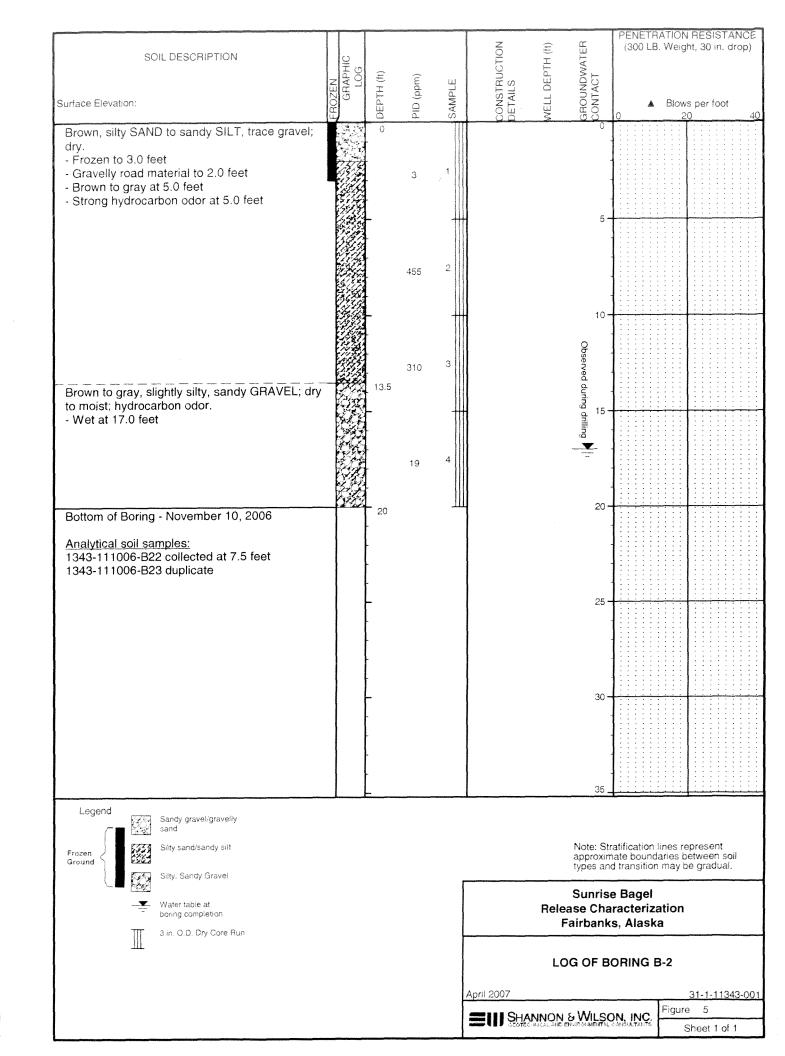
SHANNON & WILSON, INC.

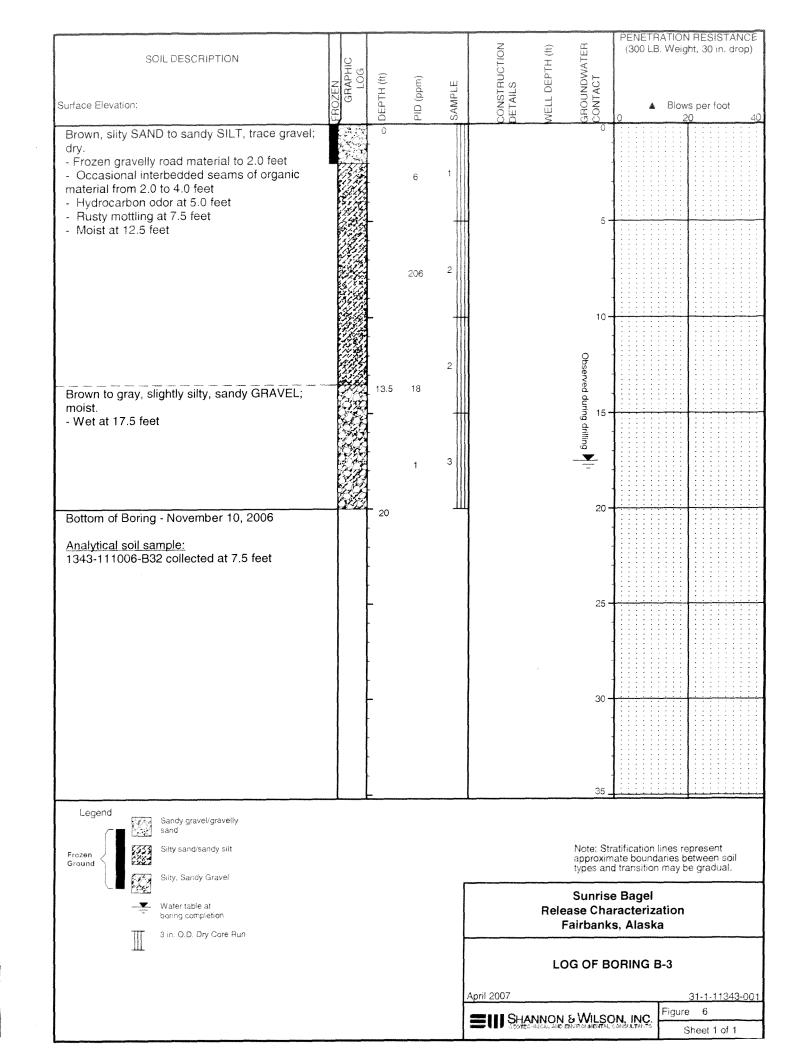
Figure 1

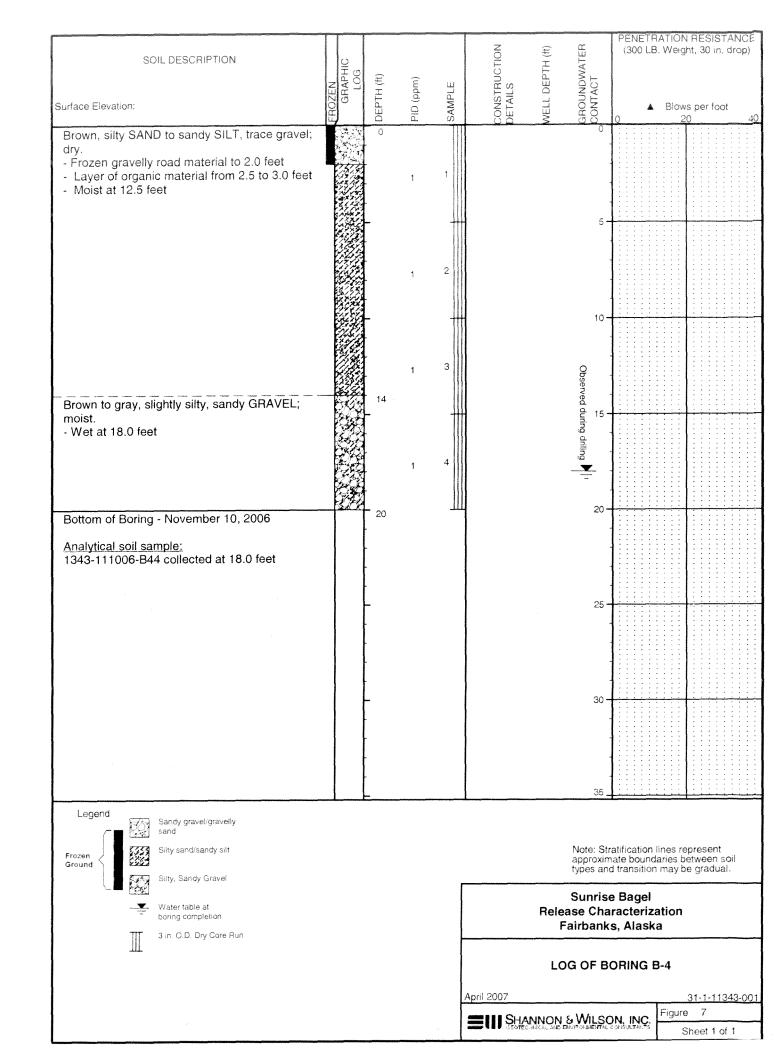




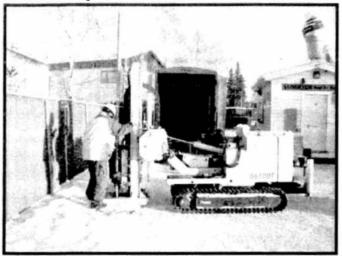








### Sunrise Bagel Release Investigation



November 10, 2006. Boring B-1 looking east.



November 10,2006. Boring B-2 looking north.

# **Laboratory Data Review Checklist**

	,	<b>©</b> Yes	C No	Comments:
	b.	•		erred to another "network" laboratory or sub-contracted to an alternatory performing the analyses ADEC CS approved?
	ļ	☐ Yes	□ No	Comments:
<u>Ch</u>	ain	of Custody (	COC)	
	a.	COC inform	nation complete	ed, signed, and dated (including released/received by)?
		<b>©</b> Yes	C No	Comments:
	b.		lyses requested	1?
	,	<b>₾</b> Yes	C No	Comments:
<u>La</u>	bora	atory Sample	Receipt Docur	<u>nentation</u>
	a.	Sample/coo	ler temperature	e documented and within range at receipt $(4^{\circ} \pm 2^{\circ} C)$ ?  Comments:
			ture was too co	ald during CCC tropped for from Figure 1 to Aughorean horses the
		*		old during SGS transfer from Fairbanks to Anchorage, however the acceptable limits
	ten	nperature blar Sample pres	nk was within a	table – acidified waters, Methanol preserved VOC soil (GRO, BTEX
	ten	nperature blar Sample pres	nk was within a	table – acidified waters, Methanol preserved VOC soil (GRO, BTEX
	ten	Sample pres Volatile Chl	nk was within a servation accep lorinated Solve	acceptable limits  table – acidified waters, Methanol preserved VOC soil (GRO, BTE) ents, etc.)?

	samples, etc Yes		Comments:
S	ample tempera	atures were repo	rted on the SGS sample receipt form
e.	Data quality	or usability affe	ected? Explain. Comments:
Se	ee QA/QC sec	tion of the repor	t .
ise .	<u>Narrative</u>		
a.	Present and  Yes	understandable?	Comments:
i sa antara	n amanananin kanananin 1900 aras 1 Aug 1900 (arab 1900) aras anna	gentambatikati ahasta kalanda (1776 n.). en verti tilahas silaharan (1876 n.). e tulah	
b.	Discrepanci	es, errors or QC	failures identified by the lab?
	<b>©</b> Yes	C No	Comments:
c.	Were all cor	rective actions d	locumented?
77 - common	E Yes	□ No	Comments:
d.	What is the	effect on data qu	ality/usability according to the case narrative?  Comments:
S	ee QA/QC sec	tion of the repor	t
mp	les Results		
•		vees performed/	reported as requested on COC?
0	© Yes	yses performed.	Comments:
a.			
a.			
	All applicab	le holding times	met?

c.	All soils rep	orted on a dry	y weight basis?					
	<b>E</b> Yes	CNo	Comments:					
d.	Are the reported PQLs less than the Cleanup Level or the minimum required detection level fo the project?							
	☐ Yes	<b>€</b> No	Comments:					
	enzene PQLs 43-111006-B2		leanup level in soil samples 1343-111006-B13, 1343-1110	06-B22,				
e.	Data quality	or usability a	nffected? Explain. Comments:					
Se	ee QA/QC sec	tion of the rep	port					
റ്റ് ട്ര	<u>imples</u>							
y Marie Sanda Jane Me	i. One	method blank	c reported per matrix, analysis and 20 samples?  Comments:					
- Andrewski de Andrewski	ii. All n	nethod blank	results less than PQL?					
	☐ Yes	<b>E</b> No	Comments:					
	iii. If above PQL, what samples are affected?  Comments:							
	Analytes detected in the associated groundwater samples were greater than 5 times the method blank concentration							
	iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?							
	<b>©</b> Yes	C No	Comments:	and a compare provided William State of State of Article State of Articles and Arti				
enditation questions	v. Data	quality or usa	ability affected? Explain. Comments:					
Se	e QA/QC sect	tion of the rep	port					

b. I			ole/Duplicate (LCS/LCSD) CS/LCSD reported per matrix, analysis and 20 samples?
	<b>€</b> Yes	C No	Comments:
and the second section of the second section of		als/Inorganics amples?	– one LCS and one sample duplicate reported per matrix, analysis and
ng at tag to been proved gaged	<b>€</b> Yes	C No	Comments:
un nagaragi acabikan kalendara kerangan	And	project specif	rcent recoveries (%R) reported and within method or laboratory limits fied DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK103 60%-120%; all other analyses see the laboratory QC pages)
	C Yes	C No	Comments:
	labo	ratory limits?	ative percent differences (RPD) reported and less than method or And project specified DQOs, if applicable. (AK Petroleum methods lyses see the laboratory QC pages)
	☐ Yes	<b>ⓒ</b> No	Comments:
	v. If %	R or RPD is o	outside of acceptable limits, what samples are affected?  Comments:
			ranthene, and pyrene were outside acceptable limits, but were not 1343-111006-B22
	vi. Do t	he affected sar	mple(s) have data flags? If so, are the data flags clearly defined?
	• Yes	C No	Comments:
	vii. Data	quality or usa	ability affected? Explain.  Comments:
See (	QA/QC sec	tion of the rep	oort

<b>C</b> . S	-		overies reported for organic analyses – field, QC and laboratory
	<b>⊆</b> Yes	C No	Comments:
caccada di Perdina Mantana Malia	And	project specif	rcent recoveries (%R) reported and within method or laboratory limits? Fied DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other boratory report pages)
	☐ Yes	<b>⊡</b> No	Comments:
samp high	le due to di in samples	llution, associa 1343-111006	overy RPDs for DRO and RRO were outside acceptable limits in ated sample 1343-111006-B13. Surrogate recoveries were biased -B13, 1343-111006-B14, 1343-111006-B22, 1343-111006-B23, and rocarbon interference.
		he sample rest clearly define	ults with failed surrogate recoveries have data flags? If so, are the data ed?
	C Yes	□ No	Comments:
A CONTRACTOR OF THE PARTY OF TH	iv. Data	quality or usa	ability affected? Explain.  Comments:
See (	QA/QC sec	tion of the rep	oort
	<u>oil</u>		yses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and
			orted per matrix, analysis and cooler?
ļ	<b>E</b> Yes	C No	Comments:
***************************************	CC CANADA CON STRUCTURE CON ACCIONANCE CON STRUCTURE CON S		
	ii. All r	esults less tha	n PQL?
	<b>€</b> Yes	C No	Comments:
	iii. If abo	ove PQL, wha	nt samples are affected?  Comments:

ıv. Data	quality or	Comments:
See QA/QC sec	ction of the	report
e. Field Duplic i. One	field dupli	cate submitted per matrix, analysis and 10 project samples?  Comments:
ii. Subr	mitted blind	i to lab?  Comments:
):	alle all southerness of the party lines of	
		relative percent differences (RPD) less than specified DQOs? l: 30% water, 50% soil)
RPD	(%) = Abs	solute value of: $\frac{(R_1-R_2)}{x \cdot 100}$
V		((R <sub>1</sub> +R <sub>2</sub> )/2)  = Sample Concentration  = Field Duplicate Concentration
T Yes	€ No	Comments:
		RPD for p&m xylenes was greater than 50%. Groundwater sample and as greater than 30%.
iv. Data	quality or	usability affected? Explain.
and the contributed and another income and the part of the form to be administrated as a super-	et sette de la 1718 de la 17 de 1866 de 17 de desde de desde 17 de 17 de 1866 de 1877 de 1876	Comments:
See QA/QC sec	tion of the	report
f. Decontamina	ation or Eq	uipment Blank (if applicable)
☐ Yes  i. All re  i. All re  i. The state of the sta	□ No esults less t	Not Applicable han PQL?
C Yes	<b>□</b> No	Comments:

ii. If a	bove PQL, what samples are affected?  Comments:
iii. Dal	ta quality or usability affected? Explain.  Comments:
7. Other Data Flags/0	Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
a. Defined an	ad appropriate?  No Comments:
Completed by:	
Title:	Angela Miller  Environmental Specialist
Date:	January 01, 2007
CS Report Name:	Release Characterization, Sunrise Bagel, 223 Illinois Street, Fairbanks, Alaska
Report Date:	January 01, 2007
Consultant Firm:	Shannon & Wilson, Inc.
Laboratory Name:	SGS Environmental Services
Laboratory Report Nu	ımber: 1066432
ADEC File Number:	102.38.121
ADEC RecKey Numb	er: 1992310114101



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

Project:

31-1-11343 Sunshine Bagel

Client:

Shannon & Wilson-Fairbanks

SGS Work Order:

1066432

Released by:

Alaska Division Technical Director

Stephen C. Ede 2006.11.27 15:27:21 -09'00'

#### Contents:

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

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

Sample 1D

SHANFBK 1066432 Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel Printed Date/Time

11/27/2006 15:04

Workorder

Client Sample ID

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

1066432001

PS

1343-111006-B11

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

1066432002

PS

1343-111006-B12

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

1066432003

PS

1343-111006-B13

DRO - Surrogate is outside QC goals (biased high) due to hydrocarbon interference.

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

GRO/BTEX - BFB surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference.

1066432004

PS

1343-111006-B14

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

GRO/BTEX - BFB surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference.

1066432005

PS

1343-111006-B22

RRO - Surrogate is outside QC goals (biased high) due to hydrocarbon interference.

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

GRO/BTEX - BFB surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference.

1066432006

PS

1343-111006-B23

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

GRO/BTEX - BFB surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference.

1066432007

PS

1343-111006-B32

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

GRO/BTEX - BFB surrogate recovery is outside QC goals (biased high) due to hydrocarbon interference.

741428

MB

MB for HBN 180341 [XXX/17573]

RRO - MB result is greater than one half of the PQL but less than PQL.

741432

MB

MB for HBN 180343 [XXX/17575]

PAHSIM - MB recovered naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene above the reporting limit. These analytes were found in the associated sample greater than 5 times the method blank concentration.

741606

MS

1343-111006-B13(1066432003MS)

DRO - MS/MSD spike recoveries are outside controls. Sample recovery is greater than four times the spike concentration. See the LCS for accuracy.

DRO/RRO - Surrogate recoveries are outside controls due to dilution.



743041

MB

#### Case Narrative

Client Printed Date/Time Shannon & Wilson-Fairbanks 11/27/2006 15:04 SHANFBK Workorder 1066432 31-1-11343 Sunshine Bagel Sample ID Client Sample ID 1343-111006-B13(1066432003MSD 741607 DRO - MS/MSD spike recoveries are outside controls. Sample recovery is greater than four times the spike concentration. See the LCS for accuracy. DRO/RRO - Surrogate recoveries are outside controls due to dilution. 741611 MS 1343-111006-B22(1066432005MS) PAHSIM - The MS/MSD recovery and RPD for most analytes are outside QC goals due to dilution. 741612 1343-111006-B22(1066432005MSD PAHSIM - The MS/MSD recovery and RPD for most analytes are outside QC goals due to dilution. 742067 MB for HBN 180480 [MXX/18435] 6020 - Cr was detected in the method blank greater than 1/2 of the PQL but less than PQL. CCV for HBN 180666 [XMS/3859] 742997 CCV PAHSIM - The CCV recovery for anthracene is outside QC goals(biased high). This analyte was not found above the PQL in the associated sample.

MB for HBN 180680 [VXX/16292]

GRO/BTEX - MB results for p&m-xylene are greater than one half of the the PQL but less than PQL.



## 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

Angela Miller Shannon & Wilson-Fairbanks 2355 Hill Road Fairbanks, AK 99709

Work Order:

1066432

31-1-11343 Sunshine Bagel

Client:

Shannon & Wilson-Fairbanks

Report Date:

November 27, 2006

Released by:

Stephen C. Ede 2006.11.27 15:27:47 -09'00'

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 001582 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.
В	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

SGS Ref.#

1066432001

Client Name Project Name/# Client Sample ID Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B11

Matrix

Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time

Printed Date/Time

11/27/2006 15:04

Collected Date/Time

11/10/2006 16:45 11/14/2006 9:00

Received Date/Time Technical Director

Stephen C. Ede

Sample Remarks:

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

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Departmen	<u>it</u>								
Gasoline Range Organics	ND	100	ug/L	AK101	A		11/21/0	6 11/21/06	НМ
Benzene	ND	0.500	ug/L	SW8021B	A		11/21/0	6 11/21/06	НМ
Toluene	ND	2.00	ug/L	SW8021B	A		11/21/0	6 11/21/06	НМ
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		11/21/0	6 11/21/06	НМ
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		11/21/0	5 11/21/06	НМ
o-Xylene	ND	2.00	ug/L	SW8021B	Α		11/21/0	5 11/21/06	HM
Surrogates									
I,4-Difluorobenzene <surr></surr>	93.7		%	SW8021B	A	74-120	11/21/06	5 11/21/06	HM
4-Bromofluorobenzene <surr></surr>	112		%	AK101	A	50-150	11/21/06	5 11/21/06	НМ
Semivolatile Organic Fue	els Departmer	<u>ıt</u>							
Diesel Range Organics	702	313	ug/L	AK102	D		11/15/06	5 11/20/06	МСМ
Surrogates									
5a Androstane <surr></surr>	96.2		n/ <sub>0</sub>	AK102	D	50-150	11/15/06	5 11/20/06	MCM



SGS Ref.#

Client Name

Project Name/# Client Sample ID Matrix 1066432002

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B12

Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time

Printed Date/Time
Collected Date/Time

11/27/2006 15:04 11/10/2006 17:00

Received Date/Time 11/14/2006 9:00 Technical Director Stephen C. Ede

Sample Remarks:

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

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Departmen	it								
Gasoline Range Organics	109	100	ug/L	AK101	A		11/21/06	11/21/06	НМ
Benzene	ND	0.500	ug/L	SW8021B	Α		11/21/06	11/21/06	НМ
Toluene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
o-Xylene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	91.2		0/0	SW8021B	A	74-120	11/21/06	11/21/06	НМ
4-Bromofluorobenzene <surr></surr>	118		. %	AK101	A	50-150	11/21/06	11/21/06	НМ
Semivolatile Organic Fue	ls Departmen	<u>nt</u>							
Diesel Range Organics	1120	321	ug/L	AK102	D		11/15/06	11/20/06	МСМ
Surrogates									
5a Androstane <surr></surr>	106		<sup>0</sup> / <sub>0</sub>	AK102	D	50-150	11/15/06	11/20/06	MCM

SGS Ref.#

1066432003

Client Name Project Name/# Client Sample ID Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B13

Matrix Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time

11/27/2006 15:04 11/10/2006 14:05

Received Date/Time 11/14/2006 9:00 Technical Director Stephen C. Ede

Sample Remarks:

DRO - Surrogate is outside QC goals (biased high) due to hydrocarbon interference.

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

GRO/BTEX - BFB 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
Volatile Fuels Departmen	<u>.t</u>								
Gasoline Range Organics	109	12.2	mg/Kg	AK101	A		11/10/0	6 11/22/06	НМ
Benzene	ND	0.0609	mg/Kg	SW8021B	A		11/10/0	6 11/22/06	НМ
Toluene	ND	0.244	mg/Kg	SW8021B	A		11/10/0	6 11/22/06	НМ
Ethylbenzene	ND	0.244	mg/Kg	SW8021B	A		11/10/0	6 11/22/06	HM
P & M -Xylene	0.882	0.244	mg/Kg	SW8021B	A		11/10/0	6 11/22/06	НМ
o-Xylene	0.616	0.244	mg/Kg	SW8021B	A		11/10/0	6 11/22/06	HM
Surrogates									
1,4-Difluorobenzene <surr></surr>	93.8		%	SW8021B	A	81-108	11/10/0	6 11/22/06	HM
4-Bromofluorobenzene <surr></surr>	770	!	%	AK101	A	50-150	11/10/0	6 11/22/06	НМ
Semivolatile Organic Fue	ls Departme	<u>ent</u>							
Diesel Range Organics	26800	1250	mg/Kg	AK102	В		11/15/00	5 11/17/06	JE
Surrogates									
5a Androstane <surr></surr>	175	!	0/0	AK102	В	50-150	11/15/06	5 11/17/06	JE
Solids									
Total Solids	87.4		817 70	SM20 2540G	В			11/20/06	BNE



1066432004

Client Name
Project Name/#

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Client Sample ID 1343-111006-B14

Matrix

Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time 11/27/2006 15:04 11/10/2006 14:10 11/14/2006 9:00

Received Date/Time Technical Director

Stephen C. Ede

### Sample Remarks:

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

GRO/BTEX - BFB 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
Volatile Fuels Departmen	it								
Gasoline Range Organics	<del>-</del> 21.8	1.62	mg/Kg	AK101	A		11/10/06	11/22/06	НМ
Benzene	ND	0.00809	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Toluene	ND	0.0324	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Ethylbenzene	ND	0.0324	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylene	0.136	0.0324	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
o-Xylene	0.475	0.0324	mg/Kg	SW8021B	Α		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	93		%	SW8021B	A	81-108	11/10/06	11/22/06	НМ
4-Bromofluorobenzene <surr></surr>	335	!	%	AK101	A	50-150	11/10/06	11/22/06	НМ
Semivolatile Organic Fue	ls Departme	ent							
Diesel Range Organics	2540	114	mg/Kg	AK102	В		11/15/06	11/17/06	JE
Surrogates									
5a Androstane <surr></surr>	100		%	AK102	В	50-150	11/15/06	11/17/06	JE
Solids									
Total Solids	86.2		%	SM20 2540G	В			11/20/06	BNE

SGS Ref.#

1066432005

Client Name Project Name/# Client Sample ID Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B22

Matrix

Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time 11/27/2006 15:04

Received Date/Time Technical Director 11/10/2006 14:40 11/14/2006 9:00

Stephen C. Ede

### Sample Remarks:

RRO - Surrogate is outside QC goals (biased high) due to hydrocarbon interference.

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

GRO/BTEX - BFB 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
Metals Department									
Mercury	ND	0.0439	mg/Kg	SW7471A	C		11/20/0	6 11/21/06	HKG
RCRA Metals									
Arsenic	11.3	1.09	mg/Kg	SW6020	В		11/17/0	6 11/20/06	TK
Barium	111	0.326	mg/Kg	SW6020	В		11/17/0	6 11/20/06	TK
Cadmium	0.373	0.217	mg/Kg	SW6020	В		11/17/0	6 11/20/06	TK
Chromium	18.8	0.434	mg/Kg	SW6020	В		11/17/06	5 11/20/06	TK
Lead	7.63	0.217	mg/Kg	SW6020	В		11/17/06	5 11/20/06	TK
Selenium	1.04	0.543	mg/Kg	SW6020	В		11/17/06	5 11/20/06	TK
Silver	ND	0.109	mg/Kg	SW6020	В		11/17/00	5 11/20/06	TK
Volatile Fuels Departme	nt								
Gasoline Range Organics	663	30.1	mg/Kg	AK101	A		11/10/06	5 11/22/06	НМ
Benzene	ND	0.150	mg/Kg	SW8021B	A		11/10/06	5 11/22/06	НМ
Toluene	ND	0.602	mg/Kg	SW8021B	A		11/10/0€	5 11/22/06	НМ
Ethylbenzene	2.06	0.602	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylene	10.6	0.602	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
o-Xylene	35.2	0.602	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	94.8		9/0	SW8021B	Α 8	31-108	11/10/06	11/22/06	НМ
4-Bromofluorobenzene \( \surr > \)	3420	!	0/0	AK101	A 5	0-150	11/10/06	11/22/06	НМ

### Semivolatile Organic Fuels Department



Client Name Project Name/# Client Sample ID Matrix 1066432005

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B22

Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time

11/27/2006 15:04 11/10/2006 14:40

Received Date/Time

11/14/2006 9:00

Technical Director

Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	lnit
Semivolatile Organic F	uels Departme	ent							
Diesel Range Organics	18800	1090	mg/Kg	AK102	В		11/15/06	11/17/06	JI
Residual Range Organics	ND	1090	mg/Kg	AK103	В		11/15/06	11/17/06	JI
Surrogates									
5a Androstane <surr></surr>	107		%	AK102	В	50-150	11/15/06	11/17/06	JI
n-Triacontane-d62 <surr></surr>	156	!	%	AK103	В	50-150	11/15/06	11/17/06	JI
Polynuclear Aromatics (	GC/MS								
Acenaphthylene	ND	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
2-Methylnaphthalene	52.0	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Acenaphthene	ND	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Fluorene	ND	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Phenanthrene	6.69	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Anthracene	ND	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Fluoranthene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Pyrene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Benzo(a)Anthracene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Chrysene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Benzo[b]Fluoranthene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Benzo[a]pyrene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Indeno[1,2,3-c,d] pyrene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Dibenzo[a,h]anthracene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Benzo[g,h,i]perylene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWM
Naphthalene	19.3	5,52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
1-Methylnaphthalene	47.2	5.52	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Benzo[k]fluoranthene	ND	0.0552	mg/Kg	8270C SIMS	В		11/15/06	11/22/06	KWN
Surrogates									
Terphenyl-d14 <surr></surr>	84.5		9/0	8270C SIMS	В	30-125	11/15/06	11/22/06	KWN

SGS Ref.# Client Name Project Name/# Client Sample ID Matrix 1066432005 Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel 1343-111006-B22

Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time Received Date/Time Technical Director 11/27/2006 15:04 11/10/2006 14:40 11/14/2006 9:00 Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Solids									
Total Solids	90.4		9/0	SM20 2540G	В			11/20/06	BNE



1066432006

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Client Sample ID

1343-111006-B23

Matrix Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time

11/27/2006 15:04 11/10/2006 14:45

Received Date/Time

11/14/2006 9:00

Technical Director Stephen C. Ede

Sample Remarks:

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

GRO/BTEX - BFB 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
Volatile Fuels Departmen	<u>ıt</u>								
Gasoline Range Organics	419	27.5	mg/Kg	AK101	A		11/10/06	11/22/06	НМ
Benzene	ND	0.137	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Toluene	ND	0.550	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Ethylbenzene	1.80	0.550	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylene	2.56	0.550	mg/Kg	SW8021B	A		11/10/06	11/22/06	HM
o-Xylene	33.5	0.550	mg/Kg	SW8021B	Α		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	88.1		%	SW8021B	A	81-108	11/10/06	11/22/06	НМ
4-Bromofluorobenzene <surr></surr>	2100	!	%	AK101	Α	50-150	11/10/06	11/22/06	НМ
Semivolatile Organic Fue	els Departme	ent							
Diesel Range Organics	18100	1100	mg/Kg	AK102	В		11/15/06	11/17/06	JE
Surrogates									
5a Androstane <surr></surr>	106		9/0	AK102	В	50-150	11/15/06	11/17/06	JE
Solids									
Total Solids	90.3		₫/ <sub>0</sub>	SM20 2540G	В			11/20/06	BNE

Client Name Project Name/#

Client Sample ID Matrix

1066432007

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

1343-111006-B32

Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time 11/27/2006 15:04 11/10/2006 15:10 11/14/2006 9:00

Received Date/Time Technical Director

Stephen C. Ede

### Sample Remarks:

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

GRO/BTEX - BFB 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
Volatile Fuels Departmen	<u>it</u>								
Gasoline Range Organics	74.0	3.57	mg/Kg	AK101	A		11/10/06	11/22/06	HM
Benzene	ND	0.0178	mg/Kg	SW8021B	A		11/10/06	11/22/06	HM
Toluene	ND	0.0713	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Ethylbenzene	0.0778	0.0713	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylene	0.963	0.0713	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
o-Xylene	3.64	0.0713	mg/Kg	SW8021B	Α		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	90.3		%	SW8021B	A	81-108	11/10/06	11/22/06	HM
4-Bromofluorobenzene <surr></surr>	357	!	%	AK101	A	50-150	11/10/06	11/22/06	НМ
Semivolatile Organic Fue	els Departme	<u>ent</u>							
Diesel Range Organics	9600	440	mg/Kg	AK102	В		11/15/06	11/17/06	JE
Surrogates									
5a Androstane <surr></surr>	120		%	AK102	В	50-150	11/15/06	11/17/06	JE
Solids									
Total Solids	89.9		%	SM20 2540G	В			11/20/06	BNE



1066432008

Client Name Project Name/# Client Sample ID Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

ple ID 1343-111006-B44

Matrix

Soil Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time

11/27/2006 15:04 11/10/2006 15:50

Collected Date/Time Received Date/Time

11/14/2006 9:00

**Technical Director** 

Stephen C. Ede

Sample Remarks:

			·····			Mangage for a consistent address of the constraint of the constrai	and the second s		
Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
				······································					
Volatile Fuels Departmen	<u>it</u>								
Gasoline Range Organics	ND	1.69	mg/Kg	AK101	Λ		11/10/06	11/22/06	НМ
Benzene	ND	0.00843	mg/Kg	SW8021B	Α		11/10/06	11/22/06	HM
Toluene	ND	0.0337	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Ethylbenzene	ND	0.0337	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylene	ND	0.0337	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
o-Xylene	ND	0.0337	mg/Kg	SW8021B	Α		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	96.4		9/0	SW8021B	A	81-108	11/10/06	11/22/06	НМ
4-Bromofluorobenzene <surr></surr>	73.5		%	AK101	Α	50-150	11/10/06	11/22/06	НМ
Semivolatile Organic Fue	els Departmen	<u>t</u>							
Diesel Range Organics	ND	22.2	mg/Kg	AK102	В		11/15/06	11/16/06	JE
Surrogates									
5a Androstane <surr></surr>	79.9		%	AK102	В	50-150	11/15/06	11/16/06	JE
<u>Solids</u>									
Total Solids	87.6		%	SM20 2540G	В			11/20/06	BNE

SGS Ref.#

Client Name Project Name/#

Client Sample ID

Matrix

1066432009

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Trip Blank

Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time

11/27/2006 15:04 11/10/2006 0:00

Received Date/Time

11/14/2006 9:00

Technical Director Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Departmen	nt								
Gasoline Range Organics	ND	100	ug/L	AK101	Α		11/21/06	11/21/06	НМ
Benzene	ND	0.500	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
Toluene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
o-Xylene	ND	2.00	ug/L	SW8021B	A		11/21/06	11/21/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	94.1		%	SW8021B	A	74-120	11/21/06	11/21/06	НМ
4-Bromofluorobenzene <surr></surr>	95.6		%	AK101	Α :	50-150	11/21/06	11/21/06	НМ



Matrix

Client Name Project Name/#

Client Sample ID

1066432010

Shannon & Wilson-Fairbanks

31-1-11343 Sunshine Bagel

Trip Blank Soil/Solid

All Dates/Times are Alaska Standard Time

Printed Date/Time Collected Date/Time 11/27/2006 15:04 11/10/2006 0:00

Received Date/Time

11/14/2006 9:00

Technical Director

Stephen C. Ede

Sample Remarks:

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Volatile Fuels Departmen	<u>it</u>								
Gasoline Range Organics	ND	2.58	mg/Kg	AK101	Λ		11/10/06	11/22/06	НМ
Benzene	ND	0.0129	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Toluene	ND	0.0517	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Ethylbenzene	ND	0.0517	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
P & M -Xylone	ND	0.0517	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
o-Xylene	ND	0.0517	mg/Kg	SW8021B	A		11/10/06	11/22/06	НМ
Surrogates									
1,4-Difluorobenzene <surr></surr>	94.4		%	SW8021B	A	81-108	11/10/06	11/22/06	НМ
4-Bromofluorobenzene <surr></surr>	95		%	AK101	Α	50-150	11/10/06	11/22/06	НМ
Solids									
Total Solids	100		%	SM20 2540G	$\mathbf{A}^{-1}$			11/20/06	BNE

SGS Ref.#

741428

Method Blank

Printed Date/Time
Prep Batch

11/27/2006 15:04

Client Name
Project Name/#

Matrix

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Water (Surface, Eff., Ground)

Method Date XXX17573 SW3520C 11/15/2006

QC results affect the following production samples:

1066432001, 1066432002

Parameter		Results	Reporting Control Limit	MDL	Umis	Analysis Date
Semivolatile	Organic Fuels Depart	ment				
Diesel Range Org	ganics	ND	300	60.0	ug/L	11/20/06
Surrogates						
5a Androstane <s< th=""><th>surr&gt;</th><th>94.5</th><th>60-120</th><th></th><th>0.5</th><th>11/20/06</th></s<>	surr>	94.5	60-120		0.5	11/20/06
Batch	XFC7240					
Method	AK102					
Instrument	HP 5890 Series II FID SV D	R				
Surrogates						
n-Triacontane-d6	2 <surr></surr>	117	60-120		%	11/20/06
Batch	XFC7240					
Method	AK103					
Instrument	HP 5890 Series II FID SV D I	R				



741430

Method Blank

Printed Date/Time
Prep Batch

11/27.2006 15:04

Client Name
Project Name/#

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Method

XXX17574 SW3550B

Project Name/# Matrix

Soil:Solid

Method Date

11/15/2006

QC results affect the following production samples:

Parameter		Results	Reporting Control	MDL	Units	Analysis Date
Semivolatile	Organic Fuels D	epartment				
Diesel Range Org	ganies	2.00 J	19.7	1.97	mg/Kg	11/16/06
Surrogates						
5a Androstane <s< th=""><th>surr&gt;</th><th>93.1</th><th>60-120</th><th></th><th>9/0</th><th>11/16/06</th></s<>	surr>	93.1	60-120		9/0	11/16/06
Batch	XFC7237					
Method	AK102					
Instrument	HP 5890 Series II FID	SV D R				
Residual Range (	Organics	3.96 J	19.7	1.97	mg/Kg	11/16/06
Surrogates						
n-Triacontane-d6	2 <surr></surr>	112	60-120		<sup>0</sup> / <sub>0</sub>	11/16/06
Batch	XFC7237					
Method	AK103					
Instrument	HP 5890 Series II FID	SVDR				

SGS Ref.#

741432

Method Blank

Prep

Printed Date/Time Batch

11-27/2006 15:04

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Method Date

XXX17575 SW3550B 11/15/2006

Matrix

Soil:Solid

QC results affect the following production samples:

1066432005

Parameter	Results	Reporting Control Limit	MDL	Units	Analysis Date
Polynuclear Aromatics GC/MS					
Acenaphthylene	ND	0.00498	0.00149	mg/Kg	11/21/06
2-Methylnaphthalene	0.0103	* 0.00498	0.00149	mg/Kg	11/21/06
Acenaphthene	ND	0.00498	0.00149	mg/Kg	11/21/06
Fluorene	ND	0.00498	0.00149	mg/Kg	11/21/06
Phenanthrene	ND	0.00498	0.00149	mg/Kg	11/21/06
Anthracene	ND	0.00498	0.00149	mg/Kg	11/21/06
Fluoranthene	ND	0.00498	0.00149	mg/Kg	11/21/06
Pyrene	ND	0.00498	0.00149	mg/Kg	11/21/06
Benzo(a)Anthracene	ND	0.00498	0.00149	mg/Kg	11/21/06
Chrysene	ND	0.00498	0.00149	mg/Kg	11/21/06
Benzo[b]Fluoranthene	ND	0.00498	0.00149	mg/Kg	11/21/06
Benzo[a]pyrene	ND	0.00498	0.00149	mg/Kg	11/21/06
Indeno[1,2,3-c,d] pyrene	ND	0.00498	0.00149	mg/Kg	11/21/06
Dibenzo[a,h]anthracene	ND	0.00498	0.00149	mg/Kg	11/21/06
Benzo[g,h,i]perylene	ND	0.00498	0.00149	mg/Kg	11/21/06
Naphthalene	0.00752	* 0.00498	0.00149	mg/Kg	11/21/06
1-Methylnaphthalene	0.00874	* 0.00498	0.00149	mg/Kg	11/21/06
Benzo[k]fluoranthene	ND	0.00498	0.00149	mg/Kg	11/21/06
Surrogates					
Terphenyl-d14 <surr></surr>	95.2	30-125		0/0	11/21/06
Batch XMS3858					

Method

8270C SIMS

Instrument

HP 5890 Series II MS2 SVOA

SGS Ref.#

742067

Method Blank

Printed Date/Time

Prep

11/27/2006 15:04

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel Batch Method MXX18435 SW3050B

Matrix

Soil/Solid

Method Date

11.17.2006

QC results affect the following production samples:

1066432005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
Metals by ICP/MS					
Arsenie	ND	1.00	0.310	mg/Kg	11/20/06
Barium	ND	0.300	0.0940	mg/Kg	11/20/06
Cadmium	ND	0.200	0.0620	mg/Kg	11/20/06
Chromium	0.235 J	0.400	0.120	mg/Kg	11/20/06
Lead	ND	0.200	0.0620	mg/Kg	11/20/06
Selenium	ND	0.500	0.150	mg/Kg	11/26/06
Silver	ND	0.100	0.0310	mg/Kg	11/20/06

Batch

MMS4562

Method

SW6020

Instrument

Perkin Elmer Sciex ICP-MS P3

SGS Ref.#

742199

Method Blank

Printed Date/Time

11/27/2006 15:04

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel Prep Batch Metho

Method Date

- Project Name/# - Matrix

Soil/Solid

QC results affect the following production samples:

 $1066432003,\,1066432004,\,1066432005,\,1066432006,\,1066432007,\,1066432008,\,1066432010$ 

Parameter Results Reporting Control MDL Units Date

Solids

**Total Solids** 

99.9

9/0

11/20/06

Batch

SPT7081

Method

SM20 2540G

Instrument



742645

Method Blank

Prep

Printed Date/Time

11/27/2006 15:04

Client Name

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Batch Method MXX18444 METHOD

Project Name/#
Matrix

Soil/Solid

Metho Date

11/20/2006

QC results affect the following production samples:

1066432005

Reporting Control Analysis
Parameter Results Lamit MDL Units Date

Metals Department

Mercury

ND

0.0400

0.0120

mg/Kg

11/21.06

Batch

MCV3542

Method

SW7471A

Instrument

PSA Millennium mercury AA

SGS Ref.#

742773

Method Blank

Printed Date/Time

11/27/2006 15:04

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel Prep Batch Method VXX16288 SW5030B

Project Name/# - Matrix

Instrument

Water (Surface, Eff., Ground)

HP 5890 Series II PID+FID VCA

Date

11/21/2006

QC results affect the following production samples: 1066432001, 1066432002, 1066432009

Parameter		Results	Reporting Control	MDL	Units	Analysis Dute
Volatile Fue	els Department		*			
Gasoline Range	Organies	10.5 J	100	10.0	ug/L	11/21/06
Surrogates						
4-Bromofluorobe	enzene <surr></surr>	112	50-150		<sup>6</sup> /u	11/21/06
Batch	VFC8196					
Method	AK101					
Instrument	HP 5890 Series II PID-	-FID VCA				
Benzene		ND	0.500	0.150	ug/L	11/21/06
Toluene		ND	2.00	0.620	ug/L	11/21/06
Ethylbenzene		ND	2.00	0.620	ug/L	11/21/06
P & M -Xylene		0.684 J	2.00	0.620	ug/L	11/21/06
o-Xylene		ND	2.00	0.620	ug/L	11/21/06
Surrogates						
1,4-Difluorobenz	tene <surr></surr>	105	74-120		%	11/21/06
Batch	VFC8196					
Method	SW8021B					



743041

Method Blank

Prep

Printed Date/Time 11/27/2006 15:04

Client Name

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Batch Method

VXX16292 AK101

Project Name/# Matrix

Soil/Solid

Date

11/22/2006

QC results affect the following production samples:

Parameter		Results	Reporting/Control	MDL	Units	Analysis Date
Volatile Fue	ls Department					
Gasoline Range (	Organics	ND	2.50	0.500	mg/Kg	11/22/06
Surrogates						
4-Bromofluorobe	enzene <surr></surr>	99.5	60-120		9/0	11:22:06
Batch	VFC8199					
Method	AK101					
Instrument	HP 5890 Series II PID	+FID VCA				
Benzene		0.00443J	0.0125	0.00400	mg/Kg	11/22/06
Toluene		0.0241J	0.0500	0.0150	mg/Kg	11/22/06
Ethylbenzene		ND	0.0500	0.0150	mg/Kg	11/22/06
P & M -Xylene		0.0319J	0.0500	0.0150	mg/Kg	11/22/06
o-Xylene		ND	0.0500	0.0150	mg/Kg	11/22/06
Surrogates						
1,4-Difluorobenz	ene <surr></surr>	99.8	81-108		%	11/22/06
Batch	VFC8199					
Method	SW8021B					
Instrument	HP 5890 Series II PID	+FID VCA				

SGS Ref.#

742534

Duplicate

Printed Date/Time Prep

11 27 2006 15:04

Client Name Project Name/#

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Batch

Original

1066432005

Matrix

Soil/Solid

Method Date

QC results affect the following production samples:

 $1066432003,\,1066432004,\,1066432005,\,1066432006,\,1066432007,\,1066432008,\,1066432010$ 

Parameter		Original Result	QC Resuli	Units	RPD	RPD Limits	Analysis Date
Solids							
Total Solids		90.4	90.2	%	0	(< 5)	11/20/2006
Batch Method Instrument	SPT7081 SM20 2540G						



741429

Lab Control Sample

Printed Date/Time

Prep

11/27 2006

15:04

Batch

XXX17573

Method Date SW3520C 11/15/2006

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Matrix

Water (Surface, Eff., Ground)

QC results affect the following production samples:

1066432001, 1066432002

Parameter		QC Results	Pet Recov	LCS-LCSD Limits	RPD	RPD Lumts	Spiked Amount	Analysis Date
Semivolatile	Organic Fuel:	s Department						
Diesel Range Org	ganies	LCS 1080	108	(75-125)			1000 ug/L	11/20/2006
Surrogates								
5a Androstane <s< td=""><td>surr&gt;</td><td>LCS</td><td>90</td><td>(60-120)</td><td></td><td></td><td></td><td>11/20/2006</td></s<>	surr>	LCS	90	(60-120)				11/20/2006
Batch Method Instrument	XFC7240 AK102 HP 5890 Series	II FID SV D R						
Surrogates								
n-Triacontane-d6	2 <surr></surr>	LCS	89	(60-120)				11/20/2006

Batch

XFC7240

Method

AK103

Instrument

HP 5890 Series II FID SV D R



741431 Lab Control Sample Printed Date/Time

Prep

11:27 2006

15:04

Client Name

Shannon & Wilson-Fairbanks

Batch Method XXX17574 SW3550B

Project Name/#

31-1-11343 Sunshine Bagel

Date

11/15/2006

Matrix

Soil Solid

QC results affect the following production samples:

Parameter			QC Results	Pet Recov	LCS LCSD Limits	RPD	RPD Lamits	Spiked Amount	Analysis Date
Semivolatile	Organic Fuels	Departm	ent						
Diesel Range Orga	nics	LCS	31.8	96	( 75-125 )			33.1 mg/Kg	11/16/2006
Surrogates									
5a Androstane <su< td=""><td>rr&gt;</td><td>LCS</td><td></td><td>76</td><td>(60-120)</td><td></td><td></td><td></td><td>11/16/2006</td></su<>	rr>	LCS		76	(60-120)				11/16/2006
Batch Method Instrument	XFC7237 AK102 HP 5890 Series II I	FID SV D	R					•	
Residual Range Or	ganies	LCS	30.4	92	( 60-120 )			33.1 mg/Kg	11/16/2006
Surrogates n-Triacontane-d62	<surr></surr>	LCS		80	( 60-120 )				11/16/2006

Batch

XFC7237

Method

AK103

Instrument

HP 5890 Series II FID SV D R



741433

Lab Control Sample

Printed Date/Time

11-27:2006

Prep Batch XXX17575

Method

SW3550B

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Date

11/15/2006

Matrix

Soil/Solid

QC results affect the following production samples:

1066432005

Parameter

QC Results

Pct Recov LCS/LCSD Limits

RPD

RPD Limits

Spiked Amount Analysis Date

15:04

Polynuclear Aromatics GC/MS

11/27/2006 15:04 741433 Lab Control Sample SGS Ref.# Printed Date/Time Prep Batch XXX17575 Method Client Name Shannon & Wilson-Fairbanks SW3550B 31-1-11343 Sunshine Bagel Date 11/15/2006 Project Name/# Soil Solid Matrix QC Pct LCS LCSD RPD Spiked Analysis RPD Parameter Results Recov Limits Limits Amount Date Polynuclear Aromatics GC/MS 0.0142 64 Acenaphthylene LCS (46-97)0.0221 mg/Kg 11/21/2006 LCS 0.0160 72 2-Methylnaphthalene (43-95) 0.0221 mg/Kg 11/21/2006 Acenaphthene LCS 0.014867 (50-92)0.0221 mg/Kg 11/21/2006 Fluorene LCS 0.0156 (53-95)71 0.0221 mg/Kg 11/21/2006 Phenanthrene LCS 0.0178 80 (56-104) 0.0221 mg/Kg 11/21/2006 0.0150 Anthracene LCS 68 (47-88)0.0221 mg/Kg 11/21/2006 Fluoranthene LCS 0.0152 69 (60-108)0.0221 mg/Kg 11/21/2006 69 0.0153 0.0221 mg/Kg 11/21/2006 Pyrene LCS (58-109) Benzo(a)Anthracene LCS 0.0169 77 (50-110) 0.0221 mg/Kg 11/21/2006 Chrysene LCS 0.0169 77 (60-102) 0.0221 mg/Kg 11/21/2006 Benzo[b]Fluoranthene 0.0175 79 LCS (47-115)0.0221 mg/Kg 11/21/2006 Benzo[a]pyrene LCS 0.0128 58 (29-98)0.0221 mg/Kg 11/21/2006 0.0172 Indeno[1,2,3-c,d] pyrene LCS 78 (52-113)0.0221 mg/Kg 11/21/2006 Dibenzo[a,h]anthracene 77 LCS 0.0170 (47-116)0.0221 mg/Kg 11/21/2006 Benzo[g.h.i]perylene LCS 0.017680 (56-105)0.0221 mg/Kg 11/21/2006 Naphthalene LCS 0.0152 69 (44-93) 0.0221 mg/Kg 11/21/2006 1-Methylnaphthalene 0.0164 74 LCS (45-96) 0.0221 mg/Kg 11/21/2006 Benzo[k]fluoranthene 77 LCS 0.0169 (64-103)0.0221 mg/Kg 11/21/2006 Surrogates Terphenyl-d14 <surr> LCS 83 (30-125)11/21/2006



741433

Lab Control Sample

QC Results

Printed Date/Time

11:27 2006

Prep

Batch

XXX17575

Method

SW3550B

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Date

11/15/2006

Matrix

Parameter

Soil/Solid

Pet LCS.LCSD

Limits

Recov

RPD

RPD Limits

Spiked Amount Analysis Date

15:04

### Polynuclear Aromatics GC/MS

Batch

XMS3858

Method

8270C SIMS

Instrument

HP 5890 Series II MS2 SVOA

742068

Lab Control Sample

Printed Date/Time

11:27/2006

15:04

Prep

Batch

MXX18435

Method Date

SW3050B

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Matrix

Soil Solid

11/17/2006

QC results affect the following production samples:

1066432005

Parameter		QC Results	Pct Recov	LCS.LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Metals by ICP/MS								
Arsenic	LCS	48.3	97	(80-120)			50 mg/Kg	11/20/2006
Barium	LCS	47.8	96	(80-120)			50 mg/Kg	11/20/2006
Cadmium	LCS	48.6	97	(80-120)			50 mg/Kg	11/20/2006
Chromium	LCS	51.0	102	(80-120)			50 mg/Kg	11/20/2006
Lead	LCS	48.5	97	(80-120)			50 mg/Kg	11/20/2006
Selenium	LCS	47.1	94	(80-120)			50 mg/Kg	11/20/2006
Silver	LCS	5.38	108	(80-120)			5 mg/Kg	11/20/2006

Batch Method MMS4562

Instrument

SW6020

Perkin Elmer Sciex ICP-MS P3



742646 Lab Control Sample

Shannon & Wilson-Fairbanks

Printed Date/Time

11 27:2006

15:04

Prep

Batch

MXX18444

Method

METHOD

Client Name Project Name/# Matrix

31-1-11343 Sunshine Bagel Soil Solid

Date 11/20/2006

QC results affect the following production samples:

1066432005

Pct LCS.LCSD RPD QC Spiked Analysis RPD Parameter Results Recov Limits Limits Amount Date

Metals Department

Mercury

LCS 0.162 97

(83-118)

0.167 mg/Kg 11/21/2006

Batch Method MCV3542

SW7471A

Instrument

PSA Millennium mercury AA

SGS Ref.#

742774 742775

Lab Control Sample

Lab Control Sample Duplicate

Printed Date/Time

11-27:2006

15:04

Batch

VXX16288

Method Date

SW5030B

Prep

Client Name Project Name/# Matrix

Shannon & Wilson-Fairbanks

31-1-11343 Sunshine Bagel Water (Surface, Eff., Ground)

11/21/2006

QC results affect the following production samples:

1066432001, 1066432002, 1066432009

Parameter		QC Results	Pet Recov	LCS LCSD Limits	RPD	RPD Lamits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Benzene	LCS	48.4	97	(79-115)			50 ug/L	11/21/2006
	LCSD	48.6	97		0	(<20)	50 ug/L	11/21/2006
Toluene	LCS	49.8	100	(85-117)			50 ug/L	11/21/2006
	LCSD	52.4	105		5	(<20)	50 ug/L	11/21/2006
Ethylbenzene	LCS	52.1	104	(81-120)			50 ug/L	11/21/2006
Ediylochizene	LCSD		105	(020)	1	(< 20)	50 ug/L	11/21/2006
D & M. Vydana	LCS	105	105	(87-119)			100/I	11/21/2007
P & M -Xylene	LCSD	103	103	(8/-119)	1	(< 20)	100 ug/L 100 ug/L	11/21/2006 11/21/2006
• •		50.6	101	.05.111)				
o-Xylene	LCS LCSD	50.6 50.0	101 100	(85-114)	1	(< 20 )	50 ug/L 50 ug/L	11/21/2006 11/21/2006
	LCSD	30.0	100		1	( - 20 )	oo ag L	11/21/2000
Surrogates								
1,4-Difluorobenzene <surr></surr>	LCS		101	(74-120)				11/21/2006
	LCSD		96		5			11/21/2006

Batch Method VFC8196 SW8021B

Instrument



742776

Lab Control Sample

Printed Date/Time

11/27/2006

15:04

Client Name

742777 Lab Control Sample Duplicate Prep

Batch Method VXX16288 SW5030B

Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Project Name/# Matrix

Water (Surface, Eff., Ground)

Date

11/21/2006

QC results affect the following production samples:

1066432001, 1066432002, 1066432009

Parameter		QC Results	Pct Recov	LCS LCSD Limits	RPD	RPD Lunits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	419	93	(60-120)			450 ug/L	11/21/2006
	LCSD	403	90		4	(< 20)	450 ug/L	11/21/2006
Surrogates								
4-Bromofluorobenzene <surr></surr>	LCS		110	(50-150)				11/21/2006
	LCSD		106		3			11/21/2006

Batch

VFC8196

Method

AK101

Instrument

SGS Ref.#

743042

Lab Control Sample

Printed Date/Time

Prep

11:27:2006

15:04

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel Batch Method Date VXX16292 AK101 11/22/2006

Matrix

Soil/Solid

QC results affect the following production samples:

Parameter	***************************************	QC Results	Pet Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Department								
Benzene	LCS	1.14	91	(84-115)			1.25 mg/Kg	11/22/2006
Toluene	LCS	1.18	94	( 90-119 )			1.25 mg/Kg	11/22/2006
Ethylbenzene	LCS	1.23	98	(88-122)			1.25 mg/Kg	11/22/2006
P & M -Xylene	LCS	2.46	99	(91-121)			2.50 mg/Kg	11/22/2006
o-Xylene	LCS	1.17	94	(88-114)			1.25 mg/Kg	11/22/2006
Surrogates								
1,4-Difluorobenzene <surr></surr>	LCS		94	(81-108)				11/22/2006

Batch Method VFC8199 SW8021B

Instrument



743043

Lab Control Sample

Printed Date/Time

11/27/2006

15:04

Prep Bate

VXX16292

Method

AK101

Date

11/22/2006

Client Name Project Name/# Shannon & Wilson-Fairbanks 31-1-11343 Sunshine Bagel

Matrix

Soil/Solid

QC results affect the following production samples:

Parameter		QC Results	Pet Recov	LCS-LCSD Limits	RPD	RPD Limits	Spiked Amouni	Analysis Date
Volatile Fuels Department								
Gasoline Range Organics	LCS	10.4	93	( 60-120 )			11.3 mg/Kg	11/22/2006
Surrogates								
4-Bromofluorobenzene <surr></surr>	LCS		108	(60-120)				11/22/2006

Batch

VFC8199

Method

AK101

Instrument



Printed Date/Time 741606 Matrix Spike 11/27/2006 15:04 SGS Ref.# Prep 741607 Matrix Spike Duplicate Batch XXX17574 Method Sonication Extraction Soil AK1 Date 11/15/2006 742393 Original Matrix Soil/Solid

QC results affect the following production samples:

1066432003, 1066432004, 1066432005, 1066432006, 1066432007, 1066432008

Parameter	umeter Qualifiers		QC Result	Pet Recov	MS MSD Limits	RPD	RPD Limits	Spiked Analysis Amount Date	
Semivolatil	e Organic F	uels Departme	<u>nt</u>						
Diesel Range Or	rganics	MS 23400	20400	-9,360* (	60-140)			32.9 mg/Kg11/17/2006	
		MSD	22400	-3,150*		10	(< 50)	32.9 mg/Kg 11/17/2006	
Surrogates									
5a Androstane <	surr>	MS	5.97	181* (	50-150)			11/17/2006	
		MSD	6.31	192*		6		11/17/2006	
Batch	XFC7238								
Method	AK102								
Instrument	HP 5890 Se.	ries II FID SV D R							
Residual Range	Organics	MS ND	359	1,090* (	60-140)			32.9 mg/Kg11/17/2006	
		MSD	370	1,130*		3	(< 50)	32.9 mg/Kg 11/17/2006	
Surrogates									
n-Triacontane-de	62 <surr></surr>	MS	9.7	294* (	50-150)			11/17/2006	
		MSD	10.7	327*		10		11/17/2006	
Datab									

Batch XFC7238 Method AK103

**Instrument** HP 5890 Series II FID SV D R

SGS Ref.#

741611

Matrix Spike

741612 Matrix Spike Duplicate

Printed Date/Time

11/27/2006 15:04

Prep

XXX17575

Method

Sonication Extraction Soil 8270

Date

Batch

11.15/2006

Original

1066432005

Matrix

Soil/Solid

QC results affect the following production samples:

1066432005

Original QC Pet MS/MSD RPD Spiked Analysis
Parameter Qualifiers Result Result Recov Limits RPD Limits Amount Date

Polynuclear Aromatics GC/MS

741611

Matrix Spike 11/27/2006 15:04 SGS Ref.# Prep Batch 741612 Matrix Spike Duplicate XXX17575 Method Sonication Extraction Soil 8270 Date 11/15/2006 1066432005 Original Matrix Soil Solid QC Pct MS-MSD RPD Spiked Analysis Original Qualifiers RPD Parameter Recov Limits Limits Date Polynuclear Aromatics GC/MS ND 0 0\* (46-97) Acenaphthylene MSmg/Kg11/22/2006 0.024 ()\*  $0.024 - mg/Kg \ 11/22/2006$ **MSD** 0  $(\le 30)$ 64.2 50,200\* (43-95) 2-Methylnaphthalene MS 52.0 0.024 mg/Kg11/22/2006 **MSD** 61.2 37,500\* (< 30)mg/Kg 11/22/2006 0.024(50-92) 0 0\* Acenaphthene MS ND mg/Kg11/22/2006 0.024 0\* MSD 0  $(\le 30)$ mg/Kg 11/22/2006 0.024 Fluorene MS ND 5.4 22,400\* (53-95) mg/Kg11/22/20060.024 MSD 17,900\*  $(\le 30)$ 4.37 mg/Kg 11/22/2006 0.024Phenanthrene MS 6.69 8.23 6,380\* (56-104) mg/Kg11/22/2006 0.024 **MSD** 7.48 3,220\* 10  $(\le 30)$ 0.024mg/Kg 11/22/2006 0\* (47-88) MSND 0 Anthracene mg/Kg11/22/2006 0.024 MSD ()\* (< 30)0 mg/Kg 11/22/2006 0.024(60-108)Fluoranthene MS ND 0.007 28\* mg/Kg11/22/2006 0.024 **MSD** 0.04 166\* 143 \* (< 30) 0.024mg/Kg 11/22/2006 51\* (58-109) Pyrene MS ND 0.012 mg/Kg11/22/2006 0.024 100 \* (< 30) MSD 152\* 0.037 0.024mg/Kg 11/22/2006 Benzo(a)Anthracene MS ND 0.017 70 (50-110)mg/Kg11/22/2006 0.024 MSD 72 (< 30)0.017 mg/Kg 11/22/2006 0.024Chrysene MS ND 0.019 79 (60-102)mg/Kg11/22/2006 0.024 83 MSD 0.02 (< 30)mg/Kg 11/22/2006 0.024 (47-115)Benzo[b]Fluoranthene ND 54 MS 0.0130.024 mg/Kg11/22/2006 58 MSD 0.014 (< 30)mg/Kg 11/22/2006 0.024 Benzo[a]pyrene (29-98)MS ND 0.013 56 mg/Kg11/22/2006 0.024 MSD 0.014 57  $(\le 30)$ mg/Kg 11/22/2006 0.024 48\* (52-113) Indeno[1,2,3-c,d] pyrene MS ND 0.012 mg/Kg11/22/2006 0.024 50\* MSD 0.012  $(\le 30)$ 0.024mg/Kg 11/22/2006 (47-116) Dibenzo[a,h]anthracene MS ND 0.012 51 mg/Kg11/22/2006 0.024 MSD 0.013 53 (< 30)mg/Kg 11/22/2006 0.024 Benzo[g,h,i]perylene 0.012 49\* (56-105)MS ND mg/Kg11/22/2006 0.024 MSD 0.013 53\* (< 30)0.024 mg/Kg 11/22/2006 Naphthalene MS 19.3 24 19,400\* (44-93) mg/Kg11/22/2006 0.024 **MSD** 13,800\* 22.7  $(\le 30)$ 0.024mg/Kg 11/22/2006 1-Methylnaphthalene 58.2 45,700\* (45-96) MS 47.2 mg/Kg11/22/2006 0.024 MSD 32,500\* 55.1 (< 30)0.024mg/Kg 11/22/2006 61\* (64-103) Benzo[k]fluoranthene ND 0.015 MS mg/Kg11/22/2006 0.024 MSD 0.016 65 (< 30)0.024 mg/Kg 11/22/2006 Surrogates (30-125)Terphenyl-d14 <surr> 0.019 11/22/2006 MS 80 **MSD** 0.02186 8 1/22/2006

Printed Date/Time

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741611 741612 Matrix Spike

Matrix Spike Duplicate

Printed Date/Time

11/27/2006 15:04

Prep

XXX17575

Method

Sonication Extraction Soil 8270

Date

Batch

11/15/2006

Original

1066432005

Parameter

Matrix

Soil/Solid

Qualifiers

Original

QC Result Pct Recov MS-MSD Limits

RPD

RPD Limits Spiked

Analysis

### Polynuclear Aromatics GC/MS

Batch

XMS3859

Method

8270C SIMS

Instrument

HP 5890 Series II MS2 SVOA

SGS Ref.#

741613 741614 Matrix Spike

Matrix Spike Duplicate

Printed Date/Time

Prep

e/Time 11:27 2006 15:04 Batch XXX17573

Method

XXX17573 Continuous Líq Extra, AK102/1

Date

11/15/2006

Original

1066783004

Matrix

Water (Surface, Eff., Ground)

QC results affect the following production samples:

1066432001, 1066432002

Parameter	A 110		Original Result	QC Result	Pet Recov	MS MSD Limits	RPD	RPD Limits	Spiker Amour	*
Semivolatile	e Organic F	uels De	epartment	<u> </u>						
Diesel Range Organics		MS	162J	1060	95	(75-125)			943	ug/L11/20/2006
		MSD		1230	114		15	(<30)	943	ug/L 11/20/2006
Surrogates										
5a Androstane <surr></surr>		MS		75.9	80	(50-150)				11/20/2006
		MSD		85.3	91		12			11/20/2006
Batch	XFC7240									
Method	AK102									
Instrument	HP 5890 Se	ries II FIE	SV D R							
Surrogates										
n-Triacontane-de	2 <surr></surr>	MS		79.3	84	(50-150)				11/20/2006
		MSD		88.5	94		11			11/20/2006
Batch	XFC7240									
Method	AK103									
Instrument	HP 5890 Ser	ries II FIE	SVDR							



742069 742070

Matrix Spike

Matrix Spike Duplicate

Printed Date/Time

Prep

Batch

11:27:2006 15:04

MXX18435

Method Date Soils Solids Digest for Metals b

te 11/17/2006

Original

1066432005

Matrix

Soil/Solid

QC results affect the following production samples:

1066432005

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS.MSD Limits	RPD	RPD Lumus	Spiked Amount	Analysis Date
Metals by ICE	P/MS								
Arsenic	MS	11.3	63.2	95	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	)	60.3	91		5	(< 20)	53.8 mg/Kg	11/20/2006
Barium	MS	111	167	103	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	)	157	85		7	(< 20)	53.8 mg/Kg	11/20/2006
Cadmium	MS	0.373	55.5	101	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	)	51.1	94		8	(< 20)	53.8 mg/Kg	11/20/2006
hromium	MS	18.8	77.1	107	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	•	72.6	100		6	(< 20)	53.8 mg/Kg	11/20/2006
_ead	MS	7.63	57.9	92	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	+	53.7	86		8	(< 20)	53.8 mg/Kg	11/20/2006
Selenium	MS	1.04	52.7	95	(80-120)			54.5 mg/Kg	11/20/2006
	MSD	•	49.4	90		6	(< 20)	53.8 mg/Kg	11/20/2006
Silver	MS	ND	5.98	110	(80-120)			5.45 mg/Kg	11/20/2006
	MSD		5.75	107		4	(< 20)	5.38 mg/Kg	1/20/2006

Batch

MMS4562

Method

SW6020

Instrument

Perkin Elmer Sciex ICP-MS P3

742647

Matrix Spike

742648

Matrix Spike Duplicate

Printed Date/Time

Prep

Batch

11/27/2006 15:04

MXX18444 Method

Digestion Mercury (S)

Date

11/20/2006

Original

Matrix

1066432005 Soil Solid

QC results affect the following production samples:

1066432005

Original QC Pct  $\operatorname{MSMSD}$ RPD Spiked Analysis Qualifiers RPD Parameter Recov Limits Amount

96

Metals Department

Mercury

MS ND

MSD

0.3760.35

(83-118) 103

7 (< 20)

0.366 mg/Kg11/21/2006 0.365 mg/Kg 11/21/2006

Batch

MCV3542

Method

SW7471A

Instrument

PSA Millennium mercury AA



743044

743045

Matrix Spike

Matrix Spike Duplicate

Printed Date/Time

Prep

Batch

11 27 2006 15:04

VXX16292

Method

AK101 Extraction (S) 11/22/2006

Date

Original

1066429001

Matrix

Soil/Solid

QC results affect the following production samples:

 $1066432003,\,1066432004,\,1066432005,\,1066432006,\,1066432007,\,1066432008,\,1066432010$ 

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Analysis Amount Date
Volatile Fuels De	partment							
Benzene	MS	ND	1.89	91	(84-115)			2.09 mg/Kg11/22/2006
	MSD		1.87	89		2	(< 20)	2.09 mg/Kg 11/22/2006
Toluene	MS	ND	1.97	94	(90-119)			2,09 mg/Kg11/22/2006
	MSD		1.98	95		0	(< 20)	2.09 mg/Kg 11/22/2006
Ethylbenzene	MS	ND	2.05	98	(88-122)			2.09 mg/Kg11/22/2006
	MSD		2.05	98		0	(< 20 )	2.09 mg/Kg 11/22/2006
P & M -Xylene	MS	ND	4.1	98	(91-121)			4.18 mg/Kg11/22/2006
	MSD		4.09	98		1	(< 20)	4.18 mg/Kg 11/22/2006
o-Xylene	MS	ND	1.97	94	(88-114)			2.09 mg/Kg11/22/2006
	MSD		2.01	96		2	(< 20)	2.09 mg/Kg 11/22/2006
Surrogates								
1,4-Difluorobenzene <sur< td=""><td>rr&gt; MS</td><td></td><td>1.92</td><td>92</td><td>(81-108)</td><td></td><td></td><td>11/22/2006</td></sur<>	rr> MS		1.92	92	(81-108)			11/22/2006
	MSD		1.85	89		4		11/22/2006

Batch

VFC8199

Method

SW8021B

Instrument

SGS Ref.#

743046

Matrix Spike

743047

Matrix Spike Duplicate

Printed Date/Time

11/27/2006 15:04

Prep

Batch VXX16292

Method AK101 Extraction (S)

Date

11/22/2006

Original Matrix 1066429001 Soil/Solid

QC results affect the following production samples:

Parameter (	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Volatile Fuels Dep	artment								
Gasoline Range Organics	MS MSE	ND )	17.1 16.9	91 90	(60-120)	1	(< 20)		Kg11/22/2006 g 11/22/2006
Surrogates									
4-Bromofluorobenzene <s< td=""><td>urr&gt; MS</td><td></td><td>1.88</td><td>90</td><td>(50-150)</td><td></td><td></td><td></td><td>11/22/2006</td></s<>	urr> MS		1.88	90	(50-150)				11/22/2006
	MSE	)	1.81	87		4			11/22/2006

Batch

VFC8199

Method

AK101

Instrument



1 1 1

1 1 1

'age 01 |

Snannon & Wilson, Inc.	Cha	in of Cust	ody Reco	ord.	aboratory SCS
200 M. 32th Street, Syste 700 1150 Clive Blvd., Suite 276 Seaths, WA 98103 St. Louis, MO 53141 (206) 632-8020 (314) 872-8170			1111	meters/Sample Conta	Iner Description
2355 Hill Road 5430 Fairbanks Street, Suite 3	Ţ			(include preservative if us	
7355 Hill Andrew (9507)  Anchorage, AK 99518  (907) 479-0600  (907) 561-2120			VA VI	1/1/10	
			and of		
	200	Q///	POPO	74747	J. J
Sample Identity Lab No.	Time Sampled	\si\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	N DY V	74900	Add comparks Mairix
343-111006-BU 1 A-E	4.45/11/10		X		5 water
1343-111006-BIZZV	5:00	1 1 1 1	<b>X</b>		5 water
1343-111006- B13 3A-B	2:05	1 1 1 1 1 1	<b>X</b>		2501
13-13-111600-B14 4	2:10	XX	X		2 SUL
1343-111006-3225 A-C	2:40	X	XX	XX	3 5014
13-13-111 COG- BZ3 6 A-B	2.45	1 1 1 1	X		2 SUL
1343-111001-13327	3.10	1 ×	X		2 5016
13-13-111000-B44 8 U	350	1 1 4 ×	7		2 501L
Terpolank 9 A-C		X		1 1 1 1 1 1	3 water
TRIPBLANK 10 A		1117			11501
Project Information Samp	e Receipt	Relinquished		Relinquished By:	2. Relinquished By: 3.
Project Number 31-1-11343 Total Number of		Signature:	fime: 11.50 stan	ature: Time: 41	
Project Name Sunshue Bigel COC Seals/Inta	1/19	Printed Name:	Qale: 11/13/00 Print		13/A 6 Printed Name: Date:
Contact   And Muller Received Good	174		Willey S	Junny Castlebe	
	nana	Company: 0		peny (C)	Company
Sampler: Milan LLev (attach shipping to	ell, if any)	Received By		Received By:	2. Received By:
Requested Turn Around Time	3.2	Signature:	2, Received By: Signature Time: 0900		
Special instructions:	NO	Sinney Cost			1
0			tlehenu	led Name: Date:	Mining tights: Date: 11-14-0G
Obstribution: While - whitement - returned to Shannon & Will	11111	Combanic O		peny:	Company:
Yellow - w/shipment - returned to Sharmon & Wite - Wishipment - for consignee files - Pink - Shannon & Wilson - Job File	on w/ Ladoratory raport	702			1 565

				1066432
_SG8				
Yes	No NA	SAMPLE RECEIPT FORM	SGS WO#:	
103		amples RUSH, priority, or w/n 72 hrs. of hold time?	Due Date:	11/29/06
-		have you done e-mail notification?	Received D	The same of the sa
· committee approved *		amples within 24 hrs. of hold time or due date?	Received T	
			The second secon	
-02798**		have you spoken with Supervisor?		conversion necessary?
		ving bottles - if req., are they properly marked?		
		nere any problems? PM Notified?		ter ID: bngstemB
<u> </u>	vvere	samples preserved correctly and pH verified?	Cooler ID	Temp Blank Cooler Temp
-	production of the second		<del></del>	5.8°C 5.3°C
				°C°C
	1 / 17 11.1	1 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -		°C
		is for PWS, provide PWSID.		
		ourier charges apply?		.cc
<del></del>	X_Weind	od of payment?		rigs include thermometer correction factors
<del>_</del>	Data	package required? (Level: 1 / 2 / 3 / 4)		thod (circle all that apply): Client /
		Notes:		rier / UPS / FedEx / USPS
	Is this	a DoD project? (USACE, Navy, AFCEE)		treak / NAC / ERA / PenAir / Carlile
	_			SGS / Other:
-		filled out for DoD projects (USACE, Navy, AFCEE)	Airbill#	
Yes	.No	1 12.13		mple Remarks: (\(\sif\) if applicable)
		ived temperature 4 ± 2°C? Samples/Analyses Affected:	Comments of the Comment of the Comme	tra Sample Volume?
	Except	ions: Samples/Analyses Affected.		nited Sample Volume? eld preserved for volatiles?
				ld-filtered for dissolved?
		**************************************		b-filtered for dissolved?
	- Rad So	reen performed? Result:		f Lab required?
		ere an airbill? (Note # above in the right hand column)		reign Soil?
	Was co	poler sealed with custody seals?		
		/ where:	This section	n must be filled if problems are found
		eal(s) intact upon arrival?	Yes No	
		ere a COC with cooler?	ļ.,—,—,—,—,—,—,—,—,—,—,—,—,—,—,—,—,—,—,—	Was client notified of problems?
		OC sealed in plastic bag & taped inside lid of cooler?	To divide atta	
		e COC filled out properly?  COC indicate COE / AFCEE / Navy project?	Individual c	e / Fax / Email (circle one)
		COC and samples correspond?		e / Fax / Email (circle one)
l —		Il sample packed to prevent breakage?	Reason for	
	77010 4	Packing material:	Acousom tor	ooi; mor
	Were a	ll samples unbroken and clearly labeled?		
		Il samples sealed in separate plastic bags?	* ************************************	**************************************
	Were a	Il VOCs free of headspace and/or MeOH preserved?		
		orrect container / sample sizes submitted?		
		le condition good?	Change Ord	er Required?
	Was co	py of CoC, SRF, and custody seals given to PM to fax?	SGS Contac	t:
	e ale 1999 - ಒಟ್ಟು <b>ಕರ್ಮ</b> ತ್ರವನ್ನು ನಡೆಡುತ್ತಿ	ti in the financial constitution of the consti	The second of the control of the con	and a section of the contract
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Notes:		And the second s	** *	
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Page 47 of 50 # F004r15 6/6/5

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SGS WO#:



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

### ANCHORAGE, AK

TO BE COMPLETED IN ANCHORAGE UPON ARRIVAL FROM FA	IRBANKS OR HAV	AII.	
NOTES RECORDED BELOW ARE ACTIONS NEEDED UPON ARRI			
	MARTIN A REPORT OF A STATE OF THE STATE OF T	7 W.	
Notes:			
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	***************************************		
D : (D ( 100 ) 1 11 1/10			
Receipt Date / Time: 11-14-56 6980			
Is Sample Date/Time Conversion Necessary? Yes No			
Number of Hours From Alaska Local Time:	seese is a source of proved ( - 15 H		
Foreign Soil? Yes No	***** * *******************************		W =
A COLOR DE LA COLO			
Delivery method to Anchorage (circle all that apply):		,	
Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir /	Carlile (Lynden) SC	S	
Other;			
Airbill#			
Mayor and Control Miller of Assistance and the Control of Control			
COOLER AND TEMP BLANK READINGS*			
	Temp Blank (°C) (	Cooler (°	Ω
1 2.5 0.9			
			<del></del>
	and the state of t		
and the second s			
CUSTODY SEALS INTACT: (YES) / NO , )	<b>1</b>		
#/WHERE: / notront, Conc	als		
COMPLETED BY:			
+m			
*Temperature readings include thermometer correction factors.	we engage was engaged to		



### SAMPLE RECEIPT FORM (page 2)

SGS WO#:

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<b>祥</b> :: ::	Container ID	Matrix	Test	00	TB	11	500 mL	250 mL	125.mL.	7m 09	40 mL	8oz (250.mL).	40Z (125 mL)	Other	AG	90	HDPE	Nalgene	Cubie	Coli	Septa	Other	None	HCI	HINO	H <sub>2</sub> SO <sub>4</sub>	MeOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	NaOH	Other
1-2	A-C	١	GEN/BTEX								6				X						X	and a planting and a state of the state of t		X		<b> </b>		+-	1	
	D-E		DROIPRO			4									X									文						
3-4	$\theta$	2.	GRO/BTEX	-									2		X				i		X	A TOTAL TO POSITION AND ADDRESS OF THE PARTY.	<u> </u>					-		
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5	B	<u>Z.</u>	GRO/BTEX DEOTRIEGIDAH RORAINTIS		****								1		X			<del>                                     </del>			X		_				$\times$	li		
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Completed by: Juny Carthberg

SGS Environmental CUSTODY SEAL WO# 6431 Cooler#2	
Signature: Date/Time: 1/13/06 1/040	
Signature: Sunny Castley Date/Time: 1/18/06 1640	
SGS Environmental CUSTODY SEAL WOT TOLLIGHT COOLET	
Signature: Juny Coothers   Date/Time: 1/3/04 1/40   T3=1.8	
Signature: Date/Time: 11/13/06/1640	
SGS Environmental CUSTODY SEAL WOT 6432  S Signature: Date/Time: 1/13/06 1640	
Signature: During Castles Date/Time: 1/13/06 6437 Date/Time: 1/13/06 1640	
Signature: Suny Castlebuy Date/Time: 11/13/06 1640	

**B**