



**ENVIRONMENTAL ENGINEERING, HEALTH & SAFETY**

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March 16, 2007

Badger Fuel  
1995 Badger Road  
North Pole, AK 99705

ATTN: Ron Jager

**RE: Interim Characterization Report and  
Recommendations for Additional Characterization  
578 Canoro Road, North Pole, Alaska**

Dear Mr. Jager:

**NORTECH** Environmental and Engineering Consultants (**NORTECH**) is pleased to provide the following update on activities related to the ongoing release investigation at 578 Canoro Road. The following text is a brief summary of the project history, site characteristics, and activities that have been completed to date. This also outlines recommendations to complete the characterization of the site. **NORTECH** is currently developing proposed work plan and cost estimate to execute the recommendations.

**PROJECT BACKGROUND AND OBJECTIVES**

In late November 2006, Badger Fuel personnel inadvertently delivered approximately 470 gallons of heating oil into the drinking water well at the residence located at 578 Canoro Road in North Pole, Alaska (Figure 1). The residence is located in an area that was developed prior to the 1990s and is now accessed through the Orion Subdivision that has been built in the last few years. As shown in Figures 1 and 2, the property is located within a meander of the Chena River and is approximately 700 to 900 feet from the Chena River in the west, north, and east directions.

Typical soils in the Tanana floodplain, including this area of the Chena River, consist of several feet silt, underlain by alluvial sands and gravels to a considerable depth. The groundwater surface is generally between 10 and 15 feet below the ground surface (bgs). These granular deposits generally become coarser with depth, exhibit wide variability in structure and stratification and apparently represent ancient glacio-alluvial deposition. Silt-filled swales and oxbow lakes generally represent former positions of rivers and streams. The thickness of alluvial sediments overlying bedrock in the region can be as great as 400 to 500 feet. Lenticular deposits of silt, sand, and gravel produce a wide range of permeability and transmissivity.

The former water supply well is located east (behind) of the house (see Figure 3). Well installation logs provided by the well installer indicate that the drinking water well extends to a depth of approximately 35.5 feet bgs with approximately 1.5 feet riser



above the surface. The well is constructed of two-inch galvanized pipe and had a flow of 10 gallons per minute. Specific well screen information is not included, but is assumed to extend approximately three to five feet above the bottom of the well. The well log includes a testhole log indicating that the site soils consist of silt to a depth of approximately three feet, followed by sand to a depth of six feet. Gravel was encountered to the bottom of the testhole to ten feet. The static water level was reported to be 14 feet. Water is drawn from the well through a jet pump located in the water utility room inside the garage. No problems with water supply had been reported prior to the fuel delivery.

Immediately after the release, Badger Fuel hired Fairbanks Pumping and Thawing to recover product and water from the well with a vacuum truck. Badger Fuel also contacted the ADEC Spills Programs and **NORTECH** to oversee the cleanup activities. Based on the initial meeting at the residence that also included the occupants of the home, the following steps were outlined to restore the original functionality of the residence and characterize the environmental conditions at the site:

- Continued extraction from the well until little product was recovered
- Installation of a temporary holding tank with replacement water pump and softener units
- Cleaning and testing of the house water system with periodic follow-up testing until a permanent water source was installed
- Installation of a large diameter product recovery adjacent to the original well
- Soil and groundwater characterization to assess the subsurface conditions at the site
- Installation of a new permanent drinking water well outside the area of groundwater impacts

## FIELD ACTIVITIES AND RESULTS

### Distribution System Cleaning and Testing

**NORTECH** and Fairbanks Pumping and Thawing cleaned both the hot and cold water sides of the domestic water supply system. The lines were filled with an approximately 50% solution of Orange Tough 50 cleaner and soaked for approximately 15 minutes. The lines were then flushed until no foaming or other evidence of the cleaner was observed. No fuel odor was observed during the flushing and a significant amount of scale was removed from the lines.

Laboratory samples were collected from the hot and cold water sides at the farthest upstairs (bathroom) and downstairs (kitchen) taps to verify that the pipes were clean. Samples were submitted for EPA 524.2 VOC (Volatile Organic Compounds) analysis. Toluene and one toluene derivative were detected at very low concentrations in each of the samples, including the sample directly from the water tank, indicating that these

compounds were present in the water brought to the site. The low levels of contaminants are not considered a concern for the site. A copy of the laboratory report and laboratory quality review checklist is attached.

ADEC requested a periodic monitoring program at the kitchen sink until after the new water supply well has been completed. Periodic testing of the water distribution system was undertaken on March 6, 2007. Hot and cold samples were collected at the kitchen sink and submitted for EPA 524.2 VOC analysis. These results will be forwarded when available and reported in a future report.

### **Product Recovery and Soil Characterization**

Fairbanks Pumping and Thawing pumped approximately 500-600 gallons of liquid (a mixture of fuel and water) from the domestic water well during response efforts on the first day. This liquid was transferred from the vacuum truck to a roll-off box at the Fairbanks Pumping and Thawing shop to allow the fuel and water to separate. The box was placed outside so the water would freeze and product could easily be measured and recovered. Fairbanks Pumping and Thawing estimated that approximately half of this liquid (250 to 300 gallons) was fuel. The roll-off box containing this liquid was inadvertently filled with soil during the excavation of the recovery well and additional quantification of the recovered fuel and water could not be performed.

Fairbanks Pumping and Thawing returned to the site the following day to continue product recover efforts. A down-hole pump was used to extract liquid from the well. Approximately 350 gallons (seven 55-gallon drums) of liquid were recovered.

**NORTECH** inspected each these drums and determined that no measurable product was present.

On December 1, **NORTECH** and Fairbanks Pumping and Thawing personnel excavated around the well casing as part of the installation of a larger diameter product recovery well. The depth of frost penetration in the yard was 2 - 2.5 feet bgs. The "T" junction where the water line came out of the well was identified at approximately four feet bgs. The "T" was found to have a ¾" bushing with the ¾" copper coming through and going to the house. This fitting allowed some venting during the fuel release, but field observations indicated that no more than a few gallons of fuel came out this opening. Field screening identified contaminated soil within in approximately 6" of the well casing beneath the "T" fitting. The copper drop pipe was removed and measured at 21 feet. The drop pipe had a foot valve on it and was assumed to be filled with contaminated water, so this piping was put in the roll-off box (described below). The "T" was removed and replaced with a standard coupling so the well can be used in the future as a monitoring well. The copper line to the house was left in place due to the risks associated with pounding through the frost adjacent to the foundation for the house. Removal of this line is expected to be completed during installation of a new permanent water service for the house.

After the top of the well casing was reassembled, excavation began for the installation of the larger-diameter product recovery well. The subsurface sand and gravel was very loose and the contaminated material around the well casing sloughed into the excavation and was removed and placed in roll-off boxes (described below). Field screening at the limits of excavation above the water table indicated the sidewalls of the excavation from the ground surface to the top of the water table were below background levels. A total of two soil samples (S-4, six feet deep and S-5, ten feet deep) were collected to close the limits of excavation. The laboratory results are summarized in Table 2. Based on the field screening and laboratory results, the contaminated material associated with the fuel release from the "T" was removed and site soils above the groundwater smear zone meet ADEC cleanup criteria.

Groundwater contact caused additional sloughing in the excavation. Field screening and direct observations indicate that the surface of the groundwater was contaminated with fuel, but the loose sand and gravel prevented the bottom of the excavation from remaining open long enough to evaluate the depth of product on the water surface. One sample and a field duplicate (S-3 and S-6) were collected to characterize the soil in the groundwater smear zone and the results are summarized in Table 2. These results confirm that groundwater smear zone impacts are present in this area. The relative percent difference for these samples is higher than the preferred range, however, both samples exceed the ADEC cleanup levels and the samples are considered representative of the natural heterogeneity of the loose gravels encountered. Copies of the laboratory report for the soil samples and laboratory quality review checklist are attached.

The recovery well was installed with the bottom approximately 14 feet below the ground surface, approximately two feet below the groundwater surface. The excavation was expanded to the north to stabilize the recovery well and provide some backfill for the excavation. Approximately 25 cubic yards of soil were estimated to have been excavated during installation of the recovery well. Due to sloughing from the contaminated material around the well casing and the sloughing into the contaminated groundwater, all of this material was stored in two 20-yard roll-off boxes by Fairbanks Pumping and Thawing and froze. ADEC approved transportation and disposal of this material at OIT on January 16, 2007 and the material is currently being stored until it can be thawed and delivered to OIT. The excavation was backfilled with clean gravel.

The loose subsurface material heaved into the bottom of the recovery well during installation. **NORTECH** and Fairbanks Pumping and Thawing used the vacuum truck to remove six to eight inches of sand and gravel from the bottom of the recovery well and allow the entrance of water and product. No product was measured on the water in the well following the removal of the sand and gravel. Since that time, the water at the bottom of the recovery well has been frozen and no product has been measured or recovered. **NORTECH** will continue to monitor the recovery well throughout the spring and early summer.

### Groundwater Characterization

On February 8 and 9, 2007, an array of seven monitoring wells was installed on the property (Figure 4). The purpose of the array was to measure the direction and magnitude of the hydraulic gradient and to delineate the extent of the contaminant plume. Based on the general westerly flow of the river in this area, the hydraulic gradient was expected to be generally west. Two of the wells (DW1 and DW2) were placed installed to a depth of 35 feet bgs, the approximate depth of the former water supply well. The remaining 5 (SW1-SW5) were installed to a depth of 17 feet to intersect the top of the water table where petroleum product normally floats. Blizzard Alaska Surveys measured the tops of each of the well casings to allow for accurate measurement of the ground water elevation.

DW1 and DW2 were standard two-inch PVC monitoring wells with screened intervals from 25 feet to 35 feet below the ground surface. Split spoon soil sampling was completed during this installation with two feet of soil recovered at five foot intervals. DW1 was located on the west side of the house, near the existing buried heating oil tank. Field screening indicated the soil in DW1 was clean and no laboratory soil samples were considered necessary. DW2 was located within 10 feet of the recovery well and the former water supply well. Field screening from the split spoon soil samples indicated that contamination was present from approximately 25 to 35 feet bgs. One soil sample was collected and the results exceeded the cleanup levels for DRO and benzene. These results are summarized in Table 4.

The shallow wells are small diameter prepacked wells that are normally installed using direct push techniques. However, due to the depth of the seasonal frost, regular hollow stem augers were advanced to 17 feet bgs and the wells were installed. These wells are screened from 7 to 17 seventeen feet to allow evaluation and sampling during the annual fluctuations of groundwater elevation. No evidence of contamination was observed in SW1, SW2, SW3, and SW4. A petroleum odor was observed on the auger cuttings from SW5 and field screening indicated this soil was contaminated. A laboratory sample was not considered necessary because this soil was within the groundwater smear zone.

After well installation, groundwater samples were collected from each of the seven wells and analyzed for BTEX (benzene, toluene, ethylbenzene, and xylenes) and DRO (diesel range organics). Free product was observed in DW2 and SW5 and laboratory results indicated benzene and DRO concentrations exceeded ADEC drinking water standards in both of these locations. Toluene and ethylbenzene also exceeded the ADEC cleanup levels in SW5. Concentrations of these contaminants of concern were not detected in the other monitoring wells except for a trace level of xylenes in SW4. The laboratory reports and the ADEC laboratory quality review checklist are attached.

The depth to water and/or product was also measured in each well several times since the wells were installed. The water table elevation is still falling and is expected to reach the lowest level in late April, immediately prior to spring breakup. The hydraulic gradient is generally to the west, as expected, and the magnitude is extremely small, approximately 0.003 feet per foot (see Figure 5).

Free product has been measured in DW2 (the source area) and SW5 (east of the source). The free product depth in DW2 has been approximately 0.02 feet and is not considered recoverable. The free product depth in SW5 has been between three and four feet. Several product recovery efforts have been made and approximately one gallon of product has been recovered. The product that has been recovered accumulates in SW5 in the days between recovery efforts and the product recharge rate in this well is very slow.

## **ANALYSIS, CONCLUSIONS, AND RECOMENDATIONS**

### **Water Distribution System**

The water distribution system is currently clean and operating adequately. The soft parts of the water system (the pump, water softener, etc) were replaced with new units and the hard parts (copper pipes, fittings, etc) were cleaned. The temporary water holding tank has been upgraded to an outdoor 2,500-gallon tank to allow use of the garage and reduce the frequency of water delivery. Monthly water testing for VOCs has been requested by ADEC until the new permanent water source has been installed.

**NORTECH** recommends continuing to collect these monthly samples from the hot and cold sides of the kitchen sink and submitting the samples for EPA 524.2 VOC analysis.

### **Product Recovery and Soil Characterization**

Based on the existing estimates, approximately half of the heating oil that was released at the site was recovered during the initial response efforts. The product recovery had only a trace amount of heating oil prior to freezing shortly after installation. Additional work will be completed on the recovery well once it thaws and larger quantities of heating oil are expected as the groundwater elevation rises with the river level.

Free product has also been observed in two of the monitoring wells installed at the site. The trace amount of product in DW2 is not currently recoverable, but this will be monitored and recovery efforts will also be undertaken in this well if the product thickness increases. Several feet of product have been observed in SW5 and approximately one quart of fuel has been recovered during each of the recovery efforts. This is the approximate volume of the fuel in the well at the beginning of recovery and the product appears to recharge relatively slowly. **NORTECH** will continue to recover product from this well during groundwater elevation monitoring events. A larger diameter monitoring well (four-inch) may be recommended for this area based on the results of the additional groundwater characterization activities described in the next section.

Field screening and laboratory data indicate that all contaminated soil located above the water table has been removed from the site. The remaining soil contamination is in the groundwater smear zone and/or below the surface of the water table as a result of the release location at approximately 35 feet below the ground surface. No additional characterization or removal action is considered necessary above the top of the groundwater smear zone. Contamination in the groundwater smear zone will be addressed as part of the groundwater characterization described in the following section.

### **Groundwater Characterization**

Petroleum releases generally occur above the water table and then migrate across the water table in the direction that the water table slopes. While this release occurred below the surface of the water table, the heating oil is expected to move laterally in the direction of groundwater flow as well as float to the surface. Free phase petroleum is also generally hydrophobic and tends to stick to soil particles. Different compounds in petroleum dissolve into the groundwater at different rates and also move through the aquifer at different rates. In general, benzene is the specific contaminant of concern that tends to dissolve and move within the aquifer at the highest rate.

The residence is located within a meandering bend of the Chena River which is generally flowing west in this area. Groundwater was assumed to be moving in this general direction as well and soil borings and monitoring wells were located accordingly to evaluate the plume under these circumstances. Observations during product recovery well installation and soil borings supported the evidence that the subsurface material is primarily sand and gravel. Additionally, the hydraulic gradient data from the monitoring wells indicates that the top of the water table also slopes generally to the west, although at a very slight magnitude (approximately 0.003 foot/foot).

The pattern of observed groundwater impacts is not consistent with the expected groundwater flow and measured hydraulic gradient. The only impacts outside the source area (DW2) were observed in SW5 which is located northeast (up gradient) of the release location. The observation of several feet of product in this well indicates that significant quantities of heating oil may be moving in this direction, which is against the hydraulic gradient as measured at the surface of the water table. Additionally, the contamination in DW2 was located primarily at least 25 feet bgs, more than 10 feet below the groundwater surface. This indicates that the heating oil may not be floating directly up from the release location. The soil and groundwater samples from DW1, located downgradient of the surface area, is also clean, confirming that the hydraulic gradient as measured at the surface of the water table is not adequate to characterize the motion of the heating oil in the aquifer.

A number of subsurface conditions could explain the differences between the expected and observed contaminant migration at the site. These are primarily related to the meandering of the Chena River and deposition of the sediments at this location and

may be either very localized or area-wide conditions. The most likely scenarios involve thin silt layers or lenses that slow down or redirect the horizontal and/or vertical flow of the groundwater in this area. Other subsurface features, such as buried log jams or other buried organic matter, may also create the observed conditions.

Due to the number of possible scenarios, **NORTECH** recommends an aquifer characterization program that increases the vertical and horizontal data resolution. Since the subsurface groundwater flow appears to be impacted by aquifer materials, this program should focus on possible obstructions to groundwater flow in the aquifer. Continuous soil borings are recommended to evaluate the potential for layers and lenses of fine material. In the event that this data does not adequately explain the observed conditions, ground penetrating radar (GPR) is recommended to fully delineate the subsurface layers and identify other physical barriers such as woody debris. Once this data is available, the current monitoring well locations and the need for additional monitoring and product recovery wells and/or removal of some of the existing wells will be evaluated.

**NORTECH** has completed a draft Conceptual Site Model (CSM) for the site, which is attached. The goal of the aquifer characterization is to significantly refine the CSM so that it adequately identifies the site characteristics and potential risks associated with the heating oil release. The data will be utilized to place product recovery and/or remediation wells at the most effective locations. Monitoring wells will also be located to provide the most appropriate information related to the risks of the site while keeping groundwater sampling efforts reasonable. While this type of detailed aquifer characterization is not necessary at all sites, the unusual groundwater characterization requires additional investigation and ultimately the aquifer characterization will increase the understanding of the site and allow better forecasting of the costs and efforts related to the ongoing cleanup efforts at the site. **NORTECH** recommends completing this aquifer characterization prior to spring breakup (typically in mid-May), which is expected to raise the water table elevation by four to six feet.

**NORTECH** has the following specific recommendations and is currently developing a work plan and cost estimate to complete this work:

- Continue monthly water system sampling at the kitchen sink
- Perform groundwater elevation monitoring and free product monitoring/recovery monthly until spring breakup
- Perform groundwater elevation monitoring and free product monitoring/recovery weekly during spring breakup and early summer until groundwater conditions stabilize
- Complete an aquifer characterization program that includes:
  - Continuous soil sampling to a depth of 30-35 feet at approximately eight locations to provide vertical resolution of the aquifer materials





Interim Characterization  
578 Canoro Road  
North Pole, Alaska  
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- Ground penetrating radar (GPR) as necessary to expand the vertical soil data horizontally
- Installation of one or two larger diameter (four-inch) recovery wells and/or up to three additional small-diameter monitoring wells based on the aquifer characterization

After the aquifer characterization is complete, **NORTECH** anticipates being able to complete the following activities:

- Installation of a new permanent water source for the residence
- Assessment of potential remediation strategies to reduce the cleanup timeframe
- Development of a multi-year groundwater monitoring program

**NORTECH** appreciates the opportunity to be of service on this project. Please contact me at your earliest convenience if you have any questions about the site conditions, analysis, conclusions, or recommendations contained in this report.

Sincerely,  
**NORTECH**

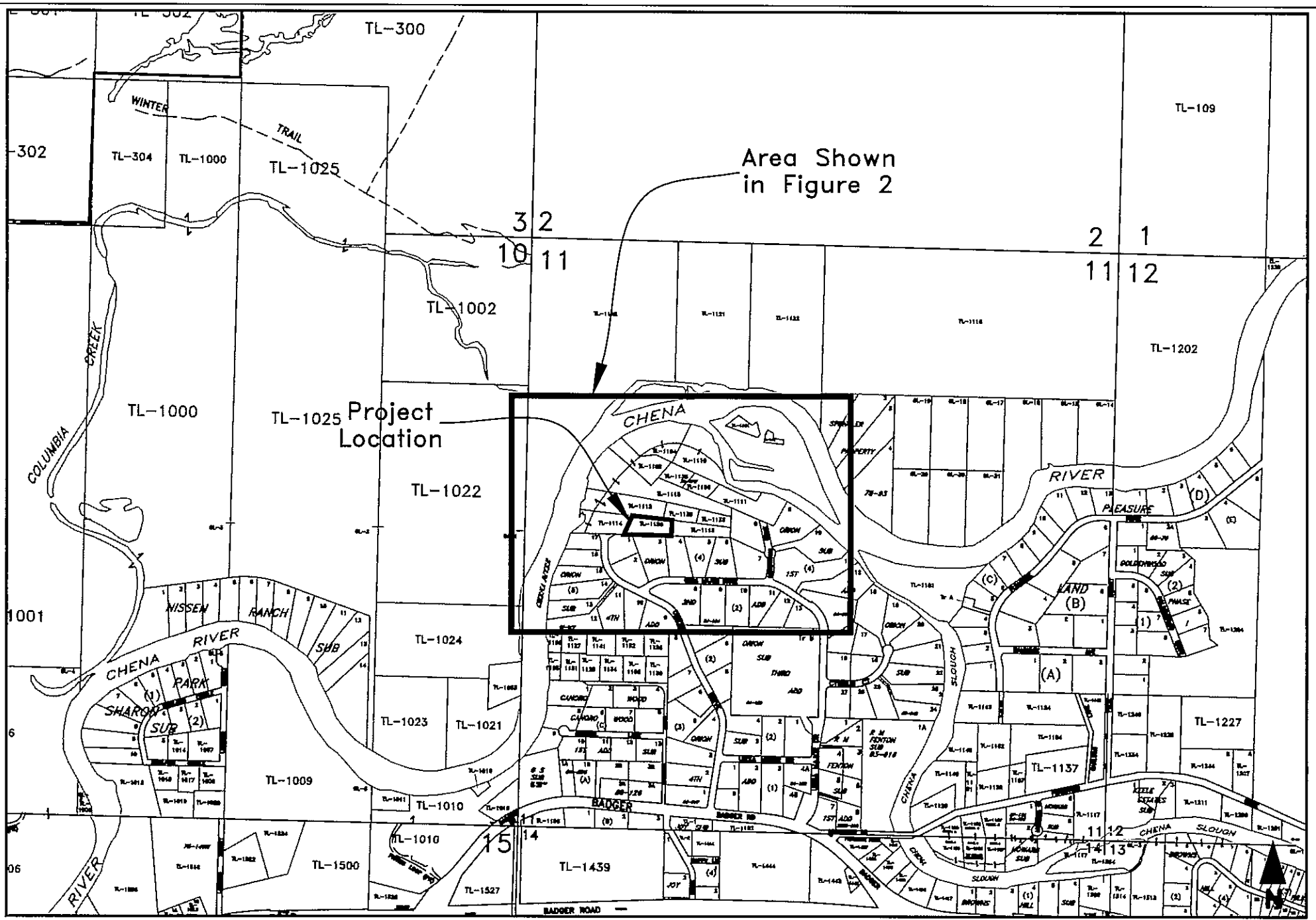
A handwritten signature in black ink that reads "Peter Beardsley".

Peter Beardsley, PE  
Environmental Engineer

Attachments: Figures 1 - 5  
Tables 1-3  
Preliminary Conceptual Site Model (CSM)  
Laboratory Reports with ADEC Laboratory Data Quality Review Forms

Cc Brian Bell, Wilton Adjustors w/attach





Area Shown  
in Figure 2

Project  
Location

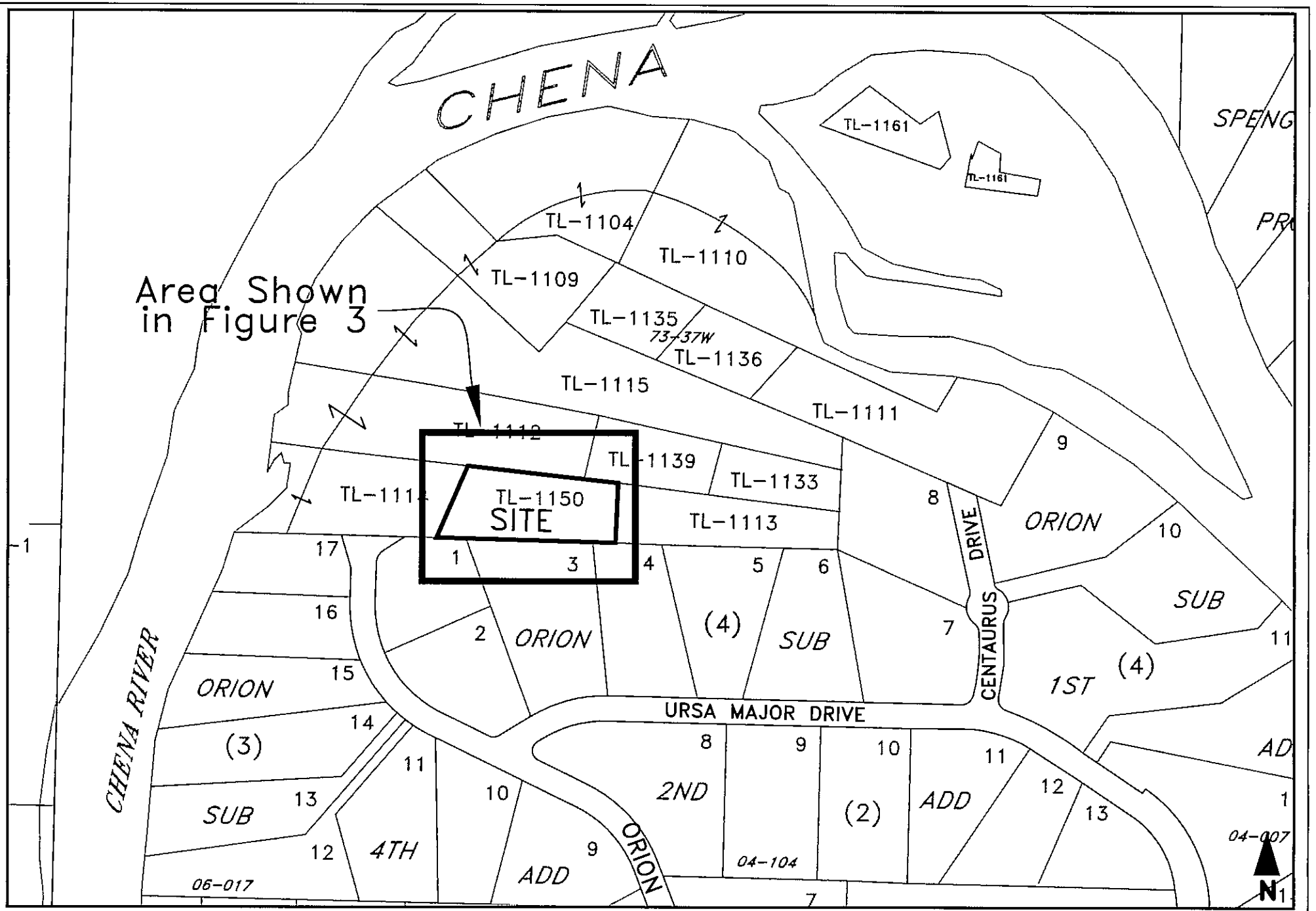


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Location Map  
578 Canoro Road  
North Pole, Alaska

DATE: 03/14/07	SCALE: 1" = 600'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080(01)

FIGURE  
1



Area Shown  
in Figure 3

**TL-1150  
SITE**



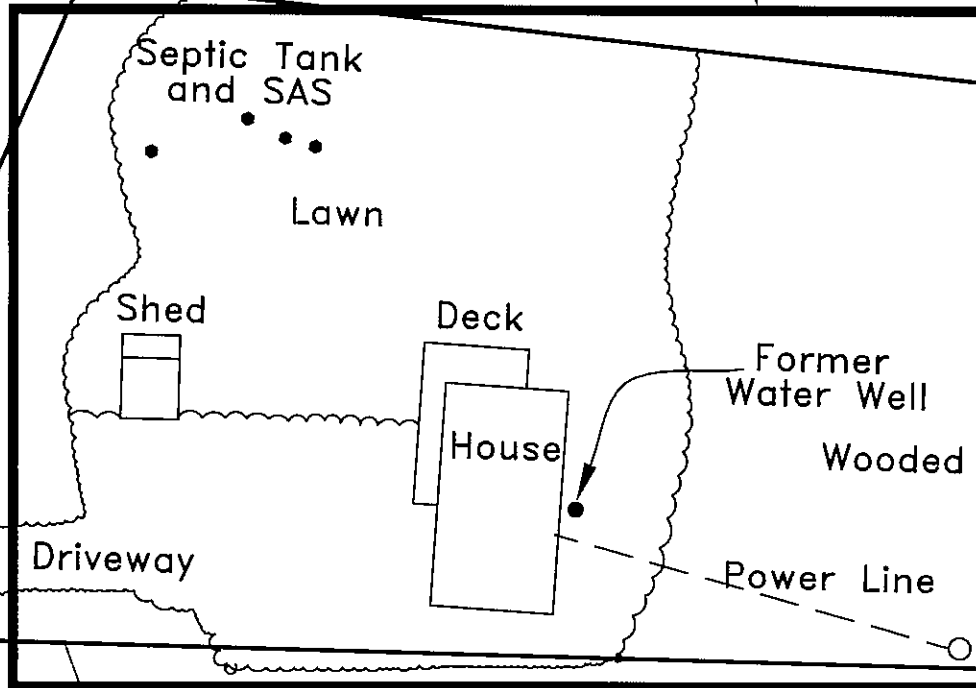
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(907) 452-5688 FAX: (907) 452-5694

Vicinity Map  
578 Canoro Road  
North Pole, Alaska

DATE: 11/28/06	SCALE: 1" = 300'
DESIGN: PLB	PROJECT: NA
DRAWN: PLB	DWG: NA(02)

FIGURE  
2

Area Shown in  
Figures 4 & 5

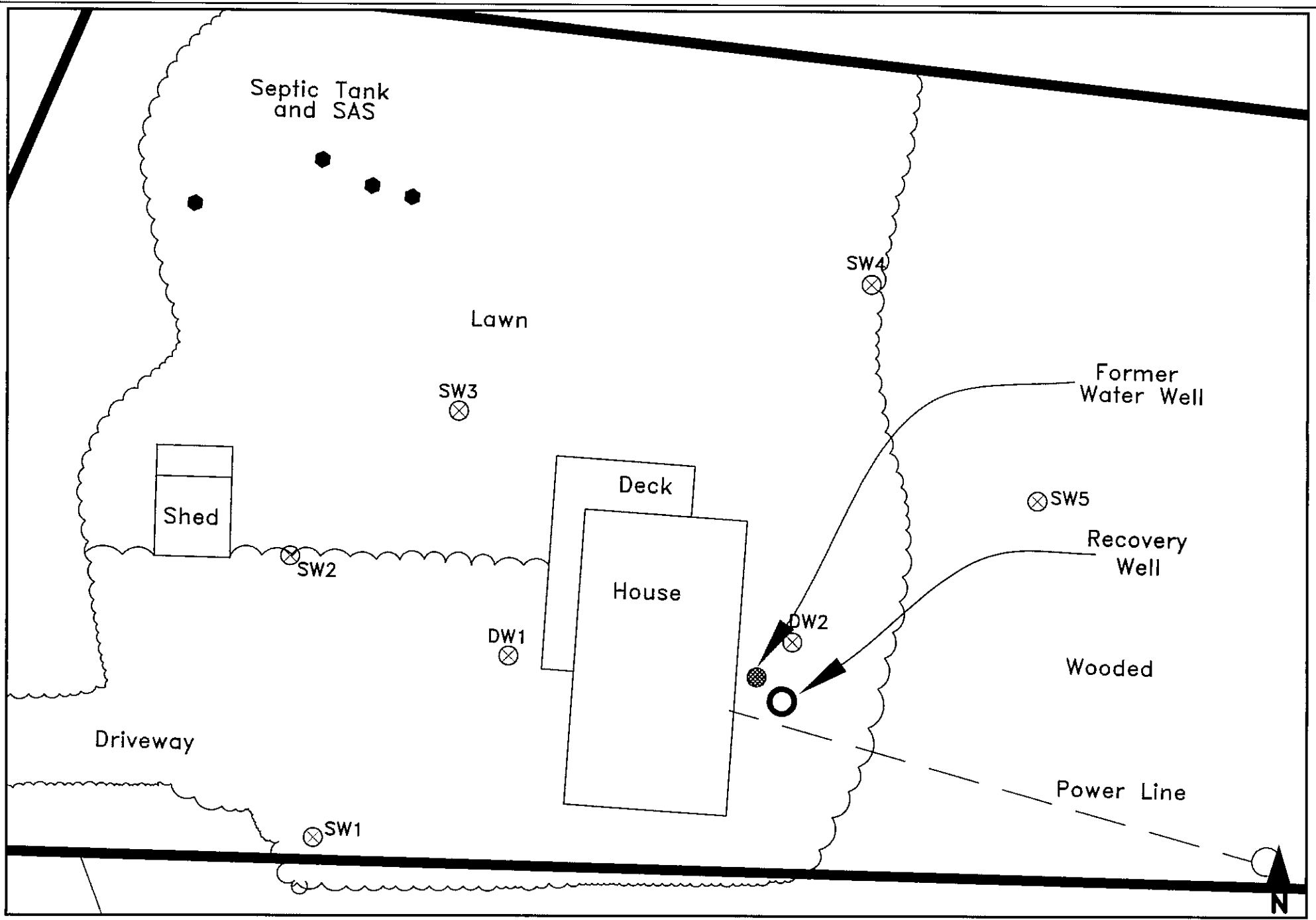


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Site Map  
578 Canoro Road  
North Pole, Alaska

DATE: 03/14/07	SCALE: 1" = 50'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080(03)

FIGURE  
3



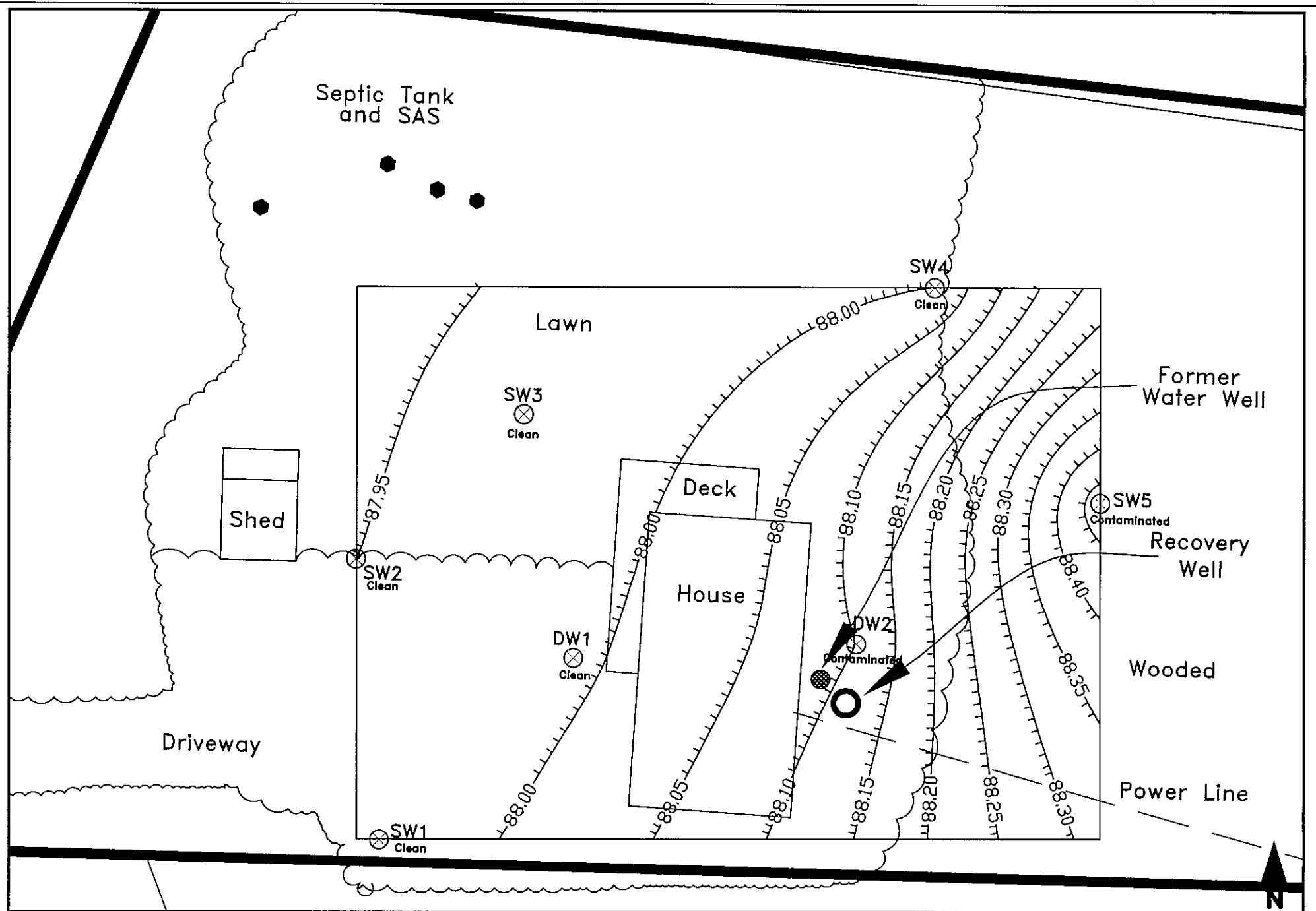
**ENVIRONMENTAL & ENGINEERING CONSULTANTS**  
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Monitoring Well Locations  
 578 Canoro Road  
 North Pole, Alaska

DATE: 03/14/07  
 DESIGN: PLB  
 DRAWN: PLB

SCALE: 1" = 25'  
 PROJECT: 06-1080  
 DWG: 061080(04)

FIGURE  
 4



**ENVIRONMENTAL & ENGINEERING CONSULTANTS**  
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 (907) 452-5688 FAX: (907) 452-5694

Water Table Elevation - 02/16/2007  
 578 Canoro Road  
 North Pole, Alaska

DATE: 03/14/07	SCALE: 1" = 25'
DESIGN: PLB	PROJECT: 06-1080
DRAWN: PLB	DWG: 061080c(05)

FIGURE  
5



**Table 1  
Initial Water System Cleaning Results**

**VOCs (Method 524.2) - Detected Analytes Only**

<b>Sample ID</b>	<b>ADEC</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>Trip Blank</b>
Analyte	Limit (mg/l)	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
1,2,4-Trimethylbenzene	0.07	ND(0.00050)	ND(0.00050)	0.00053	ND(0.00050)	ND(0.00050)	ND(0.00050)	0.00050U
p-Isopropyltoluene	NE	0.00103	0.00051	0.00206	0.00081	0.00171	ND(0.00050)	0.00050U
Trichloroethylene (TCE)	0.005	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	0.00086	0.00050U
Toluene	1	0.00054	0.00053	0.00058	0.00054	0.00074	0.00066	0.00050U
Location		Kitchen Hot	Master Bath Hot	Kitchen Cold	Master Bath Cold	Kitchen Cold (Dup)	Raw Water (after pump)	

**Notes:**

ND(X.XX) Analyte not detected at the listed detection limit

NE Cleanup Level for listed Analyte has not been established

Shade Analyte detected in concentration below the ADEC Cleanup level

**Bold** Analyte detected in concentration exceeding the ADEC Cleanup level

**Quality Control Summary - Detected Analytes Only**

<b>Sample ID</b>	<b>3</b>	<b>5</b>	<b>Average</b>	<b>Difference</b>	<b>RPD</b>
Analyte	mg/l	mg/l	mg/L	mg/L	%
1,2,4-Trimethylbenzene	0.00053	ND(0.00050)	NA	NA	NA
p-Isopropyltoluene	0.00206	0.00171	0.0019	-0.0004	-19%
Trichloroethylene (TCE)	ND(0.00050)	ND(0.00050)	NA	NA	NA
Toluene	0.00058	0.00074	0.0007	0.0002	24%

**Notes:**

NA The calculation is not applicable.



**Table 3  
Well Installation Samples**

**Ground Water Results**

Sample ID	Benzene	Toluene	Ethylbenzene	p & m xylene	o-xylene	DRO	Lab Comment
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
ADEC Limit	0.005	1	0.7	10		1.5	
DW1-W1	0.005U	0.002	0.002U	0.006	0.002	0.319U	
DW2-W2	<b>0.117</b>	0.698	0.269	1.090	0.549	<b>15.0</b>	WMD/WG
DW2-W3	<b>0.113</b>	0.702	0.277	1.110	0.557	8.640	WMD/WG
SW1-W4	0.005U	0.002U	0.002U	0.002U	0.002U	0.326U	
SW2-W5	0.005U	0.002U	0.002U	0.002U	0.002U	0.333U	
SW3-W6	0.005U	0.002U	0.002U	0.002U	0.002U	0.313U	
SW4-W7	0.005U	0.002U	0.002U	0.002	0.002U	0.326U	
SW5-W8	<b>0.466</b>	<b>1.670</b>	<b>0.767</b>	2.920	1.480	<b>2320</b>	

**Soil Results**

Sample ID	Benzene	Toluene	Ethylbenzene	p & m xylene	o-xylene	DRO	Lab Comment
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
ADEC MCL	0.02	5.40	5.50	78.00		250.00	
DW2-30	<b>0.044</b>	0.559	0.696	2.700	1.410	<b>1500</b>	WMD

Notes:

U	Analyte not detected at the listed detection limit
Shade	Analyte detected in concentration below the ADEC Cleanup level
<b>Bold</b>	Analyte detected in concentration exceeding the ADEC Cleanup level
WMD	Pattern is consistent with a weathered middle distillate
WG	Pattern is consistent with weathered gasoline

**Quality Control Summary**

Sample ID	Benzene	Toluene	Ethylbenzene	p & m xylene	o-xylene	DRO
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DW2-W2	0.117	0.698	0.269	1.090	0.549	15.0
DW2-W3	0.113	0.702	0.277	1.110	0.557	8.640
Average	0.115	0.700	0.273	1.100	0.553	11.820
Difference	0.004	-0.004	-0.008	-0.020	-0.008	6.360
RPD (%)	3%	-1%	-3%	-2%	-1%	54%

**Table 2**  
**Recovery Well Installation - Soil Sample Results**

Sample ID	ADEC	S-3	S-4	S-5	S-6
Analyte	Method 2	mg/Kg	mg/Kg	mg/Kg	mg/Kg
Field Screening Result	ppm	345	2.3	98.2	345
DRO	250	<b>1140</b>	ND(22.5)	ND(23.0)	<b>452</b>
Benzene	0.02	<b>0.0759</b>	ND(0.0119)	ND(0.0161)	ND(0.0107)
Toluene	5.4	1.23	ND(0.0475)	ND(0.0643)	0.0456
Ethylbenzene	5.5	1.84	ND(0.0475)	ND(0.0643)	0.107
Total Xylenes	78	8.98	ND(0.0475)	ND(0.0643)	0.661
Lab Comment		WMD			WMD
Location		Water Table 13' Deep	Sidewall 6' Deep	Sidewall 10' Deep	Duplicate of S-3

**Notes:**

- U Analyte not detected at the listed detection limit
- Shade** Analyte detected in concentration below the ADEC Cleanup level
- Bold** Analyte detected in concentration exceeding the ADEC Cleanup level
- WMD Pattern is consistent with a weathered middle distillate

**Quality Control Summary**

Sample ID	S-3	S-6	Average	Difference	RPD
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%
DRO	1140	452	796	-688	-86%
Benzene	0.0759	ND(0.0107)	NA	NA	NA
Toluene	1.23	0.0456	0.6378	-1	-186%
Ethylbenzene	1.84	0.107	0.9735	-2	-178%
Total Xylenes	8.98	0.661	4.8205	-8	-173%

**Notes:**

- NA The calculation is not applicable.



# HUMAN HEALTH CONCEPTUAL SITE MODEL

Site: 578 Canoro Road

---



---

Completed By: Peter Beardsley

Date Completed: 03/15/2007

**Follow the directions below. Do not consider engineering or land use controls when describing pathways.**

**(1)** Check the media that could be directly affected by the release.

**(2)** For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Briefly list other mechanisms or reference the report for details.

**(3)** Check exposure media identified in (2).

**(4)** Check exposure pathways that are complete or need further evaluation. The pathways identified must agree with Sections 2 and 3 of the CSM Scoping Form.

**(5)** Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, or "C/F" for both current and future receptors.

Media	Transport Mechanisms	Exposure Media	Exposure Pathways	Current & Future Receptors						
				Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
<input type="checkbox"/> Surface Soil (0-2 ft bgs)	<input type="checkbox"/> Direct release to surface soil <i>check soil</i>	<input type="checkbox"/> soil	<input type="checkbox"/> Incidental Soil Ingestion							
	<input type="checkbox"/> Migration or leaching to subsurface <i>check soil</i>		<input type="checkbox"/> Dermal Absorption of Contaminants from Soil							
	<input type="checkbox"/> Migration or leaching to groundwater <i>check groundwater</i>									
	<input type="checkbox"/> Volatilization <i>check air</i>									
	<input type="checkbox"/> Runoff or erosion <i>check surface water</i>									
<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <i>check soil</i>	<input checked="" type="checkbox"/> groundwater	<input checked="" type="checkbox"/> Ingestion of Groundwater	C/F	C/F					
	<input type="checkbox"/> Migration to groundwater <i>check groundwater</i>		<input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater							
	<input type="checkbox"/> Volatilization <i>check air</i>		<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
<input checked="" type="checkbox"/> Ground-water	<input checked="" type="checkbox"/> Direct release to groundwater <i>check groundwater</i>	<input checked="" type="checkbox"/> air	<input type="checkbox"/> Inhalation of Outdoor Air							
	<input checked="" type="checkbox"/> Volatilization <i>check air</i>		<input checked="" type="checkbox"/> Inhalation of Indoor Air	C/F	C/F					
	<input type="checkbox"/> Flow to surface water body <i>check surface water</i>		<input type="checkbox"/> Inhalation of Fugitive Dust							
	<input type="checkbox"/> Flow to sediment <i>check sediment</i>									
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>									
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i>	<input type="checkbox"/> surface water	<input type="checkbox"/> Ingestion of Surface Water							
	<input type="checkbox"/> Volatilization <i>check air</i>		<input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water							
	<input type="checkbox"/> Sedimentation <i>check sediment</i>		<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water							
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>									
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i>	<input type="checkbox"/> sediment	<input type="checkbox"/> Direct Contact with Sediment							
	<input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i>									
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>		<input type="checkbox"/> Ingestion of Wild Foods							
	<input type="checkbox"/> Other (list): _____									

# Human Health Conceptual Site Model Scoping Form

**Site Name:** 578 Canoro Road  
**File Number:** NA  
**Completed by:** Peter Beardsley

## Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, a CSM graphic and text must be submitted with the site characterization work plan.

*General Instructions: Follow the italicized instructions in each section below.*

## 1. General Information:

**Sources** (*check potential sources at the site*)

- |  |   |
|--|---|
| <input type="checkbox"/> USTs                          | <input type="checkbox"/> Vehicles   |
| <input type="checkbox"/> ASTs                          | <input type="checkbox"/> Landfills  |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers   |
| <input type="checkbox"/> Drums                         | <input checked="" type="checkbox"/> Other: <u>Delivery Vehicle/water well</u> |

**Release Mechanisms** (*check potential release mechanisms at the site*)

- |                                 |  |
|---------------------------------|--|
| <input type="checkbox"/> Spills | <input checked="" type="checkbox"/> Direct discharge |
| <input type="checkbox"/> Leaks  | <input type="checkbox"/> Burning                     |
|                                 | <input type="checkbox"/> Other: _____                |

**Impacted Media** (*check potentially-impacted media at the site*)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface soil (0-2 feet bgs*)  | <input checked="" type="checkbox"/> Groundwater |
| <input type="checkbox"/> Subsurface Soil (>2 feet bgs) | <input type="checkbox"/> Surface water          |
| <input type="checkbox"/> Air                           | <input type="checkbox"/> Other: _____           |

**Receptors** (*check receptors that could be affected by contamination at the site*)

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Residents (adult or child)            | <input checked="" type="checkbox"/> Site visitor |
| <input type="checkbox"/> Commercial or industrial worker                  | <input checked="" type="checkbox"/> Trespasser   |
| <input type="checkbox"/> Construction worker                              | <input type="checkbox"/> Recreational user       |
| <input type="checkbox"/> Subsistence harvester (i.e., gathers wild foods) | <input type="checkbox"/> Farmer                  |
| <input type="checkbox"/> Subsistence consumer (i.e., eats wild foods)     | <input type="checkbox"/> Other: _____            |

\* bgs – below ground surface

**2. Exposure Pathways:** (The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".)

**a) Direct Contact –**

**1 Incidental Soil Ingestion**

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

If both boxes are checked, label this pathway complete: No

**2 Dermal Absorption of Contaminants from Soil**

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Can the soil contaminants permeate the skin? (Contaminants listed below, or within the groups listed below, should be evaluated for dermal absorption).

- |                                |                   |
|--------------------------------|-------------------|
| Arsenic                        | Lindane           |
| Cadmium                        | PAHs              |
| Chlordane                      | Pentachlorophenol |
| 2,4-dichlorophenoxyacetic acid | PCBs              |
| Dioxins                        | SVOCs             |
| DDT                            |                   |

If all of the boxes are checked, label this pathway complete: No

**b) Ingestion –**

**1 Ingestion of Groundwater**

Have contaminants been detected or are they expected to be detected in the groundwater, OR are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if ADEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

If both the boxes are checked, label this pathway complete: Complete

## 2 Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water OR are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? *Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).*

*If both boxes are checked, label this pathway complete:* No

## 3 Ingestion of Wild Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild food?

Do the site contaminants have the potential to bioaccumulate (*see Appendix A*)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. the top 6 feet of soil, in groundwater that **could be** connected to surface water, etc.)

*If all of the boxes are checked, label this pathway complete:* No

## c) Inhalation

### 1 Inhalation of Outdoor Air

Is soil contaminated anywhere between 0 and 15 feet bgs?

Do people use the site or is there a chance they will use the site in the future?

Are the contaminants in soil volatile (*See Appendix B*)?

*If all of the boxes are checked, label this pathway complete:* No

### 2 Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be placed on the site in an area that could be affected by contaminant vapors? (i.e., within 100 feet, horizontally or vertically, of the contaminated soil or groundwater, or subject to “preferential pathways” that promote easy airflow, like utility conduits or rock fractures)

Are volatile compounds present in soil or groundwater (*See Appendix C*)?

*If both boxes are checked, label this pathway complete:* Complete

**3. Additional Exposure Pathways:** *(Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)*

**Dermal Exposure to Contaminants in Groundwater and Surface Water**

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- Climate permits recreational use of waters for swimming,
- Climate permits exposure to groundwater during activities, such as construction, without protective clothing, or
- Groundwater or surface water is used for household purposes.

*Check the box if further evaluation of this pathway is needed:*

Comments:

NA
----

**Inhalation of Volatile Compounds in Household Water**

Exposure from this pathway may need to be assessed only in cases where DEC water-quality or drinking-water standards are not being applied as cleanup levels. Examples of conditions that may warrant further investigation include:

- The contaminated water is used for household purposes such as showering, laundering, and dish washing, and
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix B)

*Check the box if further evaluation of this pathway is needed:*

Comments:

NA
----

**Inhalation of Fugitive Dust**

Generally DEC soil ingestion cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway, although this is not true in the case of chromium. Examples of conditions that may warrant further investigation include:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers. This size can be inhaled and would be of concern for determining if this pathway is complete.

*Check the box if further evaluation of this pathway is needed:*



Comments:

NA

### Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during recreational or some types of subsistence activities. People then incidentally **ingest** sediment from normal hand-to-mouth activities. In addition, **dermal absorption of contaminants** may be of concern if people come in contact with sediment and the contaminants are able to permeate the skin (see dermal exposure to soil section). This type of exposure is rare but it should be investigated if:

- Climate permits recreational activities around sediment, and/or
- Community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

ADEC soil ingestion cleanup levels are protective of direct contact with sediment. If they are determined to be over-protective for sediment exposure at a particular site, other screening levels could be adopted or developed.

*Check the box if further evaluation of this pathway is needed:*

Comments:

NA

### **4. Other Comments** *(Provide other comments as necessary to support the information provided in this form.)*

The small amount of contaminated soil above the smear zone has been removed, Groundwater smear zone contamination begins approximately 12 feet below the ground surface.

## APPENDIX A

### BIOACCUMULATIVE COMPOUNDS

**Table A-1: List of Compounds of Potential Concern for Bioaccumulation**

Organic compounds are identified as bioaccumulative if they have a BCF equal to or greater than 1,000 or a log  $K_{ow}$  greater than 3.5. Inorganic compounds are identified as bioaccumulative if they are listed as such by EPA (2000). Those compounds in Table X of 18 AAC 75.345 that are bioaccumulative, based on the definition above, are listed below.

Aldrin	DDT	Lead
Arsenic	Dibenzo(a,h)anthracene	Mercury
Benzo(a)anthracene	Dieldrin	Methoxychlor
Benzo(a)pyrene	Dioxin	Nickel
Benzo(b)fluoranthene	Endrin	PCBs
Benzo(k)fluoranthene	Fluoranthene	
Cadmium	Heptachlor	Pyrene
Chlordane	Heptachlor epoxide	Selenium
Chrysene	Hexachlorobenzene	Silver
Copper	Hexachlorocyclopentadiene	Toxaphene
DDD	Indeno(1,2,3-c,d)pyrene	Zinc
DDE		

Because BCF values can relatively easily be measured or estimated, the BCF is frequently used to determine the potential for a chemical to bioaccumulate. A compound with a BCF greater than 1,000 is considered to bioaccumulate in tissue (EPA 2004b).

For inorganic compounds, the BCF approach has not been shown to be effective in estimating the compound's ability to bioaccumulate. Information available, either through scientific literature or site-specific data, regarding the bioaccumulative potential of an inorganic site contaminant should be used to determine if the pathway is complete.

The list was developed by including organic compounds that either have a BCF equal to or greater than 1,000 or a log  $K_{ow}$  greater than 3.5 and inorganic compounds that are listed by the United States Environmental Protection Agency (EPA) as being bioaccumulative (EPA 2000). The BCF can also be estimated from a chemical's physical and chemical properties. A chemical's octanol-water partitioning coefficient ( $K_{ow}$ ) along with defined regression equations can be used to estimate the BCF. EPA's Persistent, Bioaccumulative, and Toxic (PBT) Profiler (EPA 2004) can be used to estimate the BCF using the  $K_{ow}$  and linear regressions presented by Meylan et al. (1996). The PBT Profiler is located at <http://www.pbtprofiler.net/>. For compounds not found in the PBT Profiler, DEC recommends using a log  $K_{ow}$  greater than 3.5 to determine if a compound is bioaccumulative.

## APPENDIX B

### VOLATILE COMPOUNDS

#### Table B-1: List of Volatile Compounds of Potential Concern

Common volatile contaminants of concern at contaminated sites. A chemical is defined as volatile if the Henry's Law constant is  $1 \times 10^{-5}$  atm-m<sup>3</sup>/mol or greater and the molecular weight less than 200 g/mole (g/mole; EPA 2004a). Those compounds in Table X of 18 AAC 75.345 that are volatile, based on the definition above, are listed below.

Acenaphthene	1,4-dichlorobenzene	Pyrene
Acetone	1,1-dichloroethane	Styrene
Anthracene	1,2-dichloroethane	1,1,2,2-tetrachloroethane
Benzene	1,1-dichloroethylene	Tetrachloroethylene
Bis(2-chlorethyl)ether	Cis-1,2-dichloroethylene	Toluene
Bromodichloromethane	Trans-1,2-dichloroethylene	1,2,4-trichlorobenzene
Carbon disulfide	1,2-dichloropropane	1,1,1-trichloroethane
Carbon tetrachloride	1,3-dichloropropane	1,1,2-trichloroethane
Chlorobenzene	Ethylbenzene	Trichloroethylene
Chlorodibromomethane	Fluorene	Vinyl acetate
Chloroform	Methyl bromide	Vinyl chloride
2-chlorophenol	Methylene chloride	Xylenes
Cyanide	Naphthalene	GRO
1,2-dichlorobenzene	Nitrobenzene	DRO

## APPENDIX C

### COMPOUNDS OF CONCERN FOR VAPOR MIGRATION

**Table C-1: List of Compounds of Potential Concern for the Vapor Migration**

A chemical is considered sufficiently toxic if the vapor concentration of the pure component poses an incremental lifetime cancer risk greater than  $10^{-6}$  or a non-cancer hazard index greater than 1. A chemical is considered sufficiently volatile if its Henry's Law constant is  $1 \times 10^{-5}$  atm-m<sup>3</sup>/mol or greater.

Acenaphthene	Dibenzofuran	Hexachlorobenzene
Acetaldehyde	1,2-Dibromo-3-chloropropane	Hexachlorocyclopentadiene
Acetone	1,2-Dibromoethane (EDB)	Hexachloroethane
Acetonitrile	1,3-Dichlorobenzene	Hexane
Acetophenone	1,2-Dichlorobenzene	Hydrogen cyanide
Acrolein	1,4-Dichlorobenzene	Isobutanol
Acrylonitrile	2-Nitropropane	Mercury (elemental)
Aldrin	N-Nitroso-di-n-butylamine	Methacrylonitrile
alpha-HCH (alpha-BHC)	n-Propylbenzene	Methoxychlor
Benzaldehyde	o-Nitrotoluene	Methyl acetate
Benzene	o-Xylene	Methyl acrylate
Benzo(b)fluoranthene	p-Xylene	Methyl bromide
Benzylchloride	Pyrene	Methyl chloride chloromethane)
beta-Chloronaphthalene	sec-Butylbenzene	Methylcyclohexane
Biphenyl	Styrene	Methylene bromide
Bis(2-chloroethyl)ether	tert-Butylbenzene	Methylene chloride
Bis(2-chloroisopropyl)ether	1,1,1,2-Tetrachloroethane	Methylethylketone (2-butanone)
Bis(chloromethyl)ether	1,1,2,2-Tetrachloroethane	Methylisobutylketone
Bromodichloromethane	Tetrachloroethylene	Methylmethacrylate
Bromoform	Dichlorodifluoromethane	2-Methylnaphthalene
1,3-Butadiene	1,1-Dichloroethane	MTBE
Carbon disulfide	1,2-Dichloroethane	m-Xylene
Carbon tetrachloride	1,1-Dichloroethylene	Naphthalene
Chlordane	1,2-Dichloropropane	n-Butylbenzene
2-Chloro-1,3-butadiene (chloroprene)	1,3-Dichloropropene	Nitrobenzene
Chlorobenzene	Dieldrin	Toluene
1-Chlorobutane	Endosulfan	trans-1,2-Dichloroethylene
Chlorodibromomethane	Epichlorohydrin	1,1,2-Trichloro-1,2,2-trifluoroethane
Chlorodifluoromethane	Ethyl ether	1,2,4-Trichlorobenzene
Chloroethane (ethyl chloride)	Ethylacetate	1,1,2-Trichloroethane
Chloroform	Ethylbenzene	1,1,1-Trichloroethane
2-Chlorophenol	Ethylene oxide	Trichloroethylene
2-Chloropropane	Ethylmethacrylate	Trichlorofluoromethane
Chrysene	Fluorene	1,2,3-Trichloropropane
cis-1,2-Dichloroethylene	Furan	1,2,4-Trimethylbenzene
Crotonaldehyde (2-butenal)	Gamma-HCH (Lindane)	1,3,5-Trimethylbenzene
Cumene	Heptachlor	Vinyl acetate
DDE	Hexachloro-1,3-butadiene	Vinyl chloride (chloroethene)

Source: EPA 2002.

Guidance on Developing Conceptual Site Models  
January 31, 2005

37

DRAFT





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

Project: 578 Canoro Rd  
Client: Nortech  
SGS Work Order: 1067004

Released by:

*Barbara A Hager*   
Barbara Hager  
Alaska Division Project Manager

Barbara Hager  
2007.01.02 10:32:38 -09'00'

**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 NORTECH Nortech  
Workorder 1067004 578 Canoro Rd

Printed Date/Time 12/15/2006 9:33

Sample ID Client Sample ID

---

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

---

1067004001 PS 1  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004002 PS 2  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004003 PS 3  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004004 PS 4  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004005 PS 5  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004006 PS 6  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

1067004007 TB Trip Blank  
VOC 524.2 was analyzed by Montgomery Watson Harza in Monrovia, CA.

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

Peter Beardsley  
Nortech  
2400 College Rd.  
Fairbanks, AK 99709

**Work Order:** 1067004  
578 Canoro Rd  
**Client:** Nortech  
**Report Date:** December 15, 2006

**Released by:**

*Barbara Hager*   
Barbara Hager  
Alaska Division Project Manager

Barbara Hager  
2007.01.02 10:32:48 -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.
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.





**CHAIN OF CUSTODY RECORD**  
**SGS Environmental Services Inc.**

1067004



- Local  
 • Alaska  
 • Louisiana  
 • New Jersey  
 • West Virginia

1 CLIENT: **NORTECH**  
 CONTACT: **Peter Beardsley** PHONE NO.: **907 452 5688**  
 PROJECT: **578 Canora Rd** SITE/PWSID#: **-**  
 REPORTS TO: **Nortech** E-MAIL: **peter@nortech.com**  
 INVOICE TO: **Nortech** FAX NO.: **907 452 3694**  
 QUOTE # \_\_\_\_\_ P.O. NUMBER **06-1080**

SGS Reference: \_\_\_\_\_ PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	NO CONTAINERS	SAMPLE TYPE	Preservatives Used	Analysis Required	REMARKS
1	A-D 1	11/29	1735	W	4	G	HA	X	
2	2	11/29	1740	W	4	G	HA	X	
3	3	11/29	1818	W	4	G	HA	X	
4	4	11/29	1811	W	4	G	HA	X	
5	5	11/29	1820	W	4	G	HA	X	HOLD
6	6	11/29	1800	W	4	G	HA	X	HOLD
7	A-C Trip Blank			W	3	G		X	

3 **CC W 624**

4 **PRIORITY**

5 Shipping Carrier: **hand** Received By: **Sunny Coatsberg**  
 Shipping Ticket No: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Special Deliverable Requirements: \_\_\_\_\_  
 Samples Received Cold? (Circle) YES  NO   
 Temperature (C): **18.1, 19.0, 15.1, 13.0**  
 Chain of Custody Seal: (Circle) INTACT  BROKEN  ABSENT

Requested Turnaround Time and Special Instructions: \_\_\_\_\_



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?

\_\_\_\_\_

\_\_\_\_\_

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)

Due Date: 12/1/06

Received Date: 11/30/06

Received Time: 0855

Is date/time conversion necessary? \_\_\_\_\_

# of hours to AK Local Time: \_\_\_\_\_

Thermometer ID: Compton 70

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>1.9</u> °C	<u>1.3</u> °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C

\*Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client

Alert Courier / UPS / FedEx / USPS /

AA Goldstreak / NAC / ERA / PenAir / Carlie

Lynden / SGS / Other: \_\_\_\_\_

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 out for DoD projects (USACE, Navy, AFCEE)**

Yes No

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?

**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: Temp a little low. Temp ok per client. Hold samples # 5+6 as per client comments on COE. Samples sent to Ref lab directly from Fbx on 11/30/06 via FedEx.

Completed by (sign): Sunny Castleberry (print): Sunny Castleberry

Login proof (check one): waived  required  performed by: [Signature]





1067004

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: 12/2/06 1030  
 Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No   
 Number of Hours From Alaska Local Time: 5  
 Foreign Soil? Yes \_\_\_\_\_ No

Delivery method to Anchorage (circle all that apply):

Alert Courier / UPS / FedEx / USPS / AA Goldstreak / NAC / ERA / PenAir / Carlisle / Lynden / SGS

Other: paperwork sent by Lynden, samples to Ref Lab from Flx via FedEx  
 Airbill # \_\_\_\_\_

COOLER AND TEMP BLANK READINGS\*

Cooler ID	Temp Blank (°C)	Cooler (°C)	Cooler ID	Temp Blank (°C)	Cooler (°C)
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

N/A

CUSTODY SEALS INTACT: YES / NO  
 # / WHERE: 2 / one front, one back

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors.



**CHAIN OF CUSTODY RECORD**  
**SGS Environmental Services Inc.**

- Locations Nationwide
- Alaska
  - Louisiana
  - New Jersey
  - West Virginia
  - Hawaii
  - Maryland
  - North Carolina
- www.us.sgs.com

0633391

1 CLIENT: **SGS** PHONE NO: (907) 562-2343

CONTACT: **Forest Taylor** SITE/PWSID#:

PROJECT: **1067004**

REPORTS TO: **200 W Potter Dr** E-MAIL:

**Anchorage, AK 99518** FAX NO.:( )

INVOICE TO: **same** QUOTE #

P.O. NUMBER

SGS Reference: **1067004**

PAGE \_\_\_\_\_ OF \_\_\_\_\_

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE C= COMP G= GRAB	Preservatives Used Analysis Required ③	REMARKS
1		11/29/06	1735	DW	4	G	X	SGS ID
2			1740		1		X	<b>Push For DUP on left</b>
3			1818		1		X	
4			1811		1		X	
5			1820		1		X	
6			1800		1		X	
	Trip Blank			W	3		X	

4 Shipping Carrier: \_\_\_\_\_

Samples Received Cold? (Circle) YES NO

Temperature (C): \_\_\_\_\_

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions:  
**email results to Forest.Taylor@sgs.com**

5 Collected/Relinquished By: (1) **Sunny Coatsberg** Date: **11/29/06** Time: **1030**

Relinquished By: (2) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished By: (3) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished By: (4) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Page 6 of 51



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Monrovia, California 91016-3629  
Tel: 626 386 1100  
Fax: 626 386 1101  
1 800 566 LABS (1 800 566 5227)

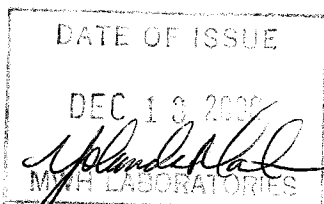
## Laboratory Report

for

SGS Environmental Services Inc.  
200 W. Potter Drive

Anchorage , AK 99518

Attention: Forest Taylor  
Fax: (907) 561-5301



YOM Yolanda Martin  
Project Manager



Report#: 189947R  
Project: DRINKING

Report#189947R replaces the original Report.

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments, QC Report, QC Summary, Data Report, Hits Report, totaling 54 page[s].



**CHAIN OF CUSTODY RECORD**  
**SGS Environmental Services Inc.**

189947  
Locations Nationwide  
• Alaska  
• Louisiana  
• New Jersey  
• West Virginia  
• Hawaii  
• Maryland  
• North Carolina  
www.us.sgs.com 0633391

1 CLIENT: SGS

CONTACT: Forest Taylor PHONE NO: 907 562-2343

PROJECT: 1067004 SITE/PWSID#:

REPORTS TO: 200 W Potter Dr. - MAIL: Anchorage, AK 99518

INVOICE TO: same QUOTE # \_\_\_\_\_ P.O. NUMBER \_\_\_\_\_

SGS Reference: 1067004 PAGE \_\_\_\_\_ OF \_\_\_\_\_

No	CONTAINER	SAMPLE TYPE	C- COMP	G- GRAB	Matrix	Time	DATE	SAMPLE IDENTIFICATION	LAB NO.	Preservatives Used		Analysis Required	REMARKS
1	4	6			DW	1735	11/29/06						SGS ID
2						1740							1067004-001
3						1818							1067004-002
4						1811							1067004-003
5						1820							1067004-004
6						1800							1067004-005
													1067004-006
													1067004-007

Handwritten notes in table: VOC 524.2, PUDS, DUST, HOLD, analysis per Forest on 12/6/06, 4-

5 Collected/Relinquished By: (1) Sunny Carberry Date 11/29/06 Time 1030 Received By: \_\_\_\_\_

Relinquished By: (2) \_\_\_\_\_ Date 12-1-06 Time 10:00 Received By: S. Taylor

Relinquished By: (3) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By: \_\_\_\_\_

Relinquished By: (4) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By: \_\_\_\_\_

4 Shipping Carrier: \_\_\_\_\_ Shipping Ticket No: \_\_\_\_\_

Samples Received Cold? (Circle) YES NO

Temperature (C): 5 50 100 150 200 250

Chain of Custody Seat: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions: email results to Forest Taylor@sgs.com

SCANNED

MWH Laboratories

750 Royal Oaks Drive, Monrovia, CA 91016  
 PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

SGS Environmental Services Inc.  
 200 W. Potter Drive  
 Anchorage, AK 99518  
 Attn: Forest Taylor  
 Phone: (907) 562-2343

Customer Code: CTE-AK  
 Group#: 189947  
 Project#: DRINKING  
 Proj Mgr: Yolanda Martin  
 Phone: (626) 386-1104

The following samples were received from you on **12/01/06**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2612010016	1067004-001	1 @VOASDWA	Water	29-nov-2006 17:35:00
2612010017	1067004-002	2 @VOASDWA	Water	29-nov-2006 17:40:00
2612010018	1067004-003	3 @VOASDWA	Water	29-nov-2006 18:18:00
2612010019	1067004-004	4 @VOASDWA	Water	29-nov-2006 18:11:00
2612010020	1067004-005	5 @VOASDWA	Water	29-nov-2006 18:20:00
2612010021	1067004-006	6 @VOASDWA	Water	29-nov-2006 18:00:00
2612010022	TRAVEL BLANK	ANALYZE @VOASDWA	Water	29-nov-2006 00:00:00

Test Acronym Description

Test Acronym	Description
@VOASDWA	Regulated VOCs plus Lists 1&3





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---

Report  
Comments  
#189947

## Group Comments

Report revised- Client requested samples on hold to be analyzed.

(QC Ref#: 2612010016)

Test: Bromomethane (Methyl Bromide) (ML/EPA 524.2)

LE = MRL Check recovery was above laboratory acceptance limits.

(QC Ref#: 2612010017)

Test: Bromomethane (Methyl Bromide) (ML/EPA 524.2)

LE = MRL Check recovery was above laboratory acceptance limits.

(QC Ref#: 2612010018)

Test: Bromomethane (Methyl Bromide) (ML/EPA 524.2)

LE = MRL Check recovery was above laboratory acceptance limits.



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Laboratory  
Hits Report  
#189947

SGS Environmental Services Inc.  
Forest Taylor  
200 W. Potter Drive  
Anchorage , AK 99518

Samples Received  
01-dec-2006 10:23:54

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2612010016	1067004-001 1				
12/01/06	Toluene		0.54	1000	ug/l	0.5
12/01/06	p-Isopropyltoluene		1.03		ug/l	0.5
	2612010017	1067004-002 2				
12/01/06	Toluene		0.53	1000	ug/l	0.5
12/01/06	p-Isopropyltoluene		0.51		ug/l	0.5
	2612010018	1067004-003 3				
12/01/06	1,2,4-Trimethylbenzene		0.53		ug/l	0.5
12/01/06	Toluene		0.58	1000	ug/l	0.5
12/01/06	p-Isopropyltoluene		2.06		ug/l	0.5
	2612010019	1067004-004 4				
12/01/06	Toluene		0.54	1000	ug/l	0.5
12/01/06	p-Isopropyltoluene		0.81		ug/l	0.5
	2612010020	1067004-005 5				
12/06/06	Toluene		0.74	1000	ug/l	0.5
12/06/06	p-Isopropyltoluene		1.71		ug/l	0.5
	2612010021	1067004-006 6				
12/06/06	Toluene		0.66	1000	ug/l	0.5
12/06/06	Trichloroethylene (TCE)		0.86	5	ug/l	0.5
	2612010022	TRAVEL BLANK ANALYZE				

SUMMARY OF POSITIVE DATA ONLY.



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Laboratory  
Hits Report  
#189947

SGS Environmental Services Inc.  
Forest Taylor  
200 W. Potter Drive  
Anchorage , AK 99518

Samples Received  
01-dec-2006 10:23:54

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
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	2612010022	TRAVEL BLANK ANALYZE				
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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
Forest Taylor  
200 W. Potter Drive  
Anchorage, AK 99518

Samples Received  
12/01/06

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-001		1 (2612010016)	Sampled on 11/29/06 17:35					
<b>Regulated VOCs plus Lists 1&amp;3</b>								
12/01/06	14:36	342876	( EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
12/01/06	14:36	342876	( EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/01/06	14:36	342876	( EPA 524.2 )	Benzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Bromobenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Bromomethane (Methyl Bromide)	ND (LE)	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Bromoethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Chlorobenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2 )	Bromoform	ND	ug/l	0.5	1



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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-001 1 (2612010016)				(continued)	Sampled on	11/29/06	17:35	
12/01/06	14:36	342876	( EPA 524.2	) Chloroform (Trichloromethane)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Chloromethane (Methyl Chloride)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
12/01/06	14:36	342876	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
12/01/06	14:36	342876	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) p-Isopropyltoluene	1.03	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
12/01/06	14:36	342876	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
12/01/06	14:36	342876	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Trichloroethylene (TCE)	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Trichlorotrifluoroethane (Freon	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Toluene	0.54	ug/l	0.5	1



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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-001 1 (2612010016)				(continued)	Sampled on 11/29/06 17:35			
12/01/06	14:36	342876	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/01/06	14:36	342876	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/01/06	14:36	342876	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 4-Bromofluorobenzene(70-130)	104	% Rec		
			( EPA 524.2	) 1,2-Dichloroethane-d4(70-130)	116	% Rec		
			( EPA 524.2	) Toluene-d8(70-130)	100	% Rec		

SGS Environmental Services Inc.  
 (continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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1067004-002	2	(2612010017)		Sampled on	11/29/06	17:40		
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**Regulated VOCs plus Lists 1&3**

12/01/06	14:58	342876	( EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
12/01/06	14:58	342876	( EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/01/06	14:58	342876	( EPA 524.2 )	Benzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Bromobenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Bromomethane (Methyl Bromide)	ND (LE)	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Bromoethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Chlorobenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Bromoform	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.5	1



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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-002 2 (2612010017)				(continued)				Sampled on 11/29/06 17:40
12/01/06	14:58	342876	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Chloromethane (Methyl Chloride)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
12/01/06	14:58	342876	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
12/01/06	14:58	342876	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) p-Isopropyltoluene	0.51	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
12/01/06	14:58	342876	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
12/01/06	14:58	342876	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Trichloroethylene (TCE)	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Trichlorotrifluoroethane (Freon	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Toluene	0.53	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1





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Laboratory  
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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-002 2 (2612010017)				(continued)	Sampled on	11/29/06	17:40	
12/01/06	14:58	342876	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/01/06	14:58	342876	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/01/06	14:58	342876	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 4-Bromofluorobenzene(70-130)	98	% Rec		
			( EPA 524.2	) 1,2-Dichloroethane-d4(70-130)	119	% Rec		
			( EPA 524.2	) Toluene-d8(70-130)	100	% Rec		



SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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1067004-003 3 (2612010018)      Sampled on 11/29/06 18:18

**Regulated VOCs plus Lists 1&3**

12/01/06 15:20	342876	( EPA 524.2	)	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1-Dichloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,1-Dichloropropene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2,4-Trimethylbenzene	0.53	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2-Dichloroethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	1,3-Dichloropropane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	2,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	2-Butanone (MEK)	ND	ug/l	5.0	1
12/01/06 15:20	342876	( EPA 524.2	)	o-Chlorotoluene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	p-Chlorotoluene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/01/06 15:20	342876	( EPA 524.2	)	Benzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Bromobenzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Bromomethane (Methyl Bromide)	ND (LE)	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Bromoethane	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Chlorobenzene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Carbon Tetrachloride	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Bromoform	ND	ug/l	0.5	1
12/01/06 15:20	342876	( EPA 524.2	)	Chloroform (Trichloromethane)	ND	ug/l	0.5	1



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Laboratory  
Data Report  
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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-003	3	(2612010018)		(continued)	Sampled on	11/29/06	18:18	
12/01/06	15:20	342876	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Chloromethane(Methyl Chloride)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
12/01/06	15:20	342876	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
12/01/06	15:20	342876	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) p-Isopropyltoluene	2.06	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
12/01/06	15:20	342876	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
12/01/06	15:20	342876	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Trichloroethylene (TCE)	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Trichlorotrifluoroethane(Freon	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Toluene	0.58	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1



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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
<b>1067004-003 3 (2612010018)</b>				<b>(continued)</b>	<b>Sampled on 11/29/06 18:18</b>			
12/01/06	15:20	342876	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/01/06	15:20	342876	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/01/06	15:20	342876	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 1,2-Dichloroethane-d4 (70-130)	117	% Rec		
			( EPA 524.2	) Toluene-d8 (70-130)	102	% Rec		
			( EPA 524.2	) 4-Bromofluorobenzene (70-130)	104	% Rec		

SGS Environmental Services Inc.  
 (continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-004 4 (2612010019)				Sampled on 11/29/06 18:11				
<b>Regulated VOCs plus Lists 1&amp;3</b>								
12/01/06	14:55	342874	( EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
12/01/06	14:55	342874	( EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/01/06	14:55	342874	( EPA 524.2 )	Benzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Bromobenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Bromoethane	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Chlorobenzene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Bromoform	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.5	1



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Laboratory  
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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-004 4 (2612010019)				(continued)	Sampled on	11/29/06	18:11	
	12/01/06 14:55	342874	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Chloromethane (Methyl Chloride)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
	12/01/06 14:55	342874	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
	12/01/06 14:55	342874	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) p-Isopropyltoluene	0.81	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
	12/01/06 14:55	342874	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
	12/01/06 14:55	342874	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Trichloroethylene (TCE)	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Trichlorotrifluoroethane (Freon	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Toluene	0.54	ug/l	0.5	1
	12/01/06 14:55	342874	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1



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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-004 4 (2612010019)				(continued)	Sampled on	11/29/06	18:11	
12/01/06	14:55	342874	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/01/06	14:55	342874	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/01/06	14:55	342874	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 1,2-Dichloroethane-d4 (70-130)	105	% Rec		
			( EPA 524.2	) 4-Bromofluorobenzene (70-130)	98	% Rec		
			( EPA 524.2	) Toluene-d8 (70-130)	92	% Rec		



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Laboratory  
 Data Report  
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SGS Environmental Services Inc.  
 (continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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1067004-005 5 (2612010020)      Sampled on 11/29/06 18:20

**Regulated VOCs plus Lists 1&3**

12/06/06 20:43	343535	( EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
12/06/06 20:43	343535	( EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/06/06 20:43	343535	( EPA 524.2 )	Benzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Bromobenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Bromoethane	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Chlorobenzene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Bromoform	ND	ug/l	0.5	1
12/06/06 20:43	343535	( EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.5	1





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Laboratory  
 Data Report  
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SGS Environmental Services Inc.  
 (continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-005 5 (2612010020)				(continued)	Sampled on	11/29/06	18:20	
	12/06/06 20:43	343535	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Chloromethane (Methyl Chloride)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
	12/06/06 20:43	343535	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
	12/06/06 20:43	343535	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) p-Isopropyltoluene	1.71	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
	12/06/06 20:43	343535	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
	12/06/06 20:43	343535	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Trichloroethylene (TCE)	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Trichlorotrifluoroethane (Freon	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Toluene	0.74	ug/l	0.5	1
	12/06/06 20:43	343535	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1



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Laboratory  
Data Report  
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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-005 5 (2612010020)				(continued)	Sampled on	11/29/06	18:20	
12/06/06	20:43	343535	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/06/06	20:43	343535	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/06/06	20:43	343535	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 4-Bromofluorobenzene(70-130)	96	% Rec		
			( EPA 524.2	) 1,2-Dichloroethane-d4(70-130)	103	% Rec		
			( EPA 524.2	) Toluene-d8(70-130)	89	% Rec		



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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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1067004-006 6 (2612010021)      Sampled on 11/29/06 18:00

**Regulated VOCs plus Lists 1&3**

12/06/06	21:06	343535	( EPA 524.2 )	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1-Dichloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,1-Dichloropropene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2-Dichloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,2-Dichloropropane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	1,3-Dichloropropane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	2,2-Dichloropropane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	2-Butanone (MEK)	ND	ug/l	5.0	1
12/06/06	21:06	343535	( EPA 524.2 )	o-Chlorotoluene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	p-Chlorotoluene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/06/06	21:06	343535	( EPA 524.2 )	Benzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Bromobenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Bromomethane (Methyl Bromide)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Bromoethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Chlorobenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Carbon Tetrachloride	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Bromoform	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2 )	Chloroform (Trichloromethane)	ND	ug/l	0.5	1

SGS Environmental Services Inc.  
 (continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-006 6 (2612010021)				(continued)				Sampled on 11/29/06 18:00
12/06/06	21:06	343535	( EPA 524.2	) Bromochloromethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Chloroethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Chloromethane (Methyl Chloride)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Chlorodibromomethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Dibromomethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Bromodichloromethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Dichloromethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Di-isopropyl ether	ND	ug/l	3.0	1
12/06/06	21:06	343535	( EPA 524.2	) Ethyl benzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Dichlorodifluoromethane	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Hexachlorobutadiene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Isopropylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) m,p-Xylenes	ND	ug/l	1.0	1
12/06/06	21:06	343535	( EPA 524.2	) Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Naphthalene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) n-Butylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) n-Propylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) o-Xylene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) p-Isopropyltoluene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) sec-Butylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Styrene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) tert-amyl Methyl Ether	ND	ug/l	3.0	1
12/06/06	21:06	343535	( EPA 524.2	) tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
12/06/06	21:06	343535	( EPA 524.2	) tert-Butylbenzene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Trichloroethylene (TCE)	0.86	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Trichlorotrifluoroethane (Freon	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) trans-1,3-Dichloropropene	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Toluene	0.66	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Total 1,3-Dichloropropene	ND	ug/l	0.5	1



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Laboratory  
Data Report  
#189947

SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
1067004-006 6 (2612010021)				(continued)	Sampled on	11/29/06	18:00	
12/06/06	21:06	343535	( EPA 524.2	) Total THM	ND	ug/l	0.5	1
12/06/06	21:06	343535	( EPA 524.2	) Total xylenes	ND	ug/l	1.5	1
12/06/06	21:06	343535	( EPA 524.2	) Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2	) 1,2-Dichloroethane-d4 (70-130)	100	% Rec		
			( EPA 524.2	) 4-Bromofluorobenzene (70-130)	98	% Rec		
			( EPA 524.2	) Toluene-d8 (70-130)	92	% Rec		



SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
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TRAVEL BLANK ANALYZE (2612010022)      Sampled on 11/29/06 00:00

**Regulated VOCs plus Lists 1&3**

12/01/06 14:33	342874	( EPA 524.2	)	1,1,1,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1,1-Trichloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1,2,2-Tetrachloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1,2-Trichloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1-Dichloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1-Dichloroethylene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,1-Dichloropropene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2,3-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2,3-Trichloropropane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2,4-Trichlorobenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2,4-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2-Dichloroethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,3,5-Trimethylbenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	1,3-Dichloropropane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	p-Dichlorobenzene (1,4-DCB)	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	2,2-Dichloropropane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	2-Butanone (MEK)	ND	ug/l	5.0	1
12/01/06 14:33	342874	( EPA 524.2	)	o-Chlorotoluene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	p-Chlorotoluene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	4-Methyl-2-Pentanone (MIBK)	ND	ug/l	5.0	1
12/01/06 14:33	342874	( EPA 524.2	)	Benzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Bromobenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Bromomethane (Methyl Bromide)	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Bromoethane	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	cis-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Chlorobenzene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Carbon Tetrachloride	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	cis-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Bromoform	ND	ug/l	0.5	1
12/01/06 14:33	342874	( EPA 524.2	)	Chloroform (Trichloromethane)	ND	ug/l	0.5	1



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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
<b>TRAVEL BLANK ANALYZE (2612010022)</b>					<b>Sampled on</b>		<b>11/29/06 00:00</b>	
12/01/06	14:33	342874	( EPA 524.2 )	Bromochloromethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Chloroethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Chloromethane(Methyl Chloride)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Chlorodibromomethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Dibromomethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Bromodichloromethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Dichloromethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Di-isopropyl ether	ND	ug/l	3.0	1
12/01/06	14:33	342874	( EPA 524.2 )	Ethyl benzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Dichlorodifluoromethane	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Fluorotrichloromethane-Freon11	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Hexachlorobutadiene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Isopropylbenzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	m-Dichlorobenzene (1,3-DCB)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	m,p-Xylenes	ND	ug/l	1.0	1
12/01/06	14:33	342874	( EPA 524.2 )	Methyl Tert-butyl ether (MTBE)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Naphthalene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	n-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	n-Propylbenzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	o-Xylene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	o-Dichlorobenzene (1,2-DCB)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Tetrachloroethylene (PCE)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	p-Isopropyltoluene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	sec-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Styrene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	trans-1,2-Dichloroethylene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	tert-amyl Methyl Ether	ND	ug/l	3.0	1
12/01/06	14:33	342874	( EPA 524.2 )	tert-Butyl Ethyl Ether	ND	ug/l	3.0	1
12/01/06	14:33	342874	( EPA 524.2 )	tert-Butylbenzene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Trichloroethylene (TCE)	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Trichlorotrifluoroethane(Freon	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	trans-1,3-Dichloropropene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Toluene	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Total 1,3-Dichloropropene	ND	ug/l	0.5	1



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Data Report  
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SGS Environmental Services Inc.  
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
<b>TRAVEL BLANK ANALYZE (2612010022) (continued)</b>					<b>Sampled on 11/29/06 00:00</b>			
12/01/06	14:33	342874	( EPA 524.2 )	Total THM	ND	ug/l	0.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Total xylenes	ND	ug/l	1.5	1
12/01/06	14:33	342874	( EPA 524.2 )	Vinyl chloride (VC)	ND	ug/l	0.3	1
			( EPA 524.2 )	4-Bromofluorobenzene (70-130)	94	% Rec		
			( EPA 524.2 )	1,2-Dichloroethane-d4 (70-130)	112	% Rec		
			( EPA 524.2 )	Toluene-d8 (70-130)	97	% Rec		





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Laboratory  
QC Summary  
#189947

SGS Environmental Services Inc.

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QC Ref #342874 - Regulated VOCs plus Lists 1&3 Analysis Date: 12/01/2006

2612010019	1067004-004 4	Analyzed by: rpd
2612010022	TRAVEL BLANK ANALYZE	Analyzed by: rpd

QC Ref #342876 - Regulated VOCs plus Lists 1&3 Analysis Date: 12/01/2006

2612010016	1067004-001 1	Analyzed by: rpd
2612010017	1067004-002 2	Analyzed by: rpd
2612010018	1067004-003 3	Analyzed by: rpd

QC Ref #343535 - Regulated VOCs plus Lists 1&3 Analysis Date: 12/06/2006

2612010020	1067004-005 5	Analyzed by: rpd
2612010021	1067004-006 6	Analyzed by: rpd



SGS Environmental Services Inc.

QC Ref #342874      Regulated VOCs plus Lists 1&3

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	1,1,1,2-Tetrachloroethane	5	4.71	UGL	94.2	( 70-130 )	
LCS2	1,1,1,2-Tetrachloroethane	5	4.47	UGL	89.4	( 70-130 )	
MBLK	1,1,1,2-Tetrachloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1,2-Tetrachloroethane	0.500	0.51	UGL	102.0	( 50-150 )	
RPD_LCS	1,1,1,2-Tetrachloroethane	94.200	89.400	UGL	5.2	( 0-20 )	
LCS1	1,1,1-Trichloroethane	5	4.72	UGL	94.4	( 70-130 )	
LCS2	1,1,1-Trichloroethane	5	4.45	UGL	89.0	( 70-130 )	
MBLK	1,1,1-Trichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1-Trichloroethane	0.500	0.49	UGL	98.0	( 50-150 )	
RPD_LCS	1,1,1-Trichloroethane	94.400	89.000	UGL	5.9	( 0-20 )	
LCS1	1,1,2,2-Tetrachloroethane	5	5.57	UGL	111.4	( 70-130 )	
LCS2	1,1,2,2-Tetrachloroethane	5	5.22	UGL	104.4	( 70-130 )	
MBLK	1,1,2,2-Tetrachloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,2,2-Tetrachloroethane	0.500	0.56	UGL	112.0	( 50-150 )	
RPD_LCS	1,1,2,2-Tetrachloroethane	111.400	104.400	UGL	6.5	( 0-20 )	
LCS1	1,1,2-Trichloroethane	5	5.07	UGL	101.4	( 70-130 )	
LCS2	1,1,2-Trichloroethane	5	5.20	UGL	104.0	( 70-130 )	
MBLK	1,1,2-Trichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,2-Trichloroethane	0.500	0.50	UGL	100.0	( 50-150 )	
RPD_LCS	1,1,2-Trichloroethane	101.400	104.000	UGL	2.5	( 0-20 )	
LCS1	1,1-Dichloroethane	5	4.76	UGL	95.2	( 70-130 )	
LCS2	1,1-Dichloroethane	5	4.39	UGL	87.8	( 70-130 )	
MBLK	1,1-Dichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1-Dichloroethane	0.500	0.53	UGL	106.0	( 50-150 )	
RPD_LCS	1,1-Dichloroethane	95.200	87.800	UGL	8.1	( 0-20 )	
LCS1	1,1-Dichloroethylene	5	4.65	UGL	93.0	( 70-130 )	
LCS2	1,1-Dichloroethylene	5	4.49	UGL	89.8	( 70-130 )	
MBLK	1,1-Dichloroethylene	ND	<0.5	UGL			
MRL_CHK	1,1-Dichloroethylene	0.500	0.56	UGL	112.0	( 50-150 )	
RPD_LCS	1,1-Dichloroethylene	93.000	89.800	UGL	3.5	( 0-20 )	
LCS1	1,1-Dichloropropene	5	4.78	UGL	95.6	( 70-130 )	
LCS2	1,1-Dichloropropene	5	4.65	UGL	93.0	( 70-130 )	
MBLK	1,1-Dichloropropene	ND	<0.5	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.



SGS Environmental Services Inc.  
(continued)

MRL_CHK	1,1-Dichloropropene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	1,1-Dichloropropene	95.600	93.000	UGL	2.8	( 0-20 )
LCS1	1,2,3-Trichlorobenzene	5	5.01	UGL	100.2	( 70-130 )
LCS2	1,2,3-Trichlorobenzene	5	5.20	UGL	104.0	( 70-130 )
MBLK	1,2,3-Trichlorobenzene	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichlorobenzene	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,2,3-Trichlorobenzene	100.200	104.000	UGL	3.7	( 0-20 )
LCS1	1,2,3-Trichloropropane	5	4.88	UGL	97.6	( 70-130 )
LCS2	1,2,3-Trichloropropane	5	4.52	UGL	90.4	( 70-130 )
MBLK	1,2,3-Trichloropropane	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichloropropane	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	1,2,3-Trichloropropane	97.600	90.400	UGL	7.7	( 0-20 )
LCS1	1,2,4-Trichlorobenzene	5	4.82	UGL	96.4	( 70-130 )
LCS2	1,2,4-Trichlorobenzene	5	4.96	UGL	99.2	( 70-130 )
MBLK	1,2,4-Trichlorobenzene	ND	<0.5	UGL		
MRL_CHK	1,2,4-Trichlorobenzene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,2,4-Trichlorobenzene	96.400	99.200	UGL	2.9	( 0-20 )
LCS1	1,2,4-Trimethylbenzene	5	5.12	UGL	102.4	( 70-130 )
LCS2	1,2,4-Trimethylbenzene	5	4.99	UGL	99.8	( 70-130 )
MBLK	1,2,4-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,2,4-Trimethylbenzene	0.500	0.42	UGL	84.0	( 50-150 )
RPD_LCS	1,2,4-Trimethylbenzene	102.400	99.800	UGL	2.6	( 0-20 )
LCS1	1,2-Dichloroethane	5	4.70	UGL	94.0	( 70-130 )
LCS2	1,2-Dichloroethane	5	4.68	UGL	93.6	( 70-130 )
MBLK	1,2-Dichloroethane	ND	<0.5	UGL		
MRL_CHK	1,2-Dichloroethane	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	1,2-Dichloroethane	94.000	93.600	UGL	0.4	( 0-20 )
LCS1	1,2-Dichloropropane	5	5.15	UGL	103.0	( 70-130 )
LCS2	1,2-Dichloropropane	5	4.93	UGL	98.6	( 70-130 )
MBLK	1,2-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	1,2-Dichloropropane	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,2-Dichloropropane	103.000	98.600	UGL	4.4	( 0-20 )
LCS1	1,3,5-Trimethylbenzene	5	5.22	UGL	104.4	( 70-130 )
LCS2	1,3,5-Trimethylbenzene	5	4.85	UGL	97.0	( 70-130 )
MBLK	1,3,5-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,3,5-Trimethylbenzene	0.500	0.40	UGL	80.0	( 50-150 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.



SGS Environmental Services Inc.  
(continued)

RPD_LCS	1,3,5-Trimethylbenzene	104.400	97.000	UGL	7.3	( 0-20 )
LCS1	1,3-Dichloropropane	5	5.00	UGL	100.0	( 70-130 )
LCS2	1,3-Dichloropropane	5	5.05	UGL	101.0	( 70-130 )
MBLK	1,3-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	1,3-Dichloropropane	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	1,3-Dichloropropane	100.000	101.000	UGL	1.0	( 0-20 )
LCS1	p-Dichlorobenzene (1,4-DCB)	5	5.19	UGL	103.8	( 70-130 )
LCS2	p-Dichlorobenzene (1,4-DCB)	5	4.93	UGL	98.6	( 70-130 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND	<0.5	UGL		
MRL_CHK	p-Dichlorobenzene (1,4-DCB)	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	p-Dichlorobenzene (1,4-DCB)	103.800	98.600	UGL	5.1	( 0-20 )
LCS1	2,2-Dichloropropane	5	4.29	UGL	85.8	( 70-130 )
LCS2	2,2-Dichloropropane	5	4.03	UGL	80.6	( 70-130 )
MBLK	2,2-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	2,2-Dichloropropane	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	2,2-Dichloropropane	85.800	80.600	UGL	6.3	( 0-20 )
LCS1	2-Butanone (MEK)	50	50.1	UGL	100.2	( 70-130 )
LCS2	2-Butanone (MEK)	50	49.8	UGL	99.6	( 70-130 )
MBLK	2-Butanone (MEK)	ND	<5.0	UGL		
MRL_CHK	2-Butanone (MEK)	5.00	5.31	UGL	106.2	( 50-150 )
RPD_LCS	2-Butanone (MEK)	100.200	99.600	UGL	0.6	( 0-20 )
LCS1	o-Chlorotoluene	5	5.06	UGL	101.2	( 70-130 )
LCS2	o-Chlorotoluene	5	4.61	UGL	92.2	( 70-130 )
MBLK	o-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	o-Chlorotoluene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	o-Chlorotoluene	101.200	92.200	UGL	9.3	( 0-20 )
LCS1	p-Chlorotoluene	5	5.18	UGL	103.6	( 70-130 )
LCS2	p-Chlorotoluene	5	4.70	UGL	94.0	( 70-130 )
MBLK	p-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	p-Chlorotoluene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	p-Chlorotoluene	103.600	94.000	UGL	9.7	( 0-20 )
LCS1	4-Methyl-2-Pentanone (MIBK)	50	54.3	UGL	108.6	( 70-130 )
LCS2	4-Methyl-2-Pentanone (MIBK)	50	55.8	UGL	111.6	( 70-130 )
MBLK	4-Methyl-2-Pentanone (MIBK)	ND	<5.0	UGL		
MRL_CHK	4-Methyl-2-Pentanone (MIBK)	5.00	4.91	UGL	98.2	( 50-150 )
RPD_LCS	4-Methyl-2-Pentanone (MIBK)	108.600	111.600	UGL	2.7	( 0-20 )

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SGS Environmental Services Inc.  
(continued)

LCS1	Benzene	5	5.03	UGL	100.6	( 70-130 )
LCS2	Benzene	5	4.84	UGL	96.8	( 70-130 )
MBLK	Benzene	ND	<0.5	UGL		
MRL_CHK	Benzene	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	Benzene	100.600	96.800	UGL	3.9	( 0-20 )
LCS1	Bromobenzene	5	4.78	UGL	95.6	( 70-130 )
LCS2	Bromobenzene	5	4.58	UGL	91.6	( 70-130 )
MBLK	Bromobenzene	ND	<0.5	UGL		
MRL_CHK	Bromobenzene	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	Bromobenzene	95.600	91.600	UGL	4.3	( 0-20 )
LCS1	Bromomethane (Methyl Bromide)	5	4.88	UGL	97.6	( 70-130 )
LCS2	Bromomethane (Methyl Bromide)	5	4.41	UGL	88.2	( 70-130 )
MBLK	Bromomethane (Methyl Bromide)	ND	<0.5	UGL		
MRL_CHK	Bromomethane (Methyl Bromide)	0.500	0.63	UGL	126.0	( 50-150 )
RPD_LCS	Bromomethane (Methyl Bromide)	97.600	88.200	UGL	10.1	( 0-20 )
LCS1	Bromoethane	5	5.53	UGL	110.6	( 70-130 )
LCS2	Bromoethane	5	5.24	UGL	104.8	( 70-130 )
MBLK	Bromoethane	ND	<0.5	UGL		
MRL_CHK	Bromoethane	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Bromoethane	110.600	104.800	UGL	5.4	( 0-20 )
LCS1	cis-1,2-Dichloroethylene	5	4.61	UGL	92.2	( 70-130 )
LCS2	cis-1,2-Dichloroethylene	5	4.42	UGL	88.4	( 70-130 )
MBLK	cis-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	cis-1,2-Dichloroethylene	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	cis-1,2-Dichloroethylene	92.200	88.400	UGL	4.2	( 0-20 )
LCS1	Chlorobenzene	5	4.83	UGL	96.6	( 70-130 )
LCS2	Chlorobenzene	5	4.85	UGL	97.0	( 70-130 )
MBLK	Chlorobenzene	ND	<0.5	UGL		
MRL_CHK	Chlorobenzene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	Chlorobenzene	96.600	97.000	UGL	0.4	( 0-20 )
LCS1	Carbon Tetrachloride	5	4.60	UGL	92.0	( 70-130 )
LCS2	Carbon Tetrachloride	5	4.40	UGL	88.0	( 70-130 )
MBLK	Carbon Tetrachloride	ND	<0.5	UGL		
MRL_CHK	Carbon Tetrachloride	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	Carbon Tetrachloride	92.000	88.000	UGL	4.4	( 0-20 )
LCS1	cis-1,3-Dichloropropene	5	4.73	UGL	94.6	( 70-130 )

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SGS Environmental Services Inc.  
(continued)

LCS2	cis-1,3-Dichloropropene	5	4.61	UGL	92.2	( 70-130 )
MBLK	cis-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	cis-1,3-Dichloropropene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	cis-1,3-Dichloropropene	94.600	92.200	UGL	2.6	( 0-20 )
LCS1	Bromoform	5	4.19	UGL	83.8	( 70-130 )
LCS2	Bromoform	5	4.15	UGL	83.0	( 70-130 )
MBLK	Bromoform	ND	<0.5	UGL		
MRL_CHK	Bromoform	0.500	0.38	UGL	76.0	( 50-150 )
RPD_LCS	Bromoform	83.800	83.000	UGL	1.0	( 0-20 )
LCS1	Chloroform (Trichloromethane)	5	4.65	UGL	93.0	( 70-130 )
LCS2	Chloroform (Trichloromethane)	5	4.53	UGL	90.6	( 70-130 )
MBLK	Chloroform (Trichloromethane)	ND	<0.5	UGL		
MRL_CHK	Chloroform (Trichloromethane)	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	Chloroform (Trichloromethane)	93.000	90.600	UGL	2.6	( 0-20 )
LCS1	Bromochloromethane	5	5.06	UGL	101.2	( 70-130 )
LCS2	Bromochloromethane	5	4.84	UGL	96.8	( 70-130 )
MBLK	Bromochloromethane	ND	<0.5	UGL		
MRL_CHK	Bromochloromethane	0.500	0.56	UGL	112.0	( 50-150 )
RPD_LCS	Bromochloromethane	101.200	96.800	UGL	4.4	( 0-20 )
LCS1	Chloroethane	5	4.98	UGL	99.6	( 70-130 )
LCS2	Chloroethane	5	4.66	UGL	93.2	( 70-130 )
MBLK	Chloroethane	ND	<0.5	UGL		
MRL_CHK	Chloroethane	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Chloroethane	99.600	93.200	UGL	6.6	( 0-20 )
LCS1	Chloromethane (Methyl Chloride)	5	4.85	UGL	97.0	( 70-130 )
LCS2	Chloromethane (Methyl Chloride)	5	4.63	UGL	92.6	( 70-130 )
MBLK	Chloromethane (Methyl Chloride)	ND	<0.5	UGL		
MRL_CHK	Chloromethane (Methyl Chloride)	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Chloromethane (Methyl Chloride)	97.000	92.600	UGL	4.6	( 0-20 )
LCS1	Chlorodibromomethane	5	4.66	UGL	93.2	( 70-130 )
LCS2	Chlorodibromomethane	5	4.67	UGL	93.4	( 70-130 )
MBLK	Chlorodibromomethane	ND	<0.5	UGL		
MRL_CHK	Chlorodibromomethane	0.500	0.42	UGL	84.0	( 50-150 )
RPD_LCS	Chlorodibromomethane	93.200	93.400	UGL	0.2	( 0-20 )
LCS1	Dibromomethane	5	4.70	UGL	94.0	( 70-130 )
LCS2	Dibromomethane	5	4.92	UGL	98.4	( 70-130 )

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SGS Environmental Services Inc.  
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MBLK	Dibromomethane	ND	<0.5	UGL		
MRL_CHK	Dibromomethane	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	Dibromomethane	94.000	98.400	UGL	4.6	( 0-20 )
LCS1	Bromodichloromethane	5	4.38	UGL	87.6	( 70-130 )
LCS2	Bromodichloromethane	5	4.33	UGL	86.6	( 70-130 )
MBLK	Bromodichloromethane	ND	<0.5	UGL		
MRL_CHK	Bromodichloromethane	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Bromodichloromethane	87.600	86.600	UGL	1.1	( 0-20 )
LCS1	Dichloromethane	5	4.70	UGL	94.0	( 70-130 )
LCS2	Dichloromethane	5	4.41	UGL	88.2	( 70-130 )
MBLK	Dichloromethane	ND	<0.5	UGL		
MRL_CHK	Dichloromethane	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Dichloromethane	94.000	88.200	UGL	6.4	( 0-20 )
LCS1	Di-isopropyl ether	5	4.67	UGL	93.4	( 70-130 )
LCS2	Di-isopropyl ether	5	4.58	UGL	91.6	( 70-130 )
MBLK	Di-isopropyl ether	ND	<3.0	UGL		
MRL_CHK	Di-isopropyl ether	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	Di-isopropyl ether	93.400	91.600	UGL	1.9	( 0-20 )
LCS1	Ethyl benzene	5	5.06	UGL	101.2	( 70-130 )
LCS2	Ethyl benzene	5	4.92	UGL	98.4	( 70-130 )
MBLK	Ethyl benzene	ND	<0.5	UGL		
MRL_CHK	Ethyl benzene	0.500	0.43	UGL	86.0	( 50-150 )
RPD_LCS	Ethyl benzene	101.200	98.400	UGL	2.8	( 0-20 )
LCS1	Dichlorodifluoromethane	5	4.39	UGL	87.8	( 70-130 )
LCS2	Dichlorodifluoromethane	5	4.06	UGL	81.2	( 70-130 )
MBLK	Dichlorodifluoromethane	ND	<0.5	UGL		
MRL_CHK	Dichlorodifluoromethane	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Dichlorodifluoromethane	87.800	81.200	UGL	7.8	( 0-20 )
LCS1	Fluorotrchloromethane-Freon11	5	4.32	UGL	86.4	( 70-130 )
LCS2	Fluorotrchloromethane-Freon11	5	4.21	UGL	84.2	( 70-130 )
MBLK	Fluorotrchloromethane-Freon11	ND	<0.5	UGL		
MRL_CHK	Fluorotrchloromethane-Freon11	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Fluorotrchloromethane-Freon11	86.400	84.200	UGL	2.6	( 0-20 )
LCS1	Hexachlorobutadiene	5	5.02	UGL	100.4	( 70-130 )
LCS2	Hexachlorobutadiene	5	4.93	UGL	98.6	( 70-130 )
MBLK	Hexachlorobutadiene	ND	<0.5	UGL		

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MRL_CHK	Hexachlorobutadiene	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Hexachlorobutadiene	100.400	98.600	UGL	1.8	( 0-20 )
LCS1	Isopropylbenzene	5	5.13	UGL	102.6	( 70-130 )
LCS2	Isopropylbenzene	5	4.75	UGL	95.0	( 70-130 )
MBLK	Isopropylbenzene	ND	<0.5	UGL		
MRL_CHK	Isopropylbenzene	0.500	0.39	UGL	78.0	( 50-150 )
RPD_LCS	Isopropylbenzene	102.600	95.000	UGL	7.7	( 0-20 )
LCS1	m-Dichlorobenzene (1,3-DCB)	5	5.04	UGL	100.8	( 70-130 )
LCS2	m-Dichlorobenzene (1,3-DCB)	5	4.87	UGL	97.4	( 70-130 )
MBLK	m-Dichlorobenzene (1,3-DCB)	ND	<0.5	UGL		
MRL_CHK	m-Dichlorobenzene (1,3-DCB)	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	m-Dichlorobenzene (1,3-DCB)	100.800	97.400	UGL	3.4	( 0-20 )
LCS1	m,p-Xylenes	10	10.4	UGL	104.0	( 70-130 )
LCS2	m,p-Xylenes	10	9.92	UGL	99.2	( 70-130 )
MBLK	m,p-Xylenes	ND	<1.0	UGL		
MRL_CHK	m,p-Xylenes	1.00	0.80	UGL	80.0	( 50-150 )
RPD_LCS	m,p-Xylenes	104.000	99.200	UGL	4.7	( 0-20 )
LCS1	Methyl Tert-butyl ether (MTBE)	5	4.33	UGL	86.6	( 70-130 )
LCS2	Methyl Tert-butyl ether (MTBE)	5	4.34	UGL	86.8	( 70-130 )
MBLK	Methyl Tert-butyl ether (MTBE)	ND	<0.5	UGL		
MRL_CHK	Methyl Tert-butyl ether (MTBE)	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	Methyl Tert-butyl ether (MTBE)	86.600	86.800	UGL	0.2	( 0-20 )
LCS1	Naphthalene	5	4.99	UGL	99.8	( 70-130 )
LCS2	Naphthalene	5	5.27	UGL	105.4	( 70-130 )
MBLK	Naphthalene	ND	<0.5	UGL		
MRL_CHK	Naphthalene	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	Naphthalene	99.800	105.400	UGL	5.5	( 0-20 )
LCS1	n-Butylbenzene	5	5.24	UGL	104.8	( 70-130 )
LCS2	n-Butylbenzene	5	5.24	UGL	104.8	( 70-130 )
MBLK	n-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	n-Butylbenzene	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	n-Butylbenzene	104.800	104.800	UGL	0.0	( 0-20 )
LCS1	n-Propylbenzene	5	4.92	UGL	98.4	( 70-130 )
LCS2	n-Propylbenzene	5	4.73	UGL	94.6	( 70-130 )
MBLK	n-Propylbenzene	ND	<0.5	UGL		
MRL_CHK	n-Propylbenzene	0.500	0.43	UGL	86.0	( 50-150 )

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RPD_LCS	n-Propylbenzene	98.400	94.600	UGL	3.9	( 0-20 )
LCS1	o-Xylene	5	4.69	UGL	93.8	( 70-130 )
LCS2	o-Xylene	5	4.56	UGL	91.2	( 70-130 )
MBLK	o-Xylene	ND	<0.5	UGL		
MRL_CHK	o-Xylene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	o-Xylene	93.800	91.200	UGL	2.8	( 0-20 )
LCS1	o-Dichlorobenzene (1,2-DCB)	5	5.11	UGL	102.2	( 70-130 )
LCS2	o-Dichlorobenzene (1,2-DCB)	5	5.38	UGL	107.6	( 70-130 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND	<0.5	UGL		
MRL_CHK	o-Dichlorobenzene (1,2-DCB)	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	o-Dichlorobenzene (1,2-DCB)	102.200	107.600	UGL	5.1	( 0-20 )
LCS1	Tetrachloroethylene (PCE)	5	5.07	UGL	101.4	( 70-130 )
LCS2	Tetrachloroethylene (PCE)	5	4.73	UGL	94.6	( 70-130 )
MBLK	Tetrachloroethylene (PCE)	ND	<0.5	UGL		
MRL_CHK	Tetrachloroethylene (PCE)	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	Tetrachloroethylene (PCE)	101.400	94.600	UGL	6.9	( 0-20 )
LCS1	p-Isopropyltoluene	5	5.05	UGL	101.0	( 70-130 )
LCS2	p-Isopropyltoluene	5	4.76	UGL	95.2	( 70-130 )
MBLK	p-Isopropyltoluene	ND	<0.5	UGL		
MRL_CHK	p-Isopropyltoluene	0.500	0.39	UGL	78.0	( 50-150 )
RPD_LCS	p-Isopropyltoluene	101.000	95.200	UGL	5.9	( 0-20 )
LCS1	sec-Butylbenzene	5	5.10	UGL	102.0	( 70-130 )
LCS2	sec-Butylbenzene	5	4.86	UGL	97.2	( 70-130 )
MBLK	sec-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	sec-Butylbenzene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	sec-Butylbenzene	102.000	97.200	UGL	4.8	( 0-20 )
LCS1	Styrene	5	5.08	UGL	101.6	( 70-130 )
LCS2	Styrene	5	5.00	UGL	100.0	( 70-130 )
MBLK	Styrene	ND	<0.5	UGL		
MRL_CHK	Styrene	0.500	0.36	UGL	72.0	( 50-150 )
RPD_LCS	Styrene	101.600	100.000	UGL	1.6	( 0-20 )
LCS1	1,2-dichloroethane-d4	100	97	%R	97.0	( 70-130 )
LCS2	1,2-dichloroethane-d4	100	96	%R	96.0	( 70-130 )
MBLK	1,2-dichloroethane-d4	100	106	%R	106.0	
MRL_CHK	1,2-dichloroethane-d4	100	101	%R	101.0	( 50-150 )
RPD_LCS	1,2-dichloroethane-d4	97.000	96.000	%R	1.0	( 0-20 )

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## SGS Environmental Services Inc. (continued)

LCS1	Toluene-d8	100	104	%R	104.0	( 70-130 )
LCS2	Toluene-d8	100	105	%R	105.0	( 70-130 )
MBLK	Toluene-d8	100	93	%R	93.0	
MRL_CHK	Toluene-d8	100	98	%R	98.0	( 50-150 )
RPD_LCS	Toluene-d8	104.000	105.000	%R	1.0	( 0-20 )
LCS1	4-Bromofluorobenzene	100	100	%R	100.0	( 70-130 )
LCS2	4-Bromofluorobenzene	100	99	%R	99.0	( 70-130 )
MBLK	4-Bromofluorobenzene	100	97	%R	97.0	
MRL_CHK	4-Bromofluorobenzene	100	92	%R	92.0	( 50-150 )
RPD_LCS	4-Bromofluorobenzene	100.000	99.000	%R	1.0	( 0-20 )
LCS1	trans-1,2-Dichloroethylene	5	4.82	UGL	96.4	( 70-130 )
LCS2	trans-1,2-Dichloroethylene	5	4.52	UGL	90.4	( 70-130 )
MBLK	trans-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	trans-1,2-Dichloroethylene	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	trans-1,2-Dichloroethylene	96.400	90.400	UGL	6.4	( 0-20 )
LCS1	tert-amyl Methyl Ether	5	4.44	UGL	88.8	( 70-130 )
LCS2	tert-amyl Methyl Ether	5	4.47	UGL	89.4	( 70-130 )
MBLK	tert-amyl Methyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-amyl Methyl Ether	0.500	0.40	UGL	80.0	( 50-150 )
RPD_LCS	tert-amyl Methyl Ether	88.800	89.400	UGL	0.7	( 0-20 )
LCS1	tert-Butyl Ethyl Ether	5	4.53	UGL	90.6	( 70-130 )
LCS2	tert-Butyl Ethyl Ether	5	4.50	UGL	90.0	( 70-130 )
MBLK	tert-Butyl Ethyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-Butyl Ethyl Ether	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	tert-Butyl Ethyl Ether	90.600	90.000	UGL	0.7	( 0-20 )
LCS1	tert-Butylbenzene	5	4.80	UGL	96.0	( 70-130 )
LCS2	tert-Butylbenzene	5	4.56	UGL	91.2	( 70-130 )
MBLK	tert-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	tert-Butylbenzene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	tert-Butylbenzene	96.000	91.200	UGL	5.1	( 0-20 )
LCS1	Trichloroethylene (TCE)	5	4.68	UGL	93.6	( 70-130 )
LCS2	Trichloroethylene (TCE)	5	4.71	UGL	94.2	( 70-130 )
MBLK	Trichloroethylene (TCE)	ND	<0.5	UGL		
MRL_CHK	Trichloroethylene (TCE)	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	Trichloroethylene (TCE)	93.600	94.200	UGL	0.6	( 0-20 )
LCS1	Trichlorotrifluoroethane (Freon)	5	4.86	UGL	97.2	( 70-130 )

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SGS Environmental Services Inc.  
(continued)

LCS2	Trichlorotrifluoroethane(Freon	5	4.35	UGL	87.0	( 70-130 )
MBLK	Trichlorotrifluoroethane(Freon	ND	<0.5	UGL		
MRL_CHK	Trichlorotrifluoroethane(Freon	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Trichlorotrifluoroethane(Freon	97.200	87.000	UGL	11.1	( 0-20 )
LCS1	trans-1,3-Dichloropropene	5	4.49	UGL	89.8	( 70-130 )
LCS2	trans-1,3-Dichloropropene	5	4.47	UGL	89.4	( 70-130 )
MBLK	trans-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	trans-1,3-Dichloropropene	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	trans-1,3-Dichloropropene	89.800	89.400	UGL	0.4	( 0-20 )
LCS1	Toluene	5	4.99	UGL	99.8	( 70-130 )
LCS2	Toluene	5	4.93	UGL	98.6	( 70-130 )
MBLK	Toluene	ND	<0.5	UGL		
MRL_CHK	Toluene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Toluene	99.800	98.600	UGL	1.2	( 0-20 )
LCS1	Vinyl chloride (VC)	5	4.79	UGL	95.8	( 70-130 )
LCS2	Vinyl chloride (VC)	5	4.38	UGL	87.6	( 70-130 )
MBLK	Vinyl chloride (VC)	ND	<0.3	UGL		
MRL_CHK	Vinyl chloride (VC)	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	Vinyl chloride (VC)	95.800	87.600	UGL	8.9	( 0-20 )

QC Ref #342876

Regulated VOCs plus Lists 1&3

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	1,1,1,2-Tetrachloroethane	5	5.00	UGL	100.0	( 70-130 )	
LCS2	1,1,1,2-Tetrachloroethane	5	4.85	UGL	97.0	( 70-130 )	
MBLK	1,1,1,2-Tetrachloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1,2-Tetrachloroethane	0.500	0.45	UGL	90.0	( 50-150 )	
RPD_LCS	1,1,1,2-Tetrachloroethane	100.000	97.000	UGL	3.0	( 0-20 )	
LCS1	1,1,1-Trichloroethane	5	5.61	UGL	112.2	( 70-130 )	
LCS2	1,1,1-Trichloroethane	5	5.33	UGL	106.6	( 70-130 )	
MBLK	1,1,1-Trichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1-Trichloroethane	0.500	0.50	UGL	100.0	( 50-150 )	
RPD_LCS	1,1,1-Trichloroethane	112.200	106.600	UGL	5.1	( 0-20 )	
LCS1	1,1,2,2-Tetrachloroethane	5	4.95	UGL	99.0	( 70-130 )	
LCS2	1,1,2,2-Tetrachloroethane	5	4.94	UGL	98.8	( 70-130 )	

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Laboratory  
QC Report  
#189947

## SGS Environmental Services Inc. (continued)

MBLK	1,1,2,2-Tetrachloroethane	ND	<0.5	UGL		
MRL_CHK	1,1,2,2-Tetrachloroethane	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,1,2,2-Tetrachloroethane	99.000	98.800	UGL	0.2	( 0-20 )
LCS1	1,1,2-Trichloroethane	5	4.65	UGL	93.0	( 70-130 )
LCS2	1,1,2-Trichloroethane	5	4.82	UGL	96.4	( 70-130 )
MBLK	1,1,2-Trichloroethane	ND	<0.5	UGL		
MRL_CHK	1,1,2-Trichloroethane	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,1,2-Trichloroethane	93.000	96.400	UGL	3.6	( 0-20 )
LCS1	1,1-Dichloroethane	5	5.26	UGL	105.2	( 70-130 )
LCS2	1,1-Dichloroethane	5	5.24	UGL	104.8	( 70-130 )
MBLK	1,1-Dichloroethane	ND	<0.5	UGL		
MRL_CHK	1,1-Dichloroethane	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,1-Dichloroethane	105.200	104.800	UGL	0.4	( 0-20 )
LCS1	1,1-Dichloroethylene	5	5.26	UGL	105.2	( 70-130 )
LCS2	1,1-Dichloroethylene	5	4.90	UGL	98.0	( 70-130 )
MBLK	1,1-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	1,1-Dichloroethylene	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,1-Dichloroethylene	105.200	98.000	UGL	7.1	( 0-20 )
LCS1	1,1-Dichloropropene	5	5.41	UGL	108.2	( 70-130 )
LCS2	1,1-Dichloropropene	5	5.17	UGL	103.4	( 70-130 )
MBLK	1,1-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	1,1-Dichloropropene	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	1,1-Dichloropropene	108.200	103.400	UGL	4.5	( 0-20 )
LCS1	1,2,3-Trichlorobenzene	5	5.12	UGL	102.4	( 70-130 )
LCS2	1,2,3-Trichlorobenzene	5	4.70	UGL	94.0	( 70-130 )
MBLK	1,2,3-Trichlorobenzene	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichlorobenzene	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,2,3-Trichlorobenzene	102.400	94.000	UGL	8.6	( 0-20 )
LCS1	1,2,3-Trichloropropane	5	5.06	UGL	101.2	( 70-130 )
LCS2	1,2,3-Trichloropropane	5	4.68	UGL	93.6	( 70-130 )
MBLK	1,2,3-Trichloropropane	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichloropropane	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	1,2,3-Trichloropropane	101.200	93.600	UGL	7.8	( 0-20 )
LCS1	1,2,4-Trichlorobenzene	5	5.16	UGL	103.2	( 70-130 )
LCS2	1,2,4-Trichlorobenzene	5	4.59	UGL	91.8	( 70-130 )
MBLK	1,2,4-Trichlorobenzene	ND	<0.5	UGL		

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Laboratory  
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SGS Environmental Services Inc.  
(continued)

MRL_CHK	1,2,4-Trichlorobenzene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,2,4-Trichlorobenzene	103.200	91.800	UGL	11.7	( 0-20 )
LCS1	1,2,4-Trimethylbenzene	5	5.39	UGL	107.8	( 70-130 )
LCS2	1,2,4-Trimethylbenzene	5	5.19	UGL	103.8	( 70-130 )
MBLK	1,2,4-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,2,4-Trimethylbenzene	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	1,2,4-Trimethylbenzene	107.800	103.800	UGL	3.8	( 0-20 )
LCS1	1,2-Dichloroethane	5	5.89	UGL	117.8	( 70-130 )
LCS2	1,2-Dichloroethane	5	5.71	UGL	114.2	( 70-130 )
MBLK	1,2-Dichloroethane	ND	<0.5	UGL		
MRL_CHK	1,2-Dichloroethane	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	1,2-Dichloroethane	117.800	114.200	UGL	3.1	( 0-20 )
LCS1	1,2-Dichloropropane	5	4.71	UGL	94.2	( 70-130 )
LCS2	1,2-Dichloropropane	5	4.71	UGL	94.2	( 70-130 )
MBLK	1,2-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	1,2-Dichloropropane	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,2-Dichloropropane	94.200	94.200	UGL	0.0	( 0-20 )
LCS1	1,3,5-Trimethylbenzene	5	5.46	UGL	109.2	( 70-130 )
LCS2	1,3,5-Trimethylbenzene	5	5.07	UGL	101.4	( 70-130 )
MBLK	1,3,5-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,3,5-Trimethylbenzene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	1,3,5-Trimethylbenzene	109.200	101.400	UGL	7.4	( 0-20 )
LCS1	1,3-Dichloropropane	5	5.16	UGL	103.2	( 70-130 )
LCS2	1,3-Dichloropropane	5	5.20	UGL	104.0	( 70-130 )
MBLK	1,3-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	1,3-Dichloropropane	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	1,3-Dichloropropane	103.200	104.000	UGL	0.8	( 0-20 )
LCS1	p-Dichlorobenzene (1,4-DCB)	5	5.13	UGL	102.6	( 70-130 )
LCS2	p-Dichlorobenzene (1,4-DCB)	5	4.97	UGL	99.4	( 70-130 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND	<0.5	UGL		
MRL_CHK	p-Dichlorobenzene (1,4-DCB)	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	p-Dichlorobenzene (1,4-DCB)	102.600	99.400	UGL	3.2	( 0-20 )
LCS1	2,2-Dichloropropane	5	4.77	UGL	95.4	( 70-130 )
LCS2	2,2-Dichloropropane	5	4.49	UGL	89.8	( 70-130 )
MBLK	2,2-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	2,2-Dichloropropane	0.500	0.45	UGL	90.0	( 50-150 )

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Laboratory  
QC Report  
#189947

## SGS Environmental Services Inc. (continued)

RPD_LCS	2,2-Dichloropropane	95.400	89.800	UGL	6.0	( 0-20 )
LCS1	2-Butanone (MEK)	50	47.6	UGL	95.2	( 70-130 )
LCS2	2-Butanone (MEK)	50	47.3	UGL	94.6	( 70-130 )
MBLK	2-Butanone (MEK)	ND	<5.0	UGL		
MRL_CHK	2-Butanone (MEK)	5.00	4.97	UGL	99.4	( 50-150 )
RPD_LCS	2-Butanone (MEK)	95.200	94.600	UGL	0.6	( 0-20 )
LCS1	o-Chlorotoluene	5	5.15	UGL	103.0	( 70-130 )
LCS2	o-Chlorotoluene	5	4.78	UGL	95.6	( 70-130 )
MBLK	o-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	o-Chlorotoluene	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	o-Chlorotoluene	103.000	95.600	UGL	7.5	( 0-20 )
LCS1	p-Chlorotoluene	5	5.25	UGL	105.0	( 70-130 )
LCS2	p-Chlorotoluene	5	4.76	UGL	95.2	( 70-130 )
MBLK	p-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	p-Chlorotoluene	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	p-Chlorotoluene	105.000	95.200	UGL	9.8	( 0-20 )
LCS1	4-Methyl-2-Pentanone (MIBK)	50	52.1	UGL	104.2	( 70-130 )
LCS2	4-Methyl-2-Pentanone (MIBK)	50	50.2	UGL	100.4	( 70-130 )
MBLK	4-Methyl-2-Pentanone (MIBK)	ND	<5.0	UGL		
MRL_CHK	4-Methyl-2-Pentanone (MIBK)	5.00	4.35	UGL	87.0	( 50-150 )
RPD_LCS	4-Methyl-2-Pentanone (MIBK)	104.200	100.400	UGL	3.7	( 0-20 )
LCS1	Benzene	5	5.13	UGL	102.6	( 70-130 )
LCS2	Benzene	5	4.83	UGL	96.6	( 70-130 )
MBLK	Benzene	ND	<0.5	UGL		
MRL_CHK	Benzene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Benzene	102.600	96.600	UGL	6.0	( 0-20 )
LCS1	Bromobenzene	5	5.30	UGL	106.0	( 70-130 )
LCS2	Bromobenzene	5	5.07	UGL	101.4	( 70-130 )
MBLK	Bromobenzene	ND	<0.5	UGL		
MRL_CHK	Bromobenzene	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Bromobenzene	106.000	101.400	UGL	4.4	( 0-20 )
LCS1	Bromomethane (Methyl Bromide)	5	5.81	UGL	116.2	( 70-130 )
LCS2	Bromomethane (Methyl Bromide)	5	5.51	UGL	110.2	( 70-130 )
MBLK	Bromomethane (Methyl Bromide)	ND	<0.5	UGL		
MRL_CHK	Bromomethane (Methyl Bromide)	0.500	0.78	UGL	<u>156.0</u>	( 50-150 )
RPD_LCS	Bromomethane (Methyl Bromide)	116.200	110.200	UGL	5.3	( 0-20 )

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SGS Environmental Services Inc.  
(continued)

LCS1	Bromoethane	5	6.46	UGL	129.2	( 70-130 )
LCS2	Bromoethane	5	6.46	UGL	129.2	( 70-130 )
MBLK	Bromoethane	ND	<0.5	UGL		
MRL_CHK	Bromoethane	0.500	0.57	UGL	114.0	( 50-150 )
RPD_LCS	Bromoethane	129.200	129.200	UGL	0.0	( 0-20 )
LCS1	cis-1,2-Dichloroethylene	5	5.19	UGL	103.8	( 70-130 )
LCS2	cis-1,2-Dichloroethylene	5	4.80	UGL	96.0	( 70-130 )
MBLK	cis-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	cis-1,2-Dichloroethylene	0.500	0.57	UGL	114.0	( 50-150 )
RPD_LCS	cis-1,2-Dichloroethylene	103.800	96.000	UGL	7.8	( 0-20 )
LCS1	Chlorobenzene	5	5.00	UGL	100.0	( 70-130 )
LCS2	Chlorobenzene	5	5.00	UGL	100.0	( 70-130 )
MBLK	Chlorobenzene	ND	<0.5	UGL		
MRL_CHK	Chlorobenzene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Chlorobenzene	100.000	100.000	UGL	0.0	( 0-20 )
LCS1	Carbon Tetrachloride	5	5.59	UGL	111.8	( 70-130 )
LCS2	Carbon Tetrachloride	5	5.25	UGL	105.0	( 70-130 )
MBLK	Carbon Tetrachloride	ND	<0.5	UGL		
MRL_CHK	Carbon Tetrachloride	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Carbon Tetrachloride	111.800	105.000	UGL	6.3	( 0-20 )
LCS1	cis-1,3-Dichloropropene	5	4.67	UGL	93.4	( 70-130 )
LCS2	cis-1,3-Dichloropropene	5	4.65	UGL	93.0	( 70-130 )
MBLK	cis-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	cis-1,3-Dichloropropene	0.500	0.41	UGL	82.0	( 50-150 )
RPD_LCS	cis-1,3-Dichloropropene	93.400	93.000	UGL	0.4	( 0-20 )
LCS1	Bromoform	5	4.73	UGL	94.6	( 70-130 )
LCS2	Bromoform	5	4.66	UGL	93.2	( 70-130 )
MBLK	Bromoform	ND	<0.5	UGL		
MRL_CHK	Bromoform	0.500	0.40	UGL	80.0	( 50-150 )
RPD_LCS	Bromoform	94.600	93.200	UGL	1.5	( 0-20 )
LCS1	Chloroform (Trichloromethane)	5	5.78	UGL	115.6	( 70-130 )
LCS2	Chloroform (Trichloromethane)	5	5.45	UGL	109.0	( 70-130 )
MBLK	Chloroform (Trichloromethane)	ND	<0.5	UGL		
MRL_CHK	Chloroform (Trichloromethane)	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Chloroform (Trichloromethane)	115.600	109.000	UGL	5.9	( 0-20 )
LCS1	Bromochloromethane	5	4.74	UGL	94.8	( 70-130 )

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SGS Environmental Services Inc.  
(continued)

LCS2	Bromochloromethane	5	4.79	UGL	95.8	( 70-130 )
MBLK	Bromochloromethane	ND	<0.5	UGL		
MRL_CHK	Bromochloromethane	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	Bromochloromethane	94.800	95.800	UGL	1.0	( 0-20 )
LCS1	Chloroethane	5	5.06	UGL	101.2	( 70-130 )
LCS2	Chloroethane	5	4.77	UGL	95.4	( 70-130 )
MBLK	Chloroethane	ND	<0.5	UGL		
MRL_CHK	Chloroethane	0.500	0.59	UGL	118.0	( 50-150 )
RPD_LCS	Chloroethane	101.200	95.400	UGL	5.9	( 0-20 )
LCS1	Chloromethane (Methyl Chloride)	5	4.96	UGL	99.2	( 70-130 )
LCS2	Chloromethane (Methyl Chloride)	5	5.15	UGL	103.0	( 70-130 )
MBLK	Chloromethane (Methyl Chloride)	ND	<0.5	UGL		
MRL_CHK	Chloromethane (Methyl Chloride)	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Chloromethane (Methyl Chloride)	99.200	103.000	UGL	3.8	( 0-20 )
LCS1	Chlorodibromomethane	5	4.94	UGL	98.8	( 70-130 )
LCS2	Chlorodibromomethane	5	5.08	UGL	101.6	( 70-130 )
MBLK	Chlorodibromomethane	ND	<0.5	UGL		
MRL_CHK	Chlorodibromomethane	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	Chlorodibromomethane	98.800	101.600	UGL	2.8	( 0-20 )
LCS1	Dibromomethane	5	5.13	UGL	102.6	( 70-130 )
LCS2	Dibromomethane	5	5.39	UGL	107.8	( 70-130 )
MBLK	Dibromomethane	ND	<0.5	UGL		
MRL_CHK	Dibromomethane	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Dibromomethane	102.600	107.800	UGL	4.9	( 0-20 )
LCS1	Bromodichloromethane	5	5.28	UGL	105.6	( 70-130 )
LCS2	Bromodichloromethane	5	5.11	UGL	102.2	( 70-130 )
MBLK	Bromodichloromethane	ND	<0.5	UGL		
MRL_CHK	Bromodichloromethane	0.500	0.57	UGL	114.0	( 50-150 )
RPD_LCS	Bromodichloromethane	105.600	102.200	UGL	3.3	( 0-20 )
LCS1	Dichloromethane	5	4.82	UGL	96.4	( 70-130 )
LCS2	Dichloromethane	5	4.84	UGL	96.8	( 70-130 )
MBLK	Dichloromethane	ND	<0.5	UGL		
MRL_CHK	Dichloromethane	0.500	0.56	UGL	112.0	( 50-150 )
RPD_LCS	Dichloromethane	96.400	96.800	UGL	0.4	( 0-20 )
LCS1	Di-isopropyl ether	5	5.00	UGL	100.0	( 70-130 )
LCS2	Di-isopropyl ether	5	4.69	UGL	93.8	( 70-130 )

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(continued)

MBLK	Di-isopropyl ether	ND	<3.0	UGL		
MRL_CHK	Di-isopropyl ether	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	Di-isopropyl ether	100.000	93.800	UGL	6.4	( 0-20 )
LCS1	Ethyl benzene	5	5.35	UGL	107.0	( 70-130 )
LCS2	Ethyl benzene	5	5.19	UGL	103.8	( 70-130 )
MBLK	Ethyl benzene	ND	<0.5	UGL		
MRL_CHK	Ethyl benzene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Ethyl benzene	107.000	103.800	UGL	3.0	( 0-20 )
LCS1	Dichlorodifluoromethane	5	4.69	UGL	93.8	( 70-130 )
LCS2	Dichlorodifluoromethane	5	4.73	UGL	94.6	( 70-130 )
MBLK	Dichlorodifluoromethane	ND	<0.5	UGL		
MRL_CHK	Dichlorodifluoromethane	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Dichlorodifluoromethane	93.800	94.600	UGL	0.8	( 0-20 )
LCS1	Fluorotrichloromethane-Freon11	5	5.57	UGL	111.4	( 70-130 )
LCS2	Fluorotrichloromethane-Freon11	5	5.55	UGL	111.0	( 70-130 )
MBLK	Fluorotrichloromethane-Freon11	ND	<0.5	UGL		
MRL_CHK	Fluorotrichloromethane-Freon11	0.500	0.59	UGL	118.0	( 50-150 )
RPD_LCS	Fluorotrichloromethane-Freon11	111.400	111.000	UGL	0.4	( 0-20 )
LCS1	Hexachlorobutadiene	5	5.12	UGL	102.4	( 70-130 )
LCS2	Hexachlorobutadiene	5	4.98	UGL	99.6	( 70-130 )
MBLK	Hexachlorobutadiene	ND	<0.5	UGL		
MRL_CHK	Hexachlorobutadiene	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	Hexachlorobutadiene	102.400	99.600	UGL	2.8	( 0-20 )
LCS1	Isopropylbenzene	5	5.45	UGL	109.0	( 70-130 )
LCS2	Isopropylbenzene	5	5.12	UGL	102.4	( 70-130 )
MBLK	Isopropylbenzene	ND	<0.5	UGL		
MRL_CHK	Isopropylbenzene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Isopropylbenzene	109.000	102.400	UGL	6.2	( 0-20 )
LCS1	m-Dichlorobenzene (1,3-DCB)	5	5.14	UGL	102.8	( 70-130 )
LCS2	m-Dichlorobenzene (1,3-DCB)	5	4.84	UGL	96.8	( 70-130 )
MBLK	m-Dichlorobenzene (1,3-DCB)	ND	<0.5	UGL		
MRL_CHK	m-Dichlorobenzene (1,3-DCB)	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	m-Dichlorobenzene (1,3-DCB)	102.800	96.800	UGL	6.0	( 0-20 )
LCS1	m,p-Xylenes	10	10.6	UGL	106.0	( 70-130 )
LCS2	m,p-Xylenes	10	10.4	UGL	104.0	( 70-130 )
MBLK	m,p-Xylenes	ND	<1.0	UGL		

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MRL_CHK	m,p-Xylenes	1.00	0.99	UGL	99.0	( 50-150 )
RPD_LCS	m,p-Xylenes	106.000	104.000	UGL	1.9	( 0-20 )
LCS1	Methyl Tert-butyl ether (MTBE)	5	4.83	UGL	96.6	( 70-130 )
LCS2	Methyl Tert-butyl ether (MTBE)	5	4.93	UGL	98.6	( 70-130 )
MBLK	Methyl Tert-butyl ether (MTBE)	ND	<0.5	UGL		
MRL_CHK	Methyl Tert-butyl ether (MTBE)	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Methyl Tert-butyl ether (MTBE)	96.600	98.600	UGL	2.0	( 0-20 )
LCS1	Naphthalene	5	4.82	UGL	96.4	( 70-130 )
LCS2	Naphthalene	5	4.66	UGL	93.2	( 70-130 )
MBLK	Naphthalene	ND	<0.5	UGL		
MRL_CHK	Naphthalene	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Naphthalene	96.400	93.200	UGL	3.4	( 0-20 )
LCS1	n-Butylbenzene	5	5.11	UGL	102.2	( 70-130 )
LCS2	n-Butylbenzene	5	4.92	UGL	98.4	( 70-130 )
MBLK	n-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	n-Butylbenzene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	n-Butylbenzene	102.200	98.400	UGL	3.8	( 0-20 )
LCS1	n-Propylbenzene	5	5.06	UGL	101.2	( 70-130 )
LCS2	n-Propylbenzene	5	4.82	UGL	96.4	( 70-130 )
MBLK	n-Propylbenzene	ND	<0.5	UGL		
MRL_CHK	n-Propylbenzene	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	n-Propylbenzene	101.200	96.400	UGL	4.9	( 0-20 )
LCS1	o-Xylene	5	4.92	UGL	98.4	( 70-130 )
LCS2	o-Xylene	5	4.80	UGL	96.0	( 70-130 )
MBLK	o-Xylene	ND	<0.5	UGL		
MRL_CHK	o-Xylene	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	o-Xylene	98.400	96.000	UGL	2.5	( 0-20 )
LCS1	o-Dichlorobenzene (1,2-DCB)	5	4.91	UGL	98.2	( 70-130 )
LCS2	o-Dichlorobenzene (1,2-DCB)	5	4.96	UGL	99.2	( 70-130 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND	<0.5	UGL		
MRL_CHK	o-Dichlorobenzene (1,2-DCB)	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	o-Dichlorobenzene (1,2-DCB)	98.200	99.200	UGL	1.0	( 0-20 )
LCS1	Tetrachloroethylene (PCE)	5	5.11	UGL	102.2	( 70-130 )
LCS2	Tetrachloroethylene (PCE)	5	5.20	UGL	104.0	( 70-130 )
MBLK	Tetrachloroethylene (PCE)	ND	<0.5	UGL		
MRL_CHK	Tetrachloroethylene (PCE)	0.500	0.58	UGL	116.0	( 50-150 )

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RPD_LCS	Tetrachloroethylene (PCE)	102.200	104.000	UGL	1.7	( 0-20 )
LCS1	p-Isopropyltoluene	5	5.21	UGL	104.2	( 70-130 )
LCS2	p-Isopropyltoluene	5	4.94	UGL	98.8	( 70-130 )
MBLK	p-Isopropyltoluene	ND	<0.5	UGL		
MRL_CHK	p-Isopropyltoluene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	p-Isopropyltoluene	104.200	98.800	UGL	5.3	( 0-20 )
LCS1	sec-Butylbenzene	5	5.24	UGL	104.8	( 70-130 )
LCS2	sec-Butylbenzene	5	4.96	UGL	99.2	( 70-130 )
MBLK	sec-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	sec-Butylbenzene	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	sec-Butylbenzene	104.800	99.200	UGL	5.5	( 0-20 )
LCS1	Styrene	5	5.27	UGL	105.4	( 70-130 )
LCS2	Styrene	5	5.07	UGL	101.4	( 70-130 )
MBLK	Styrene	ND	<0.5	UGL		
MRL_CHK	Styrene	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	Styrene	105.400	101.400	UGL	3.9	( 0-20 )
LCS1	1,2-dichloroethane-d4	100	118	%R	118.0	( 70-130 )
LCS2	1,2-dichloroethane-d4	100	121	%R	121.0	( 70-130 )
MBLK	1,2-dichloroethane-d4	100	123	%R	123.0	
MRL_CHK	1,2-dichloroethane-d4	100	119	%R	119.0	( 50-150 )
RPD_LCS	1,2-dichloroethane-d4	118.000	121.000	%R	2.5	( 0-20 )
LCS1	Toluene-d8	100	99	%R	99.0	( 70-130 )
LCS2	Toluene-d8	100	104	%R	104.0	( 70-130 )
MBLK	Toluene-d8	100	101	%R	101.0	
MRL_CHK	Toluene-d8	100	98	%R	98.0	( 50-150 )
RPD_LCS	Toluene-d8	99.000	104.000	%R	4.9	( 0-20 )
LCS1	4-Bromofluorobenzene	100	102	%R	102.0	( 70-130 )
LCS2	4-Bromofluorobenzene	100	99	%R	99.0	( 70-130 )
MBLK	4-Bromofluorobenzene	100	105	%R	105.0	
MRL_CHK	4-Bromofluorobenzene	100	104	%R	104.0	( 50-150 )
RPD_LCS	4-Bromofluorobenzene	102.000	99.000	%R	3.0	( 0-20 )
LCS1	trans-1,2-Dichloroethylene	5	5.14	UGL	102.8	( 70-130 )
LCS2	trans-1,2-Dichloroethylene	5	4.95	UGL	99.0	( 70-130 )
MBLK	trans-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	trans-1,2-Dichloroethylene	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	trans-1,2-Dichloroethylene	102.800	99.000	UGL	3.8	( 0-20 )

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SGS Environmental Services Inc.  
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LCS1	tert-amyl Methyl Ether	5	4.64	UGL	92.8	( 70-130 )
LCS2	tert-amyl Methyl Ether	5	4.74	UGL	94.8	( 70-130 )
MBLK	tert-amyl Methyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-amyl Methyl Ether	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	tert-amyl Methyl Ether	92.800	94.800	UGL	2.1	( 0-20 )
LCS1	tert-Butyl Ethyl Ether	5	4.86	UGL	97.2	( 70-130 )
LCS2	tert-Butyl Ethyl Ether	5	4.78	UGL	95.6	( 70-130 )
MBLK	tert-Butyl Ethyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-Butyl Ethyl Ether	0.500	0.43	UGL	86.0	( 50-150 )
RPD_LCS	tert-Butyl Ethyl Ether	97.200	95.600	UGL	1.7	( 0-20 )
LCS1	tert-Butylbenzene	5	5.21	UGL	104.2	( 70-130 )
LCS2	tert-Butylbenzene	5	4.96	UGL	99.2	( 70-130 )
MBLK	tert-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	tert-Butylbenzene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	tert-Butylbenzene	104.200	99.200	UGL	4.9	( 0-20 )
LCS1	Trichloroethylene (TCE)	5	4.74	UGL	94.8	( 70-130 )
LCS2	Trichloroethylene (TCE)	5	4.79	UGL	95.8	( 70-130 )
MBLK	Trichloroethylene (TCE)	ND	<0.5	UGL		
MRL_CHK	Trichloroethylene (TCE)	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Trichloroethylene (TCE)	94.800	95.800	UGL	1.0	( 0-20 )
LCS1	Trichlorotrifluoroethane (Freon	5	5.54	UGL	110.8	( 70-130 )
LCS2	Trichlorotrifluoroethane (Freon	5	5.33	UGL	106.6	( 70-130 )
MBLK	Trichlorotrifluoroethane (Freon	ND	<0.5	UGL		
MRL_CHK	Trichlorotrifluoroethane (Freon	0.500	0.67	UGL	134.0	( 50-150 )
RPD_LCS	Trichlorotrifluoroethane (Freon	110.800	106.600	UGL	3.9	( 0-20 )
LCS1	trans-1,3-Dichloropropene	5	4.80	UGL	96.0	( 70-130 )
LCS2	trans-1,3-Dichloropropene	5	4.68	UGL	93.6	( 70-130 )
MBLK	trans-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	trans-1,3-Dichloropropene	0.500	0.42	UGL	84.0	( 50-150 )
RPD_LCS	trans-1,3-Dichloropropene	96.000	93.600	UGL	2.5	( 0-20 )
LCS1	Toluene	5	5.06	UGL	101.2	( 70-130 )
LCS2	Toluene	5	4.93	UGL	98.6	( 70-130 )
MBLK	Toluene	ND	<0.5	UGL		
MRL_CHK	Toluene	0.500	0.56	UGL	112.0	( 50-150 )
RPD_LCS	Toluene	101.200	98.600	UGL	2.6	( 0-20 )
LCS1	Vinyl chloride (VC)	5	5.34	UGL	106.8	( 70-130 )

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SGS Environmental Services Inc.  
(continued)

LCS2	Vinyl chloride (VC)	5	4.79	UGL	95.8	( 70-130 )
MBLK	Vinyl chloride (VC)	ND	<0.3	UGL		
MRL_CHK	Vinyl chloride (VC)	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	Vinyl chloride (VC)	106.800	95.800	UGL	10.9	( 0-20 )

QC Ref #343535      Regulated VOCs plus Lists 1&3

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	1,1,1,2-Tetrachloroethane	5	4.65	UGL	93.0	( 70-130 )	
LCS2	1,1,1,2-Tetrachloroethane	5	4.76	UGL	95.2	( 70-130 )	
MBLK	1,1,1,2-Tetrachloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1,2-Tetrachloroethane	0.500	0.46	UGL	92.0	( 50-150 )	
RPD_LCS	1,1,1,2-Tetrachloroethane	93.000	95.200	UGL	2.3	( 0-20 )	
LCS1	1,1,1-Trichloroethane	5	4.98	UGL	99.6	( 70-130 )	
LCS2	1,1,1-Trichloroethane	5	4.56	UGL	91.2	( 70-130 )	
MBLK	1,1,1-Trichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,1-Trichloroethane	0.500	0.57	UGL	114.0	( 50-150 )	
RPD_LCS	1,1,1-Trichloroethane	99.600	91.200	UGL	8.8	( 0-20 )	
LCS1	1,1,2,2-Tetrachloroethane	5	4.84	UGL	96.8	( 70-130 )	
LCS2	1,1,2,2-Tetrachloroethane	5	5.14	UGL	102.8	( 70-130 )	
MBLK	1,1,2,2-Tetrachloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,2,2-Tetrachloroethane	0.500	0.52	UGL	104.0	( 50-150 )	
RPD_LCS	1,1,2,2-Tetrachloroethane	96.800	102.800	UGL	6.0	( 0-20 )	
LCS1	1,1,2-Trichloroethane	5	5.36	UGL	107.2	( 70-130 )	
LCS2	1,1,2-Trichloroethane	5	4.95	UGL	99.0	( 70-130 )	
MBLK	1,1,2-Trichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1,2-Trichloroethane	0.500	0.64	UGL	128.0	( 50-150 )	
RPD_LCS	1,1,2-Trichloroethane	107.200	99.000	UGL	8.0	( 0-20 )	
LCS1	1,1-Dichloroethane	5	4.92	UGL	98.4	( 70-130 )	
LCS2	1,1-Dichloroethane	5	4.66	UGL	93.2	( 70-130 )	
MBLK	1,1-Dichloroethane	ND	<0.5	UGL			
MRL_CHK	1,1-Dichloroethane	0.500	0.50	UGL	100.0	( 50-150 )	
RPD_LCS	1,1-Dichloroethane	98.400	93.200	UGL	5.4	( 0-20 )	
LCS1	1,1-Dichloroethylene	5	5.36	UGL	107.2	( 70-130 )	
LCS2	1,1-Dichloroethylene	5	4.89	UGL	97.8	( 70-130 )	

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MBLK	1,1-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	1,1-Dichloroethylene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	1,1-Dichloroethylene	107.200	97.800	UGL	9.2	( 0-20 )
LCS1	1,1-Dichloropropene	5	5.30	UGL	106.0	( 70-130 )
LCS2	1,1-Dichloropropene	5	4.99	UGL	99.8	( 70-130 )
MBLK	1,1-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	1,1-Dichloropropene	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	1,1-Dichloropropene	106.000	99.800	UGL	6.0	( 0-20 )
LCS1	1,2,3-Trichlorobenzene	5	5.11	UGL	102.2	( 70-130 )
LCS2	1,2,3-Trichlorobenzene	5	4.81	UGL	96.2	( 70-130 )
MBLK	1,2,3-Trichlorobenzene	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichlorobenzene	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	1,2,3-Trichlorobenzene	102.200	96.200	UGL	6.0	( 0-20 )
LCS1	1,2,3-Trichloropropane	5	4.69	UGL	93.8	( 70-130 )
LCS2	1,2,3-Trichloropropane	5	4.78	UGL	95.6	( 70-130 )
MBLK	1,2,3-Trichloropropane	ND	<0.5	UGL		
MRL_CHK	1,2,3-Trichloropropane	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	1,2,3-Trichloropropane	93.800	95.600	UGL	1.9	( 0-20 )
LCS1	1,2,4-Trichlorobenzene	5	4.69	UGL	93.8	( 70-130 )
LCS2	1,2,4-Trichlorobenzene	5	4.49	UGL	89.8	( 70-130 )
MBLK	1,2,4-Trichlorobenzene	ND	<0.5	UGL		
MRL_CHK	1,2,4-Trichlorobenzene	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	1,2,4-Trichlorobenzene	93.800	89.800	UGL	4.4	( 0-20 )
LCS1	1,2,4-Trimethylbenzene	5	4.98	UGL	99.6	( 70-130 )
LCS2	1,2,4-Trimethylbenzene	5	4.93	UGL	98.6	( 70-130 )
MBLK	1,2,4-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,2,4-Trimethylbenzene	0.500	0.43	UGL	86.0	( 50-150 )
RPD_LCS	1,2,4-Trimethylbenzene	99.600	98.600	UGL	1.0	( 0-20 )
LCS1	1,2-Dichloroethane	5	4.75	UGL	95.0	( 70-130 )
LCS2	1,2-Dichloroethane	5	4.58	UGL	91.6	( 70-130 )
MBLK	1,2-Dichloroethane	ND	<0.5	UGL		
MRL_CHK	1,2-Dichloroethane	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	1,2-Dichloroethane	95.000	91.600	UGL	3.6	( 0-20 )
LCS1	1,2-Dichloropropane	5	5.29	UGL	105.8	( 70-130 )
LCS2	1,2-Dichloropropane	5	5.13	UGL	102.6	( 70-130 )
MBLK	1,2-Dichloropropane	ND	<0.5	UGL		

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SGS Environmental Services Inc.  
(continued)

MRL_CHK	1,2-Dichloropropane	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	1,2-Dichloropropane	105.800	102.600	UGL	3.1	( 0-20 )
LCS1	1,3,5-Trimethylbenzene	5	5.03	UGL	100.6	( 70-130 )
LCS2	1,3,5-Trimethylbenzene	5	4.94	UGL	98.8	( 70-130 )
MBLK	1,3,5-Trimethylbenzene	ND	<0.5	UGL		
MRL_CHK	1,3,5-Trimethylbenzene	0.500	0.43	UGL	86.0	( 50-150 )
RPD_LCS	1,3,5-Trimethylbenzene	100.600	98.800	UGL	1.8	( 0-20 )
LCS1	1,3-Dichloropropane	5	5.35	UGL	107.0	( 70-130 )
LCS2	1,3-Dichloropropane	5	5.26	UGL	105.2	( 70-130 )
MBLK	1,3-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	1,3-Dichloropropane	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	1,3-Dichloropropane	107.000	105.200	UGL	1.7	( 0-20 )
LCS1	p-Dichlorobenzene (1,4-DCB)	5	5.14	UGL	102.8	( 70-130 )
LCS2	p-Dichlorobenzene (1,4-DCB)	5	5.04	UGL	100.8	( 70-130 )
MBLK	p-Dichlorobenzene (1,4-DCB)	ND	<0.5	UGL		
MRL_CHK	p-Dichlorobenzene (1,4-DCB)	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	p-Dichlorobenzene (1,4-DCB)	102.800	100.800	UGL	2.0	( 0-20 )
LCS1	2,2-Dichloropropane	5	4.83	UGL	96.6	( 70-130 )
LCS2	2,2-Dichloropropane	5	4.35	UGL	87.0	( 70-130 )
MBLK	2,2-Dichloropropane	ND	<0.5	UGL		
MRL_CHK	2,2-Dichloropropane	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	2,2-Dichloropropane	96.600	87.000	UGL	10.5	( 0-20 )
LCS1	2-Butanone (MEK)	50	53.7	UGL	107.4	( 70-130 )
LCS2	2-Butanone (MEK)	50	54.0	UGL	108.0	( 70-130 )
MBLK	2-Butanone (MEK)	ND	<5.0	UGL		
MRL_CHK	2-Butanone (MEK)	5.00	5.81	UGL	116.2	( 50-150 )
RPD_LCS	2-Butanone (MEK)	107.400	108.000	UGL	0.6	( 0-20 )
LCS1	o-Chlorotoluene	5	4.66	UGL	93.2	( 70-130 )
LCS2	o-Chlorotoluene	5	4.73	UGL	94.6	( 70-130 )
MBLK	o-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	o-Chlorotoluene	0.500	0.42	UGL	84.0	( 50-150 )
RPD_LCS	o-Chlorotoluene	93.200	94.600	UGL	1.5	( 0-20 )
LCS1	p-Chlorotoluene	5	4.82	UGL	96.4	( 70-130 )
LCS2	p-Chlorotoluene	5	4.97	UGL	99.4	( 70-130 )
MBLK	p-Chlorotoluene	ND	<0.5	UGL		
MRL_CHK	p-Chlorotoluene	0.500	0.46	UGL	92.0	( 50-150 )

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RPD_LCS	p-Chlorotoluene	96.400	99.400	UGL	3.1	( 0-20 )
LCS1	4-Methyl-2-Pentanone (MIBK)	50	59.0	UGL	118.0	( 70-130 )
LCS2	4-Methyl-2-Pentanone (MIBK)	50	56.1	UGL	112.2	( 70-130 )
MBLK	4-Methyl-2-Pentanone (MIBK)	ND	<5.0	UGL		
MRL_CHK	4-Methyl-2-Pentanone (MIBK)	5.00	5.48	UGL	109.6	( 50-150 )
RPD_LCS	4-Methyl-2-Pentanone (MIBK)	118.000	112.200	UGL	5.0	( 0-20 )
LCS1	Benzene	5	5.23	UGL	104.6	( 70-130 )
LCS2	Benzene	5	5.24	UGL	104.8	( 70-130 )
MBLK	Benzene	ND	<0.5	UGL		
MRL_CHK	Benzene	0.500	0.64	UGL	128.0	( 50-150 )
RPD_LCS	Benzene	104.600	104.800	UGL	0.2	( 0-20 )
LCS1	Bromobenzene	5	4.76	UGL	95.2	( 70-130 )
LCS2	Bromobenzene	5	4.78	UGL	95.6	( 70-130 )
MBLK	Bromobenzene	ND	<0.5	UGL		
MRL_CHK	Bromobenzene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Bromobenzene	95.200	95.600	UGL	0.4	( 0-20 )
LCS1	Bromomethane (Methyl Bromide)	5	5.43	UGL	108.6	( 70-130 )
LCS2	Bromomethane (Methyl Bromide)	5	4.77	UGL	95.4	( 70-130 )
MBLK	Bromomethane (Methyl Bromide)	ND	<0.5	UGL		
MRL_CHK	Bromomethane (Methyl Bromide)	0.500	0.65	UGL	130.0	( 50-150 )
RPD_LCS	Bromomethane (Methyl Bromide)	108.600	95.400	UGL	12.9	( 0-20 )
LCS1	Bromoethane	5	6.31	UGL	126.2	( 70-130 )
LCS2	Bromoethane	5	5.63	UGL	112.6	( 70-130 )
MBLK	Bromoethane	ND	<0.5	UGL		
MRL_CHK	Bromoethane	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Bromoethane	126.200	112.600	UGL	11.4	( 0-20 )
LCS1	cis-1,2-Dichloroethylene	5	5.39	UGL	107.8	( 70-130 )
LCS2	cis-1,2-Dichloroethylene	5	4.81	UGL	96.2	( 70-130 )
MBLK	cis-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	cis-1,2-Dichloroethylene	0.500	0.57	UGL	114.0	( 50-150 )
RPD_LCS	cis-1,2-Dichloroethylene	107.800	96.200	UGL	11.4	( 0-20 )
LCS1	Chlorobenzene	5	5.21	UGL	104.2	( 70-130 )
LCS2	Chlorobenzene	5	4.78	UGL	95.6	( 70-130 )
MBLK	Chlorobenzene	ND	<0.5	UGL		
MRL_CHK	Chlorobenzene	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Chlorobenzene	104.200	95.600	UGL	8.6	( 0-20 )

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LCS1	Carbon Tetrachloride	5	4.84	UGL	96.8	( 70-130 )
LCS2	Carbon Tetrachloride	5	4.41	UGL	88.2	( 70-130 )
MBLK	Carbon Tetrachloride	ND	<0.5	UGL		
MRL_CHK	Carbon Tetrachloride	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	Carbon Tetrachloride	96.800	88.200	UGL	9.3	( 0-20 )
LCS1	cis-1,3-Dichloropropene	5	4.73	UGL	94.6	( 70-130 )
LCS2	cis-1,3-Dichloropropene	5	4.60	UGL	92.0	( 70-130 )
MBLK	cis-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	cis-1,3-Dichloropropene	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	cis-1,3-Dichloropropene	94.600	92.000	UGL	2.8	( 0-20 )
LCS1	Bromoform	5	4.16	UGL	83.2	( 70-130 )
LCS2	Bromoform	5	4.22	UGL	84.4	( 70-130 )
MBLK	Bromoform	ND	<0.5	UGL		
MRL_CHK	Bromoform	0.500	0.47	UGL	94.0	( 50-150 )
RPD_LCS	Bromoform	83.200	84.400	UGL	1.4	( 0-20 )
LCS1	Chloroform (Trichloromethane)	5	4.94	UGL	98.8	( 70-130 )
LCS2	Chloroform (Trichloromethane)	5	4.63	UGL	92.6	( 70-130 )
MBLK	Chloroform (Trichloromethane)	ND	<0.5	UGL		
MRL_CHK	Chloroform (Trichloromethane)	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	Chloroform (Trichloromethane)	98.800	92.600	UGL	6.5	( 0-20 )
LCS1	Bromochloromethane	5	5.13	UGL	102.6	( 70-130 )
LCS2	Bromochloromethane	5	4.91	UGL	98.2	( 70-130 )
MBLK	Bromochloromethane	ND	<0.5	UGL		
MRL_CHK	Bromochloromethane	0.500	0.46	UGL	92.0	( 50-150 )
RPD_LCS	Bromochloromethane	102.600	98.200	UGL	4.4	( 0-20 )
LCS1	Chloroethane	5	5.57	UGL	111.4	( 70-130 )
LCS2	Chloroethane	5	5.21	UGL	104.2	( 70-130 )
MBLK	Chloroethane	ND	<0.5	UGL		
MRL_CHK	Chloroethane	0.500	0.66	UGL	132.0	( 50-150 )
RPD_LCS	Chloroethane	111.400	104.200	UGL	6.7	( 0-20 )
LCS1	Chloromethane (Methyl Chloride)	5	5.09	UGL	101.8	( 70-130 )
LCS2	Chloromethane (Methyl Chloride)	5	4.74	UGL	94.8	( 70-130 )
MBLK	Chloromethane (Methyl Chloride)	ND	<0.5	UGL		
MRL_CHK	Chloromethane (Methyl Chloride)	0.500	0.70	UGL	140.0	( 50-150 )
RPD_LCS	Chloromethane (Methyl Chloride)	101.800	94.800	UGL	7.1	( 0-20 )
LCS1	Chlorodibromomethane	5	4.78	UGL	95.6	( 70-130 )

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LCS2	Chlorodibromomethane	5	4.52	UGL	90.4	( 70-130 )
MBLK	Chlorodibromomethane	ND	<0.5	UGL		
MRL_CHK	Chlorodibromomethane	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	Chlorodibromomethane	95.600	90.400	UGL	5.6	( 0-20 )
LCS1	Dibromomethane	5	5.10	UGL	102.0	( 70-130 )
LCS2	Dibromomethane	5	4.79	UGL	95.8	( 70-130 )
MBLK	Dibromomethane	ND	<0.5	UGL		
MRL_CHK	Dibromomethane	0.500	0.52	UGL	104.0	( 50-150 )
RPD_LCS	Dibromomethane	102.000	95.800	UGL	6.3	( 0-20 )
LCS1	Bromodichloromethane	5	4.70	UGL	94.0	( 70-130 )
LCS2	Bromodichloromethane	5	4.44	UGL	88.8	( 70-130 )
MBLK	Bromodichloromethane	ND	<0.5	UGL		
MRL_CHK	Bromodichloromethane	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	Bromodichloromethane	94.000	88.800	UGL	5.7	( 0-20 )
LCS1	Dichloromethane	5	5.10	UGL	102.0	( 70-130 )
LCS2	Dichloromethane	5	4.44	UGL	88.8	( 70-130 )
MBLK	Dichloromethane	ND	<0.5	UGL		
MRL_CHK	Dichloromethane	0.500	0.53	UGL	106.0	( 50-150 )
RPD_LCS	Dichloromethane	102.000	88.800	UGL	13.8	( 0-20 )
LCS1	Di-isopropyl ether	5	5.14	UGL	102.8	( 70-130 )
LCS2	Di-isopropyl ether	5	4.75	UGL	95.0	( 70-130 )
MBLK	Di-isopropyl ether	ND	<3.0	UGL		
MRL_CHK	Di-isopropyl ether	0.500	0.59	UGL	118.0	( 50-150 )
RPD_LCS	Di-isopropyl ether	102.800	95.000	UGL	7.9	( 0-20 )
LCS1	Ethyl benzene	5	5.31	UGL	106.2	( 70-130 )
LCS2	Ethyl benzene	5	4.93	UGL	98.6	( 70-130 )
MBLK	Ethyl benzene	ND	<0.5	UGL		
MRL_CHK	Ethyl benzene	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	Ethyl benzene	106.200	98.600	UGL	7.4	( 0-20 )
LCS1	Dichlorodifluoromethane	5	4.56	UGL	91.2	( 70-130 )
LCS2	Dichlorodifluoromethane	5	4.10	UGL	82.0	( 70-130 )
MBLK	Dichlorodifluoromethane	ND	<0.5	UGL		
MRL_CHK	Dichlorodifluoromethane	0.500	0.60	UGL	120.0	( 50-150 )
RPD_LCS	Dichlorodifluoromethane	91.200	82.000	UGL	10.6	( 0-20 )
LCS1	Fluorotrichloromethane-Freon11	5	4.95	UGL	99.0	( 70-130 )
LCS2	Fluorotrichloromethane-Freon11	5	4.38	UGL	87.6	( 70-130 )

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MBLK	Fluorotrichloromethane-Freon11	ND	<0.5	UGL		
MRL_CHK	Fluorotrichloromethane-Freon11	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	Fluorotrichloromethane-Freon11	99.000	87.600	UGL	12.2	( 0-20 )
LCS1	Hexachlorobutadiene	5	4.97	UGL	99.4	( 70-130 )
LCS2	Hexachlorobutadiene	5	4.71	UGL	94.2	( 70-130 )
MBLK	Hexachlorobutadiene	ND	<0.5	UGL		
MRL_CHK	Hexachlorobutadiene	0.500	0.66	UGL	132.0	( 50-150 )
RPD_LCS	Hexachlorobutadiene	99.400	94.200	UGL	5.4	( 0-20 )
LCS1	Isopropylbenzene	5	4.73	UGL	94.6	( 70-130 )
LCS2	Isopropylbenzene	5	4.71	UGL	94.2	( 70-130 )
MBLK	Isopropylbenzene	ND	<0.5	UGL		
MRL_CHK	Isopropylbenzene	0.500	0.40	UGL	80.0	( 50-150 )
RPD_LCS	Isopropylbenzene	94.600	94.200	UGL	0.4	( 0-20 )
LCS1	m-Dichlorobenzene (1,3-DCB)	5	4.83	UGL	96.6	( 70-130 )
LCS2	m-Dichlorobenzene (1,3-DCB)	5	4.94	UGL	98.8	( 70-130 )
MBLK	m-Dichlorobenzene (1,3-DCB)	ND	<0.5	UGL		
MRL_CHK	m-Dichlorobenzene (1,3-DCB)	0.500	0.51	UGL	102.0	( 50-150 )
RPD_LCS	m-Dichlorobenzene (1,3-DCB)	96.600	98.800	UGL	2.3	( 0-20 )
LCS1	m,p-Xylenes	10	10.9	UGL	109.0	( 70-130 )
LCS2	m,p-Xylenes	10	10.2	UGL	102.0	( 70-130 )
MBLK	m,p-Xylenes	ND	<1.0	UGL		
MRL_CHK	m,p-Xylenes	1.00	0.86	UGL	86.0	( 50-150 )
RPD_LCS	m,p-Xylenes	109.000	102.000	UGL	6.6	( 0-20 )
LCS1	Methyl Tert-butyl ether (MTBE)	5	4.51	UGL	90.2	( 70-130 )
LCS2	Methyl Tert-butyl ether (MTBE)	5	4.16	UGL	83.2	( 70-130 )
MBLK	Methyl Tert-butyl ether (MTBE)	ND	<0.5	UGL		
MRL_CHK	Methyl Tert-butyl ether (MTBE)	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	Methyl Tert-butyl ether (MTBE)	90.200	83.200	UGL	8.1	( 0-20 )
LCS1	Naphthalene	5	5.03	UGL	100.6	( 70-130 )
LCS2	Naphthalene	5	4.85	UGL	97.0	( 70-130 )
MBLK	Naphthalene	ND	<0.5	UGL		
MRL_CHK	Naphthalene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	Naphthalene	100.600	97.000	UGL	3.6	( 0-20 )
LCS1	n-Butylbenzene	5	5.30	UGL	106.0	( 70-130 )
LCS2	n-Butylbenzene	5	5.15	UGL	103.0	( 70-130 )
MBLK	n-Butylbenzene	ND	<0.5	UGL		

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MRL_CHK	n-Butylbenzene	0.500	0.50	UGL	100.0	( 50-150 )
RPD_LCS	n-Butylbenzene	106.000	103.000	UGL	2.9	( 0-20 )
LCS1	n-Propylbenzene	5	4.72	UGL	94.4	( 70-130 )
LCS2	n-Propylbenzene	5	4.89	UGL	97.8	( 70-130 )
MBLK	n-Propylbenzene	ND	<0.5	UGL		
MRL_CHK	n-Propylbenzene	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	n-Propylbenzene	94.400	97.800	UGL	3.5	( 0-20 )
LCS1	o-Xylene	5	4.98	UGL	99.6	( 70-130 )
LCS2	o-Xylene	5	4.48	UGL	89.6	( 70-130 )
MBLK	o-Xylene	ND	<0.5	UGL		
MRL_CHK	o-Xylene	0.500	0.48	UGL	96.0	( 50-150 )
RPD_LCS	o-Xylene	99.600	89.600	UGL	10.6	( 0-20 )
LCS1	o-Dichlorobenzene (1,2-DCB)	5	5.27	UGL	105.4	( 70-130 )
LCS2	o-Dichlorobenzene (1,2-DCB)	5	5.26	UGL	105.2	( 70-130 )
MBLK	o-Dichlorobenzene (1,2-DCB)	ND	<0.5	UGL		
MRL_CHK	o-Dichlorobenzene (1,2-DCB)	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	o-Dichlorobenzene (1,2-DCB)	105.400	105.200	UGL	0.2	( 0-20 )
LCS1	Tetrachloroethylene (PCE)	5	5.13	UGL	102.6	( 70-130 )
LCS2	Tetrachloroethylene (PCE)	5	4.94	UGL	98.8	( 70-130 )
MBLK	Tetrachloroethylene (PCE)	ND	<0.5	UGL		
MRL_CHK	Tetrachloroethylene (PCE)	0.500	0.58	UGL	116.0	( 50-150 )
RPD_LCS	Tetrachloroethylene (PCE)	102.600	98.800	UGL	3.8	( 0-20 )
LCS1	p-Isopropyltoluene	5	4.79	UGL	95.8	( 70-130 )
LCS2	p-Isopropyltoluene	5	4.78	UGL	95.6	( 70-130 )
MBLK	p-Isopropyltoluene	ND	<0.5	UGL		
MRL_CHK	p-Isopropyltoluene	0.500	0.42	UGL	84.0	( 50-150 )
RPD_LCS	p-Isopropyltoluene	95.800	95.600	UGL	0.2	( 0-20 )
LCS1	sec-Butylbenzene	5	4.81	UGL	96.2	( 70-130 )
LCS2	sec-Butylbenzene	5	4.81	UGL	96.2	( 70-130 )
MBLK	sec-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	sec-Butylbenzene	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	sec-Butylbenzene	96.200	96.200	UGL	0.0	( 0-20 )
LCS1	Styrene	5	5.37	UGL	107.4	( 70-130 )
LCS2	Styrene	5	4.96	UGL	99.2	( 70-130 )
MBLK	Styrene	ND	<0.5	UGL		
MRL_CHK	Styrene	0.500	0.42	UGL	84.0	( 50-150 )

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RPD_LCS	Styrene	107.400	99.200	UGL	7.9	( 0-20 )
LCS1	1,2-dichloroethane-d4	100	96	%R	96.0	( 70-130 )
LCS2	1,2-dichloroethane-d4	100	94	%R	94.0	( 70-130 )
MBLK	1,2-dichloroethane-d4	100	102	%R	102.0	
MRL_CHK	1,2-dichloroethane-d4	100	95	%R	95.0	( 50-150 )
RPD_LCS	1,2-dichloroethane-d4	96.000	94.000	%R	2.1	( 0-20 )
LCS1	Toluene-d8	100	109	%R	109.0	( 70-130 )
LCS2	Toluene-d8	100	108	%R	108.0	( 70-130 )
MBLK	Toluene-d8	100	90	%R	90.0	
MRL_CHK	Toluene-d8	100	102	%R	102.0	( 50-150 )
RPD_LCS	Toluene-d8	109.000	108.000	%R	0.9	( 0-20 )
LCS1	4-Bromofluorobenzene	100	96	%R	96.0	( 70-130 )
LCS2	4-Bromofluorobenzene	100	97	%R	97.0	( 70-130 )
MBLK	4-Bromofluorobenzene	100	93	%R	93.0	
MRL_CHK	4-Bromofluorobenzene	100	95	%R	95.0	( 50-150 )
RPD_LCS	4-Bromofluorobenzene	96.000	97.000	%R	1.0	( 0-20 )
LCS1	trans-1,2-Dichloroethylene	5	5.25	UGL	105.0	( 70-130 )
LCS2	trans-1,2-Dichloroethylene	5	4.92	UGL	98.4	( 70-130 )
MBLK	trans-1,2-Dichloroethylene	ND	<0.5	UGL		
MRL_CHK	trans-1,2-Dichloroethylene	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	trans-1,2-Dichloroethylene	105.000	98.400	UGL	6.5	( 0-20 )
LCS1	tert-amyl Methyl Ether	5	4.42	UGL	88.4	( 70-130 )
LCS2	tert-amyl Methyl Ether	5	4.25	UGL	85.0	( 70-130 )
MBLK	tert-amyl Methyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-amyl Methyl Ether	0.500	0.44	UGL	88.0	( 50-150 )
RPD_LCS	tert-amyl Methyl Ether	88.400	85.000	UGL	3.9	( 0-20 )
LCS1	tert-Butyl Ethyl Ether	5	5.09	UGL	101.8	( 70-130 )
LCS2	tert-Butyl Ethyl Ether	5	4.85	UGL	97.0	( 70-130 )
MBLK	tert-Butyl Ethyl Ether	ND	<3.0	UGL		
MRL_CHK	tert-Butyl Ethyl Ether	0.500	0.49	UGL	98.0	( 50-150 )
RPD_LCS	tert-Butyl Ethyl Ether	101.800	97.000	UGL	4.8	( 0-20 )
LCS1	tert-Butylbenzene	5	4.50	UGL	90.0	( 70-130 )
LCS2	tert-Butylbenzene	5	4.40	UGL	88.0	( 70-130 )
MBLK	tert-Butylbenzene	ND	<0.5	UGL		
MRL_CHK	tert-Butylbenzene	0.500	0.40	UGL	80.0	( 50-150 )
RPD_LCS	tert-Butylbenzene	90.000	88.000	UGL	2.2	( 0-20 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates  
are advisory only, unless otherwise specified in the method.



**MWH Laboratories**  
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3829  
Tel: 626 386 1100  
Fax: 626 386 1101  
1 800 566 LABS (1 800 566 5227)

Laboratory  
QC Report  
#189947

SGS Environmental Services Inc.  
(continued)

LCS1	Trichloroethylene (TCE)	5	5.28	UGL	105.6	( 70-130 )
LCS2	Trichloroethylene (TCE)	5	4.99	UGL	99.8	( 70-130 )
MBLK	Trichloroethylene (TCE)	ND	<0.5	UGL		
MRL_CHK	Trichloroethylene (TCE)	0.500	0.62	UGL	124.0	( 50-150 )
RPD_LCS	Trichloroethylene (TCE)	105.600	99.800	UGL	5.6	( 0-20 )
LCS1	Trichlorotrifluoroethane (Freon	5	5.31	UGL	106.2	( 70-130 )
LCS2	Trichlorotrifluoroethane (Freon	5	4.83	UGL	96.6	( 70-130 )
MBLK	Trichlorotrifluoroethane (Freon	ND	<0.5	UGL		
MRL_CHK	Trichlorotrifluoroethane (Freon	0.500	0.55	UGL	110.0	( 50-150 )
RPD_LCS	Trichlorotrifluoroethane (Freon	106.200	96.600	UGL	9.5	( 0-20 )
LCS1	trans-1,3-Dichloropropene	5	4.64	UGL	92.8	( 70-130 )
LCS2	trans-1,3-Dichloropropene	5	4.47	UGL	89.4	( 70-130 )
MBLK	trans-1,3-Dichloropropene	ND	<0.5	UGL		
MRL_CHK	trans-1,3-Dichloropropene	0.500	0.45	UGL	90.0	( 50-150 )
RPD_LCS	trans-1,3-Dichloropropene	92.800	89.400	UGL	3.7	( 0-20 )
LCS1	Toluene	5	5.38	UGL	107.6	( 70-130 )
LCS2	Toluene	5	5.17	UGL	103.4	( 70-130 )
MBLK	Toluene	ND	<0.5	UGL		
MRL_CHK	Toluene	0.500	0.54	UGL	108.0	( 50-150 )
RPD_LCS	Toluene	107.600	103.400	UGL	4.0	( 0-20 )
LCS1	Vinyl chloride (VC)	5	5.21	UGL	104.2	( 70-130 )
LCS2	Vinyl chloride (VC)	5	4.72	UGL	94.4	( 70-130 )
MBLK	Vinyl chloride (VC)	ND	<0.3	UGL		
MRL_CHK	Vinyl chloride (VC)	0.500	0.62	UGL	124.0	( 50-150 )
RPD_LCS	Vinyl chloride (VC)	104.200	94.400	UGL	9.9	( 0-20 )

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates  
are advisory only, unless otherwise specified in the method.



## Laboratory Data Review Checklist

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes     No

Comments:

Work performed by MWH Laboratories

### 2. Chain of Custody (COC)

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

Yes     No

Comments:

- b. Correct analyses requested?

Yes     No

Comments:

VOC (524)

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes     No

Comments:

5C

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes     No

Comments:

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes     No

Comments:



d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes    No   Comments:

No discrepancies noted.

e. Data quality or usability affected? Explain.

Comments:

Data quality unaffected.

#### 4. Case Narrative

a. Present and understandable?

Yes    No   Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes    No   Comments:

Three QC flags indicated.

c. Were all corrective actions documented?

Yes    No   Comments:

No corrective actions required.

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

Comments:

No effect on data quality/usability.

#### 5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes    No   Comments:

b. All applicable holding times met?

Yes    No   Comments:

c. All soils reported on a dry weight basis?

Yes  No

Comments:

Not Applicable

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

6. QC Samples

a. Method Blank

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

Yes  No

Comments:

ii. All method blank results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable.

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

Yes  No

Comments:

Not applicable

v. Data quality or usability affected? Explain.

Comments:

Data quality not affected.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No Comments:

Not applicable.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No Comments:

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

Comments:

Not applicable

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

Yes  No Comments:

Not applicable

vii. Data quality or usability affected? Explain.

Comments:

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes    No                      Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes    No                      Comments:

No failed surrogate recoveries.

iv. Data quality or usability affected? Explain.

Comments:

Not applicable.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes    No                      Comments:

ii. All results less than PQL?

Yes    No                      Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable.

iv. Data quality or usability affected? Explain.

Comments:

Not applicable.

e. Field Duplicate

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

Yes    No                      Comments:

ii. Submitted blind to lab?

Yes    No

Comments:

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

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

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes    No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Not applicable

f. Decontamination or Equipment Blank (if applicable)

Yes    No    Not Applicable

i. All results less than PQL?

Yes    No

Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable

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

a. Defined and appropriate?

Yes     No

Comments:

Completed by:

Dave Miller

Title:

Environmental Scientist

Date:

March 15, 2007

CS Report Name:

MWH report for SGS

Report Date:

December 01, 2006

Consultant Firm:

Nortech

Laboratory Name:

MWH/SGS

Laboratory Report Number:

189947

ADEC File Number:

Not applicable

ADEC RecKey Number:

Not applicable





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

Project: 06-1080  
Client: Nortech  
SGS Work Order: 1067007

Released by:

A handwritten signature in black ink that reads "Stephen C. Ede".

Alaska Division Technical Director

Stephen C. Ede  
2006.12.12  
16:36:06 -09'00'

**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** NORTECH Nortech  
**Workorder** 1067007 06-1080

**Printed Date/Time** 12/12/2006 16:19

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

---

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

---

**1067007001 PS S-3**  
DRO - The pattern is consistent with a weathered middle distillate.

**1067007003 PS S-5**

**1067007004 PS S-6**  
DRO - The pattern is consistent with a weathered middle distillate.



# Laboratory Analysis Report

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

Peter Beardsley  
Nortech  
2400 College Rd.  
Fairbanks, AK 99709

**Work Order:** 1067007  
06-1080  
**Client:** Nortech  
**Report Date:** December 12, 2006

**Released by:**

Alaska Division Technical Director

**Stephen C. Ede**  
2006.12.12  
16:36:24 -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.
- 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.#** 1067007001  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** S-3  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 12/12/2006 16:19  
**Collected Date/Time** 12/01/2006 16:15  
**Received Date/Time** 12/06/2006 9:15  
**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
<b><u>Volatile Fuels Department</u></b>									
Benzene	75.9	12.8	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Toluene	1230	51.1	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Ethylbenzene	1840	51.1	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
P & M -Xylene	6190	51.1	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
o-Xylene	2790	51.1	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	106		%	SW8021B	A	81-108	12/01/06	12/07/06	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	1140	45.5	mg/Kg	AK102	B		12/07/06	12/08/06	JE
<b>Surrogates</b>									
5a Androstane <surr>	99.7		%	AK102	B	50-150	12/07/06	12/08/06	JE
<b><u>Solids</u></b>									
Total Solids	85.1		%	SM20 2540G	B			12/07/06	DNA



**SGS Ref.#** 1067007002  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** S-4  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 12/12/2006 16:19  
**Collected Date/Time** 12/01/2006 17:30  
**Received Date/Time** 12/06/2006 9:15  
**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>									
Benzene	ND	11.9	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Toluene	ND	47.5	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Ethylbenzene	ND	47.5	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
P & M -Xylene	ND	47.5	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
o-Xylene	ND	47.5	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	99.2		%	SW8021B	A	81-108	12/01/06	12/07/06	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	22.5	mg/Kg	AK102	B		12/07/06	12/08/06	JE
<b><u>Surrogates</u></b>									
5a Androstane <surr>	56.3		%	AK102	B	50-150	12/07/06	12/08/06	JE
<b><u>Solids</u></b>									
Total Solids	88.9		%	SM20 2540G	B			12/07/06	DNA



SGS Ref.# 1067007003  
Client Name Nortech  
Project Name/# 06-1080  
Client Sample ID S-5  
Matrix Soil/Solid

All Dates/Times are Alaska Standard Time  
Printed Date/Time 12/12/2006 16:19  
Collected Date/Time 12/01/2006 17:45  
Received Date/Time 12/06/2006 9:15  
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>									
Benzene	ND	16.1	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Toluene	ND	64.3	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Ethylbenzene	ND	64.3	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
P & M -Xylene	ND	64.3	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
o-Xylene	ND	64.3	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	101		%	SW8021B	A	81-108	12/01/06	12/07/06	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	23.0	mg/Kg	AK102	B		12/07/06	12/11/06	JE
<b>Surrogates</b>									
5a Androstane <surr>	59.2		%	AK102	B	50-150	12/07/06	12/11/06	JE
<b><u>Solids</u></b>									
Total Solids	85.9		%	SM20 2540G	B			12/07/06	DNA



**SGS Ref.#** 1067007004  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** S-6  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 12/12/2006 16:19  
**Collected Date/Time** 12/01/2006 16:20  
**Received Date/Time** 12/06/2006 9:15  
**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
<b><u>Volatile Fuels Department</u></b>									
Benzene	ND	10.7	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Toluene	45.6	42.9	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Ethylbenzene	107	42.9	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
P & M -Xylene	459	42.9	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
o-Xylene	202	42.9	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	102		%	SW8021B	A	81-108	12/01/06	12/07/06	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	452	22.5	mg/Kg	AK102	B		12/07/06	12/08/06	JE
<b>Surrogates</b>									
5a Androstane <surr>	112		%	AK102	B	50-150	12/07/06	12/08/06	JE
<b><u>Solids</u></b>									
Total Solids	87.9		%	SM20 2540G	B			12/07/06	DNA



**SGS Ref.#** 1067007005  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** Trip Blank  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 12/12/2006 16:19  
**Collected Date/Time** 12/01/2006 16:20  
**Received Date/Time** 12/06/2006 9:15  
**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>									
Benzene	ND	12.7	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Toluene	ND	50.8	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
Ethylbenzene	ND	50.8	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
P & M -Xylene	ND	50.8	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
o-Xylene	ND	50.8	ug/Kg	SW8021B	A		12/01/06	12/07/06	HM
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	92.7		%	SW8021B	A	81-108	12/01/06	12/07/06	HM
<b><u>Solids</u></b>									
Total Solids	100		%	SM20 2540G	A			12/07/06	DNA



SGS Ref.# 744476 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch XXX17631  
Method SW3550B  
Date 12/07/2006

QC results affect the following production samples:  
1067007001, 1067007002, 1067007003, 1067007004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>					
Diesel Range Organics	ND	19.9	1.99	mg/Kg	12/08/06
<b>Surrogates</b>					
5a Androstane <surr>	62.3	60-120		%	12/08/06
Batch	XFC7256				
Method	AK102				
Instrument	HP 5890 Series II FID SV D R				





SGS Ref.# 744605 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch VXX16323  
Method AK101  
Date 12/07/2006

QC results affect the following production samples:

1067007001, 1067007002, 1067007003, 1067007004, 1067007005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Benzene	ND	12.5	4.00	ug/Kg	12/07/06
Toluene	ND	50.0	15.0	ug/Kg	12/07/06
Ethylbenzene	ND	50.0	15.0	ug/Kg	12/07/06
P & M -Xylene	ND	50.0	15.0	ug/Kg	12/07/06
o-Xylene	ND	50.0	15.0	ug/Kg	12/07/06

**Surrogates**

1,4-Difluorobenzene <surr>	107	81-108		%	12/07/06
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Batch VFC8218  
Method SW8021B  
Instrument HP 5890 Series II PID+FID VCA



SGS Ref.# 744611 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch  
Method  
Date

QC results affect the following production samples:

1067007001, 1067007002, 1067007003, 1067007004, 1067007005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
-----------	---------	----------------------------	-----	-------	------------------

**Solids**

Total Solids	99.9			%	12/07/06
Batch	SPT7092				
Method	SM20 2540G				
Instrument					



SGS Ref.# 744612 Duplicate  
Client Name Nortech  
Project Name/# 06-1080  
Original 1067007003  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch  
Method  
Date

QC results affect the following production samples:  
1067007001, 1067007002, 1067007003, 1067007004, 1067007005

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
-----------	-----------------	-----------	-------	-----	------------	---------------

**Solids**

Total Solids	85.9	85.4	%	1	(< 5)	12/07/2006
Batch	SPT7092					
Method	SM20 2540G					
Instrument						



SGS Ref.# 744477 Lab Control Sample  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch XXX17631  
Method SW3550B  
Date 12/07/2006

QC results affect the following production samples:  
1067007001, 1067007002, 1067007003, 1067007004

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

**Semivolatile Organic Fuels Department**

Diesel Range Organics LCS 25.0 76 ( 75-125 ) 32.8 mg/Kg 12/08/2006

**Surrogates**

5a Androstane <surr> LCS 78 ( 60-120 ) 12/08/2006

Batch XFC7256  
Method AK102  
Instrument HP 5890 Series II FID SV D R



SGS Ref.# 744606 Lab Control Sample  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 12/12/2006 16:19  
Prep Batch VXX16323  
Method AK101  
Date 12/07/2006

QC results affect the following production samples:  
1067007001, 1067007002, 1067007003, 1067007004, 1067007005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS 1140	91	( 84-115 )			1250 ug/Kg	12/07/2006
Toluene	LCS 1140	92	( 90-119 )			1250 ug/Kg	12/07/2006
Ethylbenzene	LCS 1220	98	( 88-122 )			1250 ug/Kg	12/07/2006
P & M -Xylene	LCS 2420	97	( 91-121 )			2500 ug/Kg	12/07/2006
o-Xylene	LCS 1160	93	( 88-114 )			1250 ug/Kg	12/07/2006
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS	103	( 81-108 )				12/07/2006

Batch VFC8218  
Method SW8021B  
Instrument HP 5890 Series II PID+FID VCA



**SGS Ref.#** 744526 Matrix Spike **Printed Date/Time** 12/12/2006 16:19  
 744527 Matrix Spike Duplicate **Prep Batch** XXX17631  
**Method** Sonication Extraction Soil AK1  
**Date** 12/07/2006  
**Original** 1067007002  
**Matrix** Soil/Solid

QC results affect the following production samples:  
 1067007001, 1067007002, 1067007003, 1067007004

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Semivolatile Organic Fuels Department</b>									
Diesel Range Organics	MS	ND	30.9	83	( 60-140 )			37.3 mg/Kg	12/08/2006
	MSD		26.4	71		16	(< 50 )	37.5 mg/Kg	12/08/2006
<b>Surrogates</b>									
5a Androstane <surr>	MS		2.29	62	( 50-150 )				12/08/2006
	MSD		2.22	59		4			12/08/2006
<b>Batch</b>	XFC7256								
<b>Method</b>	AK102								
<b>Instrument</b>	HP 5890 Series II FID SV D R								



SGS Ref.# 744619 Matrix Spike  
 744620 Matrix Spike Duplicate

Printed Date/Time 12/12/2006 16:19  
 Prep Batch VXX16323  
 Method AK101 Extraction (S)  
 Date 12/07/2006

Original 744618  
 Matrix Soil/Solid

QC results affect the following production samples:  
 1067007001, 1067007002, 1067007003, 1067007004, 1067007005

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Volatile Fuels Department</b>									
Benzene	MS	ND	991	94	( 84-115 )			1060	ug/Kg 12/07/2006
	MSD		986	93		0	(< 20 )	1060	ug/Kg 12/07/2006
Toluene	MS	ND	1040	98	( 90-119 )			1060	ug/Kg 12/07/2006
	MSD		1040	99		1	(< 20 )	1060	ug/Kg 12/07/2006
Ethylbenzene	MS	ND	1090	103	( 88-122 )			1060	ug/Kg 12/07/2006
	MSD		1100	104		1	(< 20 )	1060	ug/Kg 12/07/2006
P & M -Xylene	MS	ND	2190	104	( 91-121 )			2110	ug/Kg 12/07/2006
	MSD		2290	109		4	(< 20 )	2110	ug/Kg 12/07/2006
o-Xylene	MS	ND	1050	99	( 88-114 )			1060	ug/Kg 12/07/2006
	MSD		1120	106		7	(< 20 )	1060	ug/Kg 12/07/2006

<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	MS		1080	102	( 81-108 )				12/07/2006
	MSD		1070	101		1			12/07/2006

Batch VFC8218  
 Method SW8021B  
 Instrument HP 5890 Series II PID+FID VCA



**CHAIN OF CUSTODY RECORD**  
**SGS Environmental Services Inc.**

- Locations  
 • Alaska  
 • Louisiana  
 • New Jersey  
 • West Virginia  
 www.sgs.com

1067007



1 CLIENT: Nontech  
 CONTACT: PETER PHONE NO: 907 452-5688  
 PROJECT: 06-1080 SITE/PWSID#: \_\_\_\_\_  
 REPORTS TO: Peter@Nontech.com FAX NO.: 907 452-5694  
 INVOICE TO: Nontech QUOTE # \_\_\_\_\_  
 P.O. NUMBER 061080

SGS Reference: \_\_\_\_\_  
 PAGE 1 OF 1

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	CONTAINERS			REMARKS
					No	C= COMP	G= GRAB	
1A-B	S-3	12-1	16:15	S	2			
2	S-4	12-1	17:30	S	2			
3	S-5	12-1	17:45	S	2			
4	S-6	12-1	16:20	S	2			
5A	TRIP BLANK							

Preservatives Used	Analysis Required	Shipping Carrier	Shipping Ticket No.	Special Deliverable Requirements:	Requested Turnaround Time and Special Instructions:
<u>None</u>	<u>3</u>	<u>hand</u>			

Collected/Relinquished By: (1)	Date	Time	Received By:
<u>[Signature]</u>	12-04-06	1500	<u>Sunny Carstebury</u>
Relinquished By: (2)	Date	Time	Received By:
<u>Sunny Carstebury</u>	12/16/06	16:40	<u>[Signature]</u>
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:
	12/16/06	0915	<u>[Signature]</u>

4 Samples Received Cold? (Circle) YES NO  
 Temperature 12.9°C 12.9°C 12.9°C  
 Chain of Custody Seal: (Circle) INTACT BROKEN  
INTACT BROKEN ABSENT



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: 12/18/06

Received Date: 12/4/06

Received Time: 1550

Is date/time conversion necessary?

# of hours to AK Local Time:

Thermometer ID: Unastern B

Table with 3 columns: Cooler ID, Temp Blank, Cooler Temp. Row 1: 1, 1.7 °C, 2.9 °C

\*Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client

- Alert Courier / UPS / FedEx / USPS /
AA Goldstreak / NAC / ERA / PenAir / Carlife
Lynden / SGS / Other:

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 out for DoD projects (USACE, Navv, AFCEE)

Yes No

- 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?

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): Sunny Castibey (print): Sunny Castibey

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

1067007



**SGS**

**SAMPLE RECEIPT FORM (page 2)**

SGS WO#:

#	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	HDPB	Nalgene	Cubie	Coli	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	Z	BTEX								X	4								X					X							
B			DEO									4								X												
5	A	Z	BTEX		X							1														X						

Bottle Totals													45
---------------	--	--	--	--	--	--	--	--	--	--	--	--	----

Completed by: Stacy Coates Date: 12/4/06

**SGS** Environmental

CUSTODY SEAL WO# 1007

Signature: Sunny Costberry

Date/Time: 12/5/06 1040

WO# 1067007



1067007

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: Temp Blank arrived partially frozen  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Receipt Date / Time: 12/16/09 0915  
 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 / Carlisle / Lynden / SGS  
 Other: \_\_\_\_\_  
 Airbill # \_\_\_\_\_

COOLER AND TEMP BLANK READINGS\*

Cooler ID	Temp Blank (°C)	Cooler (°C)	Cooler ID	Temp Blank (°C)	Cooler (°C)
<u>1</u>	<u>0.0</u>	<u>2.9</u>	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CUSTODY SEALS INTACT:  YES / NO  
 # / WHERE: 1 in back

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors



## Laboratory Data Review Checklist

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     No

Comments:

SGS

- 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

Comments:

Not Applicable

### 2. Chain of Custody (COC)

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

Yes     No

Comments:

- b. Correct analyses requested?

Yes     No

Comments:

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes     No

Comments:

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes     No

Comments:

MeOH

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes     No

Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No

Comments:

Not Applicable

e. Data quality or usability affected? Explain.

Comments:

Not Applicable

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes  No

Comments:

Not Applicable

c. Were all corrective actions documented?

Yes  No

Comments:

Not Applicable

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

Comments:

Not Applicable

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No

Comments:

b. All applicable holding times met?

Yes  No

Comments:

c. All soils reported on a dry weight basis?

Yes  No

Comments:

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

6. QC Samples

a. Method Blank

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

Yes  No

Comments:

ii. All method blank results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

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

Yes  No

Comments:

v. Data quality or usability affected? Explain.

Comments:



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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No Comments:

Not Applicable

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No Comments:

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

Comments:

Not Applicable

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

Yes  No Comments:

Not Applicable

vii. Data quality or usability affected? Explain.

Comments:

Not Applicable

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes    No   Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes    No   Comments:

Not Applicable

iv. Data quality or usability affected? Explain.

Comments:

Not Applicable

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes    No   Comments:

ii. All results less than PQL?

Yes    No   Comments:

iii. If above PQL, what samples are affected?

Comments:

Not Applicable

iv. Data quality or usability affected? Explain.

Comments:

Not Applicable

e. Field Duplicate

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

Yes    No   Comments:

ii. Submitted blind to lab?

Yes    No

Comments:

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

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

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes    No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

See report

f. Decontamination or Equipment Blank (if applicable)

Yes    No    Not Applicable

i. All results less than PQL?

Yes    No

Comments:

Not Applicable

ii. If above PQL, what samples are affected?

Comments:

Not Applicable

iii. Data quality or usability affected? Explain.

Comments:

Not Applicable

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

a. Defined and appropriate?

Yes  No

Comments:

Not Applicable

Completed by:

Dave Miller

Title:

Environmental Scientist

Date:

March 16, 2007

CS Report Name:

SGS report 1067007

Report Date:

December 12, 2006

Consultant Firm:

Nortech

Laboratory Name:

SGS

Laboratory Report Number:

1067007

ADEC File Number:

Not Applicable

ADEC RecKey Number:

Not Applicable





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

Project: 06-1080  
Client: Nortech  
SGS Work Order: 1070034

Released by:

A handwritten signature in black ink that reads "Stephen C. Ede".

Alaska Division Technical Director

Stephen C. Ede  
2007.02.26  
08:08:58 -09'00'

**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 NORTECH Nortech  
Workorder 1070034 06-1080

Printed Date/Time 2/23/2007 13:36

Sample ID Client Sample ID

---

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

---

**1070034002 PS DW2-W2**  
DRO - The pattern is consistent with a weathered middle distillate.  
DRO - The pattern is consistent with a weathered gasoline.

**1070034003 PS DW2-W3**  
DRO - The pattern is consistent with a weathered middle distillate.  
DRO - The pattern is consistent with a weathered gasoline.

**1070034007 PS DW2-30**  
DRO - The pattern is consistent with a weathered middle distillate.

**752250 MS TP-5 (3)(1070588003MS)**  
RRO - MS/MSD spike recoveries are outside controls. Sample recovery is greater than four times the spike concentration. See the LCS for accuracy.  
RRO - Surrogate recoveries are outside controls due to matrix interference.

**752251 MSD TP-5 (3)(1070588003MSD)**  
RRO - MS/MSD spike recoveries are outside controls. Sample recovery is greater than four times the spike concentration. See the LCS for accuracy.  
RRO - Surrogate recoveries are outside controls due to matrix interference.

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

Dave Miller  
Nortech  
2400 College  
Fairbanks, AK 99709

**Work Order:** 1070034  
06-1080  
**Client:** Nortech  
**Report Date:** February 23, 2007

**Released by:**

Alaska Division Technical Director

Stephen C. Ede  
2007.02.26 08:09:16  
-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.
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.# 1070034001  
Client Name Nortech  
Project Name/# 06-1080  
Client Sample ID DW1-W1  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 02/23/2007 13:36  
Collected Date/Time 02/09/2007 11:00  
Received Date/Time 02/13/2007 9:00  
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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Toluene	2.45	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
P & M -Xylene	6.07	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
o-Xylene	2.06	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	87.9		%	SW8021B	A	74-120	02/14/07	02/14/07	DNA
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.319	mg/L	AK102	D		02/14/07	02/15/07	JE
<b>Surrogates</b>									
5a Androstane <surr>	97.7		%	AK102	D	50-150	02/14/07	02/15/07	JE



**SGS Ref.#** 1070034002  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** DW2-W2  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 02/23/2007 13:36  
**Collected Date/Time** 02/09/2007 11:45  
**Received Date/Time** 02/13/2007 9:00  
**Technical Director** Stephen C. Ede

Sample Remarks:

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

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Benzene	117	5.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Toluene	698	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Ethylbenzene	269	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
P & M -Xylene	1090	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
o-Xylene	549	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	95.4		%	SW8021B	A	74-120	02/14/07	02/14/07	DNA
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	15.0	0.323	mg/L	AK102	D		02/14/07	02/15/07	JE
<b>Surrogates</b>									
5a Androstane <surr>	133		%	AK102	D	50-150	02/14/07	02/15/07	JE



**SGS Ref.#** 1070034003  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** DW2-W3  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 02/23/2007 13:36  
**Collected Date/Time** 02/09/2007 12:00  
**Received Date/Time** 02/13/2007 9:00  
**Technical Director** Stephen C. Ede

Sample Remarks:

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

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Benzene	113	5.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Toluene	702	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Ethylbenzene	277	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
P & M -Xylene	1110	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
o-Xylene	557	20.0	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	94.9		%	SW8021B	A	74-120	02/14/07	02/14/07	DNA
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	8.64	0.333	mg/L	AK102	D		02/14/07	02/15/07	JE
<b><u>Surrogates</u></b>									
5a Androstane <surr>	124		%	AK102	D	50-150	02/14/07	02/15/07	JE



SGS Ref.# 1070034004  
Client Name Nortech  
Project Name/# 06-1080  
Client Sample ID SW1-W4  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 02/23/2007 13:36  
Collected Date/Time 02/09/2007 14:15  
Received Date/Time 02/13/2007 9:00  
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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Toluene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	88.7		%	SW8021B	A	74-120	02/14/07	02/14/07	DNA
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.326	mg/L	AK102	D		02/14/07	02/15/07	JE
<b>Surrogates</b>									
5a Androstane <surr>	88.6		%	AK102	D	50-150	02/14/07	02/15/07	JE



**SGS Ref.#** 1070034005  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** SW2-W5  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 02/23/2007 13:36  
**Collected Date/Time** 02/09/2007 15:00  
**Received Date/Time** 02/13/2007 9:00  
**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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Toluene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/14/07	02/14/07	DNA
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	89.9		%	SW8021B	A	74-120	02/14/07	02/14/07	DNA
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.333	mg/L	AK102	D		02/14/07	02/15/07	JE
<b>Surrogates</b>									
5a Androstane <surr>	88.8		%	AK102	D	50-150	02/14/07	02/15/07	JE



**SGS Ref.#** 1070034007  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** DW2-30  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**

**Printed Date/Time** 02/23/2007 13:36  
**Collected Date/Time** 02/08/2007 15:16  
**Received Date/Time** 02/13/2007 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
<b><u>Volatile Fuels Department</u></b>									
Benzene	43.8	9.34	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
Toluene	559	37.4	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
Ethylbenzene	696	37.4	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
P & M -Xylene	2700	37.4	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
o-Xylene	1410	37.4	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	99		%	SW8021B	A	81-108	02/08/07	02/16/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	1500	99.3	mg/Kg	AK102	B		02/21/07	02/22/07	JE
<b><u>Surrogates</u></b>									
5a Androstane <surr>	85.8		%	AK102	B	50-150	02/21/07	02/22/07	JE
<b><u>Solids</u></b>									
Total Solids	79.2		%	SM20 2540G	B			02/14/07	HM



**SGS Ref.#** 1070034008  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** Trip Blank  
**Matrix** Soil/Solid

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 02/23/2007 13:36  
**Collected Date/Time** 02/08/2007 15:16  
**Received Date/Time** 02/13/2007 9:00  
**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>									
Benzene	ND	12.8	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
Toluene	ND	51.2	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
Ethylbenzene	ND	51.2	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
P & M -Xylene	ND	51.2	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
o-Xylene	ND	51.2	ug/Kg	SW8021B	A		02/08/07	02/16/07	HM
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	87.3		%	SW8021B	A	81-108	02/08/07	02/16/07	HM
<b><u>Solids</u></b>									
Total Solids	100		%	SM20 2540G	A			02/14/07	HM



SGS Ref.# 751587 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 02/23/2007 13:36  
Prep Batch VXX16467  
Method SW5030B  
Date 02/14/2007

QC results affect the following production samples:

1070034001, 1070034002, 1070034003, 1070034004, 1070034005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Volatile Fuels Department**

Benzene	ND	0.500	0.150	ug/L	02/14/07
Toluene	ND	2.00	0.620	ug/L	02/14/07
Ethylbenzene	ND	2.00	0.620	ug/L	02/14/07
P & M -Xylene	ND	2.00	0.620	ug/L	02/14/07
o-Xylene	ND	2.00	0.620	ug/L	02/14/07

**Surrogates**

1,4-Difluorobenzene <surr>	89	74-120		%	02/14/07
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Batch VFC8282  
Method SW8021B  
Instrument HP 5890 Series II PID+HECD VBA





SGS Ref.# 751592 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 02/23/2007 13:36  
Prep Batch XXX17771  
Method SW3520C  
Date 02/14/2007

QC results affect the following production samples:

1070034001, 1070034002, 1070034003, 1070034004, 1070034005

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Semivolatile Organic Fuels Department**

Diesel Range Organics ND 0.300 0.0600 mg/L 02/15/07

**Surrogates**

5a Androstane <surr> 90 60-120 % 02/15/07

Batch XFC7307  
Method AK102  
Instrument HP 5890 Series II FID SV D F



SGS Ref.# 751702 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch  
Method  
Date

QC results affect the following production samples:  
1070034007, 1070034008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
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**Solids**

Total Solids	100			%	02/14/07
Batch	SPT7129				
Method	SM20 2540G				
Instrument					



SGS Ref.# 751911 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch VXX16474  
Method AK101  
Date 02/16/2007

QC results affect the following production samples:  
1070034007, 1070034008

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Benzene	ND	12.5	4.00	ug/Kg	02/16/07
Toluene	22.7 J	50.0	15.0	ug/Kg	02/16/07
Ethylbenzene	ND	50.0	15.0	ug/Kg	02/16/07
P & M -Xylene	16.2 J	50.0	15.0	ug/Kg	02/16/07
o-Xylene	ND	50.0	15.0	ug/Kg	02/16/07
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	87.1	81-108		%	02/16/07
Batch	VFC8287				
Method	SW8021B				
Instrument	HP 5890 Series II PID+HECD VBA				



SGS Ref.# 752140 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch XXX17781  
Method SW3550B  
Date 02/21/2007

QC results affect the following production samples:  
1070034007

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>					
Diesel Range Organics	ND	19.5	1.95	mg/Kg	02/22/07
<b>Surrogates</b>					
5a Androstane <surr>	81.4	60-120		%	02/22/07
Batch	XFC7315				
Method	AK102				
Instrument	HP 5890 Series II FID SV D F				



SGS Ref.# 751703 Duplicate  
Client Name Nortech  
Project Name/# 06-1080  
Original 1070034007  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch  
Method  
Date

QC results affect the following production samples:  
1070034007, 1070034008

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
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**Solids**

Total Solids	79.2	78.4	%	1	(< 5)	02/14/2007
Batch	SPT7129					
Method	SM20 2540G					
Instrument						



**SGS Ref.#** 751588 Lab Control Sample  
 751589 Lab Control Sample Duplicate  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 02/23/2007 13:36  
**Prep Batch** VXX16467  
**Method** SW5030B  
**Date** 02/14/2007

QC results affect the following production samples:  
 1070034001, 1070034002, 1070034003, 1070034004, 1070034005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	50.1	100	( 79-115 )		50 ug/L	02/14/2007
	LCSD	50.7	101		1 (< 20)	50 ug/L	02/14/2007
Toluene	LCS	51.3	103	( 85-117 )		50 ug/L	02/14/2007
	LCSD	51.7	103		1 (< 20)	50 ug/L	02/14/2007
Ethylbenzene	LCS	51.6	103	( 81-120 )		50 ug/L	02/14/2007
	LCSD	52.0	104		1 (< 20)	50 ug/L	02/14/2007
P & M -Xylene	LCS	106	106	( 87-119 )		100 ug/L	02/14/2007
	LCSD	107	107		1 (< 20)	100 ug/L	02/14/2007
o-Xylene	LCS	51.3	103	( 85-114 )		50 ug/L	02/14/2007
	LCSD	51.5	103		0 (< 20)	50 ug/L	02/14/2007
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS		96	( 74-120 )			02/14/2007
	LCSD		97		1		02/14/2007

**Batch** VFC8282  
**Method** SW8021B  
**Instrument** HP 5890 Series II PID+HECD VBA



SGS Ref.# 751593 Lab Control Sample  
751594 Lab Control Sample Duplicate  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 02/23/2007 13:36  
Prep Batch XXX17771  
Method SW3520C  
Date 02/14/2007

QC results affect the following production samples:  
1070034001, 1070034002, 1070034003, 1070034004, 1070034005

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Semivolatile Organic Fuels Department</b>							
Diesel Range Organics	LCS	1.06	106	( 75-125 )		1 mg/L	02/15/2007
	LCSD	1.01	101		5	(< 20 )	1 mg/L 02/15/2007
<b>Surrogates</b>							
5a Androstane <surr>	LCS		96	( 60-120 )			02/15/2007
	LCSD		92		4		02/15/2007
Batch	XFC7307						
Method	AK102						
Instrument	HP 5890 Series II FID SV D F						



SGS Ref.# 751912 Lab Control Sample  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch VXX16474  
Method AK101  
Date 02/16/2007

QC results affect the following production samples:  
1070034007, 1070034008

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS 1310	104	( 84-115 )			1250 ug/Kg	02/16/2007
Toluene	LCS 1330	107	( 90-119 )			1250 ug/Kg	02/16/2007
Ethylbenzene	LCS 1330	107	( 88-122 )			1250 ug/Kg	02/16/2007
P & M -Xylene	LCS 2720	109	( 91-121 )			2500 ug/Kg	02/16/2007
o-Xylene	LCS 1300	104	( 88-114 )			1250 ug/Kg	02/16/2007
<b>Surrogates</b>							
1,4-Difluorobenzene <surr>	LCS	94	( 81-108 )				02/16/2007

Batch VFC8287  
Method SW8021B  
Instrument HP 5890 Series II PID+HECD VBA





SGS Ref.# 752141 Lab Control Sample  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Soil/Solid

Printed Date/Time 02/23/2007 13:36  
Prep Batch XXX17781  
Method SW3550B  
Date 02/21/2007

QC results affect the following production samples:  
1070034007

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 29.8 90 ( 75-125 ) 33.1 mg/Kg 02/22/2007

**Surrogates**

5a Androstane <surr> LCS 83 ( 60-120 ) 02/22/2007

Batch XFC7315  
Method AK102  
Instrument HP 5890 Series II FID SV D F



SGS Ref.# 751915 Matrix Spike  
751916 Matrix Spike Duplicate

Printed Date/Time 02/23/2007 13:36  
Prep Batch VXX16474  
Method AK101 Extraction (S)  
Date 02/16/2007

Original 751914  
Matrix Soil/Solid

QC results affect the following production samples:  
1070034007, 1070034008

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

**Surrogates**

1,4-Difluorobenzene <surr>	MS	927		93	( 81-108 )				02/16/2007
	MSD	939		94		1			02/16/2007

Batch VFC8287  
Method SW8021B  
Instrument HP 5890 Series II PID+HECD VBA



**SGS Ref.#** 752250 Matrix Spike **Printed Date/Time** 02/23/2007 13:36  
 752251 Matrix Spike Duplicate **Prep Batch** XXX17781  
**Method** Sonication Extraction Soil AK1  
**Date** 02/21/2007  
**Original** 1070588003  
**Matrix** Soil/Solid

QC results affect the following production samples:  
1070034007

Parameter	Qualifiers	Original Result	QC Result	Pet Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	MS	186	252	122	( 60-140 )			54 mg/Kg	02/22/2007
	MSD		236	92		7	(< 50 )	54 mg/Kg	02/22/2007
<b>Surrogates</b>									
5a Androstane <surr>	MS		5.35	99	( 50-150 )				02/22/2007
	MSD		5.24	97		2			02/22/2007
<b>Batch</b>	XFC7315								
<b>Method</b>	AK102								
<b>Instrument</b>	HP 5890 Series II FID SV D F								



CHAIN OF CUSTODY RECORD  
SGS Environmental Services Inc.

1070034



- Alaska
- Louisiana
- New Jersey
- West Virginia

1 CLIENT: Nov Tech

CONTACT: Dawn Miller PHONE NO: ( ) 992-5688

PROJECT: 06-1090 SITE/PWSID#: \_\_\_\_\_ E-MAIL: \_\_\_\_\_

REPORTS TO: d miller@nor-tech.com FAX NO: ( ) \_\_\_\_\_

INVOICE TO: 2406 College Rd - QUOTE # \_\_\_\_\_

Fairbanks, AK 99709 P.O. NUMBER 06-1090

SGS Reference: \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No CONTAINERS	SAMPLE TYPE	Preservatives Used	Analysis Required	REMARKS
1A-E	DW1-W1	2-9	1100	Water	5	G	K	BTEX	
2	DW2-W2		1145					BTEX	
3	DW2-W3		1200					BTEX	
4	DW2-W4		1415					BTEX	
5	DW2-W5		1500					BTEX	
7A-B	DW2-30	2-9	1916	Soil	2				
8A	Trip blank			Soil	1				
6A	Trip blank			Water	3				

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## Castleberry, Sunny R (Fairbanks)

---

**From:** David L. Miller [dmiller@nortechengr.com]  
**Sent:** Friday, February 09, 2007 5:13 PM  
**To:** Castleberry, Sunny R (Fairbanks)  
**Subject:** RE: WO#1070034

Sunny,

That's fine.

DAVE

---

**From:** Castleberry, Sunny R (Fairbanks) [mailto:Sunny.Castleberry@sgs.com]  
**Sent:** Friday, February 09, 2007 4:39 PM  
**To:** David L. Miller  
**Subject:** WO#1070034  
**Importance:** High

Dave, just to confirm:

TB was at 0°C, but cooler temp was at 5.3°C.

Also, 2 of the 3 containers for the water trip blank were broken upon arrival in the Fbx lab and the only good container has a bubble about the size on 1 cm, which is too large for us to analyze. I need you to confirm that you do not want to trip blank run for the water.

Thank you,

Sunny Castleberry  
Fairbanks Project Manager  
3180 Peger Rd. Suite 190  
ph 907-474-8656  
fx 907-474-9685  
[sunny.castleberry@sgs.com](mailto:sunny.castleberry@sgs.com)

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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: 2/26/07

Received Date: 2/9/07

Received Time: 1105

Is date/time conversion necessary?

# of hours to AK Local Time: \_\_\_\_\_

Thermometer ID: longstem 71D

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>0.0</u> °C	<u>5.3</u> °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C

\*Temperature readings include thermometer correction factors

Delivery method (circle all that apply): Client /

Alert Courier / UPS / FedEx / USPS /

AA Goldstreak / NAC / ERA / PenAir / Carlisle

Lynden / SGS / Other: \_\_\_\_\_

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

Additional Sample Remarks: (*✓* if applicable)

Extra Sample Volume? \_\_\_\_\_

Limited Sample Volume? was trip blank

Field preserved for volatiles? \_\_\_\_\_

Field-filtered for dissolved? \_\_\_\_\_

Lab-filtered for dissolved? \_\_\_\_\_

Ref Lab required? \_\_\_\_\_

Foreign Soil? \_\_\_\_\_

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

Yes No

- Is received temperature  $4 \pm 2^\circ\text{C}$ ?  
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?

***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: Temp blank 0°C. Not frozen. As per Dave, temp ok. 2 containers for #6 broken upon arrival - frozen. (the only container left for sample) has a large bubble ~ 1cm. As per Dave, do not analyze trip blank.

Completed by (sign): Sunny Castleberry (print): Sunny Castleberry  
Login proof (check one): waived  required  performed by: [Signature]



1070034

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: 2-13-07 0900
Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No [checked]
Number of Hours From Alaska Local Time: \_\_\_\_\_
Foreign Soil? Yes \_\_\_\_\_ No [checked]

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

Table with 6 columns: Cooler ID, Temp Blank (°C), Cooler (°C), Cooler ID, Temp Blank (°C), Cooler (°C). Handwritten entries: 1, 4.0, 2-8.

CUSTODY SEALS INTACT: YES [checked] / NO
# / WHERE: 1 on front, 1 on back

COMPLETED BY: JCS

\*Temperature readings include thermometer correction factors.





**SGS** Environmental

CUSTODY SEAL WO# 0032, 0033, 0034

Signature: Sunny Costleberry Date/Time: 2/12/07 1640

**SGS** Environmental

CUSTODY SEAL WO# 0032, 0033, 0034

Signature: Sunny Costleberry Date/Time: 2/12/07 1640

B=4.0  
C=2.8



## Laboratory Data Review Checklist

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     No

Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes     No

Comments:

Not applicable

### 2. Chain of Custody (COC)

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

Yes     No

Comments:

- b. Correct analyses requested?

Yes     No

Comments:

### 3. Laboratory Sample Receipt Documentation

- a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes     No

Comments:

Temps out of range (0-2C) but samples went straight to lab from field.

- b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes     No

Comments:

HCl

- c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes     No

Comments:

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

Data quality unaffected, sample taken immediately from field to lab.

#### 4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes  No

Comments:

c. Were all corrective actions documented?

Yes  No

Comments:

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

Comments:

No affect.

#### 5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes  No

Comments:

b. All applicable holding times met?

Yes  No

Comments:

c. All soils reported on a dry weight basis?

Yes  No

Comments:

Not applicable

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

Not applicable

6. QC Samples

a. Method Blank

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

Yes  No

Comments:

ii. All method blank results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable

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

Yes  No

Comments:

Not applicable

v. Data quality or usability affected? Explain.

Comments:

Not applicable

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples?

Yes  No                      Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No                      Comments:

Not applicable

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No                      Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No                      Comments:

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

Comments:

Not applicable

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

Yes  No                      Comments:

Not applicable

vii. Data quality or usability affected? Explain.

Comments:

Not applicable

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes  No                      Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes    No                      Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?

Yes    No                      Comments:

Not applicable

iv. Data quality or usability affected? Explain.

Comments:

Not applicable

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes    No                      Comments:

Trip blank for 1070034 frozen

ii. All results less than PQL?

Yes    No                      Comments:

iii. If above PQL, what samples are affected?

Comments:

Not applicable

iv. Data quality or usability affected? Explain.

Comments:

Not applicable

e. Field Duplicate

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

Yes    No                      Comments:

ii. Submitted blind to lab?

Yes    No

Comments:

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

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

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes    No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

Not applicable

f. Decontamination or Equipment Blank (if applicable)

Yes    No    Not Applicable

i. All results less than PQL?

Yes    No

Comments:

Not applicable

ii. If above PQL, what samples are affected?

Comments:

Not applicable

iii. Data quality or usability affected? Explain.

Comments:

Not applicable



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

a. Defined and appropriate?

Yes  No

Comments:

Not applicable

Completed by:

Dave Miller

Title:

Environmental Scientist

Date:

March 15, 2007

CS Report Name:

SGS work orders 1070034 and 1070039

Report Date:

March 06, 2007

Consultant Firm:

Nortech

Laboratory Name:

SGS

Laboratory Report Number:

1070034 and 1070039

ADEC File Number:

Not applicable

ADEC RecKey Number:

Not applicable





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

Project: 06-1080  
Client: Nortech  
SGS Work Order: 1070039

Released by:

A handwritten signature in black ink that reads "Stephen C. Ede".

Alaska Division Technical Director

Stephen C. Ede  
2007.03.06  
09:23:44 -09'00'

**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** NORTECH Nortech  
**Workorder** 1070039 06-1080

**Printed Date/Time** 3/6/2007 9:10

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

---

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

---

**1070039003 PS SW5**

- BTEX - Sample has a pH greater than two.
- DRO - The pattern is consistent with a weathered middle distillate.
- DRO - Surrogate recovery is outside controls due to dilution.



# 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>

Dave Miller  
Nortech  
2400 College  
Fairbanks, AK 99709

**Work Order:** 1070039  
06-1080  
**Client:** Nortech  
**Report Date:** March 06, 2007

**Released by:**

Alaska Division Technical Director

Stephen C. Ede  
2007.03.06 09:24:03  
-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.
- 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.# 1070039001  
Client Name Nortech  
Project Name/# 06-1080  
Client Sample ID SW3  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 03/06/2007 9:10  
Collected Date/Time 02/14/2007 15:00  
Received Date/Time 02/16/2007 8:50  
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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	88.9		%	SW8021B	A	74-120	02/16/07	02/17/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.313	mg/L	AK102	D		02/27/07	03/02/07	HKG
<b>Surrogates</b>									
5a Androstane <surr>	86.3		%	AK102	D	50-150	02/27/07	03/02/07	HKG



**SGS Ref.#** 1070039002  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** SW4  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 03/06/2007 9:10  
**Collected Date/Time** 02/14/2007 15:45  
**Received Date/Time** 02/16/2007 8:50  
**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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
P & M -Xylene	2.38	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	88.1		%	SW8021B	A	74-120	02/16/07	02/17/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	ND	0.326	mg/L	AK102	D		02/27/07	03/02/07	HKG
<b>Surrogates</b>									
5a Androstane <surr>	87.3		%	AK102	D	50-150	02/27/07	03/02/07	HKG



**SGS Ref.#** 1070039003  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Client Sample ID** SW5  
**Matrix** Water (Surface, Eff., Ground)

**All Dates/Times are Alaska Standard Time**  
**Printed Date/Time** 03/06/2007 9:10  
**Collected Date/Time** 02/14/2007 16:30  
**Received Date/Time** 02/16/2007 8:50  
**Technical Director** Stephen C. Ede

Sample Remarks:

BTEX - Sample has a pH greater than two.  
 DRO - The pattern is consistent with a weathered middle distillate.  
 DRO - Surrogate recovery is outside controls due to dilution.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
<b><u>Volatile Fuels Department</u></b>									
Benzene	466	5.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Toluene	1670	20.0	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Ethylbenzene	767	20.0	ug/L	SW8021B	A		02/16/07	02/17/07	HM
P & M -Xylene	2920	20.0	ug/L	SW8021B	A		02/16/07	02/17/07	HM
o-Xylene	1480	20.0	ug/L	SW8021B	A		02/16/07	02/17/07	HM
<b><u>Surrogates</u></b>									
1,4-Difluorobenzene <surr>	104		%	SW8021B	A	74-120	02/16/07	02/17/07	HM
<b><u>Semivolatile Organic Fuels Department</u></b>									
Diesel Range Organics	2320	55.0	mg/L	AK102	D		02/27/07	03/02/07	HKG
<b><u>Surrogates</u></b>									
5a Androstane <surr>	1300	!	%	AK102	D	50-150	02/27/07	03/02/07	HKG





SGS Ref.# 1070039004  
Client Name Nortech  
Project Name/# 06-1080  
Client Sample ID Trip Blank  
Matrix Water (Surface, Eff., Ground)

All Dates/Times are Alaska Standard Time  
Printed Date/Time 03/06/2007 9:10  
Collected Date/Time 02/14/2007 15:00  
Received Date/Time 02/16/2007 8:50  
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>									
Benzene	ND	0.500	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Toluene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
Ethylbenzene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
P & M -Xylene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
o-Xylene	ND	2.00	ug/L	SW8021B	A		02/16/07	02/17/07	HM
<b>Surrogates</b>									
1,4-Difluorobenzene <surr>	86.4		%	SW8021B	A	74-120	02/16/07	02/17/07	HM



SGS Ref.# 751919 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 03/06/2007 9:10  
Prep Batch VXX16475  
Method SW5030B  
Date 02/16/2007

QC results affect the following production samples:  
1070039001, 1070039002, 1070039003, 1070039004

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Volatile Fuels Department</u></b>					
Benzene	ND	0.500	0.150	ug/L	02/17/07
Toluene	ND	2.00	0.620	ug/L	02/17/07
Ethylbenzene	ND	2.00	0.620	ug/L	02/17/07
P & M -Xylene	ND	2.00	0.620	ug/L	02/17/07
o-Xylene	ND	2.00	0.620	ug/L	02/17/07
<b>Surrogates</b>					
1,4-Difluorobenzene <surr>	89.3	74-120		%	02/17/07
Batch	VFC8287				
Method	SW8021B				
Instrument	HP 5890 Series II PID+HECD VBA				



SGS Ref.# 752686 Method Blank  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 03/06/2007 9:10  
Prep Batch XXX17796  
Method SW3520C  
Date 02/27/2007

QC results affect the following production samples:  
1070039001, 1070039002, 1070039003

Parameter	Results	Reporting/Control Limit	MDL	Units	Analysis Date
<b><u>Semivolatile Organic Fuels Department</u></b>					
Diesel Range Organics	ND	0.300	0.0600	mg/L	03/02/07
<b>Surrogates</b>					
5a Androstane <surr>	71.6	60-120		%	03/02/07
Batch	XFC7319				
Method	AK102				
Instrument	HP 5890 Series II FID SV A F				



**SGS Ref.#** 751920 Lab Control Sample  
 751921 Lab Control Sample Duplicate  
**Client Name** Nortech  
**Project Name/#** 06-1080  
**Matrix** Water (Surface, Eff., Ground)

**Printed Date/Time** 03/06/2007 9:10  
**Prep Batch** VXX16475  
**Method** SW5030B  
**Date** 02/16/2007

QC results affect the following production samples:  
 1070039001, 1070039002, 1070039003, 1070039004

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b><u>Volatile Fuels Department</u></b>							
Benzene	LCS	52.8	106	( 79-115 )		50 ug/L	02/17/2007
	LCSD	51.8	104		2 (< 20)	50 ug/L	02/17/2007
Toluene	LCS	53.1	106	( 85-117 )		50 ug/L	02/17/2007
	LCSD	52.3	105		2 (< 20)	50 ug/L	02/17/2007
Ethylbenzene	LCS	52.7	105	( 81-120 )		50 ug/L	02/17/2007
	LCSD	52.1	104		1 (< 20)	50 ug/L	02/17/2007
P & M -Xylene	LCS	108	108	( 87-119 )		100 ug/L	02/17/2007
	LCSD	107	107		1 (< 20)	100 ug/L	02/17/2007
o-Xylene	LCS	52.4	105	( 85-114 )		50 ug/L	02/17/2007
	LCSD	51.6	103		2 (< 20)	50 ug/L	02/17/2007
<b><u>Surrogates</u></b>							
1,4-Difluorobenzene <surr>	LCS		96	( 74-120 )			02/17/2007
	LCSD		96		0		02/17/2007

**Batch** VFC8287  
**Method** SW8021B  
**Instrument** HP 5890 Series II PID+HECD VBA



SGS Ref.# 752687 Lab Control Sample  
752688 Lab Control Sample Duplicate  
Client Name Nortech  
Project Name/# 06-1080  
Matrix Water (Surface, Eff., Ground)

Printed Date/Time 03/06/2007 9:10  
Prep Batch XXX17796  
Method SW3520C  
Date 02/27/2007

QC results affect the following production samples:  
1070039001, 1070039002, 1070039003

Parameter	QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
<b>Semivolatile Organic Fuels Department</b>							
Diesel Range Organics	LCS	1.00	100	( 75-125 )		1 mg/L	03/02/2007
	LCSD	1.10	110		9	(< 20 )	1 mg/L 03/02/2007
<b>Surrogates</b>							
5a Androstane <surr>	LCS		86	( 60-120 )			03/02/2007
	LCSD		92		7		03/02/2007
Batch	XFC7319						
Method	AK102						
Instrument	HP 5890 Series II FID SV A F						



**CHAIN OF CUSTODY RECORD**  
**SGS Environmental Services Inc.**

1070039



- Loc:
- Alaska
  - Louisiana
  - New Jersey
  - West Virginia

1 CLIENT: Nortech

CONTACT: Dave Miller PHONE NO.: 1462-5688

PROJECT: 06-1080 SITE/PWSID#: \_\_\_\_\_

REPORTS TO: dmiller@nortechengr.com E-MAIL: \_\_\_\_\_  
FAX NO.: \_\_\_\_\_

INVOICE TO: 2400 College Fairbank AK 99709 QUOTE # \_\_\_\_\_  
PO. NUMBER 06-1080

SGS Reference: \_\_\_\_\_ PAGE \_\_\_\_\_ OF \_\_\_\_\_

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX	No	CONTAINERS	SAMPLE TYPE	Preservatives Used	Analysis Required	REMARKS
1	A-E SW3	03-14-07	1300	Water	5		G	X	X	
2	SW4		1415		1					
3	SW5		1630		1					
4	A-C Trip Blank				3			X		

Shipping Carrier: hand Samples Received Cold? (Circle) YES: NO

Shipping Ticket No: \_\_\_\_\_ Temperature (C): 4.8°C Code 5.8°C

Special Deliverable Requirements: \_\_\_\_\_ Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Requested Turnaround Time and Special Instructions: \_\_\_\_\_

2

Collected/Relinquished By: (1)	Date	Time	Received By:
<u>Dave Miller</u>	<u>2-15-07</u>	<u>1345</u>	<u>Gunny Costberry</u>
Relinquished By: (2)	Date	Time	Received By:
<u>Gunny Costberry</u>	<u>2/15/07</u>	<u>1640</u>	
Relinquished By: (3)	Date	Time	Received By:
	<u>2/16/07</u>	<u>0850</u>	
Relinquished By: (4)	Date	Time	Received By:

4



1070039

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: 2-16-07 0850
Is Sample Date/Time Conversion Necessary? Yes \_\_\_\_\_ No [checked]
Number of Hours From Alaska Local Time: \_\_\_\_\_
Foreign Soil? Yes \_\_\_\_\_ No [checked]

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

Other: \_\_\_\_\_
Airbill # \_\_\_\_\_

Table with 6 columns: Cooler ID, Temp Blank (°C), Cooler (°C), Cooler ID, Temp Blank (°C), Cooler (°C). Handwritten entries: 3, 3.1, 1.2.

CUSTODY SEALS INTACT: YES / NO
#/ WHERE: Longfront, Longback

COMPLETED BY: [Signature]

\*Temperature readings include thermometer correction factors.



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: 2/1/07  
 Received Date: 2/15/07  
 Received Time: 1345  
 Is date/time conversion necessary?   
 # of hours to AK Local Time: \_\_\_\_\_

Thermometer ID: Longstem 710

Cooler ID	Temp Blank	Cooler Temp
<u>1</u>	<u>4.8</u> °C	<u>5.9</u> °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °C
_____	_____ °C	_____ °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): Slient /  
 Alert Courier / UPS / FedEx / USPS /  
 AA Goldstreak / NAC / ERA / PenAir / Carille  
 Lynden / SGS / Other: \_\_\_\_\_

**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 out for DoD projects (USACE, Navy, AFCEE)**

Yes	No		Samples/Analyses Affected:
_____	_____	Is received temperature $4 \pm 2^\circ\text{C}$ ?	_____
_____	_____	Exceptions: _____	_____
_____	_____	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?	_____

**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: # 3A<sup>sc</sup> is HOT!

Completed by (sign): [Signature] (print): Sunny Castleberry  
 Login proof (check one): waived \_\_\_\_\_ required  performed by: [Signature]





**SGS** Environmental

CUSTODY SEAL WO# 0039

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640

TB=3.1  
C=1.2

**SGS** Environmental

CUSTODY SEAL WO# 0039

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640

**SGS** Environmental

CUSTODY SEAL WO# 0037 Cooler# 1 ~~10038~~

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640

TB=2.8  
C=1.0

**SGS** Environmental

CUSTODY SEAL WO# 0037 Cooler# 1 ~~10038~~

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640

**SGS** Environmental

CUSTODY SEAL WO# 0037 Cooler# 2

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640

TB=2.6  
C=2.0

**SGS** Environmental

CUSTODY SEAL WO# 0037 Cooler# 2

Signature: Jenny Costello

Date/Time: 2/15/07 @ 1640