# National Petroleum Reserve – Alaska

# 2004 Lake Monitoring Program

Submitted to



Submitted by



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# 1.0 Introduction

This report summarizes hydrologic observations and measurements made during a lake monitoring program conducted in the eastern National Petroleum Reserve – Alaska (NPRA) in Fall 2004 by Michael Baker Jr., Inc. (Baker). The program was performed at the request of ConocoPhillips Alaska, Inc. (CPAI). The program consisted of in situ water quality measurements and analytical sampling at twenty freshwater lakes.

The water withdrawn from North Slope lakes is used for oil field facility operation, camp operation, and in the winter for exploration and construction activities. As exploration continues to move westward in the NPRA, a number of lakes will be permitted for temporary withdrawal as well as for permanent water supply sources.

## 1.1 Background

Baker conducted a lake monitoring program in 2003 at sixteen lakes located in the eastern NPRA. In situ water quality parameters and analytical samples were collected from three separate locations at each of the sixteen lakes. Sample lakes, selected by Baker and CPAI, were identified based on their relative location to the proposed road alignment connecting the existing Alpine Facilities (CD-1 and CD-2) with the proposed developments, CD-5, CD-6, and CD-7.

The proposed road alignment into the eastern NPRA has changed slightly since completion of the 2003 lake monitoring program. In 2004, Baker was tasked with conducting a monitoring program on the sixteen lakes studied in 2003 as well as four additional lakes. In contrast to the 2003 program, only one sample was collected from each lake. One sample per lake in 2004 was determined to be sufficient based on the consistency of the results at each lake in 2003. The four additional lakes, selected by Baker and CPAI, were identified based on their location in respect to the most current proposed road alignment. The twenty study lakes and the proposed road alignment at the time of the 2004 monitoring program are presented on Figure 1.

## 1.2 Purpose

The purpose of the 2004 NPRA lake monitoring program was to continue collecting baseline water quality data from NPRA lakes in the vicinity of the proposed road alignment. Data

collected in 2004 will be added to the established database built using 2003 data. Such a database is an invaluable resource in terms of future planning and permitting for water use at NPRA lakes.

# 2.0 Field Investigation

The investigation consisted of a one-time sampling event conducted over a period of two days, August 20 and 21, 2004. A Baker engineer and engineering technician conducted the fieldwork. Maritime Helicopters provided access to the lakes. All monitoring and sampling was completed from the bank. Monitoring and sampling was conducted at a single location at each lake. The 2004 sample locations at the sixteen lakes studied in 2003 were performed at one of the three locations previously monitored. Monitoring locations from all twenty lakes were selected based on their proximity to the proposed road alignment. Figures 2 through 4 identify the monitoring locations of the northern, central, and southern study area. Each sampling location was recorded using a hand-held global positioning system (GPS) unit referenced to the North American Datum of 1983 (NAD83).

## 3.0 Field Methods

## 3.1 Analytical Parameters

Water samples for analytical evaluation were collected prior to in situ monitoring. Analytical samples were collected as grab samples in lab-provided containers. Samples were collected within the water column at a depth that represented approximately one-half the total depth of the water in each sampling location.

Each sampling container was labeled with pertinent sampling information and stored in an ice chest for transport to the analytical laboratory under standard chain-of-custody procedures. Refreezable gel packs were used to cool the samples during storage and shipment.

Samples were submitted to SGS-CT&E Environmental Services Inc. in Anchorage, Alaska for the following analysis:

- Calcium, Magnesium, Sodium, Potassium, Iron, Chloride, Copper, Zinc, Cadmium
- Total Nitrate, Sulfate

- Alkalinity
- Turbidity
- Total Dissolved Solids (TDS)
- Polynuclear Aromatic Hydrocarbons by Selective Ion Monitoring (PAH-SIM)
- Diesel Range Organics (DRO)
- Residual Range Organics (RRO)

One duplicate (quality control) sample was collected and analyzed for every ten samples collected during the monitoring program. Quality control samples were collected at lakes M9914 and L9304. Samples were collected at the same location and immediately after the project lake sample. Quality control samples were submitted to the laboratory with a different name and time as their associated lake. Quality control samples were used to verify the internal accuracy of the analytical program.

## 3.2 In Situ Parameters

A YSI 556 in situ water quality meter was used to measure the following in situ water parameters:

- Temperature in degrees Celsius (°C)
- pH in standard units
- Conductivity in millisiemens per centimeter (mS/cm)
- Salinity in milligrams per liter (%)
- Dissolved Oxygen in milligrams per liter (mg/L)

At each site, in situ monitoring was conducted just off the bank in an area that maximized depth. Readings were made within the water column at a depth that represented approximately one-half the total depth of the water in each sampling location. Every attempt was made to minimize lake substrate disturbance. If lake sediment was inadvertently disturbed, the location of the sample was moved away from the disturbance.

### 3.2.1 Instrument Calibration

Baker rented the YSI 556 meter from TTT Environmental in Anchorage, Alaska. Prior to the rental, TTT performed a complete maintenance service according to the manufacturer's specifications. The service included multiple-point calibration on all probes using span and zero check solutions, cleaning of all probes, and replacement of the semi-permeable membrane on the dissolved oxygen probe. Field calibrations were performed in the field using calibration solution provided by TTT Environmental. Field calibrations were performed on the morning of August 20, 2004, and the afternoon of August 21, 2004, prior to and after the monitoring event. All calibrations were within manufacturers tolerances.

# 4.0 Results

Results of the in situ monitoring and analytical sampling of the 2004 NPRA Lake Monitoring Program are summarized in the following tables:

- Table 1 In Situ Water Quality
- Table 2 Analytical Results, Dissolved Metals and Anions
- Table 3 Analytical Results, Alkalinity, Turbidity, TDS, DRO and RRO
- Table 4 Analytical Results, PAH-SIM

Laboratory analytical results are presented in Appendix A.

## 4.1 In Situ Parameters

## 4.1.1 Water Temperature

Water temperatures in the study lakes ranged between 11.4° and 15.4°C. The coolest water temperature, 11.4°C, was measured at Lake L9501. The warmest water temperature, 15.4°C, was measured at Lake M0292. Water temperatures in 2004 were significantly warmer than the temperature range recorded in 2003, 3.1° to 5.7°C.



## 4.1.2 рН

pH in the 20 study lakes ranged between 7.3 and 8.7 with the average pH of 8.0. The lowest pH, 7.3, was measured at Lake M9912. The highest pH, 8.7, was measured at Lake M0024. In 2003, the pH measured at 48 locations ranged from 5.5 to 8.1 and averaged 7.5.

## 4.1.3 Conductivity

Conductivities in the 20 study lakes ranged from 0.016 to 0.241 mS/cm. Conductivity can be used as a rapid estimate of the amount of dissolved solids in water and the above measurements compare well to the relatively low dissolved solid measurements made by the analytical laboratory. The low conductivities also confirm the low salinity concentrations measured at the lakes. 2003 conductivity values ranged from 0.049 to 0.157 mS/cm.

## 4.1.4 Salinity

Measurements of salinity in the 20 freshwater lakes were at or near zero percent, with values ranging from 0.0% to 0.1%. Salinity concentrations of 0.1% were measured in eighty percent of the study lakes. In 2003, in situ sampling indicated salinity concentrations of 0.0% at all 48 sampling locations.

## 4.1.5 Dissolved Oxygen

Each of the study lakes were highly oxygenated as would be expected during the open water months when the water surface is in contact with the atmosphere and the lakes are relatively well mixed due to wind action. Dissolved oxygen (DO) concentrations ranged from 8.65 to 11.01 mg/L. Concentrations of DO in 2003 ranged from 8.68 to 12.30 mg/L, similar to 2004 concentrations.

# 4.2 Analytical Parameters

## 4.2.1 Dissolved Metals

The dissolved metals program included laboratory analysis of calcium, magnesium, sodium, potassium, iron, copper, zinc, and cadmium. All metals analyses were completed as dissolved metals with the laboratory filtering the samples. Dissolved metals were analyzed by analytical method SW 6020. In general, 2004 analytical results for dissolved metals compare extremely well with analysis conducted in 2003. A brief summary of the analytical results is described below and results are presented on Table 2.

#### 4.2.1.1 Calcium and Magnesium (Hardness)

Calcium concentrations ranged from 6.3 to 29.2 mg/L and magnesium concentrations ranged from 1.6 to 6.7. Excluding the four additional lakes monitored in 2004 (L9501, M9923, M9925, and MB0401), calcium and magnesium concentrations recorded in 2004 were extremely similar to values reported in 2003. Calcium ranged from 6.3 to 20.0 mg/L in 2004 as compared with 6.1 to 20.0 mg/L in 2003, and magnesium concentrations ranged from 1.6 to 4.3 mg/L in 2004 as compared with 1.6 to 4.2 mg/L in 2003. The total concentration of these two analytes, expressed as calcium carbonate, is often referred to as hardness.

#### 4.2.1.2 Sodium

Sodium concentrations in 2004 ranged from 2.4 to 25.2 mg/L as compared to 2.6 and 17.8 mg/L in 2003. Excluding the two most northern study lakes, lakes L9501 and L9304, concentrations of sodium ranged from 2.4 to 8.0 mg/L and 2.6 to 8.1 mg/L in 2004 and 2003, respectively.

#### 4.2.1.3 Potassium

Excluding lakes M9924, M9925, L9304, L9501, and L9821, reported potassium concentrations in 2004 and 2003 were below the laboratories method detection limit (MDL). Concentrations of potassium ranged from 1.2 to 1.4 mg/L in 2004 and 1.0 to 1.2 mg/L in 2003.

#### 4.2.1.4 Iron, Copper, Zinc, and Cadmium

Iron, copper, zinc, and cadmium concentrations were found to be below the MDL in all the lakes monitored during the 2004 program. In 2003, cadmium was detected 0.001 mg/L above the MDL at location No. 1 in Lake L9821 and location No. 2 Lake L9824.

#### 4.2.2 Anions

The Anions program included laboratory analysis using the method EPA 300 for chloride, sulfate, and total nitrate. A brief summary of the analytical results is described below and results are presented on Table 2.



#### 4.2.2.1 Chloride

Chloride concentrations ranged from 5.9 mg/L to 73.1 mg/L. Excluding the four additional lakes monitored in 2004, chloride concentrations in 2004 were similar to those reported in 2003 with ranges of 5.9 to 41.7 mg/L and 6.4 to 38.0 mg/L in 2004 and 2003, respectively.

#### 4.2.2.2 Sulfate and Total Nitrate

Concentrations of sulfate in 2004 compared well with reported values in 2003. Sulfate ranged from non-detect to 4.2 mg/L in 2004 as compared to non-detect to 2.5 mg/L. The MDL for sulfate in 2004 and 2003 was 0.1 mg/L.

With one exception, total nitrate concentrations were below the MDL of 1.0 mg/L in all the sampling locations monitored in 2004. In 2003, 47 out of 48 samples were reported as non-detect. A total nitrate concentration of 1.52 mg/L was reported at location 3 in Lake M0292. Based on the scope of work, and proximity to the most current proposed road alignment, location 3 at Lake M0292 was not monitored during the 2004-monitoring program.

### 4.2.3 Alkalinity

Alkalinity can be defined as the capacity of water to react with and neutralize acid. It is expressed in terms of an equivalent amount of calcium carbonate (CaCO<sub>3</sub>). Alkalinity levels in the 20 study lakes suggest that the lakes are relatively well buffered. Alkalinities ranged from 24 mg/L to 90 mg/L. Excluding the four additional study lakes added to the 2004 scope of work, results compared well with 2003 alkalinity concentrations with values ranging from 25 to 64 mg/L in 2004 and 23 to 68 mg/L in 2003. Alkalinity samples were analyzed using method SM20 2320B and results are presented on Table 3.

## 4.2.4 Turbidity and Total Dissolved Solids (TDS)

Water samples were collected in 2004 for the analysis of turbidity by method SM20 2130B. Results ranged from 1.12 to 17.0 Nephelometric Turbidity Unit (NTU), with an average value of 4.42 NTU. Turbidity analysis was not conducted on water samples collected in 2003. In 2004, TDS concentrations ranged from 31 mg/L to 244 mg/L. In 2003, TDS concentrations ranged from less than 50 to 139 mg/L. Excluding the four additional lakes added to the scope of work in 2004, TDS concentrations in 2004 (31 to 128 mg/L) were similar to 2003 results (less than 50 to



139 mg/L). TDS analysis was conducted using analytical method SM 20 2540C. Turbidity and TDS results are presented on Table. 3.

#### 4.2.5 Diesel Range and Residual Range Organics (RRO)

Diesel Range Organics concentrations were below the MDL in 19 of 20 lakes monitored during 2004. A concentration of 0.592 mg/L was recorded in Lake M9914. RRO concentrations were below the MDL in 18 of the 20 lakes monitored during 2004. An RRO concentration of 0.812 mg/L and 0.529 mg/L was reported at lakes M9924 and M9914, respectively. DRO and RRO concentrations were below MDL in all 48 lakes sampled during 2003. The results of DRO and RRO in excess of the MDL for lakes M9914 and M9924 is likely attributed to naturally occurring organic material as the results are only slightly greater than the MDL. Analysis for DRO and RRO was performed using analytical method AK 102/103. Results are presented in Table 3.

#### 4.2.6 Polynuclear Aromatic Hydrocarbons by Selective Ion Monitoring

Polynuclear Aromatic Hydrocarbons (PAH) were analyzed using selective ion monitoring (SIM). PAH-SIM was conducted for the 16 primary aromatic hydrocarbon compounds. With one exception, all target compounds in all 20 lakes were non-detect at their various detection limits during 2004. The single exception was the compound naphthalene, which was found at concentrations of 0.107 micrograms per liter (ug/L) in Lake M9914. Naphthalene is a compound that occurs in the atmosphere as a result of anthropogenic activities. It is also an analyte quantified by both volatile and semi-volatile analysis and thus is prone to cross contamination. Internal laboratory quality control data indicate that the naphthalene detections in the Lake M9914 sample resulted from cross contamination that occurred during the sample extraction process at the lab. Results from the PAH-SIM analysis compare well with 2003 data, as cross contamination at levels near the MDL was an issue in 2003 also. PAH concentrations are presented on Table 4.



# 5.0 References

Alaska Department of Environmental Conservation (ADEC), 2002. *18 AAC 80. Drinking Water Regulations*. September 21, 2002.

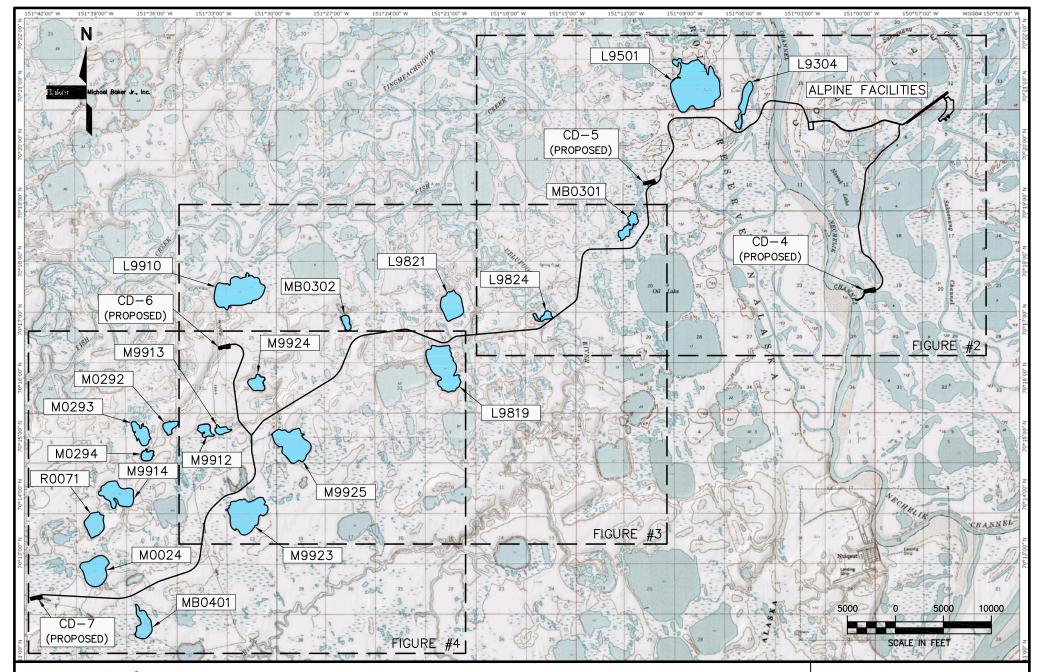
Michael Baker Jr., Inc. 2003. 2003 Lake Monitoring Program in the National Petroleum Reserve–Alaska for the Alpine Satellite Development Plan. February 4, 2004. Prepared for ConocoPhillips Alaska, Inc. Anchorage, Alaska.



# Figures

- Figure 1 NPRA 2004 Lake Monitoring Program Site Map
- Figure 2 NPRA 2004 Lake Monitoring Northern Study Area
- Figure 3 NPRA 2004 Lake Monitoring Central Study Area
- Figure 4 NPRA 2004 Lake Monitoring Southern Study Area







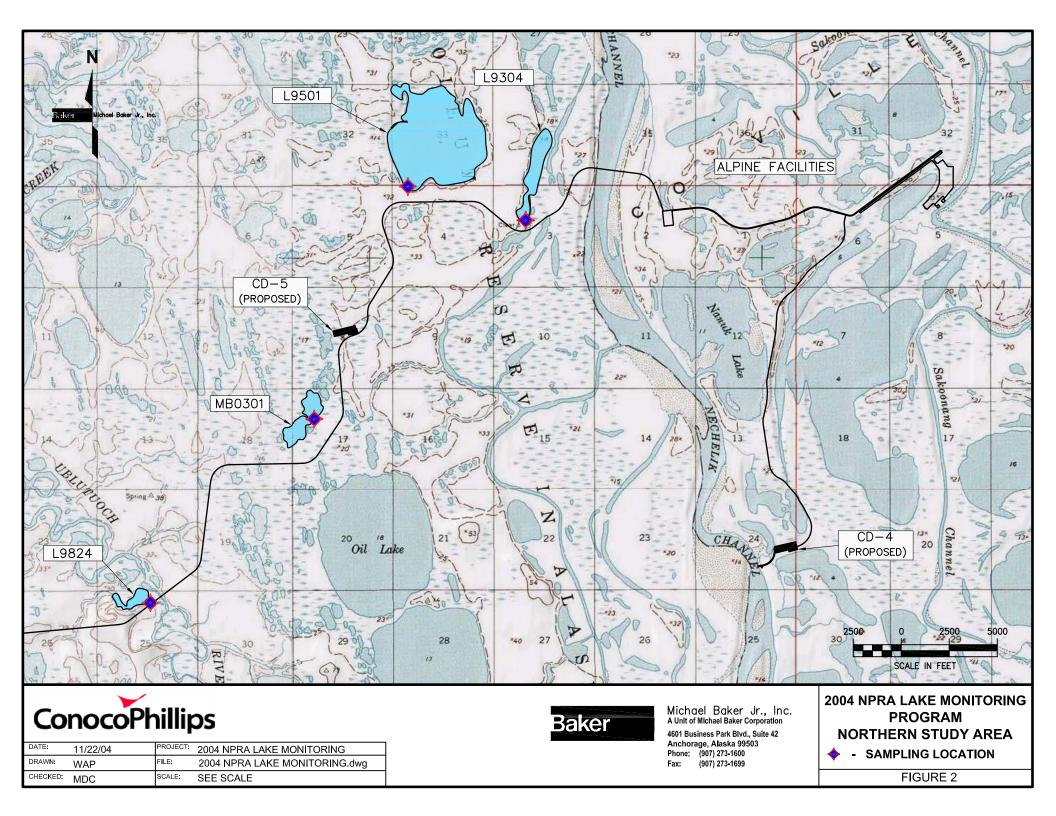
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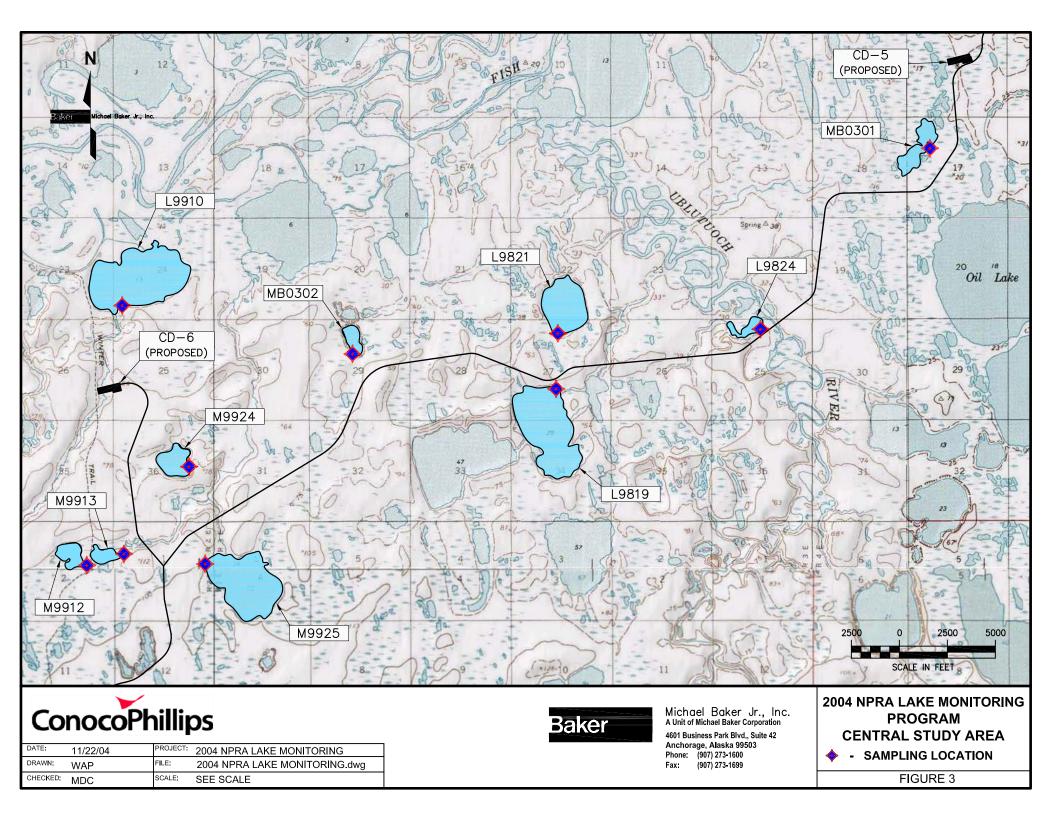


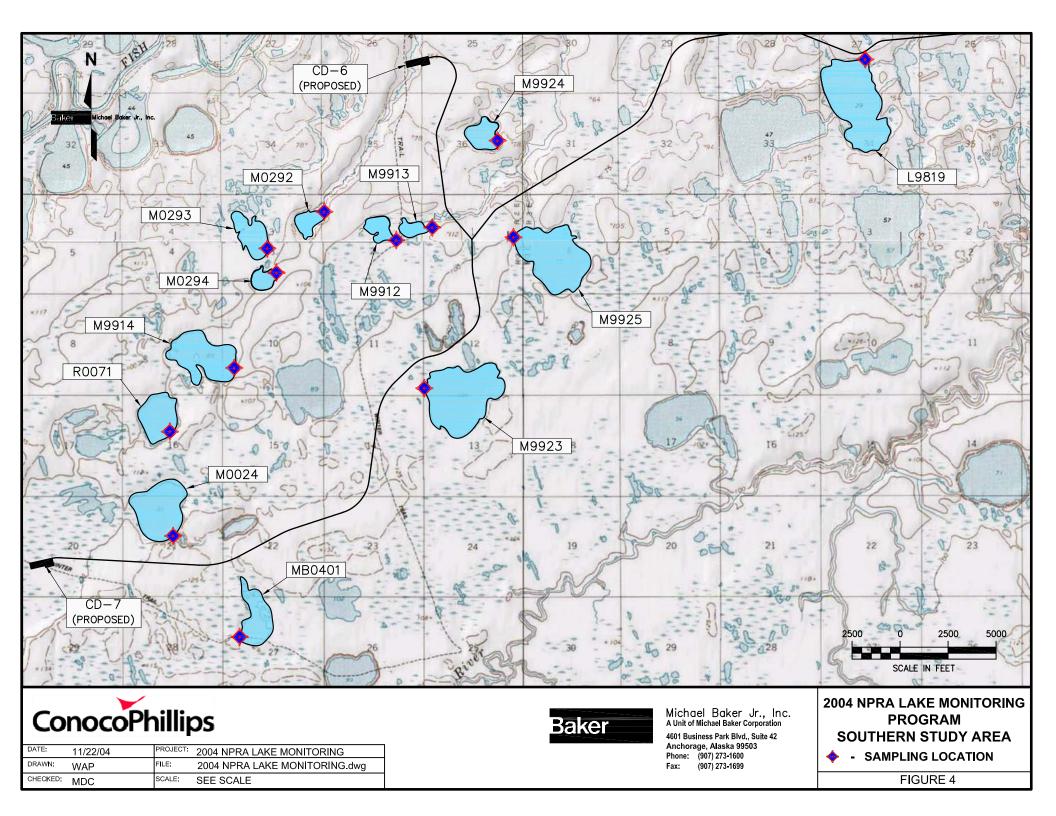
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#### 2004 NPRA LAKE MONITORING PROGRAM SITE MAP

FIGURE 1







# Tables

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- Table 2
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- Table 3
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- Table 4 Analytical Results, PAH-SIM



#### Table 1 - In Situ Water Quality

				Depth	]	[n S	itu Pa	arame	ters
Lake Number	Sample Location	Sample Date	Sample Location Coordinates (NAD83)	at Sample Location (ft)	Temp. (°C)	рН	Conduc- tivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)
	1	9/4/03	70° 20' 17.8" 151° 06' 13.6"	1.0	5.7	6.3	0.153	0.0	11.90
L9304	2	9/4/03	70° 20' 38.7" 151° 05' 51.5"	1.3	5.2	7.4	0.152	0.0	11.53
17304	3	9/4/03	70° 20' 59.7" 151° 05' 58.4"	1.0	4.7	7.7	0.154	0.0	11.31
	1	8/21/04	70° 20' 17.8'' 151° 06' 13.6''	1.0	13	7.8	0.016	0.1	9.54
L9501	1	8/21/04	70° 20' 35.2'' 151° 09' 12.7''	Not Recorded	11.4	8.0	0.241	0.2	10.61
	1	9/4/03	70° 18' 51.8" 151° 11' 38.1"	2.3	4.9	7.9	0.152	0.0	10.58
MB0301	2	9/4/03	70° 18' 36.8" 151° 11' 39.2"	1.3	4.8	7.9	0.156	0.0	11.88
1100301	3	9/4/03	70° 18' 28.1" 151° 12' 23.4"	2.0	5.0	7.9	0.157	0.0	10.91
	2	8/21/04	70° 18' 36.8'' 151° 11' 39.2''	1.3	12.0	7.8	0.149	0.1	9.82
	1	9/4/03	70° 17' 02.6" 151° 15' 47.9"	2.1	5.2	7.6	0.049	0.0	11.73
L9824	2	9/4/03	70° 17' 04.1" 151° 16' 13.7"	2.1	5.5	7.5	0.051	0.0	11.13
17024	3	9/4/03	70° 17' 09.1" 151° 16' 40.9"	0.5	5.3	7.2	0.074	0.0	10.18
	1	8/21/04	70° 17' 02.6'' 151° 15' 47.9''	2.1	13.3	8.0	0.054	0.0	9.68
	1	9/4/03	70° 17' 11.8" 151° 20' 20.3"	1.4	4.6	7.9	0.143	0.0	11.92
L9821	2	9/4/03	70° 16' 59.0" 151° 21' 05.0"	1.2	4.6	7.9	0.144	0.0	11.80
17021	3	9/4/03	70° 17' 24.9" 151° 21' 15.2"	1.5	4.9	8.0	0.145	0.0	10.07
	2	8/21/04	70° 16' 59.0'' 151° 21' 05.0''	1.2	11.7	7.8	0.145	0.1	9.91

				Depth	]	[n S	itu Pa	arame	ters
Lake Number	Sample Location	Sample Date	Sample Location Coordinates (NAD83)	at Sample Location (ft)	Temp. (°C)	рН	Conduc- tivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)
	1	9/4/03	70° 16' 32.7" 151° 21' 03.0"	0.8	5.3	7.8	0.096	0.0	11.57
L9819	2	9/4/03	70° 15' 50.7" 151° 20' 37.2"	0.9	5.1	7.9	0.096	0.0	12.05
19019	3	9/4/03	70° 16' 07.4" 151° 21' 56.6"	1.0	5.5	7.9	0.096	0.0	11.05
	1	8/21/04	70° 16' 32.7'' 151° 21' 03.0''	0.8	12.4	7.7	0.106	0.1	9.06
	1	9/4/03	70° 16' 56.9" 151° 26' 10.1"	2.9	5.3	7.6	0.076	0.0	10.92
MB0302	2	9/4/03	70° 16' 49.8" 151° 26' 18.0"	0.8	5.4	7.4	0.074	0.0	9.33
MIDU3U2	3	9/4/03	70° 17' 01.8" 151° 26' 36.0"	0.9	5.5	7.6	0.072	0.0	10.77
	2	8/20/04	70° 16' 49.8'' 151° 26' 18.0''	0.8	14.5	8.1	0.085	0.1	8.86
M9925	1	8/20/04	70° 15' 01.8'' 151° 30' 03.0''	Not Recorded	12.8	8.1	0.219	0.1	10.98
	1	9/5/03	70° 16' 00.5" 151° 30' 39.6"	1.9	4.4	8.0	0.144	0.0	10.41
M9924	2	9/5/03	70° 15' 51.3" 151° 30' 27.6"	0.8	3.5	8.0	0.137	0.0	12.15
117724	3	9/5/03	70° 15' 55.1" 151° 31' 14.9"	0.9	4.1	7.4	0.105	0.0	8.68
	2	8/20/04	70° 15' 51.3'' 151° 30' 27.6''	0.8	14.3	8.1	0.155	0.1	11.01
M9923	1	8/20/104	70° 13' 44.1'' 151° 32' 22.3''	Not Recorded	14.1	8.1	0.198	0.1	10.44
	1	9/5/03	70° 17' 12.6" 151° 32' 10.2"	1.3	3.5	7.8	0.101	0.0	12.22
L9910	2	9/5/03	70° 17' 35.0" 151° 30' 22.1"	1.3	3.6	7.8	0.110	0.0	12.04
17710	3	9/5/03	70° 17' 36.6" 151° 32' 11.4"	0.7	3.1	8.1	0.112	0.0	12.11
	1	8/20/04	70° 17' 12.6'' 151° 32' 10.2''	1.3	13.9	7.9	0.117	0.1	10.47

 Table 1 - In Situ Water Quality (Continued)

				Depth	]	n S	itu Pa	arame	ters
Lake Number	Sample Location	Sample Date	Sample Location Coordinates (NAD83)	at Sample Location (ft)	Temp. (°C)	рН	Conduc- tivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)
	1	9/5/03	70° 15' 09.8" 151° 32' 41.5"	0.7	3.1	7.7	0.085	0.0	10.78
M9913	2	9/5/03	70° 15' 06.4" 151° 32' 07.4"	1.3	3.9	7.5	0.087	0.0	11.73
117713	3	9/5/03	70° 15' 02.9" 151° 32' 37.8"	1.1	4.0	7.5	0.092	0.0	10.45
	2	8/20/04	70° 15' 06.4'' 151° 32' 07.4''	1.3	15.2	7.6	0.098	0.1	9.88
	1	9/5/03	70° 15' 01.0" 151° 33' 01.8"	1.0	4.5	7.5	0.077	0.0	11.73
M9912	2	9/5/03	70° 15' 12.4" 151° 33' 20.5"	1.1	4.7	7.4	0.076	0.0	11.36
11///12	3	9/5/03	70° 15' 11.1" 151° 33' 50.4"	1.3	4.9	7.3	0.075	0.0	9.12
	1	8/20/04	70° 15' 01.0'' 151° 33' 01.8''	1.0	14.9	7.3	0.092	0.1	8.65
	1	9/5/03	70° 15' 14.7" 151° 34' 51.7"	0.8	4.6	5.5	0.083	0.0	12.15
M0292	2	9/5/03	70° 15' 03.5" 151° 35' 08.3"	0.8	4.5	6.9	0.085	0.0	12.10
1110222	3	9/5/03	70° 15' 12.7" 151° 35' 29.5"	1.3	5.2	7.3	0.085	0.0	10.35
	1	8/20/04	70° 15' 14.7'' 151° 34' 51.7''	0.8	15.4	8.0	0.083	0.1	10.12
	1	9/5/03	70° 15' 09.8" 151° 36' 27.7"	0.9	3.5	7.5	0.065	0.0	12.24
M0293	2	9/5/03	70° 14' 56.5" 151° 36' 19.4"	1.6	3.4	7.4	0.061	0.0	11.64
11102/5	3	9/5/03	70° 15' 04.0" 151° 36' 59.4"	0.9	4.1	7.3	0.065	0.0	10.53
	2	8/20/04	70° 14' 56.5'' 151° 36' 19.4''	1.6	13.3	8.0	0.069	0.0	10.75

 Table 1 - In Situ Water Quality (Continued)

				Depth		In S	itu Pa	ırame	ters
Lake Number	Sample Location	Sample Date	Sample Location Coordinates (NAD83)	at Sample Location (ft)	<b>Temp.</b> (°C)	рН	Conduc- tivity (mS/cm)	Salinity (%)	Dissolved Oxygen (mg/L)
	1	9/5/03	70° 14' 44.0" 151° 36' 06.7"	0.8	5.0	7.6	0.057	0.0	12.02
M0294	2	9/5/03	70° 14' 35.4" 151° 36' 19.1"	1.6	5.1	7.4	0.059	0.0	9.51
1110274	3	9/5/03	70° 14' 39.0" 151° 36' 46.7"	1.4	5.4	7.5	0.059	0.0	9.73
	1	8/20/04	70° 14' 44.0'' 151° 36' 06.7''	0.8	15.0	8.2	0.068	0.0	8.9
	1	9/5/03	70° 13' 54.2" 151° 37' 10.0"	1.9	4.8	7.5	0.062	0.0	11.86
M9914	2	9/5/03	70° 13' 54.6" 151° 38' 31.8"	0.5	5.5	7.3	0.062	0.0	9.34
W19914	3	9/5/03	70° 14' 12.5" 151° 38' 12.2"	1.9	5.3	7.1	0.059	0.0	11.16
	1	8/20/04	70° 13' 54.2'' 151° 37' 10.0''	1.9	15.2	8.1	0.072	0.0	9.68
	1	9/5/03	70° 13' 37.4" 151° 38' 39.6"	0.6	5.3	6.1	0.075	0.0	9.58
R0071	2	9/5/03	70° 13' 30.4" 151° 39' 38.1"	1.1	5.2	6.8	0.076	0.0	8.83
KU0/1	3	9/5/03	70° 13' 21.5" 151° 38' 47.1"	0.7	4.2	7.3	0.097	0.0	10.66
	3	8/20/04	70° 13' 21.5'' 151° 38' 47.1''	0.7	14.2	7.9	0.105	0.1	9.53
	1	9/5/03	70° 12' 51.7" 151° 38' 29.2"	1.1	5.3	7.5	0.077	0.0	12.30
M0024	2	9/5/03	70° 12' 27.9" 151° 38' 42.5"	1.6	4.9	7.5	0.077	0.0	10.60
1910024	3	9/5/03	70° 12' 43.7" 151° 39' 54.3"	1.3	5.4	7.6	0.075	0.0	11.22
	2	8/20/04	70° 12' 27.9'' 151° 38' 42.5''	1.6	15.2	8.7	0.081	0.1	9.9
MB0401	1	8/20/04	70° 11' 35.9'' 151° 37' 00.7''	Not Recorded	15.0	8.3	0.081	0.1	10.1

		San	ıple		D	Anions by EPA 300								
Lake Number	Sample Location	Date/ Time	Depth (ft)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Nitrate (mg/L)
	1	9/4/03	1.0	9.3	3.9	17.8	1.1	U (1.0)	U (0.006)	U (0.025)	U (0.002)	37.5	2.5	U (1.0)
	2	9/4/03	1.3	8.0	3.3	15.7	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	37.9	2.4	U (1.0)
L9304	3	9/4/03	1.0	9.3	3.7	17.8	1.0	U (1.0)	U (0.006)	U (0.025)	U (0.002)	38.0	2.5	U (1.0)
	1	8/21/04	1.0	7.9	3.7	20.1	1.2	U (1.0)	U (0.006)	U (0.025)	U (0.002)	41.5	4.2	U (1.0)
	1-Dup	8/21/04	1.0	7.7	3.7	19.6	1.2	U (1.0)	U (0.006)	U (0.025)	U (0.002)	41.7	4.2	U (1.0)
L9501	1	8/21/04	NR	25.5	6.7	25.2	1.4	U(1.0)	U (0.006)	U (0.025)	U (0.002)	73.1	0.5	U (1.0)
	1	9/4/03	2.3	18.0	4.2	8.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	25.2	0.3	U (1.0)
MB0301	2	9/4/03	1.3	19.2	4.0	7.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	24.8	0.3	U (1.0)
MIDUSUI	3	9/4/03	2.0	19.1	4.0	7.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	24.7	0.3	U (1.0)
	2	8/21/04	1.3	18.9	4.3	8.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	24.6	0.2	U (1.0)
	1	9/4/03	2.1	6.1	1.7	2.7	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	6.4	U (0.1)	U (1.0)
L9824	2	9/4/03	2.1	6.2	1.7	2.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	0.003	6.4	U (0.1)	U (1.0)
L9024	3	9/4/03	0.5	8.3	2.6	3.8	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	10.0	U (0.1)	U (1.0)
	1	8/21/04	2.1	6.3	1.6	2.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	5.9	U (0.1)	U (1.0)
	1	9/4/03	1.4	19.5	3.6	7.3	1.2	U (1.0)	U (0.006)	U (0.025)	0.003	19.4	1.0	U (1.0)
L9821	2	9/4/03	1.2	20.1	3.5	7.1	1.1	U (1.0)	U (0.006)	U (0.025)	U (0.002)	19.3	1.1	U (1.0)
17021	3	9/4/03	1.5	20.0	3.5	6.8	1.1	U (1.0)	U (0.006)	U (0.025)	U (0.002)	19.3	1.3	U (1.0)
	2	8/21/04	1.2	20.0	3.7	7.5	1.3	U (1.0)	U (0.006)	U (0.025)	U (0.002)	20.3	0.7	U (1.0)

 Table 2 - Analytical Results, Dissolved Metals and Anions

August 2004

Notes

U = Analyte not detected at detection limit shown in parethesis

NR = Not recorded

	Juney stear 1	San			Anions (Cont		ed Metal	s hv S	W 6020			Anio	ns by EPA	ugust 2004 \_300
Lake Number	Sample Location	Date/ Time	Depth (ft)	Calcium (mg/L)		Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Nitrate (mg/L)
	1	9/4/03	0.8	13.4	3.2	4.5	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.9	0.3	U (1.0)
	1 Dup	9/4/03	0.8	12.6	2.9	4.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.9	0.3	U (1.0)
	2	9/4/03	0.9	13.3	2.9	4.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.8	0.4	U (1.0)
L9819	2 Dup	9/4/03	0.9	12.8	2.9	4.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.8	0.3	U (1.0)
	3	9/4/03	1.0	12.5	2.9	4.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.9	0.4	U (1.0)
	3 Dup	9/4/03	1.0	11.8	2.9	4.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.7	0.3	U (1.0)
	1	8/21/04	0.8	11.5	2.6	3.7	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.0	0.2	U (1.0)
	1	9/4/03	2.9	6.5	2.0	5.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.3	U (0.1)	U (1.0)
	1 Dup	9/4/03	2.9	6.5	2.0	5.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.4	U (0.1)	U (1.0)
MB0302	2	9/4/03	0.8	7.0	2.2	5.9	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.6	U (0.1)	U (1.0)
WID0302	2 Dup	9/4/03	0.8	7.0	2.1	5.8	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.5	U (0.1)	U (1.0)
	3	9/4/03	0.9	6.4	2.1	5.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.3	U (0.1)	U (1.0)
	2	8/20/04	0.8	7.8	2.4	6.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	16.8	U ( <b>0.1</b> )	U (1.0)
M9925	1	8/20/04	NR	29.2	5.4	7.8	1.2	U (1.0)	U (0.006)	U (0.025)	U (0.002)	32.4	1.3	U (1.0)
	1	9/5/03	1.9	13.1	3.0	5.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	16.3	0.2	U (1.0)
M0024	2	9/5/03	0.8	17.3	3.7	6.9	1.1	U (1.0)	U (0.006)	U (0.025)	U (0.002)	19.4	0.3	U (1.0)
M9924	3	9/5/03	0.9	16.9	3.6	6.5	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	19.6	0.3	U (1.0)
	2	8/20/04	0.8	19.4	4.1	7.1	1.2	U (1.0)	U (0.006)	U (0.025)	U (0.002)	19.5	0.2	U (1.0)
M9923	1	8/20/04	NR	28.7	4.5	5.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	21.0	0.8	U (1.0)

 Table 2 - Analytical Results, Dissolved Metals and Anions (Continued)

August 2004

Notes

U = Analyte not detected at detection limit shown in parethesis

NR = Not recorded

		/	1ple		Anions (Conti D	,	ed Metal	ls by S	SW 6020	)		Anio	ns by EPA	ugust 2004 A 300
Lake Number	Sample Location	Date/ Time	Depth (ft)	Calcium (mg/L)		Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Nitrate (mg/L)
	1	9/5/03	1.3	13.2	2.1	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	14.7	0.2	U (1.0)
L9910	2	9/5/03	1.3	17.0	2.1	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.4	0.3	U (1.0)
L9910	3	9/5/03	0.7	15.0	2.0	3.7	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.0	0.3	U (1.0)
	1	8/20/04	1.3	16.2	2.3	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	13.1	0.3	U (1.0)
	1	9/5/03	0.7	10.9	2.6	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.3	0.1	U (1.0)
M9913	2	9/5/03	1.3	10.6	2.6	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.6	U (0.1)	U (1.0)
M19913	3	9/5/03	1.1	8.7	2.2	3.5	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	16.1	U (0.1)	U (1.0)
	2	8/20/04	1.3	11.2	2.7	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.1	U (0.1)	U (1.0)
	1	9/5/03	1.0	8.2	2.2	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.9	U (0.1)	U (1.0)
M9912	2	9/5/03	1.1	8.3	2.2	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.7	U (0.1)	U (1.0)
W19912	3	9/5/03	1.3	8.6	2.4	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.8	U (0.1)	U (1.0)
	1	8/20/04	1.0	9.2	2.5	4.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.9	0.1	U (1.0)
	1	9/5/03	0.8	8.6	2.3	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	18.7	U (0.1)	U (1.0)
M0292	2	9/5/03	0.8	8.9	2.2	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	18.4	U (0.1)	U (1.0)
W10292	3	9/5/03	1.3	8.9	2.2	4.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	18.0	0.1	1.52
	1	8/20/04	0.8	10.1	2.7	3.9	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.4	0.2	U (1.0)
	1	9/5/03	0.9	6.6	1.7	3.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	10.1	U (0.1)	U (1.0)
M0293	2	9/5/03	1.6	6.1	1.6	2.8	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.7	0.1	U (1.0)
1110293	3	9/5/03	0.9	7.2	1.8	3.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	10.2	0.1	U (1.0)
	2	8/20/04	1.6	8.4	2.0	3.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.3	U (0.1)	U (1.0)

 Table 2 - Analytical Results, Dissolved Metals and Anions (Continued)

August 2004

Notes

U = Analyte not detected at detection limit shown in parethesis

		San	nple		D	issolv	ed Metal	s by S	SW 6020	)		Anio	ns by EPA	A 300
Lake Number	Sample Location	Date/ Time	Depth (ft)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Iron (mg/L)	Copper (mg/L)	Zinc (mg/L)	Cadmium (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Total Nitrate (mg/L)
	1	9/5/03	0.8	7.0	1.7	3.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.5	0.1	U (1.0)
10204	2	9/5/03	1.6	7.2	1.8	3.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.6	0.1	U (1.0)
M0294	3	9/5/03	1.4	7.4	1.8	3.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.5	U (0.1)	U (1.0)
	1	8/20/04	0.8	7.7	1.9	3.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.0	0.2	U (1.0)
	1	9/5/03	1.9	7.5	1.8	3.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.7	0.1	U (1.0)
	2	9/5/03	0.5	7.2	1.8	3.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.7	0.1	U (1.0)
M9914	3	9/5/03	1.9	7.8	1.8	3.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.8	0.1	U (1.0)
	1	8/20/04	1.9	8.9	2.2	4.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	11.7	U ( <b>0.1</b> )	U (1.0)
	1-Dup	8/20/04	1.9	7.9	2.0	3.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.5	0.5	U (1.0)
	1	9/5/03	0.6	9.7	2.2	3.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	12.1	U (0.1)	U (1.0)
R0071	2	9/5/03	1.1	8.5	2.2	3.6	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	11.5	0.3	U (1.0)
K00/1	3	9/5/03	0.7	11.6	2.8	4.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	15.2	U (0.1)	U (1.0)
	3	8/20/04	0.7	8.3	2.0	3.4	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	9.4	0.1	U (1.0)
	1	9/5/03	1.1	8.6	2.1	3.9	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	14.5	0.1	U (1.0)
M0024	2	9/5/03	1.6	9.7	2.5	4.1	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	14.8	0.1	U (1.0)
1110024	3	9/5/03	1.3	8.7	2.2	4.0	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	14.5	0.1	U (1.0)
	2	8/20/04	1.6	7.6	1.9	3.2	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	12.7	0.3	U (1.0)
MB0401	1	8/20/04	NR	12.9	3.3	4.3	U (1.0)	U (1.0)	U (0.006)	U (0.025)	U (0.002)	11.8	0.3	U (1.0)

 Table 2 - Analytical Results, Dissolved Metals and Anions (Continued)

August 2004

Notes

U = Analyte not detected at detection limit shown in parethesis

NR = Not recorded

		San	•		/	Tetal	Diagol	August 2004
Lake Number	Sample Location	Date	Depth (ft)	Alkalinity (mg/L)	Turbidity (NTU)	Total Dissolved Solids (mg/L)	Diesel Range Organics (mg/L)	Residual Range Organics (mg/L)
	1	9/4/03	1.0	35	NR	118	U (0.330)	U (0.549)
	2	9/4/03	1.3	37	NR	120	U (0.316)	U (0.526)
L9304	3	9/4/03	1.0	38	NR	110	U (0.300)	U (0.500)
	1	8/21/04	1.0	28	1.12	96	U(0.309)	U(0.515)
	1-Dup	8/21/04	1.0	28	0.82	99	U( <b>0.313</b> )	U(0.521)
L9501	1	8/21/04	NR	67	2.57	244	U(0.316)	U(0.526)
	1	9/4/03	2.3	62	NR	135	U (0.316)	U (0.526)
MB0301	2	9/4/03	1.3	67	NR	130	U (0.300)	U (0.500)
WID0501	3	9/4/03	2.0	68	NR	139	U (0.319)	U (0.532)
	2	8/21/04	1.3	59	2.43	108	U( <b>0.313</b> )	U(0.521)
	1	9/4/03	2.1	24	NR	55	U (0.313)	U (0.521)
L9824	2	9/4/03	2.1	23	NR	65	U (0.309)	U (0.515)
1/024	3	9/4/03	0.5	35	NR	70	U (0.315)	U (0.515)
	1	8/21/04	2.1	25	6.11	31	U(0.309)	U( <b>0.515</b> )
	1	9/4/03	1.4	66	NR	131	U (0.333)	U (0.556)
L9821	2	9/4/03	1.2	66	NR	109	U (0.323)	U (0.538)
L9021	3	9/4/03	1.5	66	NR	133	U (0.326)	U (0.543)
	2	8/21/04	1.2	64	1.81	106	U( <b>0.333</b> )	U(0.556)
	1	9/4/03	0.8	42	NR	101	U (0.300)	U (0.500)
	1 Dup	9/4/03	0.8	42	NR	95	U (0.313)	U (0.521)
	2	9/4/03	0.9	46	NR	96	U (0.330)	U (0.549)
L9819	2 Dup	9/4/03	0.9	46	NR	94	U (0.306)	U (0.510)
	3	9/4/03	1.0	43	NR	74	U (0.345)	U (0.575)
	3 Dup	9/4/03	1.0	43	NR	63	U (0.341)	U (0.568)
	1	8/21/04	0.8	40	3.26	71	U(0.319)	U(0.532)

#### Table 3 - Analytical Results, Alkalinity, Turbidity, TDS, DRO, RRO

August 2004

Notes

U = Analyte not detected at detection limit shown in parethesis

NR - Not recorded

Table 5 -	Analytical			rbidity, TDS, I	JKU, KKU (U	ontinued)		August 2004
Lake <u>Number</u>	Sample Location	San Date	nple Depth (ft)	Alkalinity (mg/L)	Turbidity (NTU)	Total Dissolved Solids (mg/L)	Diesel Range Organics (mg/L)	Residual Range Organics (mg/L)
	1	9/4/03	2.9	23	NR	79	U (0.313)	U (0.521)
	1 Dup	9/4/03	2.9	23	NR	63	U (0.309)	U (0.515)
NAD0202	2	9/4/03	0.8	23	NR	83	U (0.337)	U (0.562)
MB0302	2 Dup	9/4/03	0.8	23	NR	56	U (0.353)	U (0.588)
	3	9/4/03	0.9	24	NR	65	U (0.300)	U (0.500)
	2	8/20/04	0.8	25	9.65	55	U( <b>0.316</b> )	U(0.526)
M9925	1	8/20/04	NR	88	8.43	170	U(0.313)	U(0.521)
_	1	9/5/03	1.9	44	NR	96	U (0.326)	U (0.543)
M9924	2	9/5/03	0.8	61	NR	106	U (0.326)	U (0.543)
N19924	3	9/5/03	0.9	61	NR	116	U (0.323)	U (0.538)
	2	8/20/04	0.8	62	1.72	128	U( <b>0.306</b> )	0.812
M9923	1	8/20/04	NR	90	2.88	141	U(0.309)	U(0.515)
	1	9/5/03	1.3	46	NR	81	U (0.353)	U (0.588)
L9910	2	9/5/03	1.3	56	NR	86	U (0.309)	U (0.515)
L9910	3	9/5/03	0.7	60	NR	90	U (0.300)	U (0.500)
	1	8/20/04	1.3	52	17.0	84	U(0.303)	U(0.505)
	1	9/5/03	0.7	38	NR	86	U (0.316)	U (0.526)
M9913	2	9/5/03	1.3	33	NR	69	U (0.316)	U (0.526)
MI//13	3	9/5/03	1.1	33	NR	65	U (0.300)	U (0.500)
	2	8/20/04	1.3	34	1.63	61	U(0.306)	U(0.510)
	1	9/5/03	1.0	27	NR	69	U (0.297)	U (0.495)
M9912	2	9/5/03	1.1	27	NR	71	U (0.319)	U (0.532)
W19912	3	9/5/03	1.3	26	NR	U (50)	U (0.309)	U (0.515)
	1	8/20/04	1.0	26	1.60	61	U(0.306)	U(0.510)
	1	9/5/03	0.8	28	NR	76	U (0.316)	U (0.526)
M0292	2	9/5/03	0.8	27	NR	75	U (0.297)	U (0.495)
1410474	3	9/5/03	1.3	30	NR	83	U (0.300)	U (0.500)
	1	8/20/04	0.8	29	8.22	64	U(0.323)	U(0.538)

 Table 3 - Analytical Results, Alkalinity, Turbidity, TDS, DRO, RRO (Continued)

August 2004

Notes

 $\mathbf{U}=\mathbf{A}\mathbf{n}\mathbf{a}\mathbf{l}\mathbf{y}\mathbf{t}\mathbf{e}$  not detected at detection limit shown in parethesis

NR - Not recorded

		San	ple			Total	Diesel	Residual
Number         I           M0293         -           M0294         -           M0294         -           M09914         -	Sample Location	Date	Depth (ft)	Alkalinity (mg/L)	Turbidity (NTU)	Dissolved Solids (mg/L)	Range Organics (mg/L)	Range Organics (mg/L)
	1	9/5/03	0.9	30	NR	54	U (0.313)	U (0.521)
M0203	2	9/5/03	1.6	25	NR	U (50)	U (0.323)	U (0.538)
WIU233	3	9/5/03	0.9	30	NR	53	U (0.300)	U (0.500)
	2	8/20/04	1.6	28	1.92	38	U(0.316)	U(0.526)
	1	9/5/03	0.8	25	NR	69	U (0.333)	U (0.556)
M0204	2	9/5/03	1.6	27	NR	U (50)	U (0.316)	U (0.526)
1110274	3	9/5/03	1.4	25	NR	58	U (0.306)	U (0.510)
	1	8/20/04	0.8	25	4.38	38	U(0.306)	U(0.510)
	1	9/5/03	1.9	27	NR	61	U (0.316)	U (0.526)
	2	9/5/03	0.5	28	NR	60	U (0.306)	U (0.510)
M9914	3	9/5/03	1.9	28	NR	U (50)	U (0.300)	U (0.500)
	1	8/20/04	1.0	29	8.82	55	0.592	0.529
	1-Dup	8/20/04	1.0	27	1.66	49	U(0.319)	U(0.532)
	1	9/5/03	0.6	34	NR	79	U (0.300)	U (0.500)
D0071	2	9/5/03	1.1	34	NR	65	U (0.300)	U (0.500)
KUU/1	3	9/5/03	0.7	44	NR	89	U (0.300)	U (0.500)
	3	8/20/04	0.7	27	1.56	51	U(0.309)	U(0.515)
	1	9/5/03	1.1	31	NR	65	U (0.300)	U (0.500)
M0024	2	9/5/03	1.6	32	NR	68	U (0.300)	U (0.500)
1110024	3	9/5/03	1.3	33	NR	59	U (0.300)	U (0.500)
	2	8/20/04	1.6	28	0.79	53	U( <b>0.306</b> )	U(0.510)
MB0401	1	8/20/04	NR	44	8.76	83	U(0.326)	U(0.543)

Table 3 - Analytical Results Alkalinity Turbidity TDS DRO RRO (Continued)

Notes

U = Analyte not detected at detection limit shown in parethesis

NR - Not recorded

#### Table 4 - Analytical Results, PAH-SIM

August 2004

	Anaryticar				Poly	nucl	ear Ai	• o m a t	ic Hy	droca	rhon	s b y S	electi	ve Io	n Mor	nitori	n σ (11 o	-	ust 2004
Lake Number	Sample Location	Sample Date	Detection Limit (ug/L)	Acenaphthylene	Acenaphthene	Fluorene	Naphthalene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)Fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(1,2,3-c,d) pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,I)perylene
Tuniber	1	9/4/03	0.0495	U	۲ U	U	U	U	U	U	Ū	Ū	U	U	Ū	Ū	Ū	U	U
	2	9/4/03	0.0495	U	U	U	0.37 1	U	U	U	U	U	U	U	U	U	U	U	U
L9304	3	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/21/04	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1-Dup	8/21/04	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
L9501	1	8/21/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/4/03	0.0543	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MB0301	2	9/4/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
WID0301	3	9/4/03	0.0526	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2	8/21/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/4/03	0.0500	U	U	U	0.25 1	U	U	U	U	U	U	U	U	U	U	U	U
L9824	2	9/4/03	0.0562	U	U	U	0.24 1	U	U	U	U	U	U	U	U	U	U	U	U
L9024	3	9/4/03	0.0495	U	U	U	0.14	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/21/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/4/03	0.0610	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
L9821	2	9/4/03	0.0575	U	U	U	0.14 1	U	U	U	U	U	U	U	U	U	U	U	U
L9021	3	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/21/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1 Dup	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2	9/4/03	0.0538	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
L9819	2 Dup	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	3	9/4/03	0.0532	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	3 Dup	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/21/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes

1. Probable cross contamination in extraction procedure. Method blank was non-detect for naphthalene

2. Probable cross contamination in extraction procedure. Method blank was contaminated with naphthalene

U = Analyte not detected at detection limit shown in third column

#### Table 4 - Analytical Results, PAH-SIM (Continued)

August 2004

					Poly	nucl	ear Ai	romat	ісНу	droca	rbon	s b y S	electi	ve Io	n Mor	nitori	ng (ug	g/L)	
Lake Number	Sample Location	Sample Date	Detection Limit (ug/L)	Acenaphthylene	Acenaphthene	Fluorene	Naphthalene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)Fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(1,2,3-c,d) pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,I)perylene
	1	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1 Dup	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
<b>MB0302</b>	2	9/4/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2 Dup	9/4/03	0.0532	U U	U U	U	U	U	U U	U	U U	U U	U U	U U	U	U	U U	U	U U
	3 2	9/4/03 8/20/04	0.0500 0.05 to 0.1	U	U	U U	0.05 U	U	U	U	U	U	U	U	U	U U	U	U	U
					L.		L.										-	-	
M9925	2	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M9924	2	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	3	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M9923	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
L9910	2	9/5/03	0.0538	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
L7710	3	9/5/03	0.0500	U	U	U	$0.76^{-2}$	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0510	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M9913	2	9/5/03	0.0526	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1/19913	3	9/5/03	0.0521	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M9912	2	9/5/03	0.0543	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
111//14	3	9/5/03	0.0495	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Notes

1. Probable cross contamination in extraction procedure. Method blank was non-detect for naphthalene

2. Probable cross contamination in extraction procedure. Method blank was contaminated with naphthalene

U = Analyte not detected at detection limit shown in third column

#### Table 4 - Analytical Results, PAH-SIM (Continued)

August 2004

					Poly	nucl	ear Ai	omat	ic Hy	droca	rbon	s b y S	electi	ve Io	n Mon	itori	ng (ug	-	450 2004
Lake Number	Sample Location	Sample Date	Detection Limit (ug/L)	Acenaphthylene	Acenaphthene	Fluorene	Naphthalene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)Anthracene	Chrysene	Benzo(b)Fluoranthene	Benzo(k)fluoranthene	Benzo(a)Pyrene	Indeno(1,2,3-c,d) pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,I)perylene
	1	9/5/03	0.0538	U	U	U	0.19 <sup>-2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
M0292	2	9/5/03	0.0500	U	U	U	0.08 <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
WI0292	3	9/5/03	0.0556	U	U	U	0.15 <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0549	U	U	U	0.06 <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
M0293	2	9/5/03	0.0521	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
W10295	3	9/5/03	0.0556	U	U	U	$0.06^{2}$	U	U	U	U	U	U	U	U	U	U	U	U
	2	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0510	U	U	U	0.08 <sup>-2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
M0294	2	9/5/03	0.0510	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
WIU294	3	9/5/03	0.0505	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0532	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	2	9/5/03	0.0515	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M9914	3	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	8/20/04	0.05 to 0.1	U	U	U	<b>0.107</b> <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
	1-Dup	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0538	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
R0071	2	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
N00/1	3	9/5/03	0.0500	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	3	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
	1	9/5/03	0.0515	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
M0024	2	9/5/03	0.0495	U	U	U	0.14 <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
1110024	3	9/5/03	0.0500	U	U	U	0.28 <sup>2</sup>	U	U	U	U	U	U	U	U	U	U	U	U
	2	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
MB0401	1	8/20/04	0.05 to 0.1	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Notes	-																		

Notes

1. Probable cross contamination in extraction procedure. Method blank was non-detect for naphthalene

2. Probable cross contamination in extraction procedure. Method blank was contaminated with naphthalene

U = Analyte not detected at detection limit shown in third column

# Appendix A Laboratory Analytical Data





# Laboratory Analysis Report

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

Mike Cox Michael Baker Jr., Inc. 4601 Business Pk Blvd., #42 Anchorage, AK 99503

Work Order:	1045416 NPRA Lakes
Client:	Michael Baker Jr., Inc.
Report Date:	September 24, 2004

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 Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-005 (CS) and AK00971 (Micro).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Conference.

If you have any questions regarding this report or if we can be of any other assistance, please call your SGS Project Manager a (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 an estimated value that falls below PQL, but is greater than the MDL.
- J The quantitation is an estimation.
- 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 high outside of calibrated range.

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

SGS Environmental Services Inc. 200 W. Potter Dr, Anchorage AK. 99518-1605 t (907) 562-2343 f (907) 561-5301 www.us.sgs.com



SGS Ref.#1045416001Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM0292MatrixWater (Surface, Eff., Ground)

Released By 5 harrow Portan

#### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride and sulfate in the calibration blank; the concentration of these analytes in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3910	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	10100	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	2660	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.166	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Alkalinity	28.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	15.4	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	63.8	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	8.22	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic )	Fuels Departme	ent							
Diesel Range Organics	0.323 U	0.323	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Residual Range Organics	0.538 U	0.538	mg/L	AK102/103	Ε		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	74.9		%	AK102/103	E	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	84.1		%	AK102/103	Е	50-150	08/26/04	08/27/04	I JC



SGS Ref.#	1045416001	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 18:12
Client Sample ID	M0292	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics G	GC/MS								
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	$0.0500~{ m U}$	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	63.2		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	66.7		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	92.4		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045416002Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM0293MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	Dates/Times are Alaska Standard Timeted Date/Time09/24/200415:34					
Printed Date/Time	09/24/2004 15:34					
Collected Date/Time	08/20/2004 18:06					
<b>Received Date/Time</b>	08/24/2004 12:30					
<b>Technical Director</b>	Stephen C. Ede					

Released By Sharn Portan

#### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of chloride in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3100	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Calcium	8390	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	2020	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.100 U	0.100	mg/L	EPA 300.0	В			09/13/04	JJB
Alkalinity	27.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	9.26	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	37.5	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	1.92	0.100	NTU	SM20 2130B	D			08/24/04	КС
Semivolatile Organic 3	Fuels Departme	ent							
Diesel Range Organics	0.316 U	0.316	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Residual Range Organics	0.526 U	0.526	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	71.1		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	85.1		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC

Polynuclear Aromatics GC/MS



SGS Ref.#	1045416002	All Dates/Times are Alaska Standard Time		
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/24/2004 15:34	
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 18:06	
Client Sample ID	M0293	<b>Received Date/Time</b>	08/24/2004 12:30	
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede	

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Înit
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	56.6		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	71.2		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	95.3		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045416003Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM9912MatrixWater (Surface, Eff., Ground)

All Dates/Times are Ala	ska Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/20/2004 18:12
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	ener Parton

Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of this analyte in the sample is 10X greater.

EP 300.0 - Sample was analyzed past 28 day hold time for sulfate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	4370	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	9170	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	2460	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	Ĭ		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.132	0.100	mg/L	EPA 300.0	В			09/20/04	JJΒ
Alkalinity	26.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	15.9	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	61.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	1.60	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic H	Fuels Departme	ent							
Residual Range Organics	0.510 U	0.510	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Diesel Range Organics	0.306 U	0.306	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	83.3		%	AK102/103	Е	50-150	08/26/04	08/27/04	
5a Androstane <surr></surr>	74.8		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045416003	All Dates/Times are Alaska Standard Time		
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34	
Project Name/#	NPRA Lakes	<b>Collected Date/Time</b>	08/20/2004 18:12	
<b>Client Sample ID</b>	M9912	<b>Received Date/Time</b>	08/24/2004 12:30	
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede	

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	74.7		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	82.6		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	98.8		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045416004Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM9913MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ka Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/20/2004 18:13
<b>Received Date/Time</b>	08/24/2004 12:30
Technical Director	Stephen C. Ede

Released By Sharmon Feature

Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of this analyte in the sample is 10X greater.

EP 300.0 - Sample was analyzed past 28 day hold time for sulfate.

Sodium Dissolved Metals Cadmium Calcium Copper	4180 2.00 U 11200	1000 2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Cadmium Calcium Copper	11200	2.00							
Calcium Copper	11200	2.00							
Copper			ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
		1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	2650	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.100 U	0.100	mg/L	EPA 300.0	В			09/20/04	JJB
Alkalinity	33.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	15.1	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	61.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	1.63	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic Fue	els Departme	ent							
Diesel Range Organics	0.306 U	0.306	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Residual Range Organics	0.510 U	0.510	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	65.5		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	90.9		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045416004	All Dates/Times are Alaska Standard Time		
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34	
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 18:13	
Client Sample ID	M9913	<b>Received Date/Time</b>	08/24/2004 12:30	
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede	

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics 0	GC/MS								
Naphthalene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0 110 U	0.110	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.110 U	0.110	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	76.9		⁰∕₀	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	86.2		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	100		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045416005Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM0294MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alaska Standard TimePrinted Date/Time09/24/200415:34Collected Date/Time08/20/200417:55Received Date/Time08/24/200412:30Technical DirectorStephen C. Ede

Released By Shapping Parker

### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

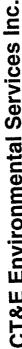
Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3020	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7710	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ĩ		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	1910	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.165	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Alkalinity	24.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	9.00	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	37.5	10.0	mg/L	SM20 2540C	D			08/25/04	K
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	4.38	0.100	NTU	SM20 2130B	D			08/24/04	KO
Semivolatile Organic H	Fuels Departme	nt							
Diesel Range Organics	0.306 U	0.306	mg/L	AK102/103	Е		08/26/04	08/27/04	i je
Residual Range Organics	0.510 U	0.510	mg/L	AK102/103	E		08/26/04	08/27/04	I JC
Surrogates									
5a Androstane <surr></surr>	72.1		<sup>0</sup> ⁄0	AK102/103	Е	50-150		08/27/04	
n-Triacontane-d62 <surr></surr>	77.3		%	AK102/103	E	50-150	08/26/04	08/27/04	ł J(
Polynuclear Aromatics	GC/MS								
Naphthalene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	1 KWN



SGS Ref.#	1045416005	All Dates/Times are Alas	laska Standard Time		
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/24/2004 15:34		
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 17:55		
Client Sample ID	M0294	<b>Received Date/Time</b>	08/24/2004 12:30		
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede		

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Acenaphthylene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.101 U	0.101	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0505 U	0.0505	ug/L	GC/MS SIM	G			09/01/04	
Acenaphthene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0505 U	0.0505	ug/L	GC/MS SIM	G			09/01/04	
Benzo[g,h,i]perylene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0505 U	0.0505	ug/L	GC/MS SIM	G			09/01/04	
Fluoranthene	0.101 U	0.101	ug/L	GC/MS SIM	G			09/01/04	
Pyrene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0505 U	0.0505	ug/L	GC/MS SIM	G			09/01/04	
Benzo[k]fluoranthene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0505 U	0.0505	ug/L	GC/MS SIM	G			09/01/04	
Indeno[1,2,3-c,d] pyrene	0.0505 U	0.0505	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	56.1		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	I KWM
Acenaphthene-d10 <surr is=""></surr>	68.1		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	4 KWM
Chrysene-d12 <surr is=""></surr>	93		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	I KWM

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tal Services Inc. In mean an a	CT&E Reference:	S-1C39 No. SAMPLE Iteenatives	TYPE	COMP			SRUCH 18 2 14 0 4 6 XX						XX J J J ZILI J		X X - A - A - X X	Received By:		Received By:	Fevel 1	Received By:	Time Repeived For Lationatory By:
CT&E Environmental Services Inc.	CLIENT: MICHADI Baker	CONTACT: M. N. & U.X PHONE NO: (	PROJECT: NPRA LAYES	REPORTS TO: M. V. Cox FAX NO: ()	INVOICE TO: L . QUOTE#	Lab No. SAMPLE IDENTIFICATION DAT	1 A.D Morg 2 . 5/20	· 212 2 (1)	· M9913 ·	BU MOZ94 .	medol	100 07	MODZY	1914/	12021	Collected/Rejraquished By: (1) / Date Time	201x	Relinquished By: (2) Date Time		Relinquished By: (3) Date Time	Relinquished By: (4) Date Time

200 W. FOULD DIVE MINING STORES AN 99701 Tel: (907) 474-8656 Fax (907) 474-9685 3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax (907) 474-9685

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VO: ( ) 273-1639 No. SAMPLE Used No. SAMPLE Used		CT&E Reference:	
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	owern#-	NO. SAMPLE Used	

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CT&E Environmental Services Inc. Laboratory Division	CT&E R	0: ( ) 275-1654 No.	() 273-1699	IBER:	DATE TIME MATRIX S	Size 1 1906 H20 Z	1812	( ( 028) (	L 1755 & V			Time Received By:		Time Received By:	Timo Baraived Bu		1272 Received for Laboratory By:	1007) 562-0343 554 (007) 563 5301
CT&E Environ	CLIENT: Micri Manel Balker	CONTACT: M. K. C. X PHONE NO: ( PROJECT: NPRA LAKES	REPORTS TO: $M_1 W_2 W_2$ Fax NO: (	INVOICE TO: (1 QUOTE# P.O. NUMBER:	2 LAB NO. SAMPLE IDENTIFICATION	DE-F M0293	MUCY C	185W				Collected/Religquished By: (1)	1/1/	Relinquished By: (2) Date		Relinquished By: (3)	Relinquished By: (4)	

200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Pax: (907) 562 53( 3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685

1045416		PAGE OF				/ / / REMARKS								(100UN 10 Temperature C: / -34	EDD Type: INTACT BROKEN ABSENT	d Special Instructions:		ile) Yellow - Returned with Report Pink - Retained by Sampler 0-720
OF CUSTODY RECORD		CT&E Reference:	No. SAMPLE Used				2 6 X	× /	×					Shipping Carrier: Shipping Ticket No:	Data Deliverables: Level I Level II Level II EDI	Requested Turnaround Time and Special Instructions:	yBy:	White - Retained by Lab (Project File)
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4	CT&E Environmental Servic Laboratory Division	A P	ا بر س	PROJECT: NP/ZA LAVE > REPORTS TO: M. W. C. EX FAX NO. (		2 LAB NO. SAMPLE IDENTIFICATION	(1) L-4 M 9913		2 Mo293				-	Collected/Relinquished By: (1) Date	Relinquished By: (2) Date	Relinquished By: (3) Date	Relinquished By: (4)	200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Eak: (907) 561-5601 3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (907) 474-9685



### SAMPLE RECEIPT FORM SGS WO#:

SGS

Yes	No	NA	~	
			Are samples RUSH, priority, or w/n 72 hrs. o hold time?	Due Date:
	calle	<u>\</u>	If yes have you done e-mail notification?	Received Date: 8-24-04
· '	Calle		If yes have you done e-mail notification:	Received Time: 1230
$- \checkmark$			Are samples within 24 hrs. of hold time or due date?	Is date/time conversion necessary?
<u> </u>			If yes, have you spoken with Supervisor?	
- <u>t-</u>			Archiving bottles - if req., are they properly marked?	# of hours to AK Local Time:
X			Are there any problems? PM Notified?	Thermometer ID: <u>5D</u>
~		<u></u>	Were samples preserved, correctly and pH verified?	Cooler ID Temp Blank Cooler Temp
		K	Eturbidity pasthold time	<u>7</u> <u>3.2</u> °C <u>3.9</u> °C
		-	· / I	<u><u>q</u> <u>2.1</u>°C <u>5.6</u>°C</u>
				10 <u>1,4</u> °C <u>3,4</u> °C
			If this is for PWS, provide PWSID.	<u> </u>
	~		Will courier charges apply?	°° °°
			Method of payment?	*Temperature readings include thermometer correction factors
			Data package required? (Level: 1 / 2 / 3 / 4)	Delivery method (circle all that apply): Client'D
			Notes:	Alert Courier / UPS / FedEx / USPS /
		·	Is this a DoD project? (USACE, Navy, AFCEE)	AA Goldstreak / NAC / ERA / PenAir / Carlile
				Lynden / SGS / Other:
	This s	ection	must be filled out for DoD projects (USACE, Navy, AFCEE)	Airbill #
Yes		No		Additional Sample Remarks: ( $\sqrt{if applicable}$ )
-			Is received temperature $4 \pm 2^{\circ}C?$	Extra Sample Volume?
			Exceptions: Samples/Analyses Affected:	Limited Sample Volume?
				Field preserved for volatiles?
				Field-filtered for dissolved?
				Lab-filtered for dissolved?
		/		Ref Lab required?
		_	Rad Screen performed?	Foreign Soil?
		/	Result:	million and a fill different lange found
			Was there an airbill? (Note # above in the right hand column)	<u>This section must be filled if problems are found.</u> Yes No
			Was cooler sealed with custody seals?	Was client notified of problems?
			# / where:	was cheft normed of problems:
		na	Were seal(s) intact upon arrival? Was there a COC with cooler?	Individual contacted:
	<u> </u>		Was the COC filled out properly?	Via: Phone / Fax / Email (circle one)
		/	Did the COC indicate COE / AFCEE / Navy project?	Date/Time:
			Did the COC and samples correspond?	Reason for contact:
			Were all sample packed to prevent breakage?	
			Packing material: $\beta \omega$	
	/		Were all samples unbroken and clearly labeled?	
	· -		Were all samples sealed in separate plastic bags?	
		nen	Were all VOCs free of headspace and/or MeOH preserved?	
	2	<u>,</u> (	Were correct container / sample sizes submitted?	Change Order Required?
			Is sample condition good?	SGS Contact:
-	<u></u>	_	Was copy of CoC, SRF, and custody seals given to PM to fax?	
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## Laboratory Analysis Report

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

Mike Cox Michael Baker Jr., Inc. 4601 Business Pk Blvd., #42 Anchorage, AK 99503

Work Order:	1045423 NPRA Lakes
Client:	Michael Baker Jr., Inc.
<b>Report Date:</b>	September 24, 2004

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 Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-005 (CS) and AK00971 (Micro).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Conference.

If you have any questions regarding this report or if we can be of any other assistance, please call your SGS Project Manager a (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 an estimated value that falls below PQL, but is greater than the MDL.
- J The quantitation is an estimation.
- 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 high outside of calibrated range.

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



SGS Ref.#	1045423001	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	<b>Collected Date/Time</b>	08/21/2004 10:45
Client Sample ID	L9304	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede
		Released By	- Active for the contraction of

### Sample Remarks:

SM2130B-Sample was received after holding time had expired. EP 300.0 - Detectable amount of chloride and sulfate in the calibration blank; the concentration of these analytes in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	20100	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7930	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	3720	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1230	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Vaters Department									
Sulfate	4.20	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Alkalinity	28.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	41.5	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	96.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	1.12	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic :	Fuels Departme	ent							
Diesel Range Organics	0.309 U	0.309	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Residual Range Organics	0.515 U	0.515	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	66.6		%	AK102/103	Е	50-150		08/27/04	
n-Triacontane-d62 <surt></surt>	82.5		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045423001	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:45
Client Sample ID	L9304	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.105 U	0.105	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.105 U	0.105	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	58		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	67		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	90.6		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045423002Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDLD002MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ka Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/21/2004 10:50
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	natriana Postarona

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride and sulfate in the calibration blank; the concentration of these analytes in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	19600	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7700	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	3660	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1180	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	4.21	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Alkalinity	27.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	41.7	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	98.8	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	0.820	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic Fu	els Departme	ent							
Diesel Range Organics	0.313 U	0.313	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Residual Range Organics	0.521 U	0.521	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	70.8		%	AK102/103	E	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	89.1		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045423002	All Dates/Times are Alas	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:50
Client Sample ID	LD002	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.106 U	0.106	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.106 U	0.106	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	57.2		<sup>0</sup> /0	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	69.9		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	91.2		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045423003Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDL9821MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ka Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/21/2004 10:07
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	opertet restressor Port Stations

Sample Remarks:

SM2130B-Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of this analyte in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	7500	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	T		08/25/04	08/27/04	WAW
Calcium	20000	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	3740	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1260	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.736	0.100	mg/L	EPA 300.0	В			09/20/04	JJB
Alkalinity	64.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	20.3	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	106	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	1.81	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic	Fuels Departme	ent							
Diesel Range Organics	0.333 U	0.333	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Residual Range Organics	0.556 U	0.556	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	82.2		%	AK102/103	E	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	98.2		%	AK102/103	E	50-150	08/26/04	08/27/04	JC

Polynuclear Aromatics GC/MS



SGS Ref.#	1045423003	All Dates/Times are Alas	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:07
Client Sample ID	L9821	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	SC/MS								
Naphthalene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.106 U	0.106	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.106 U	0.106	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0532 U	0.0532	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	62.1		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	66.3		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	97.4		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.# 1045423004 All Dates/Times are Alaska Standard Time **Client Name** Michael Baker Jr., Inc. Printed Date/Time 09/24/2004 15:34 Project Name/# Collected Date/Time 08/21/2004 10:27 NPRA Lakes **Client Sample ID** MB0301 **Received Date/Time** 08/24/2004 12:30 Water (Surface, Eff., Ground) Matrix Stephen C. Ede Technical Director Pastan Released By

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of this analyte in the sample is 10X greater. EP 300.0 - Sample was analyzed past 28 day hold time for sulfate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	7980	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	18900	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	4310	1000	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.168	0.100	mg/L	EPA 300.0				09/20/04	IJВ
Alkalinity	59.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	24.6	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	108	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	2.43	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic F	uels Departme	ent							
Residual Range Organics	0.521 U	0.521	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Diesel Range Organics	0.313 U	0.313	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	89.6		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC
5a Androstane <surr></surr>	77.2		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045423004	All Dates/Times are Alas	ka Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:27
Client Sample ID	MB0301	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Acenaphthylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Naphthalene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	56.8		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	65.6		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	93.4		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045423005Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDL9824MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ska Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/21/2004 10:15
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	estan Paskan

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of chloride in the sample is 10X greater.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	2370	1000	ug/L	SW6020 Diss.	Ĩ		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	6280	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	1640	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zine	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.100 U	0.100	mg/L	EPA 300.0	в			09/13/04	JJB
Alkalinity	24.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	5.92	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	31.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	6.11	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic H	Fuels Departme	ent							
Residual Range Organics	0.515 U	0.515	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Diesel Range Organics	0.309 U	0.309	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	83.6		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC
5a Androstane <surr></surr>	72.3		%	AK102/103	E	50-150	08/26/04	08/27/04	JC

Polynuclear Aromatics GC/MS



SGS Ref.#	1045423005	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:15
Client Sample ID	L9824	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	Technical Director	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluorene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Phenanthrene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo(a)Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Acenaphthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Dibenzo[a,h]anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[g,h,i]perylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Fluoranthene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Chrysene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[b]Fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[k]fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Benzo[a]pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/26/04	09/01/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	66.3		%	GC/MS SIM	G	30-126	08/26/04	09/01/04	KWM
Acenaphthene-d10 <surr is=""></surr>	78.5		%	GC/MS SIM	G	30-128	08/26/04	09/01/04	KWM
Chrysene-d12 <surr is=""></surr>	95.7		%	GC/MS SIM	G	30-138	08/26/04	09/01/04	KWM



SGS Ref.#1045423006Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDL9501MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ka Standard Time
Printed Date/Time	09/24/2004 15:34
Collected Date/Time	08/21/2004 10:40
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede

Released By Sharman Fortan

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	25200	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	25500	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	6670	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1370	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.530	0.500	mg/L	EPA 300.0				09/13/04	IJE
Alkalinity	66.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	73.1	0.500	mg/L	EPA 300.0	В			09/13/04	JJE
Total Dissolved Solids	244	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	2.57	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic H	Fuels Departme	nt							
Diesel Range Organics	0.316 U	0.316	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Residual Range Organics	0.526 U	0.526	mg/L	AK102/103	E		08/26/04	08/27/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	96.1		%	AK102/103	E	50-150	08/26/04	08/27/04	JC
5a Androstane <surr></surr>	87.2		%	AK102/103	E	50-150	08/26/04	08/27/04	JC
Polynuclear Aromatics	GC/MS								
Acenaphthylene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWN



SGS Ref.#	1045423006	All Dates/Times are Alas	ka Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:40
Client Sample ID	L9501	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	Technical Director	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Fluorene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Phenanthrene	0.116 U	0.116	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo(a)Anthracene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Acenaphthene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Dibenzo[a,h]anthracene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[g,h,i]perylene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Anthracene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Fluoranthene	0.116 U	0.116	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Pyrene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Chrysene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[b]Fluoranthene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[k]fluoranthene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[a]pyrene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0581 U	0.0581	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	60.2		%	GC/MS SIM	G	30-126	08/26/04	09/02/04	KWM
Acenaphthene-d10 <surr is=""></surr>	73.6		%	GC/MS SIM	G	30-128	08/26/04	09/02/04	KWM
Chrysene-d12 <surr is=""></surr>	98.6		%	GC/MS SIM	G	30-138	08/26/04	09/02/04	KWM



SGS Ref.# 1045423007 All Dates/Times are Alaska Standard Time Michael Baker Jr., Inc. **Client Name** Printed Date/Time 09/24/2004 15:34 Project Name/# Collected Date/Time 08/21/2004 10:00 NPRA Lakes **Client Sample ID** L9819 Received Date/Time 08/24/2004 12:30 Water (Surface, Eff., Ground) Matrix Stephen C. Ede Technical Director

Released By 5 / Parts

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

EP 300.0 - Detectable amount of chloride in the calibration blank; the concentration of this analyte in the sample is 10X greater. EP 300.0 - Sample was analyzed past 28 day hold time for sulfate.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3710	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Calcium	11500	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	2630	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.247	0.100	mg/L	EPA 300.0	В			09/20/04	JJB
Alkalinity	39.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	13.0	0.100	mg/L	EPA 300.0	В			09/04/04	BJA
Total Dissolved Solids	71.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/05/04	BJA
Turbidity	3.26	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic F	uels Departme	nt							
Diesel Range Organics	0.319 U	0.319	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Residual Range Organics	0.532 U	0.532	mg/L	AK102/103	Е		08/26/04	08/27/04	JC
Surrogates									
5a Androstane <surr></surr>	87.2		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC
n-Triacontane-d62 <surr></surr>	94.4		%	AK102/103	Е	50-150	08/26/04	08/27/04	JC



SGS Ref.#	1045423007	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/24/2004 15:34
Project Name/#	NPRA Lakes	Collected Date/Time	08/21/2004 10:00
<b>Client Sample ID</b>	L9819	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede
	•		

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics G	SC/MS								
Naphthalene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Acenaphthylene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Fluorene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Phenanthrene	0.104 U	0.104	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo(a)Anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Acenaphthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Dibenzo[a,h]anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[g,h,i]perylene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Fluoranthene	0.104 U	0.104	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Chrysene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[b]Fluoranthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	- KWM
Benzo[k]fluoranthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Benzo[a]pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/26/04	09/02/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	53.8		%	GC/MS SIM	G	30-126	08/26/04	09/02/04	I KWM
Acenaphthene-d10 <surr is=""></surr>	72		%	GC/MS SIM	G	30-128	08/26/04	09/02/04	I KWM
Chrysene-d12 <surr is=""></surr>	95.2		%	GC/MS SIM	G	30-138	08/26/04	4 09/02/04	I KWM

1045423			PAGEOF				REMARKS							Oudler 2 Temperature S: 1,8	C = 5.9	Chain of Custody Sear Circle	INTACT BROKEN ABSENT	ructions:			Yellow - Returned with Report Pink - Retained by Sampler 0-720
OF CUSTODY RECORD	ces inc. 	sference:			Required Required	GEAB (C)	50	<pre>&lt; XXXXX</pre>		XX XX XX ~	XXXX			A Shipping Carrier:	Shipping Ticket No:	Data Deliverables:	Level I Level II Level III EDD Type:	Requested Turnaround Time and Special Instructions	Metals- Filter in	•	White - Retained by Lab (Project File) Yellow -
CHAIN OF CUST	CT&E Environmental Services Inc. Laboratory Division	CT&E Reference:	PHONE NO: ( ) 237-1639	No. PWSID#: No.	FAX NO:( ) 273-1699	∢ – ∠ ш	SAMPLE IDENTIFICATION DATE TIME MATRIX S	10/12/8 /	8/21/04/5/	8/21/64	8/21/0710 1040			Date Time Received By:		Date Time Received by:		Date Time Received By:		Bate Time Received For Laboratory By:	200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Pax: 607) 567 5301 3180 Peder Road Fairbanks, AK 99701 Tel: (907) 474-8656 Pax: 607) 474-9685
	CT&E Laborat	CLIENT: MICHAR   Baker	CONTACT: M. K. Cox		REPORTS TO: Mile Cox	INVOICE TO:	2 LAB NO. SAMPLE I	R)A.I 29824	DA-F 29304	50002 V (G	DAT 29501			Collected/Relinquished By: (1)	ZIUN	Relinquished By: (2)		Relinquished By: (3)		Relinquished By: (4)	200 W. Potter Drive Anchorage 3180 Peder Road Fairbanks, Al

# CHAIN OF CUSTODY RECORD

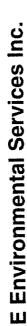
# CT&E Environmental Services Inc.

 Alaska
 Maryland
 Michigan
 New Jersey
 West Virginia
 New Orleans www.cteesi.com

	MICHAN BOWER					CT&E Reference:	<del>حر</del> ة		
CONTACT: N. W.	Ś	PHONE NO: (		01-5-12	639				PAGEOF
PROJECT:	A CANE	~~s	PWSID#:			No. SAMPLE TYPE	Preservatives		
REPORTS TO:		FAX NO: (	1-262 (	~~~	66	COMP COMP	Required		
INVOICE TO:	you and	QUOTE# P.O. NUMBER:				E N − A GRAB	150 x 150 x 100 x		
2 LAB NO.	SAMPLE IDENTIFICATION	TION	DATE	TIME	MATRIX	i ແ ທ	65 MIN 13		REMARKS
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Collected/Relinquished By: (1)		Date	Time	Received By:	ŗ.		4 Shipping Carrier:	Could 2	Temperature C:-/, &
a for the second s				/			Shipping Ticket No:		C= 5.9
Relinquished By: (2)	a construction of the second	Date	Time	Received By:	<u>4:</u>		Data Deliverables:		Chain of Custody Seal: (Circle)
	14			· · · · · · · · · · · · · · · · · · ·			Level I Level II Level III E	EDD Type:	INTACT BROKEN ABSENT
Relinquished By: (3)	c (3)	Date	Time	Received By:	y:		Requested Turnaround Time and Special Instructions:	and Special Instructions:	
	and the second se				1. Anna an Anna		Metals E		
Relinquished By: (4)		Date Ø ∦	Time (	Received For Laboratory By:	or Laboraton	y By: *********		2	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
200 W. Potter Driv 3180 Peger Road	200 W. Potter Drive <b>Anchorage, AK 99518</b> Tel: (907) 562-2343 Fax: (907) 3180 Peger Road <b>Fairbanks, AK 99701</b> Tel: (907) 474-8656 Fax: (907) 47	<b>B</b> Tel: (907) ( Tel: (907) 474	562-2343 Fe -8656 Fax:	ах: (907) 561 (907) 474-96	) 561-5301 74-9685		White - Retained by Lab (Project File)	t File) Yellow - Returned with Report	h Report Pink - Retained by Sampler 0-720

1045423		PAGE OF					REMARKS							~	Temperature C:	TB=7~ 10=59	Chain of Custody Seal: (Circle)	INTACT BROKEN ABSENT	)			led with Report Pink - Retained by Sampler 0-720	
OF CUSTODY RECORD		CT&E Reference:	Preservatives	SAMPLE Used TYPE		G= 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	≤   ≤   ≤   <   <   <   <   <   <   <	۹ ×			T XXXXX T				Shipping Carrier:	Shipping Ticket No:	Data Deliverables:	Level I Level II Level III EDD Type:	Requested Turnaround Time and Special Instructions:	/ an Eiller Metals		White - Retained by Lab (Project File) Yellow - Returned with Report	
CHAIN OF CUST	CT&E Environmental Services Inc.			KES PWSID#:	FAX NO:( ) 272/699	auote# P.O. NUMBER:	SAMPLE IDENTIFICATION DATE TIME MATRIX S	1 8/21/04 1007 H20 2	01 / 1027		9 7 10001 T				Date Time Received By:		Date Time Received By		Dete Time Received By:		Pate Time Received For LaboratoryBy:	200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Báx: (907) 561-5601 3180 Pener Road Fairhanks. AK 99701 Tel: (907) 474-8656 Páx: (907) 474-9685	
	CT&I Labore	CLIENT: MICHAR	CONTACT: MY Ke G		REPORTS TO: Muke by	INVOICE TO: ( )	LAB NO. SAMPLE	2867 I.4 (2)	JA-T MOS	781723656	() × 2120	101 200			5 Collected/Relinquished By: (1)	シークト	Relinquished By: (2)	~	Relinquished By: (3)		Relinquished By: (4)	200 W. Potter Drive Anchorage, AK 9951 3180 Pener Road Fairbanks. AK 99701	

# CHAIN OF CUSTODY RECORD



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CT&E Environmental Servi	mental Services Inc.	CT&E Environmental Services Inc. Laboratory Division	
Delent: Machael Baller		CT&E Reference:	/
CONTACT: MILLE GN PHONE NO:	NO: ( ) 273-1639	Preservatives	
PROJECT: NPRA LAKES	PWSiD#;	TYPE Used	
REPORTS TO: MI KC Gar FAX NO: (	217 10 99		
INVOICE TO: M. M. K. G.X	auote# P.O. NUMBER:		
LAB NO	DATE TIME MATRIX	2 /22/20/	P REMARKS
3) 500 2782/	8/21/64 1007 H20	2 XXX S	
7) 2919	1000/	X / X	
6 29501	/ 040 /	L X	
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Collected/Relinquished By: (1) Date	Time Received By:	Shipping Carrier:	Cooler 5 Temperature C:/C=,
2011/1	/	Shipping Ticket No:	7.7 /20 -1
Relinquished By: (2) Date	Time Received By	Data Deliverables:	Chain of Custody Seal: (Circle)
		Level I Level II Level III EDD Type:	INTACT BROKEN ABSENT
Relinquished By: (3) Date	Time Received By:	Requested Turnaround Time and Special Instructions:	al Instructions:
	ù	LAS FILAC-Metals	
Relinquished By: (4)	Time ReceiveDFor Laboratory By.		
200 W. Potter Drive <b>Anchorage, AK 99518</b> Tel: (907) 562-2343 <b>54x: (</b> 907) 561-5301 3180 Peger Road <b>Fairbanks, AK 99701</b> Tel: (907) 474-8656 <b>Påx: (</b> 407) 474-9685	907) 562-2343	White - Retained by Lab (Project File)	Yellow - Returned with Report Pink - Retained by Sampler 0-720

# SGS



1

:	-		SAMPLE RECEIPT FORM	SGS WO#:
s	No	NA		-
	· 		Are samples RUSH, priority, or w/n 72 hrs. of hold time?	Due Date: 5-2 9-2-04
_0	alle	7	If yes have you done e-mail notification?	Received Date: 8-24-04
<	-		Are samples within 24 hrs. of hold time or due date?	Received Time: 1230
			If yes, have you spoken with Supervisor?	Is date/time conversion necessary?
			Archiving bottles - if req., are they properly marked?	# of hours to AK Local Time:
/			Are there any problems? PM Notified?	Thermometer ID: <u>5</u> D
			Were samples preserved, correctly and pH verified?	Cooler ID Temp Blank Cooler Te
		ž	K turbidity past hold time Sample IO incorrect on proc 3 of COC	2 1.8 5.7 °C5.9 4.2
		*	Sample I & incorrect on proc 3 of COC	<u>5.7 °C 4.2</u>
		_	COCKELS L9819 @ 1015 I think it should be	<u>6 4.5</u> °C <u>5.9</u>
			If this is for PWS, provide PWSID. L9824	°C
	~		Will courier charges apply?	C
			Method of payment?	*Temperature readings include thermometer correcting
			Data package required? (Level: 1 / 2 / 3 / 4 )	Delivery method (circle all that apply): Client
		,	Notes: Is this a DoD project? (USACE, Navy, AFCEE)	Alert Courier / UPS / FedEx / USPS /
			is this a Dod project? (USACE, Navy, AFCEE)	AA Goldstreak / NAC / ERA / PenAir / Ca
				Lynden / SGS / Other:
			must be filled out for DoD projects (USACE, Navy, AFCEE)	Airbill #
ès ∕	_ r	<b>IO</b>	Is received temperature $4 \pm 2^{\circ}$ C?	Additional Sample Remarks: ( $\sqrt{if applicable}$ ) Extra Sample Volume?
			Exceptions: Samples/Analyses Affected:	Limited Sample Volume?
			Exceptions. Samples/Analyses Anteced.	Field preserved for volatiles?
				Field-filtered for dissolved?
				Lab-filtered for dissolved?
				Ref Lab required?
		$\leq$	Rad Screen performed?	Foreign Soil?
		_	Result:	
		<u> </u>	Was there an airbill? (Note # above in the right hand column)	This section must be filled if problems are found.
		_	Was cooler sealed with custody seals? # / where:	Yes No Was client notified of problem
		14	Were seal(s) intact upon arrival?	Was client notified of problem
	·	ng	Was there a COC with cooler?	Individual contacted:
/	-		Was the COC filled out properly?	Via: Phone / Fax / Email (circle one)
		/	Did the COC indicate COE / AFCEE / Navy project?	Date/Time:
/	·		Did the COC and samples correspond?	Reason for contact:
2			Were all sample packed to prevent breakage?	
			Packing material: $\beta \omega$	
Ζ			Were all samples unbroken and clearly labeled?	
		_	Were all samples sealed in separate plastic bags?	
	 	nn	Were all VOCs free of headspace and/or MeOH preserved? Were correct container / sample sizes submitted?	Change Order Required?
_	- 		Is sample condition good?	SGS Contact:
			Was copy of CoC, SRF, and custody seals given to PM to fax?	
			#5 ID = " 4 9824" @ 10:11	5 8/21/64 5 J = 25
otes	s:			5 0/21/67 5 gr Fr
		-,		

Completed by (sign): \_\_\_\_\_\_\_ (print): \_\_\_\_\_\_ (print): \_\_\_\_\_\_\_ James Solution

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# Laboratory Analysis Report

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

Mike Cox Michael Baker Jr., Inc. 4601 Business Pk Blvd., #42 Anchorage, AK 99503

Work Order:	1045415
	NPRA Lakes
Client:	Michael Baker Jr., Inc.
<b>Report Date:</b>	September 21, 2004

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 Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-005 (CS) and AK00971 (Micro).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Conference.

If you have any questions regarding this report or if we can be of any other assistance, please call your SGS Project Manager a (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 an estimated value that falls below PQL, but is greater than the MDL.
- J The quantitation is an estimation.
- 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 high outside of calibrated range.

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



SGS Ref.#1045415001Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM9923MatrixWater (Surface, Eff., Ground)

All Dates/Times are Ala:	ska Standard Time
Printed Date/Time	09/21/2004 14:16
Collected Date/Time	08/20/2004 18:50
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	energy Parkson

### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	4950	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Calcium	28700	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	4450	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.790	0.100	mg/L	EPA 300.0				09/13/04	JJE
Alkalinity	90.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	21.0	0.100	mg/L	EPA 300.0	В			09/05/04	JJE
Total Dissolved Solids	141	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	IJE
Turbidity	2.88	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic 3	Fuels Departme	nt							
Residual Range Organics	0.515 U	0.515	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Diesel Range Organics	0.309 U	0.309	mg/L	AK102/103	Ε		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	88.5		%	AK102/103	E	50-150	08/25/04	08/26/04	JC
n-Triacontane-d62 <surr></surr>	106		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC
Polynuclear Aromatics	GC/MS								
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN



SGS Ref.#	1045415001	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/21/2004 14:16
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 18:50
Client Sample ID	M9923	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	SC/MS								
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Phenanthrene	0.100 U	0,100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWI
Surrogates									
Naphthalene-d8 < surr/IS>	39.9		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	KW
Acenaphthene-d10 <surr is=""></surr>	58.4		0/0	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWN
Chrysene-d12 <surr is=""></surr>	64		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWI



SGS Ref.#1045415002Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM9924MatrixWater (Surface, Eff., Ground)

All Dates/Times are Ala:	ska Standard Time
Printed Date/Time	09/21/2004 14:16
Collected Date/Time	08/20/2004 19:00
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	second for the second

Sample Remarks:

SM 2130  $\,$  - Sample was received after holding time had expired.

RRO - Unknown hydrocarbon with several peaks is present.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	7060	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Calcium	19400	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	4130	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1200	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.230	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Alkalinity	61.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	19.5	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	128	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	1.72	0.100	NTU	SM20 2130B	D			08/24/04	КС
Semivolatile Organic	Fuels Departme	ent							
Diesel Range Organics	0.306 U	0.306	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Residual Range Organics	0.812	0.510	mg/L	AK102/103	E		08/25/04	08/26/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	114		%	AK102/103	E	50-150	08/25/04	08/26/04	JC
5a Androstane <surr></surr>	81.6		%	AK102/103	E	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045415002	All Dates/Times are Alaska Standard Time				
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/21/2004 14:16			
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 19:00			
Client Sample ID	M9924	<b>Received Date/Time</b>	08/24/2004 12:30			
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede			

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.104 U	0.104	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.104 U	0.104	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0521 U	0.0521	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	59.2		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	65.2		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	84.7		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWM



SGS Ref.# 1045415003 All Dates/Times are Alaska Standard Time Michael Baker Jr., Inc. Printed Date/Time **Client Name** 09/21/2004 14:16 Project Name/# **Collected Date/Time** 08/20/2004 18:40 NPRA Lakes **Client Sample ID** M9925 08/24/2004 12:30 **Received Date/Time** Matrix Water (Surface, Eff., Ground) Stephen C. Ede Technical Director -Pestor Released By

### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	7790	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Calcium	29200	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Magnesium	5440	1000	ug/L	SW6020 Diss.	1		08/25/04	08/27/04	WAW
Potassium	1220	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	1.26	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Alkalinity	88.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	32.4	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	170	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	8.43	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic F	Tuels Departme	nt							
Residual Range Organics	0.521 U	0.521	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Diesel Range Organics	0.313 U	0.313	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	85.9		°⁄0	AK102/103	E	50-150	08/25/04	08/26/04	JC
5a Androstane <surr></surr>	65.4		%	AK102/103	E	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045415003	All Dates/Times are Alaska Standard Time					
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/21/2004 14:16				
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 18:40				
<b>Client Sample ID</b>	M9925	<b>Received Date/Time</b>	08/24/2004 12:30				
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede				

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWN
Surrogates									
Naphthalene-d8 <surr is=""></surr>	56		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	62.9		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	89.6		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWM



SGS Ref.# 1045415004 All Dates/Times are Alaska Standard Time **Client Name** Michael Baker Jr., Inc. Printed Date/Time 09/21/2004 14:16 Project Name/# **Collected Date/Time** 08/20/2004 19:15 NPRA Lakes **Client Sample ID** MB0302 08/24/2004 12:30 **Received Date/Time** Matrix Water (Surface, Eff., Ground) **Technical Director** Stephen C. Ede - Pe-astron Released By

#### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	6300	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7760	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Τ		08/25/04	08/27/04	WAW
Magnesium	2410	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.100 U	0.100	mg/L	EPA 300.0	В			09/05/04	JJВ
Alkalinity	25.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	16.8	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	55.0	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	9.65	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic 1	Fuels Departme	ent							
Diesel Range Organics	0.316 U	0.316	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Residual Range Organics	0.526 U	0.526	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	98		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC
5a Androstane <surr></surr>	79		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045415004	All Dates/Times are Alaska Standard Time				
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/21/2004 14:16			
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 19:15			
<b>Client Sample ID</b>	MB0302	<b>Received Date/Time</b>	08/24/2004 12:30			
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede			

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	SC/MS								
Naphthalene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.110 U	0.110	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.110 U	0.110	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	• KWM
Benzo[b]Fluoranthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0549 U	0.0549	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	66		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	I KWM
Acenaphthene-d10 <surr is=""></surr>	76.1		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	I KWM
Chrysene-d12 <surr is=""></surr>	93.3		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	I KWM



SGS Ref.#1045415005Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDL9910MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alasl	ka Standard Tin	ne			
Printed Date/Time	09/21/2004	14:16			
Collected Date/Time	08/20/2004	19:08			
<b>Received Date/Time</b>	08/24/2004	12:30			
Technical Director	Stephen C. Ede				

Released By June Production

### Sample Remarks:

SM 2130 - Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	4170	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	ľ		08/25/04	08/27/04	WAW
Calcium	16200	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	2310	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zine	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.316	0.100	mg/L	EPA 300.0	В			09/05/04	IJВ
Alkalinity	52.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	13.1	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	83.8	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	17.0	0.100	NTU	SM20 2130B	D			08/24/04	KC
Semivolatile Organic	Fuels Departme	ent							
Diesel Range Organics	0.303 U	0.303	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Residual Range Organics	0.505 U	0.505	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	81.6		%	AK102/103	E	50-150	08/25/04	08/26/04	JC
n-Triacontane-d62 <surr></surr>	98.7		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045415005	All Dates/Times are Alaska Standard Time				
Client Name	Michael Baker Jr., Inc.	<b>Printed Date/Time</b>	09/21/2004 14:16			
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 19:08			
Client Sample ID	L9910	<b>Received Date/Time</b>	08/24/2004 12:30			
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede			

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics G	SC/MS								
Naphthalene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	50.4		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	55.8		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	71.8		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWM

Relinquished By: (2)     Date     Time     Received By:     Data Deliverables:       Relinquished By: (2)     Date     Time     Received By:     Level 1     Level 1     Level 11     Level 11     Evel 11     Eve
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CT&E Environmental Services Inc.

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	PAGEOF										Cooler 4: Temperature C: 12423		Chain of Custody Seek Curve	INTACT BHOKEN	scial Instructions:	Secondar
	CT&E Reference:	SAMPLE TYPE			Ì						Shipping Carrier:	Shipping Ticket No:	Data Deliverables:	Level I Level II Level III EDD Type:	Requested Turnaround Time and Special Instructions:	By:
ي كل الله الله الله الله الله الله الله ا		1273-1699	1273-1699	BER:	MATRIX	8/20/1 1850 H202 18	0481	1915 L	╡╌┼		Time Received By:		Time Received By:		Time Received By:	Time Received For Laboratory By:
Laboratory Division	~		REPORTS TO: MAK WY FAX NO: (	INVOICE TO: $M_1 M_2 C_{X'}$ anotes p.o. NUMBER:	LAB NO. SAMPLE IDENTIFICATION	)E-F M923	2 M4925		011L 1 × G				Date Date		Relinquished By: (3) Date	Relinquished By: (4)

200 W. Potter Drive Anchorage, AK 99518 19: (307) 474-8656 Fax: (307) 474-9685 3180 Peger Road Fairbanks, AK 99701 Tel: (907) 474-8656 Fax: (307) 474-9685

1045415		PAGEOF				REMARKS				 The The Property of the State o	Chain of Custody Seal: (Circle)	INTACT BROKEN ABSENT	jons:		Yellow - Returned with Report Pink - Retained by Sampler 0-720
OF CUSTODY RECORD		ince:	<u>ه ۲ (ت</u> ۲							A Shipping Carrier: Aboy	Shipping Ticket No:	Data Deliverables: Level 1 Level 11 Level III EDD Type:	Requested Turnaround Time and Special Instructions:		White - Retained by Lab (Project File) Yellow - Retu
CHAIN OF CUSTO	CT&E Environmental Services Inc.		рноме мо: ( ) ユフシット ( ) No. 19 PWSID#: C	FAX NO: ( ) 27 5-1699 T COMP	QUOTE# 1 GRAB P.O. NUMBER: E	DATE TIME MATRIX	2 0 4 0581 kg/02/8	<u>4 6 7 8061 7 </u>		Date Time Received By:		Date Time Received By:	-bate Time Received By:	Date Time Received for Laboratory By:	18 Tel: (907) 562-2343 Edx: (907) 561 6301
	CT&E ENV	DOLLENT: MICHOOL B	CONTACT: MIKU LOX PROJECT: NPRA LAKES	REPORTS TO: MIKO COX	INVOICE TO: ( 1	2 LAB NO. SAMPLE IDENTIFICATION	)G-H	1 1 99/0		Scotlacted/Relinquished Bv: (37)	No V	Relinquished By: (2)	Relinquished By: (3)	Relinquished By: (4)	200 W. Potter Drive Anchorage, AK 99518 Tel: (907) 562-2343 Fdx: (907) 5

-3180 Peger Road Fairpanks, AN 99/01 19: (9

# SAMPLE RECEIPT FORM SGS WO#:

i No			
	NA	Are samples RUSH, priority, or w/n 72 hrs. of hold times	Due Date: The 9-2-04
< `			Received Date: 8-24-04
calle	<u>م</u>	If yes have you done e-mail notification?	
<u> </u>		Are samples within 24 hrs. of hold time or due date?	Received Time: <u>1230</u>
		If yes, have you spoken with Supervisor?	Is date/time conversion necessary?
	$\leq$	Archiving bottles – if req., are they properly marked?	# of hours to AK Local Time:
/		Are there any problems? PM Notified?	Thermometer ID: <u>5</u> D
		Were samples preserved, correctly and pH verified?	Cooler ID Temp Blank Cooler Temp
	*	turbidity past hold time	<u> </u>
	61		<u>7.</u> <u>3.2</u> °C <u>3.9</u> °C
			<u>4</u> <u>(,q</u> °C <u>4.6</u> °C
	/	If this is for PWS, provide PWSID	℃ ℃
		Will courier charges apply?	0° 0°
		Method of payment?	*Temperature readings include thermometer correction factor
	/	Data package required? (Level: 1 / 2 / 3 / 4)	Delivery method (circle all that apply): Client'D
		Notee	Alert Courier / UPS / FedEx / USPS /
	/	Notes: Is this a DoD project? (USACE, Navy, AFCEE)	AA Goldstreak / NAC / ERA / PenAir / Carlile
	-	is uns a DOD project: (ODROE, Mary, MOEE)	Lynden / SGS / Other:
_,			Airbill #
		must be filled out for DoD projects (USACE, Navy, AFCEE)	Additional Sample Remarks: ( $\sqrt{if applicable}$ )
es 🦯	No		Extra Sample Volume?
		is received temperature $4 \pm 71\%$	
<u> </u>		Is received temperature $4 \pm 2^{\circ}$ C?	
<u> </u>		Exceptions: Samples/Analyses Affected:	Limited Sample Volume?
<u> </u>			Limited Sample Volume?
<u> </u>			Limited Sample Volume? Field preserved for volatiles?
<u> </u>			Limited Sample Volume? Field preserved for volatiles? Field-filtered for dissolved? Lab-filtered for dissolved?
<u> </u>		Exceptions: Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required?
		Exceptions: Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Field-filtered for dissolved? Lab-filtered for dissolved?
		Exceptions: Samples/Analyses Affected: Rad Screen performed? Result:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Ref Lab required? Foreign Soil?
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u>
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No
		Exceptions: Samples/Analyses Affected: Rad Screen performed? Result: Note # above in the right hand column) Was cooler sealed with custody seals? # / where:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u>
	/ // //	Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems?
	/ // <	Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted:
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one)
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one) Date/Time:
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one)
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one) Date/Time:
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one) Date/Time:
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Lab-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one) Date/Time:
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume?         Field preserved for volatiles?         Field-filtered for dissolved?         Lab-filtered for dissolved?         Ref Lab required?         Foreign Soil?         This section must be filled if problems are found.         Yes       No
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume? Field preserved for volatiles? Field-filtered for dissolved? Lab-filtered for dissolved? Ref Lab required? Foreign Soil? <u>This section must be filled if problems are found.</u> Yes No Was client notified of problems? Individual contacted: Via: Phone / Fax / Email (circle one) Date/Time: Reason for contact: 
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume?         Field preserved for volatiles?         Field-filtered for dissolved?         Lab-filtered for dissolved?         Ref Lab required?         Foreign Soil?         This section must be filled if problems are found.         Yes       No
		Exceptions:       Samples/Analyses Affected:	Limited Sample Volume?         Field preserved for volatiles?         Field-filtered for dissolved?         Lab-filtered for dissolved?         Ref Lab required?         Foreign Soil?         This section must be filled if problems are found.         Yes       No

SGS

\_\_\_\_\_ (print): \_\_\_\_\_ Jamey Solution\_\_\_\_\_ Completed by (sign): \_ . Login proof (check one)? waived Form # F004r14 : 05/17/04 \\Petra\DOCUMENT\FORMS\approved\SRF\_F004r14.doc

Form # F004r14 : 05/17/04 Date: 8-24-07 Other HOgN Freservauve CZSZBN HO<sub>2</sub>M X 'OS<sup>z</sup>H X <sup>1</sup>ONH SGS WO#. X ICH X Х None Other 0 adəZ Container Type Coli Completed by: SiduO X Nalgene . X X × HDFE CG SAMPLE RECEIPT FORM (page 2) X X Ð₹ 1 K Other х Х (Jm 221) 204 **Container Volume** (Jm 022) 208 . 4 40 mL 0 Jm 09 V ſ \\netra\nublic\DOCUMENT\FORMS\approved\SRF\_F004r14.doc **Jm 221** Bottle Totals 20 55  $\mathbf{\hat{v}}$ <u>Jm 022</u> 5 Jm 002 20 1 L 1 'HI ЗÒ Par paro PAH SIMS Met-IS Dia TOSAIS AND . ANK-ON 50 Test 5 . XitteM 5 GE-H Δ f L  $\mathbf{S}$ Container ID SGS 5 #

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## Laboratory Analysis Report

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

Mike Cox Michael Baker Jr., Inc. 4601 Business Pk Blvd., #42 Anchorage, AK 99503

Work Order:	1045420
	NPRA Lakes
Client:	Michael Baker Jr., Inc.
<b>Report Date:</b>	September 17, 2004

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 Control Manual that outlines this program is available at your request. The laboratory ADEC certification numbers are AK08-03 (DW), UST-005 (CS) and AK00971 (Micro).

Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS Quality Assurance Program Plan and the National Environmental Laboratory Accreditation Conference.

If you have any questions regarding this report or if we can be of any other assistance, please call your SGS Project Manager a (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 an estimated value that falls below PQL, but is greater than the MDL.
- J The quantitation is an estimation.
- 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 high outside of calibrated range.

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



SGS Ref.# 1045420001 All Dates/Times are Alaska Standard Time Michael Baker Jr., Inc. Printed Date/Time 09/17/2004 11:16 **Client Name** 08/20/2004 17:27 **Collected Date/Time** Project Name/# NPRA Lakes **Client Sample ID** MB0401 **Received Date/Time** 08/24/2004 12:30 Water (Surface, Eff., Ground) Stephen C. Ede Matrix **Technical Director** Posta Released By

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	4280	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	12900	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	3250	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.305	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Alkalinity	44.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	11.8	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	82.5	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	8.76	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic	Fuels Departme	ent							
Residual Range Organics	0.543 U	0.543	mg/L	AK102/103	E		08/25/04	08/26/04	JC
Diesel Range Organics	0.326 U	0.326	mg/L	AK102/103	Ε		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	79.8		%	AK102/103	E	50-150	08/25/04	08/26/04	JC
n-Triacontane-d62 <surr></surr>	89.5		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045420001	All Dates/Times are Alaska Standard Time					
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/17/2004 11:16				
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 17:27				
Client Sample ID	MB0401	<b>Received Date/Time</b>	08/24/2004 12:30				
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede				

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.105 U	0.105	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.105 U	0.105	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0526 U	0.0526	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	49.3		°⁄0	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	54.7		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	65.2		0/0	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWM



SGS Ref.# 1045420002 All Dates/Times are Alaska Standard Time **Client Name** Michael Baker Jr., Inc. Printed Date/Time 09/17/2004 11:16 Project Name/# **Collected Date/Time** 08/20/2004 17:50 NPRA Lakes **Client Sample ID** LD001 **Received Date/Time** 08/24/2004 12:30 Water (Surface, Eff., Ground) Matrix Stephen C. Ede Technical Director Prator Released By 5 1/2000

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3330	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7940	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	2030	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.521	0.100	mg/L	EPA 300.0	в			09/05/04	JJB
Alkalinity	27.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	9.52	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	48.8	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	1.66	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic Fu	iels Departme	ent							
Diesel Range Organics	0.319 U	0.319	mg/L	AK102/103	E		08/25/04	08/26/04	JC
Residual Range Organics	0.532 U	0.532	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	82.5		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC
n-Triacontane-d62 <surr></surr>	104		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#	1045420002	All Dates/Times are Alaska Standard Time				
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/17/2004 11:16			
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 17:50			
Client Sample ID	LD001	<b>Received Date/Time</b>	08/24/2004 12:30			
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede			

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	51.9		%	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	59.2		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	81.6		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	KWM



SGS Ref.# 1045420003 All Dates/Times are Alaska Standard Time **Client Name** Michael Baker Jr., Inc. Printed Date/Time 09/17/2004 11:16 Project Name/# NPRA Lakes **Collected Date/Time** 08/20/2004 17:17 **Client Sample ID** M0024 **Received Date/Time** 08/24/2004 12:30 Water (Surface, Eff., Ground) Matrix Stephen C. Ede **Technical Director** Pator Released By

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3150	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	7580	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	1890	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.269	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Alkalinity	27.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	12.7	0.100	mg/L	EPA 300.0	В			09/05/04	JJB
Total Dissolved Solids	52.5	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/09/04	JJB
Turbidity	0.790	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic Fu	els Departme	ent							
Residual Range Organics	0.510 U	0.510	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Diesel Range Organics	0.306 U	0.306	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	69		%	AK102/103	E	50-150	08/25/04	08/26/04	JC
n-Triacontane-d62 <surr></surr>	78		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#	All Dates/Times are Ala	are Alaska Standard Time			
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/17/2004 11:16		
Project Name/#	NPRA Lakes	Collected Date/Time	08/20/2004 17:17		
Client Sample ID	M0024	<b>Received Date/Time</b>	08/24/2004 12:30		
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede		

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	SC/MS								
Acenaphthylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Naphthalene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0,0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	36.4		%	GC/MS SIM	G	30-126	08/25/04	1 08/30/04	I KWM
Acenaphthene-d10 <surr is=""></surr>	42.4		%	GC/MS SIM	G	30-128	08/25/04	1 08/30/04	I KWM
Chrysene-d12 <surr is=""></surr>	53.8		%	GC/MS SIM	G	30-138	08/25/04	4 08/30/04	4 KWM



SGS Ref.#1045420004Client NameMichael Baker Jr., Inc.Project Name/#NPRA LakesClient Sample IDM9914MatrixWater (Surface, Eff., Ground)

All Dates/Times are Alas	ska Standard Time
Printed Date/Time	09/17/2004 11:16
Collected Date/Time	08/20/2004 17:45
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	os - Pestar

Sample Remarks:

DRO/RRO - Unknown hydrocarbon with several peaks is present.

SM2130B-Sample was received after holding time had expired.

PAHSIM - Naphthalene was detected in the method blank above the MDL and below the reporting limit. The results for naphthalene are estimated in this sample.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	4240	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	8880	1000	ug/L	SW6020 Diss.	ľ		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Magnesium	2190	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.100 U	0.100	mg/L	EPA 300.0	В			09/06/04	IJВ
Alkalinity	28.5	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	11.7	0.100	mg/L	EPA 300.0	В			09/06/04	JJB
Total Dissolved Solids	55.0	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/10/04	JЈВ
Turbidity	8.82	0.100	NTU	SM20 2130B	D			08/25/04	КС
Semivolatile Organic H	Tuels Departme	ent							
Diesel Range Organics	0.592	0.309	mg/L	AK102/103	E		08/25/04	08/26/04	JC
Residual Range Organics	0.529	0.515	mg/L	AK102/103	E		08/25/04	08/26/04	JC
Surrogates									
n-Triacontane-d62 <surr></surr>	121		<sup>0</sup> /0	AK102/103	Е	50-150	08/25/04	08/26/04	JC
5a Androstane <surr></surr>	106		%	AK102/103	Е	50-150	08/25/04	08/26/04	JC



SGS Ref.#

1045420004

Client Name Project Name/# Client Sample ID Matrix	NPRA Lake: M9914	Michael Baker Jr., Inc. NPRA Lakes				Printed Date/Time Collected Date/Time Received Date/Time Technical Director					
Parameter		Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init	
	-	els Departmen	nt								
Polynuclear i	Aromatics G	зс/мs 0.107	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Naphthalene Acenaphthylene		0.0500 U	0.0500	ug/L	GC/MS SIM	G			08/30/04		
Fluorene		0.0500 U	0.0500	ug/L	GC/MS SIM	G			08/30/04		
Phenanthrene		0.100 U	0.100	ug/L	GC/MS SIM	G			08/30/04		
Benzo(a)Anthrace	ene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Acenaphthene	che	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Dibenzo[a,h]anth	racene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Benzo[g,h,i]peryl		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Anthracene		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Fluoranthene		0.100 U	0.100	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Pyrene		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM	
Chrysene		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	I KWM	
Benzo[b]Fluoran	thene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	I KWM	
Benzo[k]fluorant		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	I KWM	
Benzo[a]pyrene		0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	‡ KWM	
Indeno[1,2,3-c,d]	pyrene	0.0500 U	0.0500	ug/L	GC/MS SIM	G		08/25/04	08/30/04	4 KWM	

All Dates/Times are Alaska Standard Time

Surrogates

Naphthalene-d8 < surr/IS>	40.7	°⁄6	GC/MS SIM	G	30-126	08/25/04 08/30/04 KWM
Acenaphthene-d10 <surr is=""></surr>	47.8	%	GC/MS SIM	G	30-128	08/25/04 08/30/04 KWM
Chrysene-d12 <surr is=""></surr>	58.4	%	GC/MS SIM	G	30-138	08/25/04 08/30/04 KWM



SGS Ref.# 1045420005 Michael Baker Jr., Inc. P **Client Name** Project Name/# NPRA Lakes Client Sample ID R0071 Water (Surface, Eff., Ground) Matrix

All Dates/Times are Alas	ska Standard Time
Printed Date/Time	09/17/2004 11:16
Collected Date/Time	08/20/2004 17:37
<b>Received Date/Time</b>	08/24/2004 12:30
<b>Technical Director</b>	Stephen C. Ede
Released By	en Patar

### Sample Remarks:

SM2130B-Sample was received after holding time had expired.

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Sodium	3400	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Dissolved Metals									
Cadmium	2.00 U	2.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Calcium	8330	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Copper	6.00 U	6.00	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Iron	1000 U	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Magnesium	2030	1000	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Potassium	1000 U	1000	ug/L	SW6020 Diss.	I		08/25/04	08/27/04	WAW
Zinc	25.0 U	25.0	ug/L	SW6020 Diss.	Ι		08/25/04	08/27/04	WAW
Waters Department									
Sulfate	0.109	0.100	mg/L	EPA 300.0	В			09/06/04	IJВ
Alkalinity	27.0	10.0	mg/L	SM20 2320B	D			08/26/04	KA
Chloride	9.35	0.100	mg/L	EPA 300.0	В			09/06/04	JJB
Total Dissolved Solids	51.3	10.0	mg/L	SM20 2540C	D			08/25/04	KC
Total Nitrate/Nitrite	1.00 U	1.00	mg/L	EPA 300.0	А			09/10/04	JJB
Turbidity	1.56	0.100	NTU	SM20 2130B	D			08/25/04	KC
Semivolatile Organic	Fuels Departme	ent							
Diesel Range Organics	0.309 U	0.309	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Residual Range Organics	0.515 U	0.515	mg/L	AK102/103	Е		08/25/04	08/26/04	JC
Surrogates									
5a Androstane <surr></surr>	74.8		%	AK102/103	E	50-150	08/25/04	08/26/04	
n-Triacontane-d62 <surr></surr>	84.4		%	AK102/103	E	50-150	08/25/04	1 08/26/04	JC



SGS Ref.#	1045420005	All Dates/Times are Ala	ska Standard Time
Client Name	Michael Baker Jr., Inc.	Printed Date/Time	09/17/2004 11:16
Project Name/#	NPRA Lakes	<b>Collected Date/Time</b>	08/20/2004 17:37
Client Sample ID	R0071	<b>Received Date/Time</b>	08/24/2004 12:30
Matrix	Water (Surface, Eff., Ground)	<b>Technical Director</b>	Stephen C. Ede

Parameter	Results	PQL	Units	Method	Container ID	Allowable Limits	Prep Date	Analysis Date	Init
Polynuclear Aromatics (	GC/MS								
Naphthalene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluorene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Phenanthrene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo(a)Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Acenaphthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Dibenzo[a,h]anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[g,h,i]perylene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Anthracene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Fluoranthene	0.103 U	0.103	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Chrysene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[b]Fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[k]fluoranthene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Benzo[a]pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Indeno[1,2,3-c,d] pyrene	0.0515 U	0.0515	ug/L	GC/MS SIM	G		08/25/04	08/30/04	KWM
Surrogates									
Naphthalene-d8 <surr is=""></surr>	60.2		<sup>0</sup> ⁄0	GC/MS SIM	G	30-126	08/25/04	08/30/04	KWM
Acenaphthene-d10 <surr is=""></surr>	67.5		%	GC/MS SIM	G	30-128	08/25/04	08/30/04	KWM
Chrysene-d12 <surr is=""></surr>	69.3		%	GC/MS SIM	G	30-138	08/25/04	08/30/04	I KWM

CH CH CALLES PHONE NO: () C Curve PHONE N		1045420	PAGE LOF					REMARKS									7 Temperature C. 3.2	Chain of Custody Seal: (Circle)					Yeilow - Returned with Report Pink - Retained by Sampler 0-720	
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TUTO 9-2-04

to and Deter

	SAMPLE RECEIPT FORM	SGS WO#:
	Are samples <b>RUSH</b> , priority, or w/n 72 hrs. of hold time? If yes have you done e-mail notification?	Keceivea D
~	If yes have yee eene e	Dessived T

SGS

Yes

X

No

	f yes have you done e-mail not Are samples within 24 hrs. of I If yes, have you spoken with S Archiving bottles – if req., are Are there any <b>problems</b> ? PM N Were samples preserved, correct two of the samples preserved, correct	they properly marked? Notified?	Received Date:2 Received Time:2 Is date/time conversion ne # of hours to AK Local Tir Thermometer ID:5 Cooler ID Temp Blar 3.2 1_6	$\begin{array}{c} \bullet \\ \hline \\ \hline \\ \hline \\$
	If this is for PWS, provide PWS Will courier charges apply? Method of payment? Data package required? (Level <i>Notes</i> : Is this a DoD project? (USACE	: 1 / 2 / 3 / 4 )	*Temperature readings includ Delivery method (circle all the Alert Courier / UPS / Fer AA Goldstreak / NAC / I Lynden / SGS / Other:	°C °C °C °C °C the thermometer correction factors that apply): Client dEx / USPS / ERA / PenAir / Carlile
<u>This section</u> Yes No	must be filled out for DoD projects         Is received temperature 4 ± 2°C?         Exceptions:	(USACE, Navy, AFCEE) Samples/Analyses Affected:		'olume? 2 Volume? 1 for volatiles?

(Note # above in the right hand column)

Th	is section	<u>must be filled if pro</u>	<u>blems are found.</u>
Yes	No	Was client notific	
Indiv	idual c	ontacted:	
Via:	Phone	/ Fax / Email	(circle one)
Date	/Time:		

Reason for contact:

Were all VOCs free of headspace and/or MeOH preserved? nn Change Order Required? Were correct container / sample sizes submitted? SGS Contact: \_\_\_\_\_ Is sample condition good? Was copy of CoC, SRF, and custody seals given to PM to fax? ...... Notes: (print): James Solution Completed by (sign): \_ waived \_\_\_\_ required \_\_\_\_\_ performed by: \_\_\_\_\_ ÷ Login proof (check one)

Result:

Was cooler sealed with custody seals?

Did the COC and samples correspond? Were all sample packed to prevent breakage? Packing material: <u>Sw</u> Were all samples unbroken and clearly labeled? Were all samples sealed in separate plastic bags?

Did the COC indicate COE / AFCEE / Navy project?

Were seal(s) intact upon arrival?

Was there a COC with cooler? Was the COC filled out properly?

Was there an airbill?

# / where:

No

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