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February 11, 2010

Municipal Light & Power
1200 E. First Avenue
Anchorage, AK 99501

Attn: Yelena Saville

Re: January 2010 Soil Sampling and Groundwater Monitoring at ML&P Plant 1, 821 E. 1st Avenue, Anchorage, Alaska.

This letter report presents the results of the January 2010 groundwater monitoring and soil sampling activities at Municipal Light and Power's (ML&P) Plant 1 at 821 E. First Avenue, Anchorage, Alaska. The activities described below were conducted in accordance with the January 15, 2010 work plan submitted by ML&P and approved by the Alaska Department of Environmental Conservation (ADEC).

Introduction

Facility expansion projects are being planned on the east side of the Main Office and Shop Building at Plant No.1 (Figure 1). Construction is anticipated to start in February 2010. To verify previous soil sample results for polychlorinated biphenels (PCBs) and to evaluate the potential for PCBs in the dissolved phase in groundwater, a soil boring and well (MW-14D) were installed east of the Main Office and Shop Building. The information gathered will be used to determine treatment and disposal requirements for soil and groundwater removed as part of the construction activities. Three existing wells (B-4, B-7, and MW-13D) were also sampled to further evaluate the presence or absence of dissolved phase PCBs in the groundwater at Plant 1.

Soil Sampling

Soil samples were collected January 20 from MW-14D by ADEC qualified samplers Jeremy Craner and Marika Sears of Hoefler Consulting Group. Soil samples were collected continuously from the surface to just below the alluvium/Bootlegger Cove clay interface and analyzed for PCBs. Soil samples were collected using decontaminated stainless steel split-spoons for each sample.

The boring log for MW-14D is displayed in Attachment 1. The soil borings were logged and the soil was assigned a United Soil Classification System (USCS) type, and inspected to determine if visible or olfactory indicators (odor and/or staining) of contamination were present. A photoionization

detector (PID) was used to measure and record "in-situ" readings after agitation of the soil within the split-spoon sampler. Soil samples were collected at every 2 ft interval for laboratory analysis. Samples were collected compositely across the 2-foot split-spoon sample interval and assigned a unique sample designation (name) based on the top depth of the sample interval as measured below ground surface (bgs), (i.e., MW-14D-2 was sampled from 2 to 4 feet bgs). All samples were analyzed for PCBs.

Well installation for MW-14D consisted of 2-inch diameter threaded Schedule 40 PVC blank casing, 2-feet of No. 10 machine-slotted screen, and end cap. The well screen interval was set to intersect the bottom 2-feet of the alluvial aquifer just above the Bootlegger Cove clay. A filter pack of 10-20 silica sand was installed 2 feet above the screened interval, and sealed with approximately 2 feet of hydrated bentonite pellets. The annular space was filled with bentonite grout to near ground surface. The well casing was cutoff just below grade and a steel lid was flush mounted as the protective cover (see Attachment 1 for boring log and well construction details).

Decontamination of the split-spoon sampler was conducted after each sample was collected using three 5-gallon buckets with warm water and brushes in a 3-stage system. An initial gross decontamination to remove the majority of solid particles was followed by an alconox/hot water solution. The alconox solution was followed by a warm water rinse. Deionized water was used as a final rinse. Approximately 15 gallons of decontamination water was generated and placed into a labeled 55-gallon drum. The water contained sediment. The drum was delivered to ML&P's facility at 1130 East First Avenue for temporary storage and eventual disposal.

The groundwater and soil samples collected were submitted to SGS of Anchorage, Alaska using chain-of-custody procedures. Samples were analyzed for PCBs by EPA Method SW8082A. Laboratory data was reviewed following the procedures outlined in the ADEC Environmental Laboratory Data and Quality Assurance Requirements (see Attachment 2). No data was rejected from the data set. The January 2010 groundwater analytical results are summarized in Table 3, and a summary of historical analytical results for wells B-4, B-7, and MW-13D is presented in Table 4.

Soil Analytical Results

PCBs exceeded the Method Two Cleanup Level of 1 mg/Kg at all sample intervals, with the highest concentration of 112 mg/Kg found at 2 feet bgs (see Table 1). The results show that the contamination is greatest near the ground surface and generally decreases with depth.

Well Development

Well development for MW-14D was conducted at least 48 hours after installation using a combination of surging and purging. The well was purged of approximately 24 gallons of high sediment water on January 22, 2010 which at that time did not meet the quality parameters for groundwater sampling. Sampling was conducted after development on January 24, 2010 when water quality had cleared and parameters were stable. Development water was placed in the same drum as the decontamination water generated during soil sampling and well installation.

Groundwater Sampling

Groundwater samples were collected from four monitoring wells (B-4, B-7, MW-13D, and MW-14D) on January 22 and 25, 2010 by Ivy Patton and Marika Sears of Hoefler Consulting Group. Two field-filtered samples were also collected from MW-14D for analysis if PCBs were detected in the unfiltered sample. PCBs were not detected, so the samples were not analyzed. One replicate sample was taken from MW-13D for duplicate analyses. Field forms can be found in Attachment 1.

Prior to collection of the samples, the water levels in the monitoring wells were measured using an electronic water level indicator. The depth to water ranged from 4.57 to 7.28 ft bgs (see Figure 1). The wells were purged of at least three well volumes with a peristaltic pump. During the purging, water quality parameters of temperature, conductivity, dissolved oxygen, and ORP were measured using a YSI 556 water meter. Turbidity was measured concurrently using a LaMotte 2020e turbidity meter. Samples were taken once water quality parameters had stabilized to within 10 percent. The water level data and water quality parameters are presented in Table 2. The purge water generated during sampling activities was placed in a plastic container, tightly covered, labeled, and stored at ML&P, except purge water from well MW-14D. The purge water from MW-14D was placed in the drum that contained the development water.

Groundwater Analytical Results

Groundwater results for B-4, B-7, MW-13D, and MW-14D were all non detect (see Table 3). Results are consistent with historical data for B-4 and MW-13D (see Table 4). No historical PCB data for B-7 are available.

Discussion

The soil sampling conducted in the area east of the Main Office and Shop building on January 20, 2010 indicate PCB contaminated soil is present above 1 mg/Kg from near the ground surface to 12 feet bgs. The greatest concentration of PCBs was 112 mg/Kg at 2 feet bgs with decreasing concentrations of PCBs with depth. These results differ from soil samples taken from nearby soil boring TH2 on November 22, 2009, which showed increasing concentrations of PCBs with depth (HCG 2010). Figure 2 contains the MW-14D soil sample results as well as historical results.

The monitoring well results indicate that PCBs are not present in the groundwater at this site. Results from wells B-4, B-7, MW-13D, and MW-14D were all non detect. These results are consistent with historical groundwater results from B-4 and MW-13D. The wells sampled were screened either across or at the bottom of the shallow aquifer, and the results verify that PCBs are not present in the water column.

Based on the analytical results for groundwater, the investigative derived waste water that was containerized in drums or other containers should not contain dissolved phase PCBs or other contaminants of concern. However, drum containing the decontamination and purge water from well MW-14D may contain sediment or suspended solids with PCBs.

Prepared by:

Ivy Patton
Associate Scientist
Hoefler Consulting Group

Reviewed by:

Bret Berglund
Project Manager
Hoefler Consulting Group

References:

HCG 2010. *November 2009 Geotechnical Borings and Soil Sampling at Hank Nikkels Plant No. 1 821 East First Avenue, Anchorage, Alaska (ADEC RecKey: 1992210904904)*

Attachments:

Figure 1- January 2010 Groundwater and Soil Sample Results

Figure 2 - Historical PCB Sample Data

Table 1 - Municipal Light and Power Plant No. 1 January 2010 Groundwater Sample Results

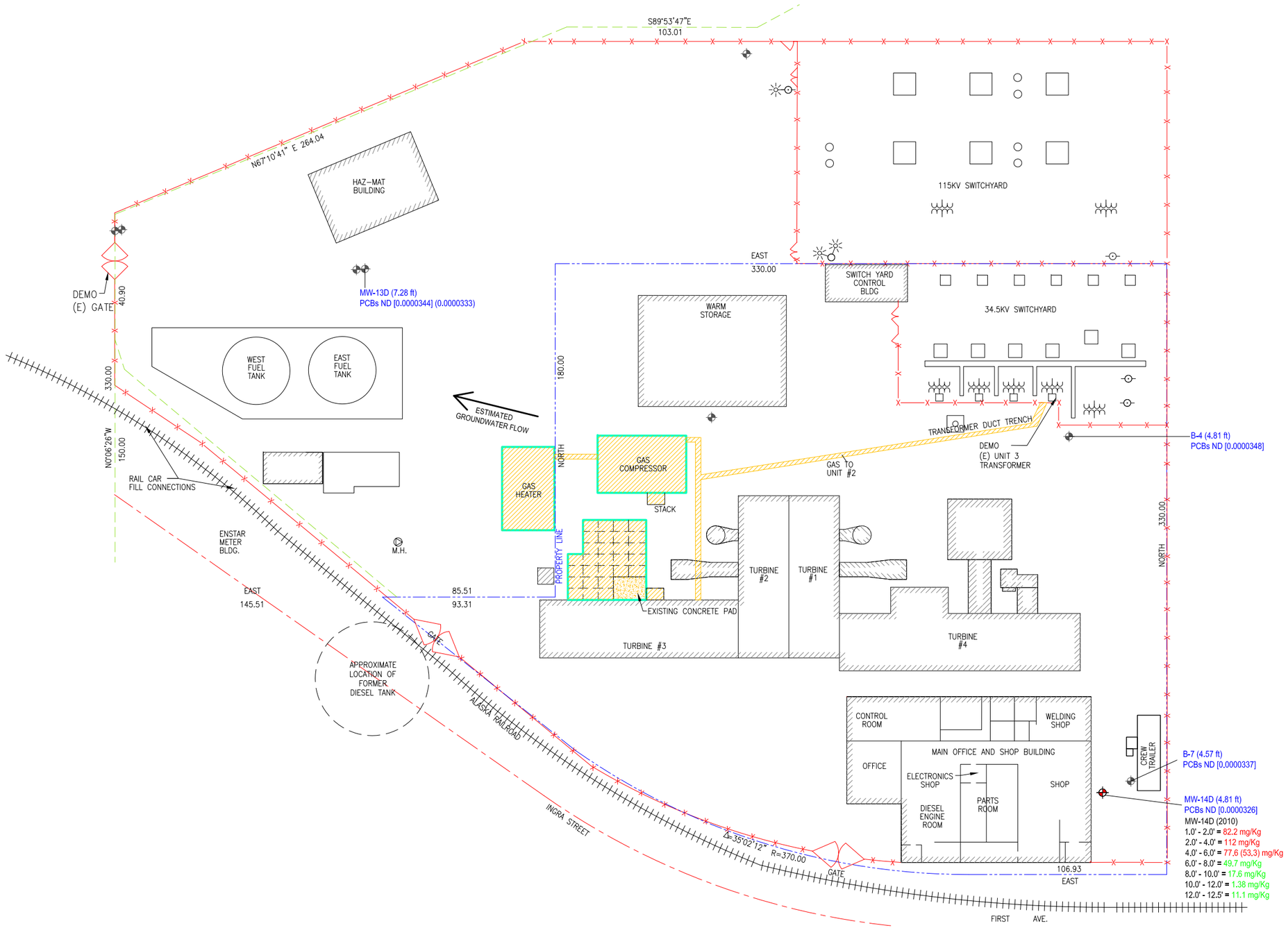
Table 2 - Municipal Light and Power Plant No. 1 January 2010 Groundwater Sampling Log

Table 3 - Municipal Light and Power Plant No. 1 January 2010 Soil Sample Results

Table 4 - Cumulative Summary of Groundwater Analytical Results

Attachment 1 – Groundwater Field Forms, Monitoring Well Development Log, and Boring Log with Monitoring Well Construction

Attachment 2 –HCG Data Quality Assessment, ADEC Checklist, and SGS laboratory report



LEGEND

- M.H. — SEWER MANHOLE
- FENCE
- RAILROAD TRACK
- PROPERTY LINE
- LEASE BOUNDARY
- BUILDING (PRE 2001)
- BUILDING (POST 2001)
- EXCAVATION AREAS (2006)
- MONITORING WELL
- GATE

DATA KEY

GROUNDWATER SAMPLE KEY

Monitoring Well Name
Groundwater Elevation Below Ground Surface
MDL Shown if Result is ND

MW-2 (2.5 ft)
PCBs 0.15 (0.20) [MDL]

Duplicate PCB Sample Result (mg/L)
PCB Sample Result (mg/L)

PCBs = Polychlorinated biphenyls
ND = Not Detected
MDL = Method Detection Limit

SOIL SAMPLE KEY

Boring Name
Year Sample Collected

B-2 (1991)
10.0' - 11.5' = 7.1 mg/Kg

PCB Sample Result
Depth Range (bgs)

BLACK = PCBs ≤ 1 mg/Kg
GREEN = PCBs > 1 mg/Kg and ≤ 50 mg/Kg
RED = PCBs > 50 mg/Kg

January 2010 Groundwater and Soil Sample Results

ML&P PLANT 1
ANCHORAGE, ALASKA

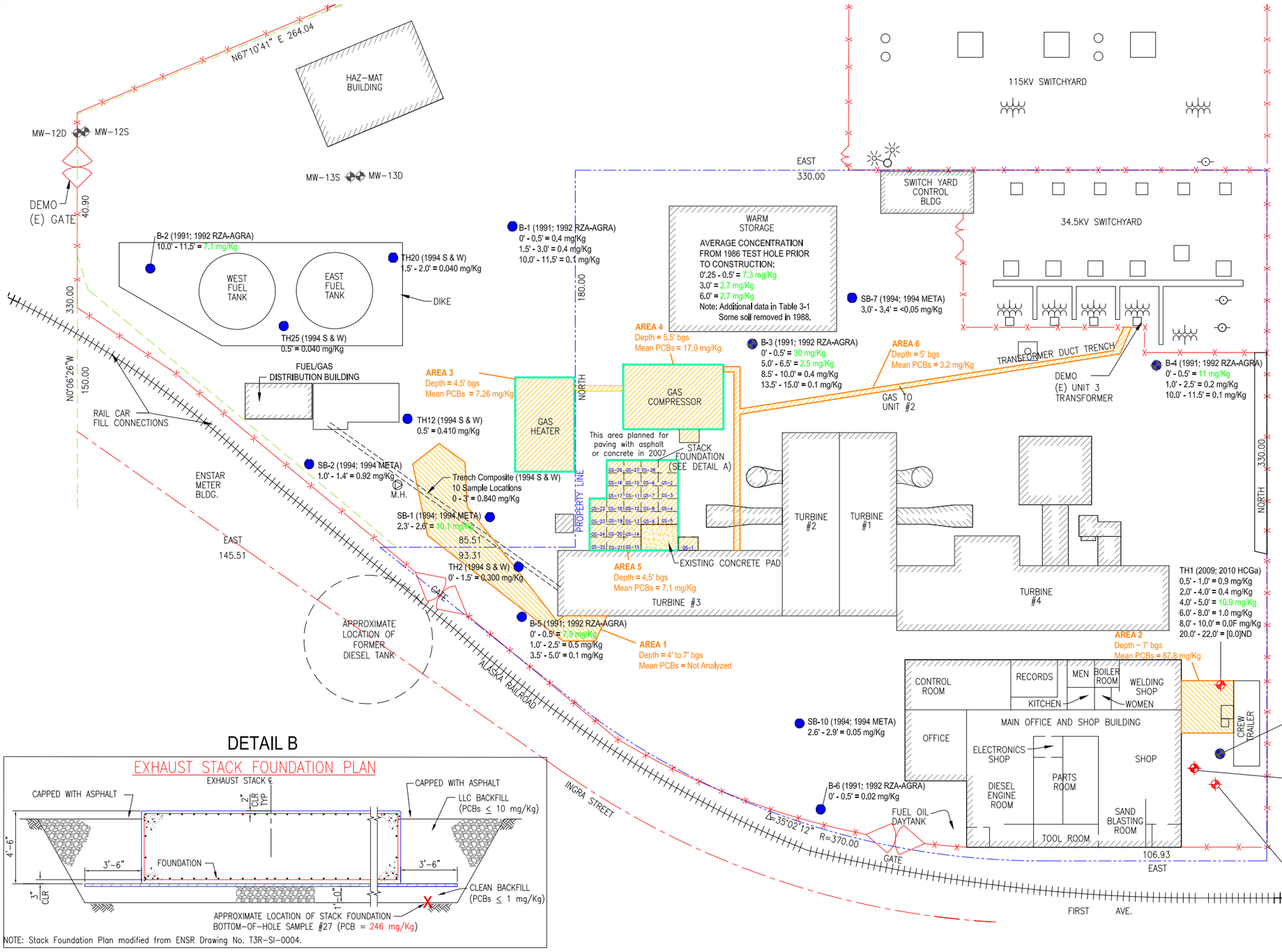
Hoefler CONSULTING GROUP

NORTH

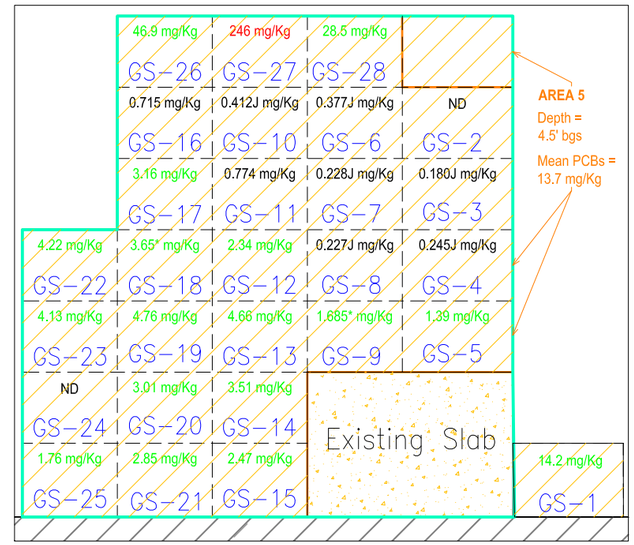
0 10 20 30 60 90
SCALE (FEET)

FIGURE NUMBER:	DATE:
FIGURE 1	2/08/2010
	PROJECT NUMBER:
Excavation Areas based on Figure 1-4, ENSR 2006	4904-017

H:\4904 - ML & P\4904-017-150-60s Contaminated Site Support\Plant 1\2010 GW and Soil Monitoring\January 2010 report\Figure 1.dwg



DETAIL A



Stack Foundation Bottom-of-Excavation Sample Locations (Grid Squares) Prior to Pouring Concrete Foundation

(One composite sample collected in each grid square at 4.5' bgs
Data Source: ENSR 2006)

LEGEND

- M.H. — SEWER MANHOLE
- FENCE
- RAILROAD TRACK
- PROPERTY LINE
- LEASE BOUNDARY
- MONITORING WELL
- 2009 BOREHOLE
- GATE
- ND — NONDETECT
- F — VALUE BETWEEN MDL AND PQL
- BUILDING (PRE 2001)
- BUILDING (POST 2001)
- EXCAVATION AREAS POST 1990 (backfilled to approx. 5' bgs with soil < 10 mg/Kg and imported clean soil)
- EXCAVATION AREAS POST 1990 (backfilled with an unknown type of material; original contaminated material removed)

DATA KEY

B-2 (1991; 1992 RZA-AGRA)
10.0' - 11.5' = 7.1 mg/Kg

- Boring Name
- Year Sample Collected
- Source Report
- PCB Sample Result
- Depth Range (bgs)

● = Sample Location
BLACK = PCBs ≤ 1 mg/Kg
GREEN = PCBs > 1 mg/Kg and ≤ 50 mg/Kg
RED = PCBs > 50 mg/Kg
* = Average of parent sample and duplicate
J = Detected below the PQL, value is considered an estimate
LLC = Low Level Contaminated Soils (≤ 10 mg/Kg)
GS = Grid Square
NOTE: ADEC Method 2 Soil Cleanup Level for PCBs as defined in 18 AAC 75.341 is 1 mg/Kg

DETAIL B

NOTE: Stack Foundation Plan modified from ENSR Drawing No. T3R-SI-0004.

HISTORICAL PCB SAMPLE DATA

ML&P PLANT 1
ANCHORAGE, ALASKA

NORTH
0 10 20 30 60 90
SCALE (FEET)

Areas 3-6 based on Figure 1-4, ENSR 2006

FIGURE NUMBER:	DATE:
FIGURE 2	2/11/2010
	PROJECT NUMBER:
	4904-017

H:\4904 - ML & P\4904-017-150-60s Contaminated Site Support\Plant 1\2010 GW and Soil Monitoring\January 2010 report\Figure 2.dwg

Table 1 - Municipal Light and Power Plant No.1 January 2010 Soil Sample Results

Compound milligrams per kilogram (mg/Kg)	Method Two (under 40-inch zone)[1]	Method Two Migration to Groundwater[2]	Sample Locations[3]														Maximum Concentration[4]		Frequency of Detection[5]	Frequency Above Primary Screening Criteria[5,6]
			MW-14D 20-Jan-10 1100211001		MW-14D-2 20-Jan-10 1100211002		**Primary** MW-14D-4 20-Jan-10 1100211003		**Duplicate** MW-14D-94 20-Jan-10 1100211010		MW-14D-6 20-Jan-10 1100211006		MW-14D-8 20-Jan-10 1100211007		MW-14D-10 20-Jan-10 1100211008		MW-14D-12 20-Jan-10 1100211009					
			Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag		
Sample Depth (feet bgs)			0-2		2-4		4-6		4-6		6-8		8-10		10-12		12-12.5		--	--	--	--
Polychlorinated Biphenyls (SW8082)																						
Aroclor-1016	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1221	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1232	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1242	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1248	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1254	--	--	[0.0154]	ND	[0.0162]	ND	[0.032]	ND	[0.0315]	ND	[0.0178]	ND	[0.0173]	ND	[0.0161]	ND	[0.0179]	ND	[0.032]	ND	0/7	0/7
Aroclor-1260	--	--	82.2	=	112	=	77.6	=	53.3	=	49.7	=	17.6	=	1.38	=	11.1	=	112	=	0/7	0/7
Total PCBs[7]	1	--	**82.2**	=	**112**	=	**77.6**	=	**53.3**	=	**49.7**	=	**17.6**	=	**1.38**	=	**11.1**	=	**112**	=	7/7	7/7
Percent Solids (SM2540G)																						
Total Solids			95.1	=	94.3	=	93.2	=	93.5	=	84.2	=	86.7	=	92.8	=	83.3	=	--	--	--	--

Notes:

1 - Primary Screening Criteria: the cleanup level corresponds to the lowest value for direct contact or inhalation of soil as listed in 18 AAC 75.341, Tables B1 and B2, (Method Two cleanup levels) for the under 40 inch zone.

2 - Secondary Screening Criteria: the value corresponds to the value listed in 18 AAC 75.341, Tables B1 and B2, Migration to Groundwater.

3 - The field sample identification number, date collected and laboratory sample identification number are provided. The sample depth in feet is listed after the hyphen at the end of the sample identification number.

4 - The maximum concentration of a detected analyte is shown. If an analyte was not detected, then the highest MDL is shown.

5 - A parent and duplicate sample are counted as one sample. The higher of the two values are used for the purpose of counting detections and exceedances.

6 - Screening criteria values are from 18 AAC 75.341 Method Two Under 40-inch Zone. Total values are the summation of detected compounds only. If all values are nondetectable, the highest MDL is shown.

7 - Total values were the summation of detected compounds only. If compounds were not detected, then the highest MDL was listed.

Data Flags

ND	nondetect, method detection limit is presented in brackets to the left
=	A detected compound (concentration listed in column to the left)

Abbreviations

--	Not applicable or screening criteria does not exist for this compour	mg/Kg	milligrams per kilogram
AAC	Alaska Administrative Code	PCB	Polychlorinated Biphenyl
bgs	below ground surface		
COC	Contaminant of Concern		
MDL	Method Detection Limit		

bold and shaded - value exceeds primary screening criteria (Method Two Cleanup Levels)
shaded - value exceeds Method Two migration to groundwater cleanup levels.

February 8, 2010

Table 2 - Municipal Light and Power, Plant No. 1,
2010 Groundwater Sampling Log

Well Number	B-4	B-7	MW-13D	MW-14D
Water Level & Well Purging Data				
Screened Interval Depth (ft bgs)	1.0-17.0	0.5-17.5	12.5-14.5	10.5-12.5
Date Water Level Measured	1/22/2010	1/22/2010	1/25/2010	1/25/2010
Time Water Level Measured	9:50	12:30	13:45	11:02
Depth to Water Below measuring point, ft	4.81	4.57	7.28	4.81
Depth of Well Below Top of Casing, ft	11.72	15.80	14.74	12.20
Water Column in Well, ft	6.91	11.23	7.46	7.39
Gallons per Foot	0.163	0.163	0.163	0.163
Gallons in Well	1.10	1.80	1.21	1.20
Total Gallons Pumped	5.3	6.4	4.2	2.9
Diameter of Well Casing, inch	2	2	2	2
Sampling/Water Parameters				
Date Sampled	1/22/2010	1/22/2010	1/24/2010	1/25/2010
Time Sampled	11:15	14:00	15:20	11:40
Temperature, C	2.96	4.74	4.38	3.71
Specific Conductance, µS/cm	245	289	262	262
pH	6.75	6.79	6.81	6.55
Dissoved Oxygen (mg/L)	2.23	0.26	0.39	0.51
ORP (mV)	48.20	38.1	7.7	86.6
Turbidity (NTU)	5.24	4.74	2.87	1.03
Sample Number	B4-012210	B7-012210	MW13D-012510 MW93D-012510	MW14D-012510
Parameters Tested	PCBs SW8082A	PCBs SW8082A	PCBs SW8082A	PCBs SW8082A
Notes:				
Purging and Sampling Method: Peristaltic Pump				
Sampled By: Marika Sears and Ivy Patton - Hoefler Consulting Group				

Table 3 - Municipal Light and Power Plant No.1 January 2010 Groundwater Sample Results

Compound milligrams per Liter (mg/L)	Screening Criteria	Sample Locations[2]										Maximum Concentration[3]		Frequency of Detection[4]	Frequency Above Screening Criteria[4,5]
	18 AAC 75 Table C Groundwater Cleanup Levels[1]	B4-012210 22-Jan-10 1100250002		B7-012210 22-Jan-10 1100250001		**Primary** MW-13D-012510 25-Jan-10 1100267001		**Duplicate** MW-93D-012510 25-Jan-10 1100267002		MW-14D-012510 25-Jan-10 1100267003					
		Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc	Flag	Conc.	Flag		
Polychlorinated Biphenyls (SW8082A)															
Aroclor-1016	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1221	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1232	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1242	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1248	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1254	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Aroclor-1260	--	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4
Total PCBs[6]	0.0005	[0.0000348]	ND	[0.0000337]	ND	[0.0000344]	ND	[0.0000333]	ND	[0.0000326]	ND	[0.0000348]	ND	0/4	0/4

Notes:

1 - Screening Criteria: the cleanup level corresponds to ADEC 18 AAC 75 Table C Groundwater Cleanup Levels (October 9, 2008).

2 - The field sample identification number, date collected and laboratory sample identification number are provided.
The D designation in the sample identification number indicates the well is screened near the bottom of the shallow alluvial aquifer.

3 - The maximum concentration of a detected analyte is shown. If an analyte was not detected, then the highest MDL is shown.

4 - A parent and replicate sample are counted as one sample. The higher of the two values are used for the purpose of counting detections and exceedances.

5 - Screening criteria values are from 18 AAC 75.345 Table C .

6 - Total values were the summation of detected compounds only. If compounds were not detected, then the highest MDL was listed.

Data Flags

ND - nondetect, method detection limit is presented in brackets to the left

= - A detected compound (concentration listed in column to the left).

Abbreviations

-- - not applicable or screening criteria does not exist for this compound

AAC - Alaska Administrative Code

ADEC - Alaska Department of Environmental Conservation

MDL - Method Detection Limit

mg/L - milligrams per liter

PCB - Polychlorinated biphenyl

bold and shaded - The value exceeds the screening criteria (ADEC 18 AAC 75, Table C Groundwater Cleanup Levels).

TABLE 4 - CUMULATIVE SUMMARY OF GROUNDWATER ANALYTICAL RESULTS

Sample Date	May-94	Aug-95	Jun-96	Aug-96	Jul-99	Aug-99	Nov-99	Oct-04	Jun-06						Oct-06				
Analysis	DRPH	DRPH	DRPH	DRPH	DRO	DRO	DRO	DRO	DRO	RRO	GRO	Benzene	Total BTEX	PCBs	DRO	RRO	Benzene	Total BTEX	PCBs
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Monitoring Well																			
MW-13D	-	0.51	0.65	0.41	0.478	-	-	ND [0.319]	-	-	-	-	-	-	0.336	-	0.000938	0.000938	<0.0000332
B-4	0.17	NA	0.13	ND [0.1]	ND [0.316] [0.330/0.323]	ND [0.326]	ND [0.330]	ND [0.330]	-	-	-	-	-	-	0.100 J/ 0.0821 J	-	<0.000150	<0.000150	<0.0000325
B-7	0.13	NA	0.11	0.10	ND [0.316]	NA	NA	ND [0.323]	-	-	-	-	-	-	-	-	-	-	-

KEY	DESCRIPTION
-	Sample not analyzed for parameter or data not available
[0.617]	Values in [ ] are PQLs
ND	Analyte Not Detected
J	The quantitation is an estimate
<0.000150	Analyte below detection limit of 0.000150
1.63	Compound detected above 18 AAC 75.345, Table C Groundwater Cleanup Level

Attachment 1

Groundwater Field Forms, Monitoring Well Development Log,

and Boring Log with Monitoring Well Construction

HOEFLER CONSULTING GROUP
Groundwater Sampling Form

Site Name:	ML&P Plant 1	Well ID:	B-4
Site ID:		Well Type:	☒ Monitor ☐ Extraction
Project :	2010 GW Monitoring	Well Material:	☐ PVC ☐ Stainless Steel
Date:	1/22/~~09~~ 10	Well Integrity:	☐ Excellent ☐ Good ☐ Fair ☒ Poor
Start Time:	0950		
Finish Time:			
Sampled By:	JP/MS		
Weather Conditions:	15°F pCloudy		

Probe Type:	Casing Diameter (in)	Gallons/Linear Foot	Casing Radius (ft)
☒ Oil/Water Interface ☐ Electronic Water Indicator	☒ 2	☒ 0.163	☒ 0.083

Purging Information

Start Time:	0950	Depth to Water:	5.81
Finish Time:	1102	Total Depth of Casing:	12.72
		Product Level:	—
		Amount of Product:	—

Purging Equipment

☐ Bailer — Dedicated?
☐ Submersible Pump — (Yes) or No
☒ Peristaltic Pump — tubing

12.72 − 5.81 = 6.91

Conversions/Constants: For 2" wells 1 casing volume (gallons) = 0.163 * water column height (ft)

Water column height = Total depth of casing (ft) – Depth to water (ft) = ~~6.91~~ 6.91 Casing volume (gal): 1.1

Total Volume Purged (gal):

6.91 × 0.16 = 1.1056

Time	Volume (gal)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temp. (°C)	ORP (mv)	Draw Down (ft below TOC)
1030	2.2	6.69	247	2.55	30.1	3.04	48.0	4.87
1040	3.3	6.68	248	2.32	15.8	2.95	42.6	4.88
1050	4.4	6.77	247	2.27	7.34	2.89	43.5	4.88
1055	4.8	6.76	246	2.25	7.97	2.96	46.1	4.88
1100	5.3	6.75	245	2.23	5.24	2.96	48.2	4.88

Color	Odor	Purged Dry?	Meter Used	Discharge Water
☒ Clear	☒ None	☐ Yes ☒ No	☒ ~~Horiba U-40~~ YSI556	☒ Treated
☐ Cloudy	☐ Faint		☐ Horiba U-22	☐ Discharged
☐ Yellow	☐ Moderate	Sheen?	☐ ExTech EC500	
☐ Brown	☐ Strong	☐ Yes ☒ No	☒ ~~Hach~~ Lamotte 2020E	

Sampling Information

Date:	1/22/10	Sampling Equipment	
Start Time:	1115	☐ Bailer	
Finish Time:	11:25	☐ Submersible Pump	Dedicated? (Yes) or No
Depth of Tubing:	9.2 ft	☒ Peristaltic Pump	TUBING

Sample ID #	B4-012210			
Analysis Requested	~~PCBs~~	DRO/RRO		
Volume/Container	2X 1 Liter	1 Liter		
Preservative	NO			
Comments				

Other Sample Types

QC Duplicate Sample #	Duplicate Analyses	Trip Blank Sample #

HOEFLER CONSULTING GROUP
Groundwater Sampling Form

Site Name:	ML&P Plant 1	Well ID:	B-7 (MW-7)
Site ID:		Well Type:	☒ Monitor ☐ Extraction
Project :	2010 GW Monitoring	Well Material:	☒ PVC ☐ Stainless Steel
Date:	1/22/10	Well Integrity:	☐ Excellent ☒ Good ☐ Fair ☐ Poor
Start Time:	1230		
Finish Time:	1415		
Sampled By:	JP/MS		
Weather Conditions:	20°F sunny		

Probe Type:	Casing Diameter (in)	Gallons/Linear Foot	Casing Radius (ft)
☒ Oil/Water Interface ☐ Electronic Water Indicator	☒ 2	☒ 0.163	☐ 0.083

Purging Information

Start Time:	12:50	Depth to Water:	4.57
Finish Time:	1400	Total Depth of Casing:	15.80
		Product Level:	
		Amount of Product:	—

Purging Equipment

	Dedicated?
☐ Bailer	
☐ Submersible Pump	(Yes) or No
☒ Peristaltic Pump	tubing

Conversions/Constants: For 2" wells 1 casing volume (gallons) = 0.163 * water column height (ft)

Water column height = Total depth of casing (ft) – Depth to water (ft) = 11.23 Casing volume (gal): 1.8

Total Volume Purged (gal):

Time	Volume (gal)	pH	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temp. (°C)	ORP (mv)	Draw Down (ft below TOC)
1325	3.8	6.84	301	0.53	13.4	4.87	34.0	5.10
1335	4.5	6.81	298	0.31	16.4	4.58	34.8	4.89
1345	5.2	6.80	295	0.31	9.54	4.60	34.9	4.89
1350	5.8	6.79	292	0.27	8.18	4.73	36.2	4.89
1358	6.4	6.79	289	0.26	5.89	4.74	38.1	4.89

Color	Odor	Purged Dry?	Meter Used	Discharge Water
☒ Clear	☒ None	☐ Yes ☒ No	☒ ~~Horiba U-10~~ YSI 556	☒ Treated
☐ Cloudy	☐ Faint		☐ Horiba U-22	☐ Discharged
☒ Yellow (slight yellow)	☐ Moderate	Sheen?	☐ ExTech EC500	
☐ Brown	☐ Strong	☐ Yes ☒ No	☒ ~~Hach~~ LaMotte 2020e	

Sampling Information

Date:	1/22/10	Sampling Equipment	
Start Time:	14:00	☐ Bailer	
Finish Time:	1410	☐ Submersible Pump	Dedicated? (Yes) or No
Depth of Tubing:	11 ft	☒ Peristaltic Pump	tubing

Sample ID #				
Analysis Requested	(PCBs)	DRO/RRO		
Volume/Container	2x 1 Liter	1 Liter		
Preservative	NO			
Comments				

Other Sample Types

QC Duplicate Sample #	Duplicate Analyses	Trip Blank Sample #

HOEFLER CONSULTING GROUP
Groundwater Sampling Form

Site Name:	ML&P Plant 1	Well ID:	MW-13D
Site ID:		Well Type:	☒ Monitor ☐ Extraction
Project :	2010 GW Monitoring	Well Material:	☒ PVC ☐ Stainless Steel
Date:	1/25/10	Well Integrity:	☐ Excellent ☐ Good ☐ Fair ☐ Poor
Start Time:	1345		
Finish Time:			
Sampled By:	IP/MS		
Weather Conditions:	Sunny 15F		

Probe Type:	Casing Diameter (in)	Gallons/Linear Foot	Casing Radius (ft)
☒ Oil/Water Interface ☐ Electronic Water Indicator	☒ 2	☐ 0.163	☐ 0.083

Purging Information

Start Time:	1415	Depth to Water:	7.28
Finish Time:	1514	Total Depth of Casing:	14.74
		Product Level:	—
		Amount of Product:	—

Purging Equipment: ☐ Bailer ☐ Submersible Pump ☒ Peristaltic Pump — Dedicated? Yes or No

Conversions/Constants: For 2" wells 1 casing volume (gallons) = 0.163 * water column height (ft)

Water column height = Total depth of casing (ft) – Depth to water (ft) = 7.46 Casing volume (gal): 1.21

Total Volume Purged (gal):

Time	Volume (gal)	pH	Conductivity ~~(µmhos/cm)~~ mS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temp. (°C)	ORP (mv)	Draw Down (ft below TOC)
1445	1.5	6.85	259	0.82	5.68	4.21	5.7	—
1455	2.5	6.82	262	0.51	4.84	4.41	7.2	7.31
1505	3.5	6.81	263	0.40	3.57	4.46	7.6	7.29
1512	4.2	6.81	262	0.39	2.87	4.38	7.7	7.31

Color: ☒ Clear ☐ Cloudy ☐ Yellow ☐ Brown

Odor: ☐ None ☐ Faint ☒ Moderate HC/anoxic ☐ Strong

Purged Dry?: ☐ Yes ☒ No

Sheen?: ☐ Yes ☒ No

Meter Used: ☒ ~~Horiba U-10~~ Y8155L ☐ Horiba U-22 ☐ ExTech EC500 ☒ ~~Hach~~ LaMotte 2020e

Discharge Water: ☒ Treated ☐ Discharged

Sampling Information

Date:	1/25/10	**Sampling Equipment**	
Start Time:	1520 ~~1525~~	☐ Bailer	
Finish Time:	1525	☐ Submersible Pump	Dedicated? Yes or No
Depth of Tubing:	11 ft	☒ Peristaltic Pump	

Sample ID #	MW13D-012510			
Analysis Requested	PCBs	~~DRO/RRO~~		
Volume/Container	2x1 Liter	~~1 Liter~~		
Preservative				
Comments				

Other Sample Types

QC Duplicate Sample #	Duplicate Analyses	Trip Blank Sample #
MW93D-012510		

HOEFLER CONSULTING GROUP
Groundwater Sampling Form

Site Name:	ML&P Plant 1	Well ID: MW-14D	
Site ID:		Well Type: ☒ Monitor ☐ Extraction	
Project :	2010 GW Monitoring		
Date:	1/26/10	Well Material: ☒ PVC ☐ Stainless Steel	
Start Time:	1102		
Finish Time:		Well Integrity: ☒ Excellent ☐ Good ☐ Fair ☐ Poor	
Sampled By:	IP/MS		
Weather Conditions:	10°F sunny		

Probe Type:	Casing Diameter (in)	Gallons/Linear Foot	Casing Radius (ft)
☒ Oil/Water Interface ☐ Electronic Water Indicator	☒ 2	☐ 0.163	☐ 0.083

Purging Information

Start Time: 1105	Depth to Water: 4.81	Purging Equipment	
Finish Time: 1137	Total Depth of Casing: 12.20	☐ Bailer	Dedicated?
	Product Level: —	☐ Submersible Pump	(Yes) or No
	Amount of Product: —	☒ Peristaltic Pump	Tubing

Conversions/Constants: For 2" wells 1 casing volume (gallons) = 0.163 * water column height (ft)

Water column height = Total depth of casing (ft) – Depth to water (ft) = 7.39 Casing volume (gal): 1.2

Total Volume Purged (gal):

Time	Volume (gal)	pH	Conductivity (~~µmhos/cm~~) mS/cm	Dissolved Oxygen (mg/L)	Turbidity (NTU)	Temp. (°C)	ORP (mv)	Draw Down (ft below TOC)
1113	0.9	6.60	263	0.45	2.17	3.63	82.8	~~8.~~ 4.81
1127	2.2	6.53	263	0.50	1.54	3.65	85.8	4.81
1135	2.9	6.55	262	0.51	1.03	3.71	86.6	4.81

Color	Odor	Purged Dry?	Meter Used	Discharge Water
☒ Clear	☒ None	☐ Yes ☒ No	☒ ~~Horiba U-10~~ YSI 556	☒ Treated
☐ Cloudy	☐ Faint		☐ Horiba U-22	☐ Discharged
☐ Yellow	☐ Moderate	Sheen?	☐ ExTech EC500	
☐ Brown	☐ Strong	☐ Yes ☒ No	☒ ~~Hach~~ LaMotte 2020e	

Sampling Information

Date:	1/25/10	Sampling Equipment	
Start Time:	1140	☐ Bailer	
Finish Time:	1200	☐ Submersible Pump	Dedicated? (Yes) or No
Depth of Tubing:	8.4	☒ Peristaltic Pump	Tubing

Sample ID #	MW14D-012510	MW14D-012510(DUP)		MW14D-012510(MS)
Analysis Requested	PCBs @ 1140	~~DRO/RRO~~ @ 1200		@ 1150
Volume/Container	2x 1 Liter	~~1 Liter~~		
Preservative				
Comments				

Other Sample Types

QC Duplicate Sample #	Duplicate Analyses	Trip Blank Sample #

MONITORING WELL DEVELOPMENT LOG

Site: Plant 1, MLTP		Client: MLTP	
Project No.: 97 4904-017-154	Sample ID:		Well No.: MW-14D
Development Start Date/Time: 1/22/10 14:30		Development End Date/Time: 1/22/10 1535	
Developed By: JP/MS 1/25/10 1015			

Depth Measurement Ref. Point* Mark on TOC Well Casing ID: (2") 4" 6" Other _____

Well Headspace/Odor _____ LNAPL Check (Yes/No) DNAPL Check (Yes/No)

Equipment used to measure thickness and sample free product (Make, Model, etc.) _____

Solinst Interface, model 122

Depth to top and bottom of screened interval 10.5-12.5 Depth to LNAPL ——

Original DTW 1/22/10 5.02 Final DTW _____ Depth to DNAPL ——

LNAPL/DNAPL Thickness 1/25/10 4.80 LNAPL/DNAPL Sample and Volume _____

Measured Well TD: 12.20 (-) Original DTW: 5.02 (=) Ht. Wtr Col.: 7.18

DEVELOPMENT METHOD:

- [X] Submersible Pump 1/22/10
- [ ] Dedicated Bladder Pump
- [ ] Bladder Pump
- [ ] SS
- [ ] Centrifugal Pump
- [X] Peristaltic Pump 1/25/10
- [ ] Hand Pump
- [ ] Bailer
- [ ] Tef
- [ ] Gas Lift/Displacement Pump
- [ ] Inertial Lift Pump
- [ ] Other_____
- [ ] PVC

Development Equip. (Make, Model, etc.) _____

Development Water Containerized? (Yes/No) Development Equip. Decontaminated? (Yes/No)

Average Development Rate: 0.35 4/min ~~gpm~~ 1/25/10 Weather Clear 15°F

Actual Time (min.)	Vols. Purged (gals.)	Depth to Pump Intake (ft.)	Depth to Water (ft.)	Temp (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	D.O. (mg/L)	ORP (mV)	Comments
1036	25.7	8.4	4.80	3.87	6.74	270	12.4	0.88	95.2	
1045	26.4	"	4.81	3.70	6.64	266	6.46	0.54	87.3	
1053	27.1	"	4.81	3.69	6.60	265	4.84	0.49	84.6	
1103	28	"	4.81	3.71	6.57	264	4.25	0.54	82.6	

* All depths in feet below reference point on wellhead, generally top of casing; DTW = Depth to Water; LNAPL/DNAPL = Light/Dense Non-Aqueous Phase Liquid

- had to stop on 1/22/10 before done because we ran out of room in the waste drum - 24 gal pumped and not clear enough to attach water meter

Hoefler CONSULTING GROUP

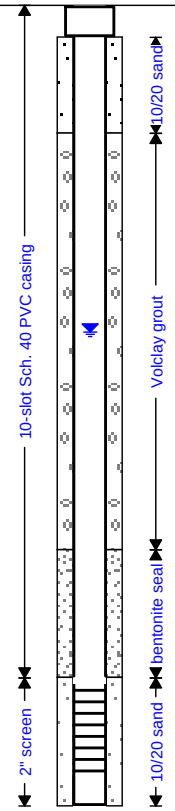
3401 Minnesota Drive
Anchorage, AK 99503

Borehole/Well ID: MW-14D

Location: ML & P
Completion Date: 01-20-2010
Project No.: 4904-017
Logged by: Jeremy Craner
Drilled by: Discovery Drilling

Drill Rig Type: CME 75
Drill Method: Hollow-stem
Sampling Method: Split-spoon 2-in X 2 ft
Total Depth (bgs): 12.5 ft
Depth to Water (bgs): 5.10 ft

SUBSURFACE PROFILE			SAMPLE					
Depth (ft)	Lithologic Column	Description/Comments	Blowcounts	Recovered/ Driven	Odor/Stain?	In Situ PID	Sample ID	Well Completion Details
0		3" Asphalt cover	41 74 38 29	24/24	N/N	0	MW-14D	
2		GM, silty/sandy gravel, light to dark brown, frozen, no odor/stain.					MW-14D-2	
		GM, silty/sandy gravel, dark brown, moist at 3.8 ft, no odor/stain.	18 18 9 5	18/24	N/N	0		
4		SW, well-graded sand w/ minor gravel, dark brown, moist, loose, no odor/stain. Water table at 6 ft.	2 1 1 1	12/24	N/N	0	MW-14D-4	
6		GM, silty/sandy gravel w/ large clasts, brown, saturated, HC odor and sheen in spoon.	2 2 4 5	16/24	Y/N	0.8	MW-14D-6	
8		GW, well-graded gravel w/ sand, brown to gray, saturated, loose, slight HC odor and sheen in spoon.	4 4 6 7	16/24	Y/Y	0.6	MW-14D-8	
10		SW, well-graded sand w/ gravel, dark gray, saturated, loose, slight HC odor?	2 3 5 6	18/24	Y/N	0.1	MW-14D-10	
12		"Bootlegger Cove Clay" at 12.5 ft bgs.	0.5 0.5 0.5 0.5	20/24	Y/N	0.1	MW-14D-12	
14								
16								
18								
20								



DATE:
DRAWN BY:
CHECKED BY:

NOTES: Set 2" PVC Sch. 40 monitoring well w/ screen 10.5 to 12.5 ft bgs, 3 bags 10/20 silica sand to 10.5 ft bgs, 2 bags bentonite seal to 8.5 ft bgs, 1/2 bag Volclay grout to ~2 ft bgs, 10/20 silca sand to ~ 2 ft. Water level in well 5.10 ft below MP on TOC.

Attachment 2

HCG Data Quality Assessment, ADEC Checklist,

and SGS Laboratory Report

1 LAB ANALYSIS, DATA VALIDATION, AND REPORTING

This Data Quality Assessment (DQA) covers soil sampling for ML&P completed on January 20, 2010 and associated groundwater sampling completed on January 22 and January 25, 2010. SGS North America (SGS) in Anchorage, Alaska (an ADEC-approved laboratory) provided the analytical support for this project. Table 1 provides laboratory work order numbers and corresponding receipt temperatures.

Samples were taken according to the specifications in Table 2. The chain of custody forms were completed as the samples were packaged into coolers for transport. Trip blanks, temperature blanks, and gel ice were added as required. The samples were placed in a cooler at the time of collection and were kept chilled until delivery to the laboratory. Documentation pertaining to chain-of-custody and sample condition was filed in field and laboratory records.

Table 1 Summary of Work Orders and Cooler Receipt Information

Work Order Number	Matrix	Date of Receipt	Temperature Blank	Cooler Temperature
1100211	Soil	01/20/10	-1.0ºC	NA
1100250	Water	01/22/10	2.0ºC	NA
1100267	Water	01/26/10	2.1ºC	NA

NA – Not Applicable

Table 2 Summary of Sample Containers and Preservatives

Method	Container Volume	Container Material	Preservative	Hold time (days)	Trip Blank
PCBs in Soil (SW8082A)	4 oz.	Amber Glass	4°C (±2°)	Non	Not Required
PCBs in Water (SW8082A)	2 X 1L	Amber Glass	4°C (±2°)	None	Not Required

The SGS final reports were presented as hard copy Level II data deliverable packages and electronic deliverables compatible with Microsoft Access. The analytic data was reviewed for consistency with *ADEC Technical Memorandum 06-002, Environmental Laboratory Data and Quality Assurance* (ADEC 2009) requirements. An ADEC Laboratory Data Review Checklist was completed for each analytical work order and was included in this report (Attachment 1). Any anomalies to the requirements for precision, accuracy, representativeness, comparability, completeness and sensitivity (PARCCS) are discussed below and the data were flagged where appropriate.

Application of Data Flags

General data quality flagging conventions in Table 3 were used to indicate quality control anomalies. Data was flagged, where appropriate. A data quality summary is provided below.

Table 3 Data Qualifiers

Qualifier	Description
F	The analyte was positively identified but the associated concentration was estimated above the method detection limit (MDL) and below the practical quantitation limit (PQL).
J	The analyte was positively identified, the quantitation was an estimate. Where applicable a "+" or "-" was appended to indicate positive or negative bias, respectively.
ND	The analyte was analyzed for, but not detected. The associated numerical value was at or below the MDL.
M	A matrix effect was present. Where applicable a "+" or "-" was appended to indicate positive or negative bias, respectively.
B	The compound was positively identified in the method blank and/or trip blank. The reported concentration was less than 5X that of the blank, or less than 10X for common laboratory contaminants, methylene chloride and acetone.

Preservation, Temperature and Hold Time

Temperature blank and cooler receipt temperatures are presented in Table 1. No trip blanks or samples were noted by the laboratory as being frozen. Preservation and holding time criteria were considered met.

PRECISION

Precision was measured from the Field Duplicate, and the Relative Percent Difference (RPD) between Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) and Matrix Spike (MS)/Matrix Spike Duplicate (MSD).

Field Duplicates

One field duplicate was collected per ten samples per method and matrix. Table 4 presents sample and duplicate counts. Table 5 presents parent samples, their field duplicates and analyses. Table 6 presents field duplicate RPD exceedances. The RPDs for all duplicate results not listed in Table 6 were within criteria. In general, RPDs were not evaluated in cases when either result was between the MDL and PQL or nondetect. There were no RPD exceedances for field duplicates.

Laboratory Control Sample and Duplicate (LCS/LCSD) and Matrix Spike and Duplicate (MS/MSD) RPD

Analytical batch precision was established through the extraction and analysis of an LCS/LCSD for soils and an MS/MSD for waters. Precision criteria were met. RPDs were within acceptance criteria. No data were flagged based on LCS or MS RPD failures.

Table 4 Field Duplicate Counts

Matrix	Parameter (Method)	Total Samples	Total Replicates	Replicate Frequency Met?
Soil	PCBs (SW8082)	7	1	Yes
Water	PCBs (SW8082)	4	1	Yes

Table 5 Field Duplicates

Primary Sample ID (LabID)	Duplicate Sample ID (Lab ID)	Analysis	Method	Matrix
MW-14D-4 (1100267001)	MW-14D-94 (1100267002)	PCBs	SW8082	Soil
MW-13D-012510 (1100211003)	MW-93D-012510 (1100211010)	PCBs	SW8082	Water

Table 6 Field Duplicates Failing Precision Criteria

Method	Analyte	Primary Result	Replicate Result	RPD	Units	Flag

1.1 ACCURACY

Accuracy was measured from laboratory QC sample percent recoveries to include LCS/LCSD, MS/MSD, and surrogates. Accuracy was also evaluated by determining whether any deviations to method or laboratory requirements for CCV were noted in the case narrative(s).

Continuing Calibration Verification (CCV)
No continuing calibration verification standards were noted in the case narrative as outside allowable limits.

Surrogates
All surrogate recoveries were within laboratory limits.

No data was flagged based on surrogate recovery.

Laboratory Control Sample and Duplicate (LCS/LCSD) and Matrix Spike and Duplicate (MS/MSD) Recovery
One LCS and an MS/MSD were analyzed for each batch of samples for waters. For soils, one LCS/LCSD was analyzed.

All LCS/LCSD samples recovered within laboratory control limits.

For the MS/MSD associated with water sample MW-14D-4, recoveries were within limits for Aroclor-1016 but high outside limits for Aroclor-1260. The spike amount was significantly less than the concentration of the parent sample. Therefore, the data were considered usable without qualification.

No data was flagged based on LCS or MS recoveries.

Internal Standards
No internal standards were noted in the case narrative as outside allowable limits.

1.2 REPRESENTATIVENESS

The data deliverables were consistent with the site conditions. Samples were collected from planned locations.

1.3 COMPARABILITY

Comparability between laboratories was not applicable to this investigation. Standard SW846 methods (SW 3550C and SW8082A) were used by SGS, an ADEC-certified laboratory.

1.5 COMPLETENESS

Completeness was measured as the number of usable results versus the total number of results. The data set was 100% complete with no omissions or rejections with respect to sample collection or analysis. The information fulfilled the data quality objectives of this sampling event.

1.6 SENSITIVITY

Sensitivity was measured by evaluating whether the PQL was less than the regulatory clean up levels or project required goals. In cases where the PQL did not meet goals, the MDL was evaluated. Additionally, sensitivity was evaluated by determining whether method blank and trip blank results were less than the PQL.

Blanks (Method and Trip)
There were not trip blanks required (PCBs only). One method blank was analyzed for every analytical batch of twenty samples or less. There were no PCB detections reported for any of the method blanks.

Reporting Limits
PCB PQLs and MDLs were evaluated against the 18 AAC 75 Method Two Cleanup Level of 1 mg/Kg for soils and the 18 AAC 75 Table C Groundwater Cleanup Level of 0.0005 mg/L for waters.

All PQLs and MDLs met project goals.

Laboratory Data Review Checklist

Completed by: Wendy Mitchell

Title: Senior Scientist

Date: February 4, 2010

CS Report Name: ML&P

Report Date:

Consultant Firm: Hoefler Consulting Group

Laboratory Name: SGS North America

Laboratory Report Number: 1100211

ADEC File Number:

ADEC RecKey Number:

1. Laboratory

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

      ☑ Yes ☐ No Comments:

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

      ☑ Yes ☐ No Comments:

      Not Applicable

2. Chain of Custody (COC)

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

      ☑ Yes ☐ No Comments:

   b. Correct analyses requested?

      ☑ Yes ☐ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☐ Yes ☒ No Comments:

The temperature blank was -1.0°C.

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

e. Data quality or usability affected? Explain.

Comments:

No impact.

4. Case Narrative

a. Present and understandable?

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

c. Were all corrective actions documented?

☒ Yes ☐ No Comments:

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

Comments:

No impact

5. Samples Results

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

☑ Yes ☐ No Comments:

b. All applicable holding times met?

☑ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

No impact.

6. QC Samples

a. Method Blank

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

☑ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☑ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not Applicable

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

☐ Yes ☒ No Comments:

Not Applicable.

v. Data quality or usability affected? Explain.

Comments:

No impact.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

Not Applicable

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

☐ Yes ☒ No Comments:

An MS/MSD performed on sample MW-14D-4 recovered high for Aroclor 1260 and within limits for Aroclor-1016. The spike amount was significantly less than the concentration of the parent sample.

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

☒ Yes ☐ No Comments:

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

Comments:

MW-14D-4

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

☐ Yes ☒ No Comments:

It was not appropriate to calculate a recovery for Aroclor-1260 since the spike amount was significantly less than the concentration in the parent sample.

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

No impact.

c. Surrogates – Organics Only

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

☐ Yes ☒ No Comments:

Not Applicable.

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

No impact.

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☒ No Comments:

Not Applicable. PCBs only.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

Not Applicable

iii. All results less than PQL?

☑ Yes ☐ No Comments:

Not Applicable

iv. If above PQL, what samples are affected?

Comments:

Not Applicable

v. Data quality or usability affected? Explain.

Comments:

Not Applicable

e. Field Duplicate

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

☑ Yes ☐ No Comments:

MW-14D-94 was a field duplicate of MW-14D-4

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No impact.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

No equipment blank was collected. Samples were collected with a split spoon that was decontaminated between samples.

ii. If above PQL, what samples are affected?

Comments:

Not Applicable.

iii. Data quality or usability affected? Explain.

Comments:

Results were used as reported and no contamination due to equipment was assumed.

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

a. Defined and appropriate?

☒ Yes ☐ No Comments:

Laboratory Data Review Checklist

Completed by:	Wendy Mitchell
Title:	Senior Scientist
Date:	February 4, 2010
CS Report Name:	ML&P
Report Date:	
Consultant Firm:	Hoefler Consulting Group
Laboratory Name:	SGS North America
Laboratory Report Number:	1100250
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

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

   ☉ Yes ○ No Comments:

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

   ☉ Yes ○ No Comments:

   Not Applicable

2. Chain of Custody (COC)

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

   ☉ Yes ○ No Comments:

   b. Correct analyses requested?

   ☉ Yes ○ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

e. Data quality or usability affected? Explain.

Comments:

No impact.

4. Case Narrative

a. Present and understandable?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

c. Were all corrective actions documented?

☑ Yes ☐ No Comments:

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

Comments:

No impact

5. Samples Results

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

☑ Yes ☐ No Comments:

b. All applicable holding times met?

☑ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

No impact.

6. QC Samples

a. Method Blank

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

☑ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☑ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not Applicable

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

☐ Yes ☒ No Comments:

Not Applicable.

v. Data quality or usability affected? Explain.

Comments:

No impact.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

Not Applicable

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

Comments:

Not Applicable.

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

☐ Yes ☒ No Comments:

Not Applicable.

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

No impact.

c. Surrogates – Organics Only

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

☐ Yes ☒ No Comments:

Not Applicable.

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

No impact.

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☒ No Comments:

Not Applicable. PCBs only.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

Not Applicable

iii. All results less than PQL?

☑ Yes ☐ No Comments:

Not Applicable

iv. If above PQL, what samples are affected?

Comments:

Not Applicable

v. Data quality or usability affected? Explain.

Comments:

Not Applicable

e. Field Duplicate

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

☑ Yes ☐ No Comments:

There was no field duplicate associated with this work order. However, the project frequency of 10% was met. Reference the DQA and the checklist for SDG 1100267.

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

Not applicable for this work order.

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

The RPD was within limits for all project duplicates.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No impact.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Samples were collected with dedicated tubing.

ii. If above PQL, what samples are affected?

Comments:

Not Applicable.

iii. Data quality or usability affected? Explain.

Comments:

Not Applicable.

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

a. Defined and appropriate?

☒ Yes ☐ No Comments:

Laboratory Data Review Checklist

Completed by:	Wendy Mitchell
Title:	Senior Scientist
Date:	February 4, 2010
CS Report Name:	ML&P
Report Date:	
Consultant Firm:	Hoefler Consulting Group
Laboratory Name:	SGS North America
Laboratory Report Number:	1100267
ADEC File Number:	
ADEC RecKey Number:	

1. Laboratory

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

   ☉ Yes ○ No Comments:

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

   ☉ Yes ○ No Comments:

   Not Applicable

2. Chain of Custody (COC)

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

   ☉ Yes ○ No Comments:

   b. Correct analyses requested?

   ☉ Yes ○ No Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

e. Data quality or usability affected? Explain.

Comments:

No impact.

4. Case Narrative

a. Present and understandable?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

c. Were all corrective actions documented?

☑ Yes ☐ No Comments:

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

Comments:

No impact

5. Samples Results

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

☑ Yes ☐ No Comments:

b. All applicable holding times met?

☑ Yes ☐ No Comments:

c. All soils reported on a dry weight basis?

☑ Yes ☐ No Comments:

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

☑ Yes ☐ No Comments:

e. Data quality or usability affected?

Comments:

No impact.

6. QC Samples

a. Method Blank

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

☑ Yes ☐ No Comments:

ii. All method blank results less than PQL?

☑ Yes ☐ No Comments:

iii. If above PQL, what samples are affected?

Comments:

Not Applicable

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

☐ Yes ☒ No Comments:

Not Applicable.

v. Data quality or usability affected? Explain.

Comments:

No impact.

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

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

Not Applicable

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

Comments:

Not Applicable.

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

☐ Yes ☒ No Comments:

Not Applicable.

vii. Data quality or usability affected? (Use comment box to explain)

Comments:

No impact.

c. Surrogates – Organics Only

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

☒ Yes ☐ No Comments:

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

☒ Yes ☐ No Comments:

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

☐ Yes ☒ No Comments:

Not Applicable.

iv. Data quality or usability affected? (Use the comment box to explain.)

Comments:

No impact.

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

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (if not, enter explanation below.)

☐ Yes ☒ No Comments:

Not Applicable. PCBs only.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

☐ Yes ☐ No Comments:

Not Applicable

iii. All results less than PQL?

☑ Yes ☐ No Comments:

Not Applicable

iv. If above PQL, what samples are affected?

Comments:

Not Applicable

v. Data quality or usability affected? Explain.

Comments:

Not Applicable

e. Field Duplicate

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

☑ Yes ☐ No Comments:

MW-93D-012510 was a duplicate of MW-13D-012510.

ii. Submitted blind to lab?

☑ Yes ☐ No Comments:

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

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

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

☑ Yes ☐ No Comments:

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

No impact.

f. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below.)

☐ Yes ☐ No ☒ Not Applicable

i. All results less than PQL?

☐ Yes ☐ No Comments:

Samples were collected with dedicated tubing.

ii. If above PQL, what samples are affected?

Comments:

Not Applicable.

iii. Data quality or usability affected? Explain.

Comments:

Not Applicable.

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

a. Defined and appropriate?

☒ Yes ☐ No Comments:

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	ML&P
Client:	Hoefler Consulting Group
SGS Work Order:	1100211

Released by:

Contents:

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Client Name: Hoefler Consulting Group
Project Name: ML&P
Workorder No.: 1100211

Sample Comments

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

Lab Sample ID	Sample Type	Client Sample ID
1100211004	BMS	MW-14D-4 MS
	8082A - MS/MSD for Aroclor 1260 does not meet QC criteria due to matrix interference. See the LCS for accuracy.	
1100211005	BMSD	MW-14D-4 MSD
	8082A - MS/MSD for Aroclor 1260 does not meet QC criteria due to matrix interference. See the LCS for accuracy.	

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 **t**(907)562.2343 **f**(907)561.5301
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Report of Manual Integrations

Print Date: 1/27/2010 4:19 pm

Laboratory ID	Client Sample ID	Analytical Batch	Method	Analyte	Reason
1100211005	MW-14D-4 MSD	XGC6869	SW8082A	Aroclor-1016	SP
947227	CCV for HBN 225100 (XGC/6869)	XGC6869	SW8082A	Aroclor-1016	SP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
www.us.sgs.com Member of SGS Group

Laboratory Analytical Report

Client: **Hoefler Consulting Group**
3401 Minnesota Dr.
Suite 300
Anchorage, AK 99503

Attn: **Wendy Mitchell**
T: (907)563-2196 F:(907)563-2164
wmitchell@hoeflernet.com

Project: **ML&P**

Workorder No.: **1100211**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Jennifer Serna

Project Manager

Enclosed are the analytical results associated with the above work order. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 1/27/2010 4:19 pm

Client Name: Hoefler Consulting Group
Project Name: ML&P
Workorder No.: 1100211

Analytical Methods

Method Description	Analytical Method
Percent Solids SM2540G	SM20 2540G
SW8082 PCB's	SW8082A

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1100211001	MW-14D
1100211002	MW-14D-2
1100211003	MW-14D-4
1100211004	MW-14D-4 MS
1100211005	MW-14D-4 MSD
1100211006	MW-14D-6
1100211007	MW-14D-8
1100211008	MW-14D-10
1100211009	MW-14D-12
1100211010	MW-14D-94

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Detectable Results Summary

Print Date: 1/27/2010 4:19 pm

Client Sample ID: **MW-14D**
SGS Ref. #: 1100211001

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	82200	ug/Kg

Client Sample ID: **MW-14D-2**
SGS Ref. #: 1100211002

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	112000	ug/Kg

Client Sample ID: **MW-14D-4**
SGS Ref. #: 1100211003

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	77600	ug/Kg

Client Sample ID: **MW-14D-6**
SGS Ref. #: 1100211006

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	49700	ug/Kg

Client Sample ID: **MW-14D-8**
SGS Ref. #: 1100211007

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	17600	ug/Kg

Client Sample ID: **MW-14D-10**
SGS Ref. #: 1100211008

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	1380	ug/Kg

Client Sample ID: **MW-14D-12**
SGS Ref. #: 1100211009

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	11100	ug/Kg

Client Sample ID: **MW-14D-94**
SGS Ref. #: 1100211010

Polychlorinated Biphenyls

Parameter	Result	Units
Aroclor-1260	53300	ug/Kg

Client Sample ID: **MW-14D**
SGS Ref. #: 1100211001
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.1

Collection Date/Time: 01/20/10 11:35
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	30.8 U	51.5	15.4	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	82200	5150	1540	ug/Kg	100	XGC6870	XXX22225	
Decachlorobiphenyl <surr>	85	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 16:16
Dilution Factor: 1
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.982 g
Prep Extract Vol.: 5 mL
Container ID:1100211001-A
Analyst: RTS

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 10:48
Dilution Factor: 100
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.982 g
Prep Extract Vol.: 5 mL
Container ID:1100211001-A
Analyst: RTS

Client Sample ID: **MW-14D**
SGS Ref. #: 1100211001
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 95.1

Collection Date/Time: 01/20/10 11:35
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	95.1			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211001-A
Analyst: KAN

Client Sample ID: **MW-14D-2**
SGS Ref. #: 1100211002
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 94.3

Collection Date/Time: 01/20/10 11:50
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	32.4 U	54.1	16.2	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	112000	10800	3240	ug/Kg	200	XGC6870	XXX22225	
Decachlorobiphenyl <surr>	82	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 16:28
Dilution Factor: 1
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.059 g
Prep Extract Vol.: 5 mL
Container ID:1100211002-A
Analyst: RTS

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 11:00
Dilution Factor: 200
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.059 g
Prep Extract Vol.: 5 mL
Container ID:1100211002-A
Analyst: RTS

Client Sample ID: **MW-14D-2**
SGS Ref. #: 1100211002
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 94.3

Collection Date/Time: 01/20/10 11:50
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	94.3			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211002-A
Analyst: KAN

Client Sample ID: **MW-14D-4**
SGS Ref. #: 1100211003
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.2

Collection Date/Time: 01/20/10 12:00
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1221	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1232	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1242	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1248	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1254	64.0 U	107	32.0	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1260	77600	10700	3200	ug/Kg	200	XGC6870	XXX22225	
Decachlorobiphenyl <surr>	78	60-125		%	2	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 16:40
Dilution Factor: 2
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.661 g
Prep Extract Vol.: 5 mL
Container ID:1100211003-A
Analyst: RTS

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 11:12
Dilution Factor: 200
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.661 g
Prep Extract Vol.: 5 mL
Container ID:1100211003-A
Analyst: RTS

Client Sample ID: **MW-14D-4**
SGS Ref. #: 1100211003
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.2

Collection Date/Time: 01/20/10 12:00
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	93.2			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211003-A
Analyst: KAN

Client Sample ID: **MW-14D-6**
SGS Ref. #: 1100211006
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.2

Collection Date/Time: 01/20/10 12:10
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	35.6 U	59.3	17.8	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	49700	5930	1780	ug/Kg	100	XGC6870	XXX22225	
Decachlorobiphenyl <surr>	75	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 18:17
Dilution Factor: 1
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.522 g
Prep Extract Vol.: 5 mL
Container ID:1100211006-A
Analyst: RTS

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 12:48
Dilution Factor: 100
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.522 g
Prep Extract Vol.: 5 mL
Container ID:1100211006-A
Analyst: RTS

Client Sample ID: **MW-14D-6**
SGS Ref. #: 1100211006
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 84.2

Collection Date/Time: 01/20/10 12:10
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	84.2			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211006-A
Analyst: KAN

Client Sample ID: **MW-14D-8**
SGS Ref. #: 1100211007
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 86.7

Collection Date/Time: 01/20/10 12:15
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	34.6 U	57.6	17.3	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	17600	576	173	ug/Kg	10	XGC6869	XXX22225	
Decachlorobiphenyl <surr>	68	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 18:29
Dilution Factor: 1
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.544 g
Prep Extract Vol.: 5 mL
Container ID:1100211007-A
Analyst: RTS

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 01:20
Dilution Factor: 10
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.544 g
Prep Extract Vol.: 5 mL
Container ID:1100211007-A
Analyst: RTS

Client Sample ID: **MW-14D-8**
SGS Ref. #: 1100211007
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 86.7

Collection Date/Time: 01/20/10 12:15
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	86.7			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211007-A
Analyst: KAN

Client Sample ID: **MW-14D-10**
SGS Ref. #: 1100211008
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.8

Collection Date/Time: 01/20/10 12:30
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	32.2 U	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	1380	53.8	16.1	ug/Kg	1	XGC6869	XXX22225	
Decachlorobiphenyl <surr>	75	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 18:41
Dilution Factor: 1

Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10

Initial Prep Wt./Vol.: 22.527 g
Prep Extract Vol.: 5 mL
Container ID:1100211008-A
Analyst: RTS

Client Sample ID: **MW-14D-10**
SGS Ref. #: 1100211008
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 92.8

Collection Date/Time: 01/20/10 12:30
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	92.8			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211008-A
Analyst: KAN

Client Sample ID: **MW-14D-12**
SGS Ref. #: 1100211009
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 83.3

Collection Date/Time: 01/20/10 12:40
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1221	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1232	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1242	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1248	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1254	35.8 U	59.8	17.9	ug/Kg	1	XGC6869	XXX22225	
Aroclor-1260	11100	598	179	ug/Kg	10	XGC6869	XXX22225	
Decachlorobiphenyl <surr>	75	60-125		%	1	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 18:53
Dilution Factor: 1
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.586 g
Prep Extract Vol.: 5 mL
Container ID:1100211009-A
Analyst: RTS

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 01:32
Dilution Factor: 10
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.586 g
Prep Extract Vol.: 5 mL
Container ID:1100211009-A
Analyst: RTS

Client Sample ID: **MW-14D-12**
SGS Ref. #: 1100211009
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 83.3

Collection Date/Time: 01/20/10 12:40
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	83.3			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211009-A
Analyst: KAN

Client Sample ID: **MW-14D-94**
SGS Ref. #: 1100211010
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.5

Collection Date/Time: 01/20/10 12:00
Receipt Date/Time: 01/20/10 16:21

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1221	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1232	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1242	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1248	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1254	63.0 U	105	31.5	ug/Kg	2	XGC6869	XXX22225	
Aroclor-1260	53300	5250	1580	ug/Kg	100	XGC6870	XXX22225	
Decachlorobiphenyl <surr>	76	60-125		%	2	XGC6869	XXX22225	

Batch Information

Analytical Batch: XGC6869
Analytical Method: SW8082A
Analysis Date/Time: 01/26/10 19:05
Dilution Factor: 2
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.908 g
Prep Extract Vol.: 5 mL
Container ID:1100211010-A
Analyst: RTS

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 13:00
Dilution Factor: 100
Prep Batch: XXX22225
Prep Method: SW3550C
Prep Date/Time: 01/21/10 12:10
Initial Prep Wt./Vol.: 22.908 g
Prep Extract Vol.: 5 mL
Container ID:1100211010-A
Analyst: RTS

Client Sample ID: **MW-14D-94**
SGS Ref. #: 1100211010
Project ID: ML&P
Matrix: Soil/Solid (dry weight)
Percent Solids: 93.5

Collection Date/Time: 01/20/10 12:00
Receipt Date/Time: 01/20/10 16:21

Solids

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Total Solids	93.5			%	1	SPT8081		

Batch Information

Analytical Batch: SPT8081
Analytical Method: SM20 2540G
Analysis Date/Time: 01/21/10 12:20
Dilution Factor: 1

Initial Prep Wt./Vol.: 1 mL
Container ID:1100211010-A
Analyst: KAN

SGS Ref.#	946832	Method Blank	**Printed Date/Time**	01/27/2010 16:19
Client Name	Hoefler Consulting Group		**Prep Batch**	XXX22225
Project Name/#	ML&P		**Method**	SW3550C
Matrix	Soil/Solid (dry weight)		**Date**	01/21/2010

QC results affect the following production samples:

1100211001, 1100211002, 1100211003, 1100211006, 1100211007, 1100211008, 1100211009, 1100211010

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Polychlorinated Biphenyls					
Aroclor-1016	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1221	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1232	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1242	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1248	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1254	30.0 U	50.0	15.0	ug/Kg	01/26/10
Aroclor-1260	30.0 U	50.0	15.0	ug/Kg	01/26/10
Surrogates					
Decachlorobiphenyl <surr>	91	60-125		%	01/26/10

Batch XGC6869
Method SW8082A
Instrument HP 6890 Series II ECD SV L R

SGS Ref.#	947044	Method Blank	**Printed Date/Time**	01/27/2010 16:19
Client Name	Hoefler Consulting Group		**Prep Batch**	
Project Name/#	ML&P		**Method**	
Matrix	Soil/Solid (dry weight)		**Date**	

QC results affect the following production samples:

1100211001, 1100211002, 1100211003, 1100211006, 1100211007, 1100211008, 1100211009, 1100211010

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Solids					
Total Solids	100			%	01/21/10
Batch SPT8081					
Method SM20 2540G					
Instrument					

SGS Ref.#	947045	Duplicate	**Printed Date/Time**	01/27/2010 16:19
Client Name	Hoefler Consulting Group		**Prep Batch**	
Project Name/#	ML&P		**Method**	
Original	1100211006		**Date**	
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

1100211001, 1100211002, 1100211003, 1100211006, 1100211007, 1100211008, 1100211009, 1100211010

Parameter	Original Result	QC Result	Units	RPD	RPD Limits	Analysis Date
Solids						
Total Solids	84.2	83.5	%	1	(< 15)	01/21/2010
Batch SPT8081						
Method SM20 2540G						
Instrument						

SGS Ref.#	946833	Lab Control Sample	**Printed Date/Time**	01/27/2010	16:19
			Prep Batch	XXX22225	
Client Name	Hoefler Consulting Group		**Method**	SW3550C	
Project Name/#	ML&P		**Date**	01/21/2010	
Matrix	Soil/Solid (dry weight)				

QC results affect the following production samples:

1100211001, 1100211002, 1100211003, 1100211006, 1100211007, 1100211008, 1100211009, 1100211010

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polychlorinated Biphenyls								
Aroclor-1016	LCS	191	86	(58-122)			222 ug/Kg	01/26/2010
Aroclor-1260	LCS	198	89	(61-130)			222 ug/Kg	01/26/2010
Surrogates								
Decachlorobiphenyl <surr>	LCS		99	(60-125)				01/26/2010

Batch XGC6869
Method SW8082A
Instrument HP 6890 Series II ECD SV L R

SGS Ref.#	1100211004	Billable Matrix Spike	**Printed Date/Time**	01/27/2010 16:19
	1100211005	Billable Matrix Spike Dup.	**Prep Batch**	XXX22225
			Method	Sonication Extraction Soil SW8
			Date	01/21/2010
Original	1100211003			
Matrix	Soil/Solid (dry weight)			

QC results affect the following production samples:

Parameter	Qualifiers	Original Result	QC Result	Pct Recov	MS/MSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polychlorinated Biphenyls									
Aroclor-1016	BMS	(64.0) U	248	105	(58-122)			236 ug/Kg	01/26/2010
	BMSD		273	115		9	(< 30)	237 ug/Kg	01/26/2010
Aroclor-1260	BMS	77600	82618	2,130*	(61-130)			236 ug/Kg	01/27/2010
	BMSD		78970	585*		5	(< 30)	237 ug/Kg	01/27/2010
Surrogates									
Decachlorobiphenyl <surr>	BMS		189	80	(60-125)				01/26/2010
	BMSD		185	78		2			01/26/2010

Batch	XGC6869
Method	SW8082A
Instrument	HP 6890 Series II ECD SV L R

SGS North America Inc.
CHAIN OF CUSTODY RECORD

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- Alaska
- New Jersey
- North Caroli
- West Virgini

1100211

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1

CLIENT: HCG

CONTACT: Wendy Mitchell PHONE NO: 907-563-2196

PROJECT: MWP SITE/PWSID# :

REPORTS TO: Wendy Mitchell EMAIL: wmitchell@hefternet.com

INVOICE TO: 3401 Minnesota Dr, Ste 350 Anchorage, AK 99503 QUOTE #:

P.O. #: 4904-017-154

SGS Reference #:

page 1 of 1

2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) PCBs 8082	RUSH	REMARKS/ LOC ID
1 A	MW-14D	1/20/10	1135	S	1	G		X		
2 A	MW-14D-2		1150		1			X		
3 4 5 AB	MW-14D-4		1200		2			X		
6 A	MW-14D-6		1210		1			X		
7	MW-14D-8		1215		1			X		
8	MW-14D-10		1230		1			X		
9	MW-14D-12		1240		1			X		
10	MW-14D-94		1200		1			X		

5

Collected/Relinquished By:(1)	Date	Time	Received By:
Jerry Conn	1/20/10	1621	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 1/20/10	Time 1621	Received For Laboratory By:

4

DOD Project? YES (NO)

Cooler ID

Cooler Temp °C

Special Deliverable Requirements: Level 2, EDD, ~~Acct~~ JC Data view

Requested Turnaround Time and-or Special Instructions: 5-7 day

Temperature Blank °C: -1.0 Therm # 35d

or Ambient ☐

Chain of Custody Seal: (Circle) (INTACT) BROKEN ABSENT

SGS

SAMPLE RECEIPT FORM

SGS WO#: 1100211

Yes	No	NA		
✓			Are samples **RUSH**, priority or *w/in 72 hrs* of **hold time**?	
✓			If yes, have you done *e-mail ALERT notification*?	
	✓		Are samples *within 24 hrs.* of **hold time** or **due date**?	
		✓	If yes, have you also *spoken with* supervisor?	
		✓	Archiving bottles: Are lids marked w/ red "X" ?	
		✓	Were samples collected with proper preservative?	
	✓		**Any problems (ID, cond'n , HT, etc)? Explain:**	
		✓	If this is for PWS, provide **PWSID:**	
		✓	Payment received: $_____ by Check or Credit Card	
	✓		Will courier charges apply?	
✓	X/90		Data package required? (Level: 1 / (2) / 3 / 4)	
	✓		Is this a DoD project? (USACE, Navy, AFCEE)	

Notes: EDD MATH VIEW

TAT (circle one): Standard -or- (Rush)

Received Date: 1-20-10

Received Time: 1644

Cooler ID	Temperature	Measured w/ (Therm #)
1	-1.0 °C	35
	°C	
	°C	
	°C	

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply):

(Client) / Alert Courier / Lynden / SGS UPS / FedEx / USPS / DHL / Carlile AkAir Goldstreak / NAC / ERA / PenAir

Other: _____

Additional Sample Remarks: *(√ if applicable)*

_____ Extra Sample Volume?

_____ Limited Sample Volume?

_____ Multi-Incremental Samples?

_____ Lab-filtered for dissolved_____

_____ Ref Lab required for_____

_____ Foreign Soil?

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

Yes	No		Yes	N/A
		Is received temperature ≤6°C?		Was pH verified upon receipt?
		Were containers ice-free? *Notify PM **immediately** of any ice in samples.* If some cooler temperatures are non-compliant, see form FS-0029 (attached) for samples/analyses affected.		
		Was there an airbill? *(If "yes," see attached.)*		
		Was cooler sealed with custody seals & were they intact? # / where: _____		
		Was there a COC with cooler?		
		Was COC sealed in plastic bag & taped inside lid of cooler?		
		Was the COC filled out properly? Did labels correspond?		
		Did the COC indicate USACE / Navy / AFCEE project?		
		Samples were packed to prevent breakage with *(circle one)*: Bubble Wrap Vermiculite Other (specify): _____		
		Were all samples sealed in separate plastic bags?		
		Were all VOCs free of headspace and/or MeOH preserved?		
		Were correct container / sample sizes submitted?		
		Was the PM notified of arrival so they can send Sample Receipt Acknowledgement to client?		

Cooler ID_____ Cooler Temp °C_____ Cooler ID_____ Cooler Temp °C_____

Cooler ID_____ Cooler Temp °C_____ Cooler ID_____ Cooler Temp °C_____

This section must be completed if problems are noted.

Was client notified of problems? Yes / No

By (SGS PM): _____

Individual contacted: _____

Via: Phone / Fax / E-mail (*circle one*)

Date/Time: _____

Reason for contact: _____

Change Order Required? Yes / No

Notes: DUE DATE 1-27-10

Completed by (sign): _____ **(print):** JULIE NOCCHI

Login proof: **Self-check completed** ✓ **Peer-reviewer's In itials** ela

1100211

SGS

SAMPLE RECEIPT FORM - Bottle Tracking **SGS WO#**

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1L	500mL	250mL or 8oz	125mL or 4oz	60mL	40mL	Other:	Container Type: AG	CG	HDPE	Nalgene	Coli	Septa	Other:	Preservative: None	HCl	HNO3	H2SO4	NaOH	Ascorbic Acid	NH_4Cl	Other:	*Notes
1,2,6-10	A	2	PCB 8082					7	~~7~~ EE				✓							✓								
3	A		PCB 8082					1					✓							✓								
	B		EXTRA VOLUME					1					✓							✓								
4	A		PCB 8082						5	1	1	3A																
	B		EXTRA VOLUME									3B																
5	A		PCB 8082									3A																
	B		EXTRA VOLUME									3B																
Bottle Totals								9																				

* Note: Containers which require (additional) chemical preservation upon receipt must be documented per SOP#106

Completed by: _____ Date: 1-20-10

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	ML&P Consulting Group
Client:	Hoefler Consulting Group
SGS Work Order:	1100250

Released by:

Contents:

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Client Name: Hoefler Consulting Group
Project Name: ML&P Consulting Group
Workorder No.: 1100250

Sample Comments

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

Lab Sample ID	Sample Type	Client Sample ID

There were no analytical anomalies associated with the data reported herein.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 **t**(907)562.2343 **f**(907)561.5301
www.us.sgs.com
Member of SGS Group

Report of Manual Integrations

Print Date: 1/28/2010 10:37 am

Laboratory ID	Client Sample ID	Analytical Batch	Method	Analyte	Reason
947314	LCS for HBN 225119 [XXX/22242]	XGC6872	SW8082A	Aroclor-1260	BLC
947347	CCV for HBN 225126 (XGC/6872)	XGC6872	SW8082A	Aroclor-1016	SP

Manual Integration Reason Code Descriptions

Code	Description
O	Original Chromatogram
M	Modified Chromatogram
SS	Skimmed surrogate
BLG	Closed baseline gap
RP	Reassign peak name
PIR	Pattern integration required
IT	Included tail
SP	Split peak
RSP	Removed split peak
FPS	Forced peak start/stop
BLC	Baseline correction
PNF	Peak not found by software

All DRO/RRO analysis are integrated per SOP.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
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Laboratory Analytical Report

Client: **Hoefler Consulting Group**
3401 Minnesota Dr.
Suite 300
Anchorage, AK 99503

Attn: **Wendy Mitchell**
T: (907)563-2196 F:(907)563-2164
wmitchell@hoeflernet.com

Project: **ML&P Consulting Group**

Workorder No.: **1100250**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Jennifer Serna

Project Manager

Enclosed are the analytical results associated with the above work order. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & UST-005 (CS) for ADEC and AK100001 for NELAP (RCRA methods: 1020A, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035B, 6010B, 6020, 7470A, 7471B, 8021B, 8081B, 8082A, 8260B, 8270D, 8270D-SIM, 9040B, 9045C, 9056A, 9060A, AK101 and AK102/103). Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, the National Environmental Laboratory Accreditation Program and other regulatory authorities. The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV	Continuing Calibration Verification
CL	Control Limit
D	The analyte concentration is the result of a dilution.
DF	Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
F	Indicates value that is greater than or equal to the DL
GT	Greater Than
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 1/28/2010 10:37 am

Client Name: Hoefler Consulting Group
Project Name: ML&P Consulting Group
Workorder No.: 1100250

Analytical Methods

Method Description	Analytical Method
SW8082 PCB's	SW8082A

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1100250001	B7-012210
1100250002	B4-012210

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Client Sample ID: **B7-012210**
SGS Ref. #: 1100250001
Project ID: ML&P Consulting Group
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 01/22/10 14:00
Receipt Date/Time: 01/22/10 16:40

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1221	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1232	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1242	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1248	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1254	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Aroclor-1260	0.0674 U	0.109	0.0337	ug/L	1	XGC6872	XXX22242	
Decachlorobiphenyl <surr>	102	50-121		%	1	XGC6872	XXX22242	

Batch Information

Analytical Batch: XGC6872
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 18:09
Dilution Factor: 1

Prep Batch: XXX22242
Prep Method: SW3520C
Prep Date/Time: 01/27/10 11:20

Initial Prep Wt./Vol.: 920 mL
Prep Extract Vol.: 1 mL
Container ID:1100250001-B
Analyst: RTS

Client Sample ID: **B4-012210**
SGS Ref. #: 1100250002
Project ID: ML&P Consulting Group
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 01/22/10 11:02
Receipt Date/Time: 01/22/10 16:40

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1221	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1232	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1242	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1248	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1254	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Aroclor-1260	0.0696 U	0.112	0.0348	ug/L	1	XGC6872	XXX22242	
Decachlorobiphenyl <surr>	95	50-121		%	1	XGC6872	XXX22242	

Batch Information

Analytical Batch: XGC6872
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 18:21
Dilution Factor: 1

Prep Batch: XXX22242
Prep Method: SW3520C
Prep Date/Time: 01/27/10 11:20

Initial Prep Wt./Vol.: 890 mL
Prep Extract Vol.: 1 mL
Container ID:1100250002-B
Analyst: RTS

SGS Ref.#	947313	Method Blank	**Printed Date/Time**	01/28/2010 10:37
Client Name	Hoefler Consulting Group		**Prep Batch**	XXX22242
Project Name/#	ML&P Consulting Group		**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)		**Date**	01/27/2010

QC results affect the following production samples:

1100250001, 1100250002

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Polychlorinated Biphenyls					
Aroclor-1016	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1221	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1232	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1242	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1248	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1254	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1260	0.0620 U	0.100	0.0310	ug/L	01/27/10
Surrogates					
Decachlorobiphenyl <surr>	110	50-121		%	01/27/10

Batch XGC6872
Method SW8082A
Instrument HP 6890 Series II ECD SV L R

SGS Ref.#	947314	Lab Control Sample	**Printed Date/Time**	01/28/2010	10:37
	947315	Lab Control Sample Duplicate	**Prep Batch**	XXX22242	
Client Name	Hoefler Consulting Group		**Method**	SW3520C	
Project Name/#	ML&P Consulting Group		**Date**	01/27/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1100250001, 1100250002

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polychlorinated Biphenyls								
Aroclor-1016	LCS	0.880	88	(60-140)			1 ug/L	01/27/2010
	LCSD	1.02	102		15	(< 25)	1 ug/L	01/27/2010
Aroclor-1260	LCS	0.870	87	(63-123)			1 ug/L	01/27/2010
	LCSD	0.960	96		10	(< 25)	1 ug/L	01/27/2010
Surrogates								
Decachlorobiphenyl <surr>	LCS		101	(50-121)				01/27/2010
	LCSD		106		5			01/27/2010

Batch XGC6872
Method SW8082A
Instrument HP 6890 Series II ECD SV L R

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Locations N
- Alaska
- New Jersey
- North Carolina
- West Virginia

www.us

1100250

11 e

1

CLIENT: Hoefler Consulting Group

CONTACT: Wendy Mitchell PHONE NO: 907-563-2196

PROJECT: ML+P Plant 1 SITE/PWSID# :

REPORTS TO: EMAIL:

Wendy Mitchell wmitchell@hoeflernet.com

INVOICE TO: 3601 Minnesota Dr Suite 300 Anchorage AK 99503 QUOTE #:

P.O. #: 4904-017-154

SGS Reference #:

page 1 of 1

2

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples	Preservatives Used	Analysis Required (3) PCBs 8082	REMARKS/ LOC ID
1 A,B	B7-012210	1/22/10	14:00	W	2	G		✓	RUSH
2 A,B	B4-012210	1/22/10	11:02	W	2	G		✓	

5

Collected/Relinquished By:(1)	Date	Time	Received By:
Ivy Patton	1/22/10	16:40	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 1/23/10	Time 1640	Received For Laboratory By:

4

DOD Project? YES NO

Cooler ID

Cooler Temp °C

Special Deliverable Requirements: Level II data view

Requested Turnaround Time and-or Special Instructions:

5-7 days

Temperature Blank °C: 2.0 or Ambient ☐

Therm # 35C

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

1100250

SGS

SAMPLE RECEIPT FORM

SGS WO#:

Yes	No	NA	
✓			Are samples **RUSH**, priority or *w/in 72 hrs* of **hold time**?
✓			If yes, have you done *e-mail ALERT notification*?
	✓		Are samples *within 24 hrs.* of **hold time** or **due date**?
		✓	If yes, have you also *spoken with* supervisor?
		✓	Archiving bottles: Are lids marked w/ red "X" ?
		✓	Were samples collected with proper preservative?
	✓		**Any problems (ID, cond'n , HT, etc)? Explain:**
		✓	If this is for PWS, provide **PWSID:**
		✓	Payment received: $ by Check or Credit Card
	✓		Will courier charges apply?
✓			Data package required? (Level: 1 / (2) / 3 / 4) Notes: DATA with
	✓		Is this a DoD project? (USACE, Navy, AFCEE)

RUSH

TAT (circle one): Standard -or- (Rush)

Received Date: 1-22-10

Received Time: 1640

Cooler ID	Temperature	Measured w/ (Therm #)
1	2.0 °C	35d
	°C	
	°C	
	°C	

Note: Temperature readings include thermometer correction factors

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

Additional Sample Remarks: (√ *if applicable*)

____ Extra Sample Volume?
____ Limited Sample Volume?
____ Multi-Incremental Samples?
____ Lab-filtered for dissolved ____
____ Ref Lab required for ____
____ Foreign Soil?

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

Yes	No		Yes	N/A	
		Is received temperature ≤6°C?			Was pH verified upon receipt?
		Were containers ice-free? *Notify PM **immediately** of any ice in samples.* If some cooler temperatures are non-compliant, see form FS-0029 (attached) for samples/analyses affected.			
		Was there an airbill? *(If "yes," see attached.)*			
		Was cooler sealed with custody seals & were they intact? # / where:			
		Was there a COC with cooler?			
		Was COC sealed in plastic bag & taped inside lid of cooler?			
		Was the COC filled out properly? Did labels correspond?			
		Did the COC indicate USACE / Navy / AFCEE project?			
		Samples were packed to prevent breakage with *(circle one)*: Bubble Wrap Vermiculite Other (specify):			
		Were all samples sealed in separate plastic bags?			
		Were all VOCs free of headspace and/or MeOH preserved?			
		Were correct container / sample sizes submitted?			
		Was the PM notified of arrival so they can send Sample Receipt Acknowledgement to client?			

Cooler ID____ Cooler Temp °C____ Cooler ID____ Cooler Temp °C____
Cooler ID____ Cooler Temp °C____ Cooler ID____ Cooler Temp °C____

This section must be completed if problems are noted.

Was client notified of problems? Yes / No

By (SGS PM): ____

Individual contacted: ____
Via: Phone / Fax / E-mail (*circle one*)
Date/Time: ____
Reason for contact: ____

Change Order Required? Yes / No

Notes: DUE DATE 1-29-10

Completed by (sign): [signature] **(print):** JAMES DOUGHTY

Login proof: / **Self-check completed** [initials] **Peer-reviewer's In itials** Ale

Form # F004r23 revised 12/14/2009

1100250

SGS

SAMPLE RECEIPT FORM - Bottle Tracking SGS WO#

#	Container ID	Matrix	Test	QC	TB	Container Volume: 1L	500mL	250mL or 8oz	125mL or 4oz	60mL	40mL	Other:	Container Type: AG	CG	HDPE	Nalgene	Coli	Septa	Other:	Preservative: None	HCl	HNO3	H2SO4	NaOH	Ascorbic Acid	NH_4Cl	Other:	*Notes
1,2	A,B	1	PCB 8082			4							✓							✓								
Bottle Totals						4																						

* Note: Containers which require (additional) chemical preservation upon receipt must be documented per SOP#106

Completed by: _____ Date: 1-22-10

SGS North America Inc.
Alaska Division
Level II Laboratory Data Report

Project:	ML&P
Client:	Hoefler Consulting Group
SGS Work Order:	1100267

Released by:

Contents:

Note:
Unless otherwise noted, all quality assurance/quality control criteria is in compliance with the standards set forth by the proper regulatory authority, the SGS Quality Assurance Program Plan, and the National Environmental Accreditation Conference.

Client Name: Hoefler Consulting Group
Project Name: ML&P
Workorder No.: 1100267

Sample Comments

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

Lab Sample ID	Sample Type	Client Sample ID

There were no analytical anomalies associated with the data reported herein.

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
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Laboratory Analytical Report

Client: **Hoefler Consulting Group**
3401 Minnesota Dr.
Suite 300
Anchorage, AK 99503

Attn: **Wendy Mitchell**
T: (907)563-2196 F:(907)563-2164
wmitchell@hoeflernet.com

Project: **ML&P**

Workorder No.: **1100267**

Certification:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, other than the conditions noted on the sample data sheet(s) and/or the case narrative. This certification applies only to the tested parameters and the specific sample(s) received at the laboratory.

If you have any questions regarding this report, or if we can be of further assistance, please contact your SGS Project Manager.

Jennifer Serna

Project Manager

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
www.us.sgs.com Member of SGS Group

Enclosed are the analytical results associated with the above work order. If you have any questions regarding this report, or if we can be of any other assistance, please contact your SGS Project Manager at 907-562-2343. All work is provided under SGS general terms and conditions (<http://www.sgs.com/terms_and_conditions.htm>), unless other written agreements have been accepted by both parties.

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ICV	Initial Calibration Verification
J	The quantitation is an estimation.
JL	The analyte was positively identified, but the quantitation is a low estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LOD	Limit of Detection (i.e., 2xDL)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
M	A matrix effect was present.
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
Q	QC parameter out of acceptance range.
R	Rejected
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content.
All DRO/RRO analyses are integrated per SOP.

SAMPLE SUMMARY

Print Date: 1/27/2010 4:15 pm

Client Name: Hoefler Consulting Group
Project Name: ML&P
Workorder No.: 1100267

Analytical Methods

Method Description	Analytical Method
SW8082 PCB's	SW8082A

Sample ID Cross Reference

Lab Sample ID	Client Sample ID
1100267001	MW-13D-012510
1100267002	MW-93D-012510
1100267003	MW-140-012510

SGS North America Inc. | Environmental Division 200 West Potter Drive Anchorage AK 99518 t(907)562.2343 f(907)561.5301
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Client Sample ID: **MW-13D-012510**
SGS Ref. #: 1100267001
Project ID: ML&P
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 01/25/10 15:20
Receipt Date/Time: 01/26/10 11:38

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1221	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1232	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1242	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1248	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1254	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Aroclor-1260	0.0688 U	0.111	0.0344	ug/L	1	XGC6870	XXX22237	
Decachlorobiphenyl <surr>	102	50-121		%	1	XGC6870	XXX22237	

Batch Information

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 14:25
Dilution Factor: 1

Prep Batch: XXX22237
Prep Method: SW3520C
Prep Date/Time: 01/26/10 11:30

Initial Prep Wt./Vol.: 900 mL
Prep Extract Vol.: 1 mL
Container ID:1100267001-A
Analyst: RTS

Client Sample ID: **MW-93D-012510**
SGS Ref. #: 1100267002
Project ID: ML&P
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 01/25/10 15:20
Receipt Date/Time: 01/26/10 11:38

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1221	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1232	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1242	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1248	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1254	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Aroclor-1260	0.0666 U	0.108	0.0333	ug/L	1	XGC6870	XXX22237	
Decachlorobiphenyl <surr>	102	50-121		%	1	XGC6870	XXX22237	

Batch Information

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 14:37
Dilution Factor: 1

Prep Batch: XXX22237
Prep Method: SW3520C
Prep Date/Time: 01/26/10 11:30

Initial Prep Wt./Vol.: 930 mL
Prep Extract Vol.: 1 mL
Container ID:1100267002-A
Analyst: RTS

Client Sample ID: **MW-140-012510**
SGS Ref. #: 1100267003
Project ID: ML&P
Matrix: Water (Surface, Eff., Ground)

Collection Date/Time: 01/25/10 11:40
Receipt Date/Time: 01/26/10 11:38

Polychlorinated Biphenyls

Parameter	Result	LOQ/CL	DL	Units	DF	Analytical Batch	Prep Batch	Qualifiers
Aroclor-1016	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1221	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1232	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1242	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1248	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1254	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Aroclor-1260	0.0652 U	0.105	0.0326	ug/L	1	XGC6870	XXX22237	
Decachlorobiphenyl <surr>	103	50-121		%	1	XGC6870	XXX22237	

Batch Information

Analytical Batch: XGC6870
Analytical Method: SW8082A
Analysis Date/Time: 01/27/10 14:49
Dilution Factor: 1

Prep Batch: XXX22237
Prep Method: SW3520C
Prep Date/Time: 01/26/10 11:30

Initial Prep Wt./Vol.: 950 mL
Prep Extract Vol.: 1 mL
Container ID:1100267003-A
Analyst: RTS

SGS Ref.#	947153	Method Blank	**Printed Date/Time**		01/27/2010 16:15
Client Name	Hoefler Consulting Group		**Prep**	**Batch**	XXX22237
Project Name/#	ML&P			**Method**	SW3520C
Matrix	Water (Surface, Eff., Ground)			**Date**	01/26/2010

QC results affect the following production samples:

1100267001, 1100267002, 1100267003

Parameter	Results	LOQ/CL	DL	Units	Analysis Date
Polychlorinated Biphenyls					
Aroclor-1016	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1221	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1232	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1242	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1248	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1254	0.0620 U	0.100	0.0310	ug/L	01/27/10
Aroclor-1260	0.0620 U	0.100	0.0310	ug/L	01/27/10
Surrogates					
Decachlorobiphenyl <surr>	105	50-121		%	01/27/10

Batch XGC6870
Method SW8082A
Instrument HP 6890 Series II ECD SV H F

SGS Ref.#	947154	Lab Control Sample	**Printed Date/Time**	01/27/2010	16:15
	947155	Lab Control Sample Duplicate	**Prep Batch**	XXX22237	
Client Name	Hoefler Consulting Group		**Method**	SW3520C	
Project Name/#	ML&P		**Date**	01/26/2010	
Matrix	Water (Surface, Eff., Ground)				

QC results affect the following production samples:

1100267001, 1100267002, 1100267003

Parameter		QC Results	Pct Recov	LCS/LCSD Limits	RPD	RPD Limits	Spiked Amount	Analysis Date
Polychlorinated Biphenyls								
Aroclor-1016	LCS	0.880	88	(60-140)			1 ug/L	01/27/2010
	LCSD	0.850	85		3	(< 25)	1 ug/L	01/27/2010
Aroclor-1260	LCS	1.00	100	(63-123)			1 ug/L	01/27/2010
	LCSD	0.980	98		2	(< 25)	1 ug/L	01/27/2010
Surrogates								
Decachlorobiphenyl <surr>	LCS		106	(50-121)				01/27/2010
	LCSD		106		0			01/27/2010

Batch	XGC6870
Method	SW8082A
Instrument	HP 6890 Series II ECD SV H F

SGS

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CHAIN OF CUSTODY RECORD

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- Alaska
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(1)

CLIENT: Hoefler Consulting Group

CONTACT: Wendy Mitchell PHONE NO: 563 - 2196

PROJECT: ML+P SITE/PWSID# :

REPORTS TO: EMAIL:

Wendy Mitchell wmitchell@hoeflernet.com

INVOICE TO: QUOTE #:

3401 Minnesota Dr Suite 350
Anchorage AK 99503 P.O. #: 4904-017-154

SGS Reference #:

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(2)

LAB NO.	SAMPLE IDENTIFICATION	DATE	TIME	MATRIX/ MATRIX CODE	# CONTAINERS	SAMPLE TYPE C= COMP G= GRAB MI= Multi Incremental Samples
(1) A,B	MW-13D012510	1/25/10	15:20	W	2	
(2)	MW13D-012510	1/25/10	15:20	W	2	
(3)	MW14D-012510	1/25/10	11:40	W	2	

Preservatives Used

Analysis Required (3)

PCBs 8082

RUSH

REMARKS/ LOC ID

✓
✓
✓

(5)

Collected/Relinquished By:(1)	Date	Time	Received By:
Jay Patton	1/26/10	11:38	
Relinquished By: (2)	Date	Time	Received By:
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date 1/26/10	Time 1138	Received For Laboratory By:

(4)

DOD Project? YES NO

Cooler ID

Cooler Temp °C

Special Deliverable Requirements: level II data view

Requested Turnaround Time and-or Special Instructions:

5-7 days

Temperature Blank °C: 2.1 Therm # 35d

or Ambient ☐

Chain of Custody Seal: (Circle)

INTACT BROKEN (ABSENT)

❑ 200 W. Potter Drive **Anchorage, AK 99518** Tel: (907) 562-2343 Fax: (907) 561-5301
❑ 5500 Business Drive **Wilmington, NC 28405** Tel: (910) 350-1903 Fax: (910) 350-1557

White - Retained by Lab
Pink - Retained by Client

SGS

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SAMPLE RECEIPT FORM

SGS WO#: _____

RUSH

Yes	No	NA		
✓			Are samples **RUSH**, priority or *w/in 72 hrs* of **hold time**?	
✓			If yes, have you done *e-mail ALERT notification*?	
	✓		Are samples *within 24 hrs.* of **hold time** or **due date**?	
		✓	If yes, have you also *spoken with* supervisor?	
		✓	Archiving bottles: Are lids marked w/ red "X" ?	
		✓	Were samples collected with proper preservative?	
	✓		**Any problems (ID, cond'n , HT, etc)? Explain:**	
		✓	If this is for PWS, provide **PWSID:** _____	
		✓	Payment received: $_____ by Check or Credit Card	
	✓		Will courier charges apply?	
✓			Data package required? (Level: 1 / (2) / 3 / 4)	
			Notes: DATA VIEW	
	✓		Is this a DoD project? (USACE, Navy, AFCEE)	

TAT (circle one): Standard -or- (Rush)

Received Date: 1-26-10

Received Time: 1138

Cooler ID	Temperature	Measured w/ (Therm #)
1	2.1 °C	35d
	°C	
	°C	
	°C	

Note: Temperature readings include thermometer correction factors

Delivery method (circle all that apply):

(Client) / Alert Courier / Lynden / SGS UPS / FedEx / USPS / DHL / Carlile AkAir Goldstreak / NAC / ERA / PenAir

Other: _____

Additional Sample Remarks: *(√ if applicable)*

_____ Extra Sample Volume?

_____ Limited Sample Volume?

_____ Multi-Incremental Samples?

_____ Lab-filtered for dissolved_____

_____ Ref Lab required for_____

_____ Foreign Soil?

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

Yes	No		Yes	N/A
		Is received temperature ≤6°C?		Was pH verified upon receipt?
		Were containers ice-free? *Notify PM **immediately** of any ice in samples.* If some cooler temperatures are non-compliant, see form FS-0029 (attached) for samples/analyses affected.		
		Was there an airbill? *(If "yes," see attached.)*		
		Was cooler sealed with custody seals & were they intact? # / where: _____		
		Was there a COC with cooler?		
		Was COC sealed in plastic bag & taped inside lid of cooler?		
		Was the COC filled out properly? Did labels correspond?		
		Did the COC indicate USACE / Navy / AFCEE project?		
		Samples were packed to prevent breakage with *(circle one)*: Bubble Wrap Vermiculite Other (specify): _____		
		Were all samples sealed in separate plastic bags?		
		Were all VOCs free of headspace and/or MeOH preserved?		
		Were correct container / sample sizes submitted?		
		Was the PM notified of arrival so they can send Sample Receipt Acknowledgement to client?		

Cooler ID_____ Cooler Temp °C_____ Cooler ID_____ Cooler Temp °C_____

Cooler ID_____ Cooler Temp °C_____ Cooler ID_____ Cooler Temp °C_____

This section must be completed if problems are noted.

Was client notified of problems? Yes / No

By (SGS PM): _____

Individual contacted: _____

Via: Phone / Fax / E-mail (*circle one*)

Date/Time: _____

Reason for contact: _____

Change Order Required? Yes / No

Notes: DUE DATE 2-2-10

Completed by (sign): _____ **(print):** _____

Login proof: **Self-check completed** ✓ **Peer-reviewer's In itials** _____

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SGS

SAMPLE RECEIPT FORM - Bottle Tracking **SGS WO#**

						Container Volume							Container Type							Preservative									
#	Container ID	Matrix	Test	QC	TB	1L	500mL	250mL or 8oz	125mL or 4oz	60mL	40mL	Other:	AG	CG	HDPE	Nalgene	Coli	Septa	Other:	None	HCl	HNO3	H2SO4	NaOH	Ascorbic Acid	NH_4Cl	Other:	*Notes
1-3	A,B	1	PCB 8082			6							✓							✓								
Bottle Totals						6																						

* Note: Containers which require (additional) chemical preservation upon receipt must be documented per SOP#106

Completed by: _____ Date: 1-26-10