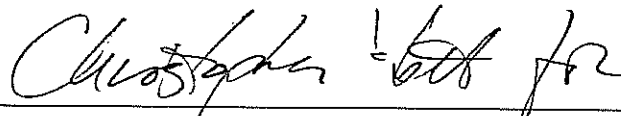


PHASE II ENVIRONMENTAL SITE ASSESSMENT AND FILL CHARACTERIZATION REPORT OF FINDINGS

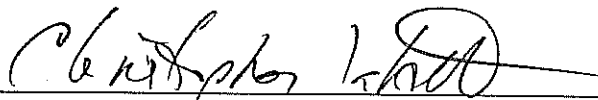
Franke Property
1301 Sunset Avenue
Arcata, California

Assessor's Parcel Number 505-121-19
and portions of 505-121-21

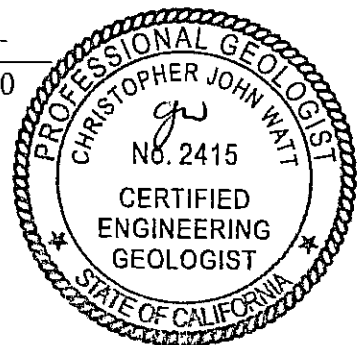
Prepared for:
Arcata Volunteer Fire Department
631 Ninth Street
Arcata, California 95521



Gwendolyn J. Erickson, Staff Geologist



Christopher J. Watt, CEG 2415, Exp. 03/31/10



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May 29, 2008
LACO Project No. 6833.00

PHASE II ENVIRONMENTAL SITE ASSESSMENT AND FILL CHARACTERIZATION REPORT OF FINDINGS

Franke Property, 1301 Sunset Avenue, Arcata, California
Assessor's Parcel Number 505-121-19 and portions of 505-121-21
LACO Project No. 6833.00

EXECUTIVE SUMMARY

LACO Associates (LACO) was retained by the Arcata Volunteer Fire Department (AVFD) to perform a Phase II subsurface investigation to evaluate environmental conditions attributable to hazardous material releases and characterize fill soil at 1301 Sunset Avenue in Arcata, California (Figure 1). The subject site comprises the currently undeveloped Assessor's Parcel Number (APN) 505-121-19 and the eastern portion of APN 505-121-21. A former lumber mill site once occupied the entirety of both parcels.

The most recent Phase I Environmental Site Assessment (ESA) for the subject site indicated past historical use included farmland, lumber mill, and lumber storage facility (LACO, 2008). The site occupies the edge of a filled drainage and fill thickness is greatest along the southern boundary of the site. Field work associated with this Phase II investigation and fill characterization was completed in the spring of 2008, in accordance with our service agreement dated February 25, 2008. Results from this investigation confirm the presence of total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as motor oil (TPHmo), and metals in soil identified during the previous investigation (SHN, 1995).

INTRODUCTION

Several Phase I ESAs (Winzler and Kelley, 1994; SHN, 1995; and LACO, 2008) have been completed for the property, located at 1301 Sunset Avenue, between Sunset Avenue and the Northwestern Pacific Railroad in Arcata, California (Figure 1). Results from the Phase I ESA completed for the subject site (LACO, 2008) indicate areas with potential hazardous materials releases at the site include the lumber storage area and isolated areas occasionally used to dispose used crankcase oil (Figure 2). Historical maps also indicate a tepee burner area located

approximately 100 feet west of the APN 505-121-19 property line, immediately north of the railroad (Figure 2). A previous Phase II investigation completed across both parcels provided evidence for the following: 1) low concentrations of TPHd (less than 10 micrograms per gram [$\mu\text{g/g}$]) and TPHmo (less than 70 $\mu\text{g/g}$) in soil above 5 feet below ground surface (bgs), in areas occasionally used to dispose used crankcase oil; 2) concentrations of lead, zinc, chromium, and nickel below State of California Title 22 total threshold limit concentration (TTLC) or soluble threshold limit concentration (STLC) thresholds; and 3) unspecified fill, greater than 5 feet thick, along the southern portion of the site (SHN, 1995).

The AVFD is interested in purchasing the subject site (or a portion thereof) to develop a new facility. Consequently, the AVFD requested additional subsurface investigation to evaluate environmental conditions attributable to hazardous material releases onsite and a characterization of fill material for building location feasibility. This report contains details of the Phase II investigation, sampling methodologies, summary of soil and groundwater laboratory results, fill characterization and methodologies, and discussion of findings, conclusions, and recommendations for future work at the site. A location map and site map are included as Figures 1 and 2, respectively. Field work was conducted in accordance with LACO's *Standard Operating Procedures No. 1*, included as Attachment 1. A key to abbreviations used throughout this report is included as Attachment 2.

FIELD METHODS

On March 13, 2008, LACO performed an investigation which included the collection of soil and groundwater samples and soil density measurements. During the March 2008 investigation LACO personnel observed Julien Construction install 13 backhoe pits (BH1 through BH3, BH5, BH6, BH8, BH9, and BH11 through BH16), and LACO installed three standard penetration test (SPT) borings (BH4, BH7, and BH10) at locations identified on Figure 2. Soil and groundwater samples were collected from locations based on historical Phase I and Phase II ESAs. Additional groundwater samples were collected on April 24, 2008.

Soil lithology was logged in general accordance with American Society for Testing and Materials Standards D2488 field methods for Unified Soil Classification System identification while noting the presence and depth of groundwater. Boring logs for all backhoe pits and SPT borings are included as Attachment 3. Backhoe pit and borehole locations from this investigation were surveyed using a handheld GeoXT global positioning system in the WGS84 horizontal datum. Current and historical boring locations are indicated on Figure 2.

Installation Methods

Backhoe Pits

Backhoe pits were installed with a 2.5-foot wide bucket down to native soil which ranged from 2 to 10 feet bgs. Depth to native soil increased from the northern to the southern portion of the site. Total depths of backhoe excavations ranged from approximately 3 to 11 feet bgs across the site.

SPT Borings

To assess in-situ soil conditions, boreholes BH4, BH7, and BH10 were installed using a rotary auger rig fitted with 6 5/8-inch hollow stem augers. Boreholes were installed to native material which varied from approximately 2.75 to 7 feet bgs in the vicinity of the boreholes. Total depths of boreholes ranged from 4 to 11.5 feet bgs. SPT were conducted at approximately 18-inch intervals to qualify fill material density and consistence.

Sampling Methods

Soil Sample Collection

Soil samples for the Phase II investigation were collected from the upper 3 feet of fill material observed in the backhoe pits. Soil samples were collected directly into glass jars, labeled, placed in an ice-filled cooler to ensure preservation of the analytes, and submitted under standard chain-of-custody protocols to a state-certified laboratory for analysis. Soil sample identification, sampling depths, and analytical suite are presented below in Table A. Field boring soil logs are presented in Attachment 3 and backhoe and borehole locations are presented on Figure 2.

Table A: Phase II Soil Sampling Details		
Boring ID	Soil Sample Depths (feet bgs)	Analytical Suite
BH1	1	TPHd, TPHmo per 8015B
BH2	0.75	
BH3	1	
BH4	2.5-3	TPHd, TPHmo per 8015B CAM5 per 6010B SVOC per 8270
BH9	1.5	TPHd, TPHmo per 8015B CAM5 per 6010B SVOC per 8270
BH10	1.5	TPHd, TPHmo per 8015B
BH11	1.5	
BH12	0.75	

Groundwater Sample Collection

During the March 2008 investigation, grab groundwater samples were collected from perched groundwater typically above approximately 3 feet bgs in backhoe pits BH5, BH9, and BH14. Groundwater samples were collected using disposable dippers and decanted directly into laboratory-supplied containers. Groundwater samples were labeled, placed in an ice-filled cooler to ensure preservation of the analytes, and submitted under standard chain-of-custody protocols to a state-certified laboratory for analysis. Table B indicates grab groundwater sample identification, sampling dates, depth, and analytical suite. Backhoe and borehole locations are presented on Figure 2.

Table B: Phase II Groundwater Sampling Details			
Sample ID	Date	Groundwater Sample Depths (feet bgs)	Analytical Suite
BH5	3/13/2008	perched water above 2	TPHg and Full 8260 list
BH9	3/13/2008	2	
BH14	3/13/2008	perched water above 2	

Soil Density and Fill Characterization

In addition to the installation of three SPT boreholes, LACO performed nuclear density testing per American Standard Testing Method (ASTM) D6938, and collected native soil pedons for bulk density analysis to characterize in-situ moisture content and density of fill and native materials observed across the site. Nuclear density test locations occurred on the surface adjacent to backhoe pits and at distinct changes in fill material typically within the upper 5 feet of each of the backhoe pits. Sidewalls of the backhoe pits were stepped if tests occurred deeper than 5 feet and trench corrections were applied to tests taken in pits less than 30 inches wide. Table C, below, summarizes nuclear density sampling locations and depths. Figure 2 illustrates all backhoe pit locations.

Table C: Nuclear Density Sampling Details			
Backhoe Pit	Soil Sample Depths (feet bgs)	Backhoe Pit	Testing Depths (feet bgs)
BH1	Surface	BH9	Surface
BH1	2	BH9	2
BH2	Surface	BH11	Surface
BH2	2	BH11	1.75
BH2	4.5	BH11	3.5
BH3	Surface	BH11	5
BH3	1.75	BH12	Surface
BH5	Surface	BH12	3
BH5	1.5	BH13	Surface
BH6	Surface	BH14	Surface
BH6	1.75	BH15	Surface
BH6	5	BH15	2
BH8	Surface	BH15	3.25
BH8	1.75	BH16	Surface
BH8	5.25	BH16	2.25

Native soil ped samples were collected below fill soils for bulk density analysis. A list of bulk density sampling locations and depths are presented below in Table D.

Table D: Bulk Density Sampling Details	
Boring ID	Soil Sample Depths (feet bgs)
BH2	9.5
BH3	6.5
BH5	11
BH9	7
BH15	4
BH16	4

RESULTS

Chemical Analyses

Soil

Analytical results reported for soil samples collected during the current investigation are presented below in Table E. Laboratory analytical results of soil samples collected from current and historical investigations across the site are included in Table 1. Copies of the analytical reports from the current investigation are included as Attachment 4. Sample results and discussions of analytical discrepancies are presented in the case narrative of the analytical report.

Table E: Soil Sample Analytical Results					
Sample Number	Sample Depth (feet bgs)	TPHd (µg/g)	TPHmo (µg/g)	CAM 5 Metals (µg/g)	SVOCs (µg/g)
BH1 - 1	1	ND<1.0	ND<10	---	---
BH2 - 0.75	0.75	ND<1.0	ND<10	---	---
BH3 - 1	1	ND<1.0	ND<10	---	---
BH4 - 2.5-3	2.5-3	11	53	Cd ND<2.0 Cr=59 (STLC=310 µg/L) Ni=68 Zn=63 Pb=11	All ND<0.43-2.1
BH9 - 1.5	1.5	15	96	Cd ND<2.0 Cr=37 Ni=31 Zn=45 Pb ND<10	All ND<0.53-2.6
BH10 - 1.5	1.5	19	39	---	---
BH11 - 1.5	1.5	ND<1.0	ND<10	---	---
BH12 - 0.75	0.75	ND<1.0	ND<10	---	---

TPHd / TPHmo

Analytical results from soil samples collected on site generally confirm historical TPHd and TPHmo, as reported in the previous Phase II investigation (SHN, 1995). Diesel and motor oil range results for soil samples collected proximal to the two previously identified areas of diesel/motor oil impact indicate concentrations of diesel less than 20 µg/g and concentrations of motor oil less than 100 µg/g. Figure 3 shows diesel and motor oil concentrations in soil from current and historical analytical results.

Metals

Although concentrations of CAM5 metals (cadmium, chromium, lead, nickel, and zinc) reported for recent soil samples collected from the site are consistent with metals concentrations from

previous investigations at the site (Table 1), the chromium concentration near borehole BH4 was slightly over the State of California Title 22 TTLC of 50 µg/g. Metals concentrations exceeding respective TTLC values require a STLC extraction be done to determine the hazardous classification of the soil. When the STLC extraction is used, solid matrices are reported in aqueous units. The STLC chromium value for the BH4 soil sample is presented with the soil analytical results in Table E, above. Analytical results from the chromium STLC extraction on the soil sample from BH4 indicate an STLC value below the State of California Title 22 STLC designation of hazardous waste material (5,000 micrograms per liter [µg/L]).

Groundwater

Laboratory analytical results for groundwater samples collected from backhoe pits BH5, BH9, and BH14 are presented below in Table F. Laboratory analytical results for groundwater samples collected from the site are summarized in Table 2, and copies of the current laboratory reports are included as Attachment 4.

Table F: Groundwater Sample Analytical Results				
Sample Number	DATE	Sample Depth (feet bgs)	TPHg (µg/L)	Full 8260 VOC list (µg/L)
BH5	3/13/2008	perched water above 2	ND<50	ND<0.50-10
BH9 - 2	3/13/2008	2	ND<50	ND<0.50-10
BH14 - 2	3/13/2008	perched water above 2	ND<50	ND<0.50-10

IN-SITU SOIL CONDITIONS

Fill soil across the site ranges from approximately 2 feet in the north to 10 feet along the south margin of the property. Fill soil is laterally and vertically heterogeneous and consists of a range of materials including anthropogenic debris in soft clayey silt to dense gravel with sand. Logs and redwood bark layers up to 12 inches thick were observed during the current investigation in

test locations BH1, BH2, BH5, BH8, BH11, BH13, and BH15. For foundation design purposes, Figure 5 presents a general location where fill soil is approximately 4 feet thick.

Based on shallow depths to water observed along the western portion of the site, depths to native soil, and local topography, the site appears to be the head of a filled-in drainage which drained southwesterly towards the lower soccer field to the south (Figure 2). Perched groundwater was observed at approximately 2 to 3 feet bgs across the western portion of the site during the March investigation. No evidence of surface erosion by overland flow, including rilling and gullyng, was observed during our site investigation in the vicinity of the proposed building site.

Soil Density Results

Current SPT borings, nuclear density testing, and bulk density samples provide evidence for materials with variable densities across the site. Results from nuclear density testing and bulk density samples collected from the site during this investigation are summarized in Table 3. Copies of the laboratory soil bulk density results are included as Attachment 5.

Nuclear density testing of in-situ fill material confirms heterogeneity of fill as dry densities range from approximately 73 to 130 pounds per cubic foot (pcf). Dry densities of native material on site, inferred from both nuclear density testing and bulk density samples, ranges from 89 to 108 pcf.

SPT blow counts can provide a qualitative value to soil density and consistence the interpretation of SPT data for geotechnical purposes is generally restricted to cohesionless soils. Below the gravel fill cap observed across much of the site, fill and native soils were generally cohesive. A summary of soil material types, depths, and SPT blow counts for boreholes BH4, BH7, and BH10 is presented in Table 4.

Based on blow counts and material type, Terzaghi and Peck (1948) indicate a qualitative description of soil consistence which is presented below in Table G.

Table G: Inferred Soil Consistence Based on Blow Counts per Terzaghi and Peck (1948)		
Soil Type	Number of Blow Counts	Qualitative Description of Soil Consistence
Cohesive (silt and clay)	0 to 3	Very Soft
	3 to 5	Soft
	5 to 8	Medium Stiff
	8 to 15	Stiff
	15 to 30	Very Stiff
	30 to 50	Hard
Cohesionless (sand and gravel)	0 to 5	Very loose
	5 to 10	Loose
	10 to 30	Medium dense
	30 to 50	Dense
	50 to 90	Very dense

Based on blow counts and soil consistence qualified by Terzaghi and Peck (1948), fill soil across the site ranges from very loose to medium dense in the areas of BH4 and BH7, respectively, to medium stiff to stiff in the area of BH10. In general, variable SPT blowcount results of in-situ fill material confirm heterogeneity of fill across the site.

DISCUSSION

The concentrations of constituents of concern reported in soil samples from the site do not likely pose a threat to water quality at this time. Soil within the proposed development should remain on site, and should be prevented from contributing to storm-water discharge if disturbed during construction.

Our investigation and evaluation of this site indicate that the area of investigation is underlain by a fill wedge which increases in thickness from 2 feet adjacent to Sunset Avenue to 10 feet towards the southern portion of the site. Organic material within fill is not suitable for supporting the expected foundation loads. Removal of organic and organic-rich material, and re-use of suitable soil compacted to 90 percent would result in a lowered risk to proposed structures and site improvements. We expect organic-free fill and native soils will be challenging to moisture-

condition appropriately for placement as engineered structural fill. Suitable load-bearing native material composed of dark yellowish brown silty sand and sandy silt is present above a depth of 4 feet north of the line indicated on Figure 4. One engineering geologic and geotechnical hazard to the proposed development on the subject parcel is differential settlement of foundations due to placement on variable or unsuitable (soft compressible) load-bearing material.

Although surface drainage is not anticipated to pose a significant hazard to the proposed structure, perched groundwater at the site may affect re-use and compaction of finer grained and cohesive fill material. As such, a French drain system may be required to de-water perched groundwater in the proposed development area.

RECOMMENDATIONS

- Management of shallow soil impacted with TPHd and TPHmo, anticipated to be disturbed during construction and grading activities, should be incorporated into the site development of the storm water pollution prevention plan.
- To maximize building space and minimize foundation costs, the proposed building area should stay within the limits of minimum fill thickness illustrated on Figure 4. As fill is heterogeneous, proposed buildings should be planned and designed for potential of differential settlement. Once a building design is established, a design-specific geotechnical investigation to verify assumptions and provide detailed design recommendations should be conducted.
- Organic-rich fill and native topsoil on the site should not be considered suitable for use as structural fill.

LIMITATIONS

LACO has exercised a standard of care equal to that generated for this industry to ensure that the information contained in this report is current and accurate. LACO disclaims any and all liability for any errors, omissions, or inaccuracies in the information and data presented in this report and/or any consequences arising there from, whether attributable to inadvertence or otherwise. LACO makes no representations or warranties of any kind including, but not limited to, any

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LIST OF FIGURES, TABLES, AND ATTACHMENTS

- Figure 1: Location Map
- Figure 2: Site Map
- Figure 3: Diesel and Motor Oil Concentrations in Soil above 3 Feet bgs
- Figure 4: Fill Line: 4 Feet Thick

- Table 1: Current and Historical Soil Analytical Results
- Table 2: Groundwater Analytical Results
- Table 3: Nuclear Density Results (for Site Soils)
- Table 4: SPT Blowcount Results

- Attachment 1: Standard Operating Procedures No. 1
- Attachment 2: Key to Abbreviations
- Attachment 3: Field Boring Logs
- Attachment 4: Laboratory Reports
- Attachment 5: Soil Bulk Density Laboratory Reports

REFERENCES

- LACO 2008, *Phase I Environmental Site Assessment Report*; Submitted to the California Regional Water Quality Control Board (CRWQCB) in August 2003; CRWQCB Case No. 1THU908.
- Marshack, J. B., 2007. Central Valley Regional Water Quality Control Board, A Compilation of Water Quality Goals August 2003 with tables updated August 2007. California Environmental Protection Agency.
- SHN, 1995. Phase II Environmental Site Assessment Franke Property, Arcata, CA Assessor's Parcel #'s 505-121-19 & 505-121-21. Prepared for the City of Arcata. May 1995
- SHN, 1995. Phase I Environmental Site Assessment Proposed HUD Senior Housing Lot Sunset Avenue Arcata, California. Prepared for the City of Arcata. July 1995.
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PROJECT	Report on findings	BY	TPP	DATE	1/13/01
CLIENT	Alameda Volunteer Fire Department	DATE	1/13/01	PROJECT NO.	1
LOCATION	12000 1st St., Alameda, CA	SCALE	1" = 50'	REVISION	
Location Map:					



PROJECT	Report Findings	BY	TJP	FIGURE	1
CLIENT	Alameda County Fire Department	DATE	05/20/09	PROJECT NO.	2
LOCATION	1551 Santa Rosa Avenue, Alameda, CA	CHECK		SCALE	1" = 50'
SHEET NO.		0003.D1			

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Legend

- Test Pit Location LACO 2008
- Test Pit Location LACO 2006
- Test Pit Location LACO 1999
- Test Pit Location SHM 1999

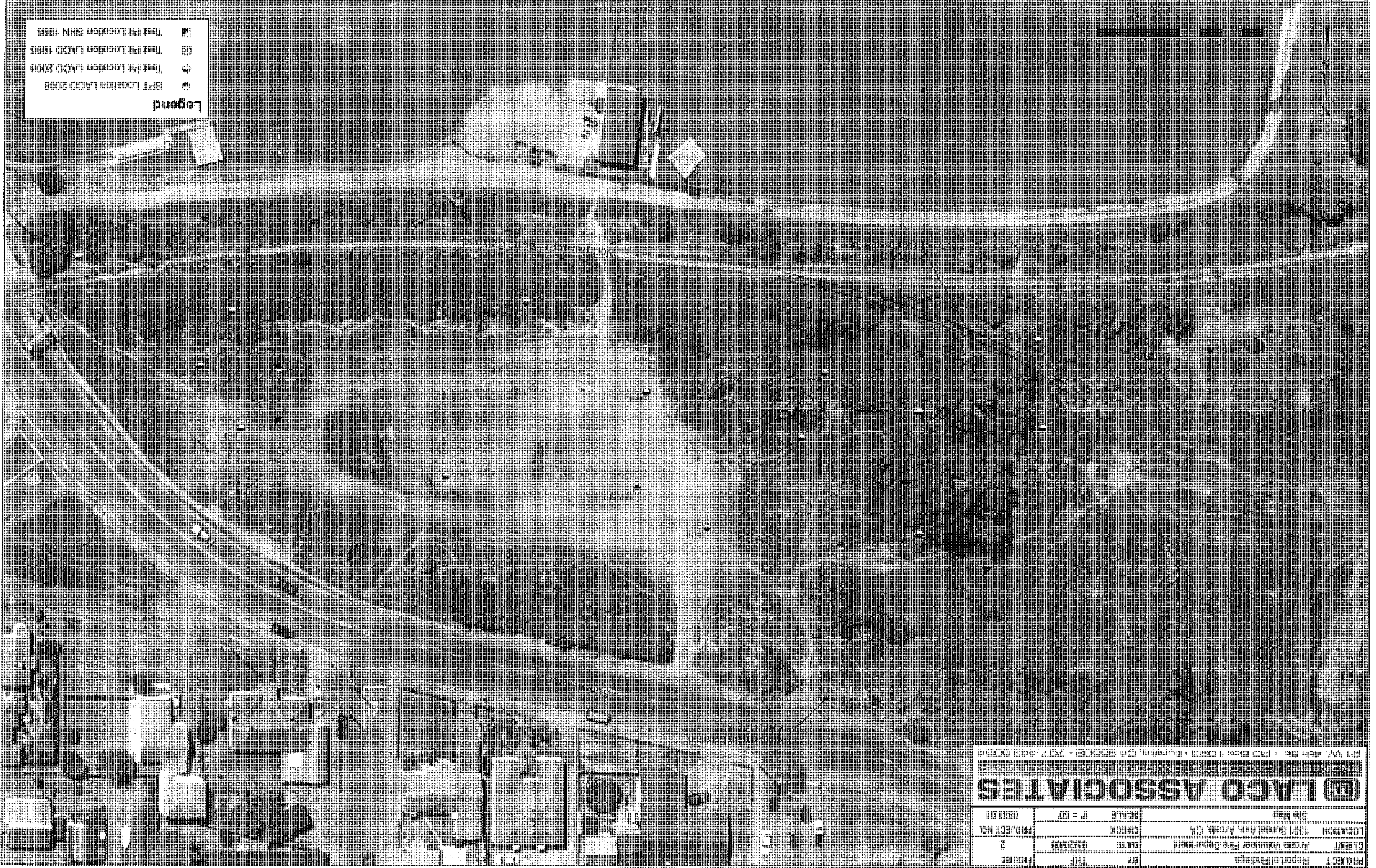


Table 1: Current and Historical Soil Analytical Results

Arcata Volunteer Fire Department; Franke Phase II

LACO Project No. 6833.00

Sample Number	Sample Depth (feet bgs)	DATE	TPHd (µg/g)	TPHmo (µg/g)	CAM 5 Metals (µg/g)	SVOCs (µg/g)
TP-15	3	4/10/1995	9.6	68	Cr=45 Ni=39 Zn=64 Pb=11	---
TP-15	5	4/10/1995	ND<1.0	ND<10	Cr=54 Ni=33 Zn=69 Pb=5.6	---
TP-16	3	5/19/1995	4.0	59	Cr=37 Ni=32 Zn=36 Pb=10	---
TP-16	5	5/19/1995	ND<1.0	ND<10	Cr=39 Ni=34 Zn=29 Pb=4.3	---
TP-17	COMP 3 & 5	5/19/1995	---	---	Cr=48 Ni=76 Zn=50 Pb=5.2	---
BH1 - 1	1	3/13/2008	ND<1.0	ND<10	---	---
BH2 - 0.75	0.75	3/13/2008	ND<1.0	ND<10	---	---
BH3 - 1	1	3/13/2008	ND<1.0	ND<10	---	---
BH4 - 2.5-3	2.5-3	3/13/2008	11	53	Cd ND<2.0 Cr=59 Ni=68 Zn=63 Pb=11	All ND<0.43-2.1
BH9 - 1.5	1.5	3/13/2008	15	96	Cd ND<2.0 Cr=37 Ni=31 Zn=45 Pb ND<10	All ND<0.53-2.6
BH10 - 1.5	1.5	3/13/2008	19	39	---	---
BH11 - 1.5	1.5	3/13/2008	ND<1.0	ND<10	---	---
BH12 - 0.75	0.75	3/13/2008	ND<1.0	ND<10	---	---

Table 2: Groundwater Analytical Results

Arcata Volunteer Fire Department; Franke Phase II

LACO Project No. 6833.00

Sample Number	DATE	Sample Depth (feet bgs)	TPHg (µg/L)	Full 8260 VOC list (µg/L)
BH5	3/13/2008	perched water above 2	ND<50	ND<0.50-10
BH9 - 2	3/13/2008	2	ND<50	ND<0.50-10
BH14 - 2	3/13/2008	perched water above 2	ND<50	ND<0.50-10

Table 3: Nuclear Density Testing Results

Arcata Volunteer Fire Department; Franke Phase II

LACO Project No. 6833.00

Boring ID	Depth (feet bgs)	Material	Bulk Density dry (pcf)	Dry Density (pcf)	Moisture Content (%)
BH1	Surface	FILL	---	120.1	8.7
BH1	2		---	76.5	26
BH2	Surface		---	122.1	12.5
BH2	2		---	91.1	25.2
BH2	4.5		---	72.6	38.4
BH3	Surface		---	119.7	13
BH3	1.75		---	90.8	24.9
BH5	Surface		---	121.2	17.1
BH5	1.5		---	106.8	20.3
BH6	Surface		---	130.2	14
BH6	1.75		---	97.2	22.9
BH6	5		---	86.2	32.8
BH8	Surface		---	99.3	23.4
BH8	1.75		---	119.7	8.5
BH8	5.25		---	80.3	29.5
BH9	Surface		---	82.3	31.4
BH9	2		---	92.2	23.3
BH11	Surface		---	102	24.7
BH11	1.75		---	118.3	13.4
BH11	3.5		---	116.9	15.2
BH11	5		---	105.4	23.8
BH12	Surface		---	82.7	34.6
BH13	Surface		---	81.4	42.2
BH14	Surface		---	97.2	29.6
BH15	Surface		---	123	14.5
BH15	2		---	94.8	23.3
BH16	Surface		---	129.5	11.7
BH2	9.5*	NATIVE	114.7	93	---
BH3	6.5*		119.8	97	---
BH5	11*		116.3	95	---
BH9	7*		109.9	89	---
BH12	3		---	107.5	16.7
BH15	3.25		---	93.9	26.1
BH15	4*		111.3	90	---
BH16	2.25		---	92.9	27.3
BH16	4*		112.1	91	---

* Dry density calculated from bulk density and moisture content assumed to be 23% based on average of nuclear density tested native soil and 1995 moisture/density results.

Dry density = bulk density / (1+moisture content)

Table 4: SPT Blowcount Results

Arcata Volunteer Fire Department; Franke Phase II

LACO Project No. 6833.00

Boring ID	Depth Interval (feet bgs)	Material Description	SPT Blow Counts
BH4	2 to 2.5	SILT WITH CLAY AND SAND with organics	1
	2.5 to 3		4
	3 to 3.5		3
	3.5 to 4	SILT WITH SAND AND GRAVEL	2
	4 to 4.5		1
	4.5 to 5		3
	5 to 5.5	SILT WITH SAND AND GRAVEL	2
	5.5 to 6		3
	6 to 6.5		2
	7 to 7.5	CLAYEY SILT: NATIVE	2
	7.5 to 8		1
	8 to 8.5		3
	8.5 to 9	SILT WITH CLAY AND SAND	3
	9 to 9.5		4
	9.5 to 10		6
BH7	10 to 10.5	SILT WITH CLAY AND SAND	2
	10.5 to 11		3
	11 to 11.5		5
	1 to 1.5	WELL GRADED GRAVEL WITH SILT with organics	22
	1.5 to 2		11
	2 to 2.5		13
	2.5 to 3	SILTY SAND	5
	3 to 3.5		7
	3.5 to 4		9
BH10	4 to 4.5	SILTY SAND: NATIVE	11
	4.5 to 5		20
	5 to 5.5		28
	1 to 1.5	SANDY SILT	7
	1.5 to 2		9
	2 to 2.5		11
	2.5 to 3	SANDY SILT: NATIVE AT 2.75 FEET	4
	3 to 3.5		5
	3.5 to 4		6

Attachment 1

Attachment 2

Key to Abbreviations

---	-- Sample not analyzed for parameter during current sampling event
Alk	-- Alkalinity
ARG	-- Active Remediation Goal
ART	-- Active Remedial Target
bgs	-- Below Ground Surface
BTEX	-- Benzene, Toluene, Ethylbenzene, m,p- and o- Xylenes
BOD	-- Biochemical Oxygen Demand
CAP	-- Corrective Action Plan
CO ₂	-- Carbon Dioxide
COC	-- Constituent of Concern
COD	-- Chemical Oxygen Demand
Cr	-- Chromium
CRWQCB	-- California Regional Water Quality Control Board
DCO ₂	-- Dissolved Carbon Dioxide
DHP	-- Down-hole-pump (submersible pump)
DIPE	-- Di-isopropyl Ether
Dis	-- Dissolved
DNAPL	-- Dense Non-Aqueous Phase Liquid
DO	-- Dissolved Oxygen
DOT	-- Department of Transportation
DTW	-- Depth-to-Water
ECw	-- Electrical Conductivity in water
EDB	-- 1,2-Dibromethane
ETBE	-- Ethyl Tertiary Butyl Ether
FB	-- Field Blank
FD	-- Field Duplicate
Fe	-- Iron
FP	-- Free Product
FS	-- Feasibility Study
ft	-- Feet
GMR	-- Groundwater Monitoring Report
HCDEH	-- Humboldt County Division of Environmental Health
HVDPE	-- High Vacuum Dual Phase Extraction
ISCO	-- In-Situ Chemical Oxidation
mg/L	-- Milligrams per liter
Mn	-- Manganese
MTBE	-- Methyl Tertiary Butyl Ether
mV	-- Millivolt
N	-- Nitrogen
NAPL	-- Non-Aqueous Phase Liquid
NCL	-- North Coast Laboratories
ND<50	-- Non-detect at reporting limit shown
NO ₃	-- Nitrate
NCRWQCB	-- Northern California Regional Water Quality Control Board
O&G	-- Oil & Grease
Or	-- Over Range of Meter
ORP	-- Oxidation Reduction Potential
P	-- Phosphorous
PAH	-- Polycyclic Aromatic Hydrocarbons
PARG	-- Preliminary Active Remediation Goal

Key to Abbreviations (continued)

PCP/TCP	-- Penta/ Tetra/ Tri Chlorophenol
PFP	-- Pay-for-Performance
pH	-- Potential of Hydrogen
PID	-- Photoionization Detector
ROF	-- Report of Findings
RP	-- Responsible Party
RPD	-- Relative Percent Difference
SC	-- Specific Conductance
SCM	-- Site Conceptual Model
SGC	-- Silica Gel Cleanup
SO ₄	-- Sulfate
SRS	-- Sensitive Receptor Survey
T	-- Temperature
T&P	-- Tape and Paste
TAME	-- Tertiary Amyl Methyl Ether
TB	-- Trip Blank
TBA	-- Tertiary Butyl Alcohol
TBF	-- Tertiary Butyl Formate
TIC	-- Total Inorganic Carbon
TICs	-- Tentatively Identified Compounds
TOC	-- Total Organic Carbon
Tot	-- Total
Total Xylenes	Sum of m,p-xylene and o-xylenes
TPHd	-- Total Petroleum Hydrocarbons as Diesel
TPHg	-- Total Petroleum Hydrocarbons as Gasoline
TPHk	-- Total Petroleum Hydrocarbons as Kerosene
TPHmo	-- Total Petroleum Hydrocarbons as Motor Oil
TPHs	-- Total Petroleum Hydrocarbons as Solvent
TSS	-- Total Suspended Solids
UST	-- Underground Storage Tank
Ur	-- Under Range of Meter
VOA	-- Volatile Organic Analysis
VOC	-- Volatile Organic Compounds
WQO	-- Water Quality Objective
µg/L	-- Micrograms per liter (parts per billion)
µg/g	-- Micrograms per gram (parts per million)
Note: Not all abbreviations in this key are used in the report.	

Attachment 3

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Project Name: Frankie
 Project No.: 6833
 Date: 7/17
 Driller: Lorne
 PM: CJW
 Logged by: GH
 Field Point Name: BH1
 Drilling Method: BA
 Auger/Rod Diameter:
 Location: see map

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture		%Organics/Shell Fragments	Odor	N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity	Consistency	S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense	D=Dry M=Moist W=Wet S=Saturated							
0	—	10	N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		A SS CC=Continuous Cores PT=Push tube	
1	5	70	N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	Max and Average rock size Rock lithology
6.5	—	30	N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	SD puff	N	SI		CC PT	large woody debris is 15' logs
20.4	8	—	N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	NATIVE
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		A SS	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		A SS	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		A SS	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		A SS	
			N	S	F	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI		CC PT	

Depth to Water:
 Casing Type/Diameter:
 Screen Interval:
 Purge Volume:
 Purge Method:
 Sampling Method:
 Analytes:
 Closure:

Project Name: Franklin
 Project No.: 1833
 Date: 3/13/08
 Driller: Lorne
 PM: CJW

Logged by: GTE
 Field Point Name: BH2
 Drilling Method: RH
 Auger/Rod Diameter:
 Location: See map.

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0'									GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		A SS	Max and Average rock size Rock lithology
1'	10	10	M	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		CC PT	Reverwood map 3"
4'	20	50	M	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		A SS	Set H ₂ O table @ 4'
5'	5	55	N	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		CC PT	Woodsy & base bank
7'	20	70	N	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	40	N		A SS	Organic smel
7.5'	20	20	N	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		CC PT	NATIVE
9.5'	1	65	N	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		A SS	
10'	10	10	N	St	F	C	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N		CC PT	

Depth to Water:
 Casing Type/Diameter:
 Screen Interval:
 Purge Volume:
 Purge Method:
 Sampling Method:
 Analytes:
 Closure:

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Location Map

Project Name: Franklin
Project No.: 0833
Date: 3/13
Driller: None
PM:
Logged by:
Field Point Name: BH3
Drilling Method:
Auger/Rod Diameter:
Location:

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0.	✓	10	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	Max and Average rock size Rock lithology
1	10	70	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	max 3
2	10	40	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	steel cables
5.5	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	wood large rock mar 4
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	NATIVE
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N SI		A SS	
	20	30	N	St	F	F	SA	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:



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Project Name: Frank
Project No.: 0833
Date: 3/12/08
Driller: LAD
PM:

Logged by: GJE
Field Point Name: B14
Drilling Method: HSKA
Auger/Rod Diameter: 7"

Location: 21 West Fourth Street

Location Map

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	-	20	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	max 3"
1	15	70	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	CC PT	
2	Same	50	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	2-3.5"
4	10	50	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	CC PT	3.5-5" material inconsistent
7	-	20	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	5-6.5" NATIVE
7.5	20	70	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	7-8.5"
9	10	70	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	8.5-10"
10	Same	50	N	S	F	M	F	A	SA	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	(M)	A SS	10-11.5"

Depth to Water: 11.5'
Casing Type/Diameter: 8" @ 11.5'
Screen Interval: 11.5'

Purge Volume: 11.5'
Purge Method: 11.5'

Sampling Method: 11.5'
Analytes: 11.5'
Closure: 11.5'

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Project Name: Frankie
Project No.: 4833
Date: 5/13/8
Driller: Lorne
PM: CJW
Logged by: GJE
Field Point Name: BH5
Drilling Method: BH
Auger/Rod Diameter:
Location: see map.

Depth (ft)	Color (Munsell)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
		%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	gray brown		10	N	S	70	70	A SR	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	Max and Average rock size Rock lithology River run
1	dark gray brown streaks of brown	various 10	60	N	S	20	10	A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	sat. pore 2'
6	black			N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	mixed native.
7	yellowish gray		30	N	S	65		A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	NATIVE
11	black			N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
				N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	
				N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
				N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	
				N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
				N	S			A SA	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:

Project Name: Frankie
 Project No.: 0833
 Date: 3/13/80
 Driller: Donne
 PM: CW
 Logged by: GJE
 Field Point Name: BH
 Drilling Method: RH
 Auger/Rod Diameter:
 Location: See map

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	gray	10	N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		A SS	Max and Average rock size Rock lithology
1	gray		M	St	F	F	A	D	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W	St		CC PT	Agg River-rem Warp 3"
1.5	dg.	5	M	St	F	F	A	D	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W	St		CC PT	same gravel.
5.5	becomes fine		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		A SS	max 0.35" becomes d.b. @ 3.5'
6.5	fine fine		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	max 0.75"
7.5	dg.	10	M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	NATIVE
8.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
9.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
10.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
11.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
12.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
13.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
14.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
15.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
16.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
17.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
18.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
19.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
20.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
21.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
22.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
23.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
24.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
25.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
26.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
27.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
28.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
29.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
30.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
31.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
32.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
33.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
34.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
35.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
36.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
37.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
38.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
39.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
40.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
41.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
42.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
43.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
44.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
45.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
46.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
47.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
48.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
49.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
50.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
51.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
52.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
53.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
54.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
55.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
56.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
57.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
58.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
59.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
60.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
61.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
62.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
63.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
64.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
65.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
66.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
67.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
68.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
69.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
70.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
71.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
72.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
73.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
74.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
75.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
76.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
77.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
78.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
79.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
80.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
81.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
82.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
83.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
84.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
85.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
86.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
87.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
88.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
89.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
90.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
91.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
92.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
93.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
94.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
95.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
96.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
97.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
98.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
99.5	dg.		M	St	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	
100.5	dg.		N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	N		CC PT	

Depth to Water:
 Casing Type/Diameter:
 Screen Interval:
 Purge Volume:
 Purge Method:
 Sampling Method:
 Analytes:
 Closure:

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WJ LALU ASSOCIATES
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Project Name: Frankie
Project No.: 4833
Date: 2/17
Driller: DR
PM: CDW

Logged by: GUE
Field Point Name: GAT BH 7
Drilling Method: 5 HSB
Auger/Rod Diameter: 1.75"
Location:

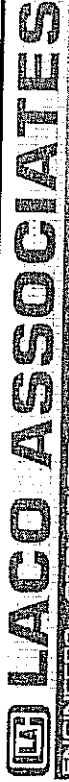
Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	0	10	N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		SS	
2.5	15	20	N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D	50	N		CC PT	22 11 13 22 2 11 13 11 1 13 2.5 woody deb.
3	5	40	N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	5 7 9 2.5-4 NATURAL
4	5	25	N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	11 20 20 2.5-55 4
		55	N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	
			N	S	F	F	A	L	GW GP GM GC SW SP SM SC ML CL OL	D		N		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:

Project Name: *Funkle*
Project No.: *6833*
Date: *3/13*
Driller: *Lorne*
PM: *CJW*
Logged by: *GJE*
Field Point Name: *BHB*
Drilling Method: *Batch*
Auger/Rod Diameter: *4"*
Location: *See map*

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	Color (Munsell)	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense						
0	dark brown	10	60	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N SI		A SS	Max and Average rock size Rock lithology roots
2	bluish gray	1	10	M	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	3" max. top gravel
3.6	dark brown			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N SI		A SS	Barek
4.5	gray		60	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	lots of Bark fibers partly 10" Bark
6	Barek			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N SI		A SS	NATIVE 7
7	bluish gray	15	10	M	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
	Dark 10			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N SI		A SS	
				M	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N SI		A SS	
				M	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:



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FAX: (707) 443-0553

Location Map

Project Name: Frankie

Project No.: 08337

Date: 3/13

Driller: bone

PM: CW

Logged by: gjt

Field Point Name: BH9

Drilling Method: BH

Auger/Rod Diameter:

Location: See map

Depth (ft)	Color (Munsell)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight SI=Strong	PID (ppm)	Sample	Other Remarks		
		%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density D=Dense MD=Medium dense VD=Very dense									
0	d.b	-	30	N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A=Auger SS=Split spoon CC=Continuous Cores PT=Push tube	Max and Average rock size Rock lithology water supply mixed gravel 60% intermediate in some place maps
2	d.b.	10	70	M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
5.5	d.b.	10	70	N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	NATIVE
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
				N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
				N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
				N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
				N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	
				N	S	F	F	A	L	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	D		N	SI		A SS	
				M	SI	C	C	SR	R	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH Pt	W		SI			CC PT	

Sampling Method:

Analytes:

Closure:

Purge Volume:

Purge Method:

Project Name: *Franklin*

Project No.: *18273*

Date: *5/1/00*

Driller: *LAD*

PM: *CAN*

Logged by: *GSE*

Field Point Name: *10/B410*

Drilling Method: *HA-A*

Auger/Rod Diameter: *2.75"*

Location: *See map*

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2486 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	Color (Munsell)	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense						
0	<i>dark brown</i>			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	Max and Average rock size Rock lithology <i>fragments river m.</i>
1	<i>dark brown</i>	<i>10</i>	<i>10</i>	M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
2.75	<i>dark brown</i>	<i>10</i>	<i>10</i>	M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	<i>73 1-2.5</i>
	<i>dark brown</i>	<i>10</i>	<i>10</i>	M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	<i>73 2.5-4 @ NATIVE</i>
	<i>dark brown</i>	<i>10</i>	<i>10</i>	M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	
				M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	
				M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	
				M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	
				M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	
				N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	
				M	St	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		St		CC PT	

Depth to Water:
 Casing Type/Diameter:
 Screen Interval:
 Purge Volume:
 Purge Method:
 Sampling Method:
 Analytes:
 Closure:

Project Name: Frankie
 Project No.: 4833
 Date: 3/13
 Driller: Lorne
 PM:
 Logged by: GJC
 Field Point Name: BH1
 Drilling Method: BH
 Auger/Rod Diameter:
 Location:

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None S=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	Color (Munsell)	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense						
0	dark grey	—	20	N	S	10	F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	Max and Average rock size Rock lithology rock max 3" avg. 3"
2	dark grey	5	40	M	St	25	F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	wood delon's
4	dark grey	15	10	N	S	50	F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		A SS	removed nitric @ 4.5"
7.5	becomes mottled heavy	5	10	N	S	70	F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	sub @ 6.5"
10'				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	
				N	S		F	F A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL		N		CC PT	

Depth to Water:
 Casing Type/Diameter:
 Screen Interval:
 Purge Volume:
 Purge Method:
 Sampling Method:
 Analytes:
 Closure:

Project Name: Frank

Project No.:

Date: 2/13

Driller:

PM:

Logged by: 

Field Point Name:

Drilling Method: 1-11

Auger/Rod Diameter:

Location: 00. W. 02

Depth (ft)	Color (Munsell)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PLD (pmm)	Sample	Other Remarks
		%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	bl br	0	0	N	St	10	F	10	C	10	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	(M)	A SS	Max and Average rock size Rock lithology max 0.5 avg 0.25
1	gray	0	0	N	St	50	F	50	C	20	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
2	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
3	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
4	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
5	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
6	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
7	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
8	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
9	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
10	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
11	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
12	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
13	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
14	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
15	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
16	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
17	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
18	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
19	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5 avg 0.25 FILL reworked to 1.5
20	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	CC PT	max 0.5 avg 0.25 FILL reworked to 1.5
21	gray	0	0	N	St	50	F	50	C	30	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PI	D	M	A SS	max 0.5

Depth to Water:

Casing Type/Diameter:

Screen Interval:

Purge Volume:

Purge Method:

Sampling Method:

Analytes:

Close:

Project Name: Franklin
Project No.: 0833
Date: 3/13
Driller: PH: Lane
PM: CW
Logged by: AE
Field Point Name: 6413
Drilling Method: PH
Auger/Rod Diameter:
Location: SR Map

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	15	30	N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	Max and Average rock size Rock lithology
2	10	70	M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	Fill the water channel @ 2
Bottom 2.5			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		CC PT	Native @ 2
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	
			N	S	F	F	A	MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	F	M	SA	VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W S		St		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:

Collected H₂O @ bottom

Project Name: Frankie
Project No.: 18333
Date: 3/13/08
Driller: WMM
PM: WMM

Logged by: GJE
Field Point Name: BH14
Drilling Method: 34
Auger/Rod Diameter:

Location: See map

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	15	30	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		(N)		A SS	Max and Average rock size Rock lithology
2	10	70	M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	detrital origin - w/ve jagon - wood
3			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	NATIVE
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N SI		A SS	
			M	St	M	C	SR	D VD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	W		St		CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:

WJ LACU ASSOCIATES

ENGINEERS, GEOLOGISTS, ENVIRONMENTAL CONSULTANTS
21 W. 4th St., PO Box 1023 • Eureka, CA 95502 • 707.443.5054

LOCATION MAP

Eureka, CA 95501
TEL: (707) 443-5054
FAX: (707) 443-0553

Project Name: Franklin
Project No.: 08333
Date: 5/13/2008
Driller: Lorne
PM: CAW
Logged by: GJE
Field Point Name: BH15
Drilling Method: RTH
Auger/Rod Diameter:
Location: See map.

Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PID (ppm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	1	10	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	A SS	Max and Average rock size Rock lithology
1	10	50	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	CC PT	map 3
3.5	20	60	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M	large 30	N	SI	CC PT	H2O @ 2' - stop @ 2.25
4	10	70	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	A SS	large woody debris + bark
	20	5	N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	CC PT	NATIVE.
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	A SS	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	CC PT	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	A SS	
			N	S	F	F	A	L MD	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D M		N	SI	CC PT	

Depth to Water:
Casing Type/Diameter:
Screen Interval:
Purge Volume:
Purge Method:
Sampling Method:
Analytes:
Closure:

Project Name: Frankie
 Project No.: VB33
 Date: 3/13/08
 Driller: Lorne
 PM: CW
 Logged by: GJE
 Field Point Name: BH-14
 Drilling Method: BH-
 Auger/Rod Diameter: —
 Location: —

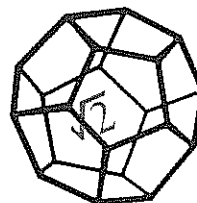
Depth (ft)	Silt & Clay				Sand & Gravel				ASTM D-2488 Group Symbol	Moisture D=Dry M=Moist W=Wet S=Saturated	%Organics/Shell Fragments	Odor N=None SI=Slight St=Strong	PLD (pmm)	Sample	Other Remarks
	%Clay	%Silt	Plasticity N=None L=Low M=Medium H=High	Consistency S=Soft F=Firm ST=Stiff H=Hard	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") C=Coarse (>0.75")	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	Density L=Loose MD=Medium dense D=Dense VD=Very dense							
0	1	10	N	S	30	F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D	1	N	IS	A SS	Max and Average rock size Rock lithology
1	10	50	N	S	30	F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
2	20	50	M	S	30	F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	Native
	20	4	N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	A SS	
			M	S		C	SR	R	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL	D		N	SI	CC PT	
			N	S		F	A	L	GW GP GM GC SW SP SM SC ML CL OL MH CH OH PL						

Sampling Method:
Analytes:
Closure:

Purge Volume:
Purge Method:

Depth to Water:	
Casing Type/Diameter:	
Screen Interval:	

Attachment 4



**NORTH COAST
LABORATORIES LTD.**

April 01, 2008

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Attn: Chris Watt

RE: 6833 Franke Phase II

Order No.: 0803390

Invoice No.: 73600

PO No.:

ELAP No. 1247-Expires July 2008

SAMPLE IDENTIFICATION

Fraction Client Sample Description


01A	BH1-1'
02A	BH2-0.75'
03A	BH3-1'
04A	BH4-2.5-3'
05A	BH5
06A	BH9-2'
07A	BH9-1.5
08A	BH10-1.5
09A	BH11-1.5'
10A	BH12-0.75
11A	BH14-2

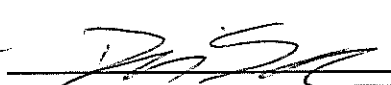
ND = Not Detected at the Reporting Limit

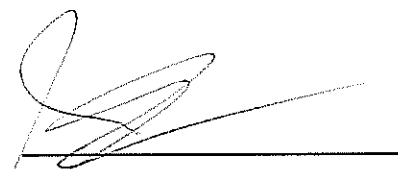
Limit = Reporting Limit

All solid results are expressed on a wet-weight basis unless otherwise noted.

REPORT CERTIFIED BY


Laboratory Supervisor(s)


QA Unit


Jesse G. Chaney, Jr.
Laboratory Director

CLIENT: LACO Associates
Project: 6833 Franke Phase II
Lab Order: 0803390

CASE NARRATIVE

TPH as Diesel and/or Motor Oil passed through a Silica Gel Column:

All samples for this analysis were initially analyzed for diesel and/or motor oil. Samples that did not show material in the diesel and/or motor oil range were not passed through the silica gel column.

Due to a contaminate present in the method blank the diesel reporting limit was raised.

Samples BH4-2.5-3', BH9-1.5 and BH10-1.5 contain material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

Samples BH4-2.5-3', BH9-1.5 and BH10-1.5 do not have the typical pattern of fresh motor oil. However, the results reported represent the amount of material in the motor oil range.

The holding time for sample BH11-1.5' was exceeded by four days due to re-extraction.

TPH as Diesel/Motor Oil:

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limits for diesel and motor oil. These recoveries indicate that the sample results may be erroneously high. There were no detectable levels of the analytes in the samples; therefore, the data were accepted.

EPA 8260B:

The LCS recovery was slightly below the lower acceptance limit for methylene chloride. The response of the reporting limit standard was such that the analyte would have been detected even with the low recovery; therefore, the data were accepted.

The relative percent difference (RPD) for the laboratory control samples was above the acceptance limit for trichlorofluoromethane and 2,2-dichloropropane. This indicates that the results could be variable. Since there were no detectable levels of analyte in the sample, the data were accepted.

Date: 01-Apr-2008
WorkOrder: 0803390

ANALYTICAL REPORT

Client Sample ID: BH1-1'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-01A

Matrix: Soil

Test Name: TPH as Diesel/Motor Oil

Reference: EPA 3550/EPA 8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/20/08	3/21/08
TPHC Motor Oil	ND	10	µg/g	1.0	3/20/08	3/21/08

Client Sample ID: BH2-0.75'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-02A

Matrix: Soil

Test Name: TPH as Diesel/Motor Oil

Reference: EPA 3550/EPA 8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/20/08	3/22/08
TPHC Motor Oil	ND	10	µg/g	1.0	3/20/08	3/22/08

Client Sample ID: BH3-1'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-03A

Matrix: Soil

Test Name: TPH as Diesel/Motor Oil

Reference: EPA 3550/EPA 8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/20/08	3/22/08
TPHC Motor Oil	ND	10	µg/g	1.0	3/20/08	3/22/08

Client Sample ID: BH4-2.5-3'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-04A

Matrix: Soil

Test Name: TPH passed through Silica Gel Column

Reference: EPA 3550/3630/GCFID/8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	11	2.0	µg/g	1.0	3/20/08	3/28/08
TPHC Motor Oil	53	10	µg/g	1.0	3/20/08	3/28/08

Date: 01-Apr-2008

WorkOrder: 0803390

ANALYTICAL REPORT

Client Sample ID: BH5

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-05A

Matrix: Groundwater

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		3/24/08
Chloromethane	ND	2.0	µg/L	1.0		3/24/08
Vinyl chloride	ND	1.0	µg/L	1.0		3/24/08
Bromomethane	ND	1.0	µg/L	1.0		3/24/08
Chloroethane	ND	1.0	µg/L	1.0		3/24/08
Trichlorofluoromethane	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
Methylene chloride	ND	2.0	µg/L	1.0		3/24/08
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/24/08
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/24/08
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloroethane	ND	1.0	µg/L	1.0		3/24/08
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/24/08
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
2,2-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
Bromochloromethane	ND	1.0	µg/L	1.0		3/24/08
Chloroform	ND	1.0	µg/L	1.0		3/24/08
Carbon Tetrachloride	ND	1.0	µg/L	1.0		3/24/08
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
Benzene	ND	0.50	µg/L	1.0		3/24/08
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/24/08
1,2-Dichloroethane	ND	1.0	µg/L	1.0		3/24/08
Trichloroethene	ND	1.0	µg/L	1.0		3/24/08
Dibromomethane	ND	1.0	µg/L	1.0		3/24/08
1,2-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
Bromodichloromethane	ND	1.0	µg/L	1.0		3/24/08
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
Toluene	ND	0.50	µg/L	1.0		3/24/08
Tetrachloroethene	ND	1.0	µg/L	1.0		3/24/08
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		3/24/08
Dibromochloromethane	ND	1.0	µg/L	1.0		3/24/08
1,3-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1.0		3/24/08
Chlorobenzene	ND	1.0	µg/L	1.0		3/24/08
Ethylbenzene	ND	0.50	µg/L	1.0		3/24/08
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1.0		3/24/08
m,p-Xylene	ND	0.50	µg/L	1.0		3/24/08
o-Xylene	ND	0.50	µg/L	1.0		3/24/08
Bromoform	ND	1.0	µg/L	1.0		3/24/08
Styrene	ND	1.0	µg/L	1.0		3/24/08

Date: 01-Apr-2008

WorkOrder: 0803390

ANALYTICAL REPORT

Isopropylbenzene	ND	1.0	µg/L	1.0	3/24/08
Bromobenzene	ND	1.0	µg/L	1.0	3/24/08
n-Propylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0	3/24/08
2-Chlorotoluene	ND	1.0	µg/L	1.0	3/24/08
4-Chlorotoluene	ND	1.0	µg/L	1.0	3/24/08
1,2,3-Trichloropropane	ND	2.0	µg/L	1.0	3/24/08
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1.0	3/24/08
tert-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1.0	3/24/08
sec-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
4-Isopropyltoluene	ND	1.0	µg/L	1.0	3/24/08
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
n-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1.0	3/24/08
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1.0	3/24/08
Hexachlorobutadiene	ND	2.0	µg/L	1.0	3/24/08
Naphthalene	ND	2.0	µg/L	1.0	3/24/08
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1.0	3/24/08
Surrogate: 1,2-Dichloroethane-d4	104	80-120	% Rec	1.0	3/24/08
Surrogate: 1,4-Dichlorobenzene-d4	95.0	42.1-150	% Rec	1.0	3/24/08
Surrogate: Dibromofluoromethane	104	80.4-114	% Rec	1.0	3/24/08
Surrogate: Toluene-d8	96.9	80-120	% Rec	1.0	3/24/08

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Gasoline	ND	50	µg/L	1.0		3/24/08

Date: 01-Apr-2008
WorkOrder: 0803390

ANALYTICAL REPORT

Client Sample ID: BH9-2'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-06A

Matrix: Groundwater

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		3/24/08
Chloromethane	ND	2.0	µg/L	1.0		3/24/08
Vinyl chloride	ND	1.0	µg/L	1.0		3/24/08
Bromomethane	ND	1.0	µg/L	1.0		3/24/08
Chloroethane	ND	1.0	µg/L	1.0		3/24/08
Trichlorofluoromethane	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
Methylene chloride	ND	2.0	µg/L	1.0		3/24/08
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/24/08
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/24/08
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloroethane	ND	1.0	µg/L	1.0		3/24/08
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/24/08
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/24/08
2,2-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
Bromochloromethane	ND	1.0	µg/L	1.0		3/24/08
Chloroform	ND	1.0	µg/L	1.0		3/24/08
Carbon Tetrachloride	ND	1.0	µg/L	1.0		3/24/08
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		3/24/08
1,1-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
Benzene	ND	0.50	µg/L	1.0		3/24/08
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/24/08
1,2-Dichloroethane	ND	1.0	µg/L	1.0		3/24/08
Trichloroethene	ND	1.0	µg/L	1.0		3/24/08
Dibromomethane	ND	1.0	µg/L	1.0		3/24/08
1,2-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
Bromodichloromethane	ND	1.0	µg/L	1.0		3/24/08
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
Toluene	ND	0.50	µg/L	1.0		3/24/08
Tetrachloroethene	ND	1.0	µg/L	1.0		3/24/08
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/24/08
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		3/24/08
Dibromochloromethane	ND	1.0	µg/L	1.0		3/24/08
1,3-Dichloropropane	ND	1.0	µg/L	1.0		3/24/08
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1.0		3/24/08
Chlorobenzene	ND	1.0	µg/L	1.0		3/24/08
Ethylbenzene	ND	0.50	µg/L	1.0		3/24/08
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1.0		3/24/08
m,p-Xylene	ND	0.50	µg/L	1.0		3/24/08
o-Xylene	ND	0.50	µg/L	1.0		3/24/08
Bromoform	ND	1.0	µg/L	1.0		3/24/08
Styrene	ND	1.0	µg/L	1.0		3/24/08

Date: 01-Apr-2008

WorkOrder: 0803390

ANALYTICAL REPORT

Isopropylbenzene	ND	1.0	µg/L	1.0	3/24/08
Bromobenzene	ND	1.0	µg/L	1.0	3/24/08
n-Propylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0	3/24/08
2-Chlorotoluene	ND	1.0	µg/L	1.0	3/24/08
4-Chlorotoluene	ND	1.0	µg/L	1.0	3/24/08
1,2,3-Trichloropropane	ND	2.0	µg/L	1.0	3/24/08
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1.0	3/24/08
tert-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1.0	3/24/08
sec-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
4-Isopropyltoluene	ND	1.0	µg/L	1.0	3/24/08
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
n-Butylbenzene	ND	1.0	µg/L	1.0	3/24/08
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0	3/24/08
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1.0	3/24/08
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1.0	3/24/08
Hexachlorobutadiene	ND	2.0	µg/L	1.0	3/24/08
Naphthalene	ND	2.0	µg/L	1.0	3/24/08
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1.0	3/24/08
Surrogate: 1,2-Dichloroethane-d4	106	80-120	% Rec	1.0	3/24/08
Surrogate: 1,4-Dichlorobenzene-d4	99.4	42.1-150	% Rec	1.0	3/24/08
Surrogate: Dibromofluoromethane	105	80.4-114	% Rec	1.0	3/24/08
Surrogate: Toluene-d8	96.9	80-120	% Rec	1.0	3/24/08

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Gasoline	ND	50	µg/L	1.0		3/24/08

Client Sample ID: BH9-1.5

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-07A

Matrix: Soil

Test Name: TPH passed through Silica Gel Column

Reference: EPA 3550/3630/GCFID/8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	15	2.0	µg/g	1.0	3/20/08	3/28/08
TPHC Motor Oil	96	10	µg/g	1.0	3/20/08	3/28/08

Date: 01-Apr-2008
WorkOrder: 0803390

ANALYTICAL REPORT

Client Sample ID: BH10-1.5

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-08A

Matrix: Soil

Test Name: TPH passed through Silica Gel Column

Reference: EPA 3550/3630/GCFID/8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	19	2.0	µg/g	1.0	3/20/08	3/28/08
TPHC Motor Oil	39	10	µg/g	1.0	3/20/08	3/28/08

Client Sample ID: BH11-1.5'

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-09A

Matrix: Soil

Test Name: TPH passed through Silica Gel Column

Reference: EPA 3550/3630/GCFID/8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/31/08	3/31/08
TPHC Motor Oil	ND	10	µg/g	1.0	3/31/08	3/31/08

Client Sample ID: BH12-0.75

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-10A

Matrix: Soil

Test Name: TPH as Diesel/Motor Oil

Reference: EPA 3550/EPA 8015B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	3/20/08	3/22/08
TPHC Motor Oil	ND	10	µg/g	1.0	3/20/08	3/22/08

Date: 01-Apr-2008
WorkOrder: 0803390

ANALYTICAL REPORT

Client Sample ID: BH14-2

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-11A

Matrix: Groundwater

Test Name: EPA 8260B

Reference: EPA 5030B/8260B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		3/25/08
Chloromethane	ND	2.0	µg/L	1.0		3/25/08
Vinyl chloride	ND	1.0	µg/L	1.0		3/25/08
Bromomethane	ND	1.0	µg/L	1.0		3/25/08
Chloroethane	ND	1.0	µg/L	1.0		3/25/08
Trichlorofluoromethane	ND	1.0	µg/L	1.0		3/25/08
1,1-Dichloroethene	ND	1.0	µg/L	1.0		3/25/08
Methylene chloride	ND	2.0	µg/L	1.0		3/25/08
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/25/08
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		3/25/08
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		3/25/08
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		3/25/08
1,1-Dichloroethane	ND	1.0	µg/L	1.0		3/25/08
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		3/25/08
cis-1,2-Dichloroethene	ND	1.0	µg/L	1.0		3/25/08
2,2-Dichloropropane	ND	1.0	µg/L	1.0		3/25/08
Bromochloromethane	ND	1.0	µg/L	1.0		3/25/08
Chloroform	ND	1.0	µg/L	1.0		3/25/08
Carbon Tetrachloride	ND	1.0	µg/L	1.0		3/25/08
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		3/25/08
1,1-Dichloropropene	ND	1.0	µg/L	1.0		3/25/08
Benzene	ND	0.50	µg/L	1.0		3/25/08
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		3/25/08
1,2-Dichloroethane	ND	1.0	µg/L	1.0		3/25/08
Trichloroethene	ND	1.0	µg/L	1.0		3/25/08
Dibromomethane	ND	1.0	µg/L	1.0		3/25/08
1,2-Dichloropropane	ND	1.0	µg/L	1.0		3/25/08
Bromodichloromethane	ND	1.0	µg/L	1.0		3/25/08
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/25/08
Toluene	ND	0.50	µg/L	1.0		3/25/08
Tetrachloroethene	ND	1.0	µg/L	1.0		3/25/08
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		3/25/08
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		3/25/08
Dibromochloromethane	ND	1.0	µg/L	1.0		3/25/08
1,3-Dichloropropane	ND	1.0	µg/L	1.0		3/25/08
1,2-Dibromoethane (EDB)	ND	2.0	µg/L	1.0		3/25/08
Chlorobenzene	ND	1.0	µg/L	1.0		3/25/08
Ethylbenzene	ND	0.50	µg/L	1.0		3/25/08
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1.0		3/25/08
m,p-Xylene	ND	0.50	µg/L	1.0		3/25/08
o-Xylene	ND	0.50	µg/L	1.0		3/25/08
Bromoform	ND	1.0	µg/L	1.0		3/25/08
Styrene	ND	1.0	µg/L	1.0		3/25/08

Date: 01-Apr-2008

WorkOrder: 0803390

ANALYTICAL REPORT

Isopropylbenzene	ND	1.0	µg/L	1.0	3/25/08
Bromobenzene	ND	1.0	µg/L	1.0	3/25/08
n-Propylbenzene	ND	1.0	µg/L	1.0	3/25/08
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0	3/25/08
2-Chlorotoluene	ND	1.0	µg/L	1.0	3/25/08
4-Chlorotoluene	ND	1.0	µg/L	1.0	3/25/08
1,2,3-Trichloropropane	ND	2.0	µg/L	1.0	3/25/08
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1.0	3/25/08
tert-Butylbenzene	ND	1.0	µg/L	1.0	3/25/08
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1.0	3/25/08
sec-Butylbenzene	ND	1.0	µg/L	1.0	3/25/08
4-Isopropyltoluene	ND	1.0	µg/L	1.0	3/25/08
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0	3/25/08
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0	3/25/08
n-Butylbenzene	ND	1.0	µg/L	1.0	3/25/08
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0	3/25/08
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1.0	3/25/08
1,2,4-Trichlorobenzene	ND	2.0	µg/L	1.0	3/25/08
Hexachlorobutadiene	ND	2.0	µg/L	1.0	3/25/08
Naphthalene	ND	2.0	µg/L	1.0	3/25/08
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1.0	3/25/08
Surrogate: 1,2-Dichloroethane-d4	106	80-120	% Rec	1.0	3/25/08
Surrogate: 1,4-Dichlorobenzene-d4	103	42.1-150	% Rec	1.0	3/25/08
Surrogate: Dibromofluoromethane	105	80.4-114	% Rec	1.0	3/25/08
Surrogate: Toluene-d8	96.8	80-120	% Rec	1.0	3/25/08

Test Name: TPH as Gasoline

Reference: LUFT/EPA 8260B Modified

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
TPHC Gasoline	ND	50	µg/L	1.0		3/25/08

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Method Blank

Sample ID: MB 032408	Batch ID: R51626	Test Code: 8260W	Units: µg/L	Analysis Date 3/24/08 7:22:00 AM	Prep Date:						
Client ID:	Run ID: ORGCMS2_080324A	SeqNo: 752528									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0									
Chloromethane	ND	2.0									
Vinyl chloride	ND	1.0									
Bromomethane	ND	1.0									
Chloroethane	ND	1.0									
Trichlorofluoromethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
Methylene chloride	ND	2.0									
trans-1,2-Dichloroethene	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	ND	1.0									
1,1-Dichloroethane	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
cis-1,2-Dichloroethene	ND	1.0									
2,2-Dichloropropane	ND	1.0									
Bromochloromethane	ND	1.0									
Chloroform	ND	1.0									
Carbon Tetrachloride	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,1-Dichloropropene	ND	1.0									
Benzene	ND	0.50									
Tert-amyl methyl ether (TAME)	ND	1.0									
1,2-Dichloroethane	ND	1.0									
Trichloroethene	ND	1.0									
Dibromomethane	ND	1.0									
1,2-Dichloropropane	ND	1.0									
Bromodichloromethane	ND	1.0									

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Method Blank

cis-1,3-Dichloropropene	ND	1.0
Toluene	ND	0.50
Tetrachloroethene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
Dibromochloromethane	ND	1.0
1,3-Dichloropropane	ND	1.0
1,2-Dibromoethane (EDB)	ND	2.0
Chlorobenzene	ND	1.0
Ethylbenzene	ND	0.50
1,1,1,2-Tetrachloroethane	ND	1.0
m,p-Xylene	ND	0.50
o-Xylene	ND	0.50
Bromoform	ND	1.0
Styrene	ND	1.0
Isopropylbenzene	ND	1.0
Bromobenzene	ND	1.0
n-Propylbenzene	0.07916	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
2-Chlorotoluene	ND	1.0
4-Chlorotoluene	ND	1.0
1,2,3-Trichloropropane	ND	2.0
1,3,5-Trimethylbenzene	ND	1.0
tert-Butylbenzene	ND	1.0
1,2,4-Trimethylbenzene	0.1172	1.0
sec-Butylbenzene	ND	1.0
4-Isopropyltoluene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
n-Butylbenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0
1,2,4-Trichlorobenzene	ND	2.0
Hexachlorobutadiene	ND	2.0

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J

J

Method Blank

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

Compound	Concentration (ppm)	Retention Time (min)	Peak Area	Peak Height	Peak Width (min)	Peak Shape	Peak Type	Peak Label
Naphthalene	ND	2.0						
1,2,3-Trichlorobenzene	ND	2.0						
1,2-Dichloroethane-d4	0.943	0.10	1.00	0	94.3%	80	120	0
1,4-Dichlorobenzene-d4	0.925	0.10	1.00	0	92.5%	42	150	0
Dibromofluoromethane	0.965	0.10	1.00	0	96.5%	80	114	0
Toluene-d8	0.970	0.10	1.00	0	97.0%	80	120	0

Sample ID: MB 032408	Batch ID: R51632	Test Code: GASW-MS	Units: µg/L	Analysis Date 3/24/08 7:22:00 AM	Prep Date:
Client ID:		Run ID: ORGCMS2 080324C		SeqNo: 752650	

[illegible]

Sample ID: MB-19957	Batch ID: 19957	Test Code: SGTPDMS	Units: µg/g	Analysis Date 3/28/08 12:18:43 AM	Prep Date: 3/20/08
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Client ID:	Run ID:	SeqNo:
ORG14 080327C	753610	

[illegible]

Sample ID: MB-20027	Batch ID: 20027	Test Code: SGTPDMS	Units: µg/g	Analysis Date: 3/31/08 7:58:51 PM	Prep Date: 3/31/08
Client ID:		Run ID: ORGC14 080331A		SeqNo: 754026	

TPHC Diesel (C12-C22)	TPHC Mator Oil
ND	ND
1.0	10

Sample ID: MB-19956	Batch ID: 19956	Test Code: TPHDMS	Units: µg/g	Analysis Date 3/21/08 10:20:03 PM	Prep Date: 3/20/08
Client ID:		Run ID: QRC7 080321B		SeqNo: 752162	

[illegible][illegible]

Qualifiers:	NID - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

North Coast Laboratories, Ltd.

Date: 01-Apr-2008

CLIENT: LACO Associates
Work Order: 0803390
Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-08163	Batch ID: R51626	Test Code: 8260W	Units: µg/L	Analysis Date 3/24/08 4:12:00 AM	Prep Date:						
Client ID:	Run ID: ORGCMS2_080324A	SeqNo: 752526									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	18.92	1.0	20.0	0	94.6%	51	140	0			
Chloromethane	14.76	2.0	20.0	0	73.8%	55	134	0			
Vinyl chloride	16.37	1.0	20.0	0	81.8%	60	134	0			
Bromomethane	15.70	1.0	20.0	0	78.5%	60	144	0			
Chloroethane	14.95	1.0	20.0	0	74.8%	69	127	0			
Trichlorofluoromethane	16.50	1.0	20.0	0	82.5%	71	131	0			
1,1-Dichloroethene	17.46	1.0	20.0	0	87.3%	78	120	0			
Methylene chloride	15.74	2.0	20.0	0	78.7%	80	120	0			
trans-1,2-Dichloroethene	18.88	1.0	20.0	0	94.4%	78	114	0			
Methyl tert-butyl ether (MTBE)	17.41	1.0	20.0	0	87.1%	72	125	0			
Tert-butyl alcohol (TBA)	405.3	10	400	0	101%	66	144	0			
Di-isopropyl ether (DIPE)	19.14	1.0	20.0	0	95.7%	71	123	0			
1,1-Dichloroethane	17.39	1.0	20.0	0	86.9%	80	120	0			
Ethyl tert-butyl ether (ETBE)	18.86	1.0	20.0	0	94.3%	64	126	0			
cis-1,2-Dichloroethene	19.22	1.0	20.0	0	96.1%	73	112	0			
2,2-Dichloropropane	20.34	1.0	20.0	0	102%	66	145	0			
Bromochloromethane	19.54	1.0	20.0	0	97.7%	74	119	0			
Chloroform	19.28	1.0	20.0	0	96.4%	80	120	0			
Carbon Tetrachloride	20.28	1.0	20.0	0	101%	72	127	0			
1,1,1-Trichloroethane	20.24	1.0	20.0	0	101%	74	126	0			
1,1-Dichloropropene	20.08	1.0	20.0	0	100%	75	119	0			
Benzene	21.98	0.50	20.0	0	110%	80	120	0			
Tert-amyl methyl ether (TAME)	19.07	1.0	20.0	0	95.4%	60	131	0			
1,2-Dichloroethane	17.75	1.0	20.0	0	88.7%	82	124	0			
Trichloroethene	20.38	1.0	20.0	0	102%	77	116	0			
Dibromomethane	19.58	1.0	20.0	0	97.9%	81	120	0			
1,2-Dichloropropane	19.48	1.0	20.0	0	97.4%	77	117	0			
Bromodichloromethane	19.18	1.0	20.0	0	95.9%	77	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates**Work Order:** 0803390**Project:** 6833 Franke Phase II**QC SUMMARY REPORT**

Laboratory Control Spike

cis-1,3-Dichloropropene	18.49	1.0	20.0	0	92.4%	62	142	0
Toluene	21.62	0.50	20.0	0	108%	75	115	0
Tetrachloroethene	20.55	1.0	20.0	0	103%	71	123	0
trans-1,3-Dichloropropene	20.07	1.0	20.0	0	100%	74	126	0
1,1,2-Trichloroethane	21.34	1.0	20.0	0	107%	77	121	0
Dibromochloromethane	22.91	1.0	20.0	0	115%	72	120	0
1,3-Dichloropropane	21.18	1.0	20.0	0	106%	73	123	0
1,2-Dibromoethane (EDB)	21.56	2.0	20.0	0	108%	73	120	0
Chlorobenzene	19.10	1.0	20.0	0	95.5%	80	120	0
Ethylbenzene	21.08	0.50	20.0	0	105%	68	120	0
1,1,1,2-Tetrachloroethane	21.95	1.0	20.0	0	110%	80	120	0
m,p-Xylene	39.87	0.50	40.0	0	99.7%	70	118	0
o-Xylene	20.06	0.50	20.0	0	100%	75	112	0
Bromoforn	22.67	1.0	20.0	0	113%	65	126	0
Styrene	19.31	1.0	20.0	0	96.6%	68	111	0
Isopropylbenzene	19.85	1.0	20.0	0	99.3%	80	120	0
Bromobenzene	20.00	1.0	20.0	0	100%	67	111	0
n-Propylbenzene	18.59	1.0	20.0	0	92.9%	73	117	0
1,1,2,2-Tetrachloroethane	17.85	1.0	20.0	0	89.3%	60	126	0
2-Chlorotoluene	18.39	1.0	20.0	0	91.9%	74	114	0
4-Chlorotoluene	17.75	1.0	20.0	0	88.8%	71	120	0
1,2,3-Trichloropropane	18.61	2.0	20.0	0	93.1%	64	129	0
1,3,5-Trimethylbenzene	19.04	1.0	20.0	0	95.2%	75	113	0
tert-Butylbenzene	19.09	1.0	20.0	0	95.5%	65	128	0
1,2,4-Trimethylbenzene	18.80	1.0	20.0	0	94.0%	73	128	0
sec-Butylbenzene	18.11	1.0	20.0	0	90.5%	71	123	0
4-Isopropyltoluene	18.98	1.0	20.0	0	94.9%	75	120	0
1,3-Dichlorobenzene	17.72	1.0	20.0	0	88.6%	59	131	0
1,4-Dichlorobenzene	17.56	1.0	20.0	0	87.8%	67	121	0
n-Butylbenzene	18.38	1.0	20.0	0	91.9%	76	117	0
1,2-Dichlorobenzene	17.63	1.0	20.0	0	88.2%	60	120	0
1,2-Dibromo-3-chloropropane (DBCP)	19.02	2.0	20.0	0	95.1%	70	123	0
1,2,4-Trichlorobenzene	19.19	2.0	20.0	0	96.0%	64	125	0
Hexachlorobutadiene	20.77	2.0	20.0	0	104%	72	128	0

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike

Naphthalene	19.28	2.0	20.0	0	96.4%	57	133	0
1,2,3-Trichlorobenzene	18.52	2.0	20.0	0	92.6%	56	127	0
1,2-Dichloroethane-d4	0.919	0.10	1.00	0	91.9%	80	120	0
1,4-Dichlorobenzene-d4	0.954	0.10	1.00	0	95.4%	42	150	0
Dibromofluoromethane	0.937	0.10	1.00	0	93.7%	80	114	0
Toluene-d8	0.965	0.10	1.00	0	96.5%	80	120	0

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: LCSD-08163 Batch ID: R51626 Test Code: 8260W Units: µg/L Analysis Date 3/25/08 3:15:00 AM Prep Date:
Client ID: Run ID: ORGCMS2_080324A SeqNo: 752537

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	20.48	1.0	20.0	0	102%	51	140	18.9	7.91%	20	
Chloromethane	16.16	2.0	20.0	0	80.8%	55	134	14.8	9.03%	20	
Vinyl chloride	17.79	1.0	20.0	0	88.9%	60	134	16.4	8.31%	20	
Bromomethane	17.97	1.0	20.0	0	89.8%	60	144	15.7	13.5%	20	
Chloroethane	17.95	1.0	20.0	0	89.7%	69	127	15.0	18.2%	20	
Trichlorofluoromethane	20.87	1.0	20.0	0	104%	71	131	16.5	23.4%	20	R
1,1-Dichloroethene	19.69	1.0	20.0	0	98.4%	78	120	17.5	12.0%	20	
Methylene chloride	18.23	2.0	20.0	0	91.1%	80	120	15.7	14.7%	20	
trans-1,2-Dichloroethene	20.68	1.0	20.0	0	103%	78	114	18.9	9.10%	20	
Methyl tert-butyl ether (MTBE)	18.35	1.0	20.0	0	91.7%	72	125	17.4	5.24%	20	
Tert-butyl alcohol (TBA)	454.4	10	400	0	114%	66	144	405	11.4%	20	
Di-isopropyl ether (DIPE)	18.60	1.0	20.0	0	93.0%	71	123	19.1	2.89%	20	
1,1-Dichloroethane	19.69	1.0	20.0	0	98.4%	80	120	17.4	12.4%	20	
Ethyl tert-butyl ether (ETBE)	18.27	1.0	20.0	0	91.4%	64	126	18.9	3.15%	20	
cis-1,2-Dichloroethene	20.91	1.0	20.0	0	105%	73	112	19.2	8.44%	20	R
2,2-Dichloropropane	14.54	1.0	20.0	0	72.7%	66	145	20.3	33.3%	20	
Bromochloromethane	21.85	1.0	20.0	0	109%	74	119	19.5	11.1%	20	
Chloroform	21.46	1.0	20.0	0	107%	80	120	19.3	10.7%	20	
Carbon Tetrachloride	21.57	1.0	20.0	0	108%	72	127	20.3	6.14%	20	
1,1,1-Trichloroethane	21.73	1.0	20.0	0	109%	74	126	20.2	7.10%	20	
1,1-Dichloropropene	20.07	1.0	20.0	0	100%	75	119	20.1	0.0381%	20	
Benzene	21.31	0.50	20.0	0	107%	80	120	22.0	3.09%	20	
Tert-amyl methyl ether (TAME)	18.27	1.0	20.0	0	91.3%	60	131	19.1	4.31%	20	
1,2-Dichloroethane	19.83	1.0	20.0	0	99.2%	82	124	17.8	11.1%	20	
Trichloroethene	20.32	1.0	20.0	0	102%	77	116	20.4	0.252%	20	
Dibromomethane	21.48	1.0	20.0	0	107%	81	120	19.6	9.24%	20	
1,2-Dichloropropane	20.01	1.0	20.0	0	100%	77	117	19.5	2.69%	20	
Bromodichloromethane	20.70	1.0	20.0	0	103%	77	120	19.2	7.61%	20	
cis-1,3-Dichloropropene	17.86	1.0	20.0	0	89.3%	62	142	18.5	3.47%	20	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: LACO Associates
Work Order: 0803390
Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Toluene	20.80	0.50	20.0	0	104%	75	115	21.6	3.88%	20
Tetrachloroethane	19.25	1.0	20.0	0	96.3%	71	123	20.6	6.53%	20
trans-1,3-Dichloropropene	17.85	1.0	20.0	0	89.2%	74	126	20.1	11.7%	20
1,1,2-Trichloroethane	20.32	1.0	20.0	0	102%	77	121	21.3	4.89%	20
Dibromochloromethane	21.88	1.0	20.0	0	109%	72	120	22.9	4.59%	20
1,3-Dichloropropane	20.29	1.0	20.0	0	101%	73	123	21.2	4.27%	20
1,2-Dibromoethane (EDB)	20.42	2.0	20.0	0	102%	73	120	21.6	5.41%	20
Chlorobenzene	18.42	1.0	20.0	0	92.1%	80	120	19.1	3.59%	20
Ethylbenzene	20.54	0.50	20.0	0	103%	68	120	21.1	2.57%	20
1,1,1,2-Tetrachloroethane	20.47	1.0	20.0	0	102%	80	120	22.0	6.98%	20
m,p-Xylene	38.67	0.50	40.0	0	96.7%	70	118	39.9	3.05%	20
o-Xylene	20.35	0.50	20.0	0	102%	75	112	20.1	1.44%	20
Bromofom	22.45	1.0	20.0	0	112%	65	126	22.7	0.986%	20
Styrene	19.51	1.0	20.0	0	97.5%	68	111	19.3	0.998%	20
Isopropylbenzene	20.03	1.0	20.0	0	100%	80	120	19.8	0.900%	20
Bromobenzene	20.38	1.0	20.0	0	102%	67	111	20.0	1.88%	20
n-Propylbenzene	19.18	1.0	20.0	0	95.9%	73	117	18.6	3.12%	20
1,1,2,2-Tetrachloroethane	18.67	1.0	20.0	0	93.3%	60	126	17.8	4.44%	20
2-Chlorotoluene	18.96	1.0	20.0	0	94.8%	74	114	18.4	3.06%	20
4-Chlorotoluene	18.34	1.0	20.0	0	91.7%	71	120	17.8	3.26%	20
1,2,3-Trichloropropane	19.60	2.0	20.0	0	98.0%	64	129	18.6	5.16%	20
1,3,5-Trimethylbenzene	19.78	1.0	20.0	0	98.9%	75	113	19.0	3.80%	20
tert-Butylbenzene	19.77	1.0	20.0	0	98.9%	65	128	19.1	3.49%	20
1,2,4-Trimethylbenzene	19.70	1.0	20.0	0	98.5%	73	128	18.8	4.67%	20
sec-Butylbenzene	18.89	1.0	20.0	0	94.4%	71	123	18.1	4.20%	20
4-Isopropyltoluene	19.52	1.0	20.0	0	97.6%	75	120	19.0	2.79%	20
1,3-Dichlorobenzene	18.54	1.0	20.0	0	92.7%	59	131	17.7	4.50%	20
1,4-Dichlorobenzene	18.15	1.0	20.0	0	90.7%	67	121	17.6	3.29%	20
n-Butylbenzene	18.71	1.0	20.0	0	93.5%	76	117	18.4	1.78%	20
1,2-Dichlorobenzene	18.50	1.0	20.0	0	92.5%	60	120	17.6	4.83%	20
1,2-Dibromo-3-chloropropane (DBCP)	20.14	2.0	20.0	0	101%	70	123	19.0	5.75%	20
1,2,4-Trichlorobenzene	19.30	2.0	20.0	0	96.5%	64	125	19.2	0.575%	20
Hexachlorobutadiene	20.46	2.0	20.0	0	102%	72	128	20.8	1.49%	20
Naphthalene	20.00	2.0	20.0	0	100%	57	133	19.3	3.66%	20

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

1,2,3-Trichlorobenzene	19.02	2.0	20.0	0	95.1%	56	127	18.5	2.53%	20
1,2-Dichloroethane-d4	1.06	0.10	1.00	0	106%	80	120	0.919	14.3%	20
1,4-Dichlorobenzene-d4	0.998	0.10	1.00	0	99.8%	42	150	0.954	4.54%	20
Dibromofluoromethane	1.07	0.10	1.00	0	107%	80	114	0.937	13.0%	20
Toluene-d8	0.944	0.10	1.00	0	94.4%	80	120	0.965	2.18%	20

Sample ID: LCS-08164 Batch ID: R51632 Test Code: GASW-MS Units: µg/L Analysis Date 3/24/08 5:47:00 AM Prep Date:
Client ID: Run ID: ORGCMS2_080324C SeqNo: 752648

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,065	50	1,000	0	107%	80	120	0			

Sample ID: LCSD-08164 Batch ID: R51632 Test Code: GASW-MS Units: µg/L Analysis Date 3/25/08 3:47:00 AM Prep Date:
Client ID: Run ID: ORGCMS2_080324C SeqNo: 752657

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	1,096	50	1,000	0	110%	80	120	1,060	2.85%	20	

Sample ID: LCS-19957 Batch ID: 19957 Test Code: SGTPDMS Units: µg/g Analysis Date 3/27/08 11:07:44 PM Prep Date: 3/20/08
Client ID: Run ID: ORGC14_080327C SeqNo: 753608

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	12.09	2.0	10.0	0	121%	59	179	0			
TPHC Motor Oil	23.82	10	20.0	0	119%	74	158	0			

Sample ID: LCSD-19957 Batch ID: 19957 Test Code: SGTPDMS Units: µg/g Analysis Date 3/27/08 11:31:23 PM Prep Date: 3/20/08
Client ID: Run ID: ORGC14_080327C SeqNo: 753609

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	12.80	2.0	10.0	0	128%	59	179	12.1	5.73%	15	
TPHC Motor Oil	26.27	10	20.0	0	131%	74	158	23.8	9.78%	15	

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank
J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: LCS-20027	Batch ID: 20027	Test Code: SGTPDMS	Units: µg/g	Analysis Date 3/31/08 6:46:08 PM	Prep Date: 3/31/08						
Client ID:	Run ID: ORGC14_080331A	SeqNo: 754025									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	8.345	1.0	10.0	0	83.4%	59	179	0			
TPHC Motor Oil	17.48	10	20.0	0	87.4%	74	158	0			
Sample ID: LCS-19956	Batch ID: 19956	Test Code: TPHDMS	Units: µg/g	Analysis Date 3/21/08 8:31:58 PM	Prep Date: 3/20/08						
Client ID:	Run ID: ORGC7_080321B	SeqNo: 752159									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	13.65	1.0	10.0	0	137%	77	125	0			S
TPHC Motor Oil	25.19	10	20.0	0	126%	82	121	0			S
Sample ID: LCSD-19956	Batch ID: 19956	Test Code: TPHDMS	Units: µg/g	Analysis Date 3/21/08 8:53:39 PM	Prep Date: 3/20/08						
Client ID:	Run ID: ORGC7_080321B	SeqNo: 752160									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	13.72	1.0	10.0	0	137%	77	125	13.6	0.472%	15	S
TPHC Motor Oil	25.10	10	20.0	0	126%	82	121	25.2	0.354%	15	S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

1399714-12 (X) 0491-78-202
1399714-12 (X) 0491-78-202



LABORATORY NUMBER: 080379C

Attention: CJ. Watt
Results & Invoice to: LAW ASSOC.
Address: 21 W. 4th St.
Evreke, CA
Phone: 707 443-6054
Copies of Report to: ~~W~~
Sampler (Sign & Print): ~~W~~ Evreke

PROJECT INFORMATION

Project Number: 6833
Project Name: Frankel Project
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*
	BH1 - 1	3/13/06		S
	BH2 - 0.75			
	BH3 - 1			
	BH4 - 2.5-3			
	BH5			GLW
	BH9 - 2			
	BH9 - 1.5			
	BH10 - 1.5			
	BH11 - 1.5			
	BH12 - 0.75			

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
			3/14/08
			1520

***MATRIX:** DW=Drinking Water; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

SAMPLE DISPOSAL

	Return	Pickup
NCL Disposal of Non-Contaminated		

CHAIN OF CUSTODY SEALS Y/N/NA
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

REPORTING REQUIREMENTS:

Preliminary: FAX: Verbal: By: _____
Final Report: FAX: Verbal: By: _____

CONTAINER CODES: 1— $1/2$ gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L CP; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other

PRESERVATIVE CODES: a—HN(C)₃; b—HCl; c—HSO₃⁻; d—Na₂S₂O₃; e—NaOH; f—C₂H₅Cl; g—other

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT



$$[H^0(\mathbb{P}^n, \mathcal{O}(k))] = \binom{n+k}{k} = \binom{n+k}{n}.$$

Attention: CWatt
Results & Invoice to: LATO
Address: _____
Phone: 707 443-5054
Copies of Report to: _____
Sampler (Sign & Print): [Signature]

PROJECT INFORMATION

Project Number: ~~6833~~ 6833
Project Name: Frankie Phage II
Purchase Order Number: _____

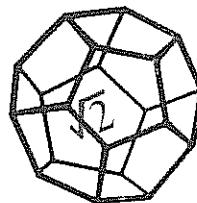
[illegible]

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
			3/14/08
			152

***MATRIX:** DW=Drinking Water; Eff=Effluent; Inf=Influent; SW=Surface Water; GW=Ground Water; S=Soil; O=Other.

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

LABORATORY NUMBER: <u>0803390</u>	
TAT: <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 5 Day <input type="checkbox"/> 5-7 Day	STD (2-3 Wk) <input type="checkbox"/> Other: _____
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES	
REPORTING REQUIREMENTS: State Forms: _____	
Preliminary: FAX <u> </u> Verbal <input type="checkbox"/> By: _____	Final Report: FAX <input type="checkbox"/> Verbal <input type="checkbox"/> By: _____
CONTAINER CODES: 1—1/2 gal. pl; 2—250 ml pl; 3—500 ml pl; 4—1 L Nalgene; 5—250 ml BG; 6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA; 10—125 ml VOA; 11—4 oz glass jar; 12—8 oz glass jar; 13—brass tube; 14—other	
PRESERVATIVE CODES: a—HNO ₃ ; b—HCl; c—H ₂ SO ₄ ; d—Na ₂ S ₂ O ₅ ; e—NaOH; f—C ₂ H ₃ O ₂ Cl; g—other	
SAMPLE CONDITION/SPECIAL INSTRUCTIONS	
SAMPLE DISPOSAL <input type="checkbox"/> NCL Disposal of Non-Contaminated <input type="checkbox"/> Return <input type="checkbox"/> Pickup	
CHAIN OF CUSTODY SEALS Y/N/NA <input type="checkbox"/>	
SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand	



**NORTH COAST
LABORATORIES LTD.**

May 19, 2008

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Order No.: 0805335
Invoice No.: 74592
PO No.:
ELAP No. 1247-Expires July 2008

Attn: Chris Watt

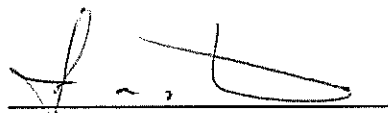
RE: 6833 Franke Phase II

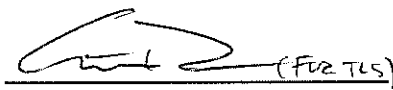
SAMPLE IDENTIFICATION

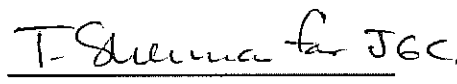
Fraction	Client Sample Description
01A	BH4-2.5-3'

ND = Not Detected at the Reporting Limit
Limit = Reporting Limit
All solid results are expressed on a wet-weight basis unless otherwise noted.

REPORT CERTIFIED BY


Laboratory Supervisor(s)


QA Unit


Jesse G. Chaney, Jr.
Laboratory Director

North Coast Laboratories, Ltd.**Date:** 19-May-2008

CLIENT: LACO Associates
Project: 6833 Franke Phase II
Lab Order: 0805335

CASE NARRATIVE

Chromium:

Sample BH4-2.5-3' was extracted following the method described in Title 22, CCR 66261.126, Appendix II (CAM WET).

Date: 19-May-2008

WorkOrder: 0805335

ANALYTICAL REPORT

Client Sample ID: BH4-2.5-3'

Received: 5/14/08

Collected: 3/13/08 00:00

Lab ID: 0805335-01A

Matrix: Soil

Test Name: EPA 6010B

Reference: EPA 6010B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Chromium	310	100	µg/L	10	5/16/08	5/19/08

North Coast Laboratories, Ltd.

Date: 19-May-2008

CLIENT:

LACO Associates

Work Order:

0805335

Project:

6833 Franke Phase II

QC SUMMARY REPORT

Method Blank

Sample ID:	MB-20283	Batch ID:	20283	Test Code:	6ICPX	Units:	µg/L	Analysis Date	5/19/08 15:10:00	Prep Date:	5/16/08
Cient ID:		Run iD:	INICP1_080519A	SeqNo:	764099						
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	100									

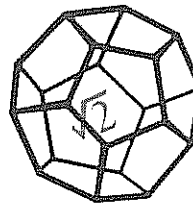
Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	

CLIENT: LACO Associates
Work Order: 0805335
Project: 6833 Franke Phase II

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-20283	Batch ID: 20283	Test Code: 6ICPX	Units: µg/L	Analysis Date 5/19/08 15:14:00	Prep Date: 5/16/08						
Client ID:	Run ID:	INICP1_080519A		SeqNo: 764100							
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1,755	100	2,000	0	87.7%	85	115	0			

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	



**NORTH COAST
LABORATORIES LTD.**

April 15, 2008

LACO Associates
P.O. Box 1023
Eureka, CA 95502

Order No.: 0804060
Invoice No.: 73854
PO No.:
ELAP No. 1247-Expires July 2008

Attn: Chris Watt

RE: 6833 Franke Phase II

SAMPLE IDENTIFICATION

Fraction Client Sample Description

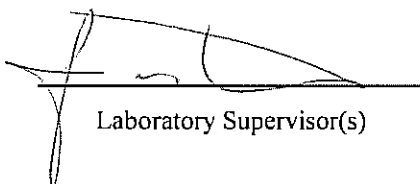
01A	BH4-2.5-3'
02A	BH9-1.5

ND = Not Detected at the Reporting Limit

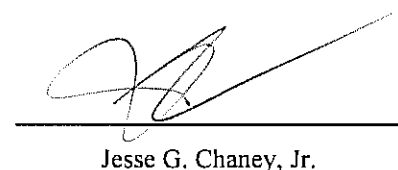
Reporting Limit

Metals

REPORT CERTIFIED BY


Laboratory Supervisor(s)


QA Unit


Jesse G. Chaney, Jr.
Laboratory Director

Date: 15-Apr-2008

WorkOrder: 0804060

ANALYTICAL REPORT

Client Sample ID: BH4-2.5-3'

Received: 4/2/08

Collected: 3/13/08 0:00

Lab ID: 0804060-01A

Matrix: Soil

Test Name: EPA 6010B

Reference: EPA 6010B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Cadmium	ND	2.0	µg/g	1.0	4/11/08	4/14/08
Chromium	59	2.0	µg/g	1.0	4/11/08	4/14/08
Lead	11	10	µg/g	1.0	4/11/08	4/14/08
Nickel	68	5.0	µg/g	1.0	4/11/08	4/14/08
Zinc	63	5.0	µg/g	1.0	4/11/08	4/14/08

Client Sample ID: BH9-1.5

Received: 4/2/08

Collected: 3/13/08 0:00

Lab ID: 0804060-02A

Matrix: Soil

Test Name: EPA 6010B

Reference: EPA 6010B

<u>Parameter</u>	<u>Result</u>	<u>Limit</u>	<u>Units</u>	<u>DF</u>	<u>Extracted</u>	<u>Analyzed</u>
Cadmium	ND	2.0	µg/g	1.0	4/11/08	4/14/08
Chromium	37	2.0	µg/g	1.0	4/11/08	4/14/08
Lead	ND	10	µg/g	1.0	4/11/08	4/14/08
Nickel	31	5.0	µg/g	1.0	4/11/08	4/14/08
Zinc	45	5.0	µg/g	1.0	4/11/08	4/14/08

CLIENT: LACO Associates
Work Order: 0804060
Project: 6833 Franke Phase II

QC SUMMARY REPORT
Method Blank

Sample ID: MB-20077	Batch ID: 20077	Test Code: 6ICPS	Units: µg/g	Analysis Date 4/14/08 11:53:00 AM	Prep Date: 4/11/08						
Client ID:	Run ID: INICP1_080414A	SeqNo: 756390									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	2.0									
Chromium	ND	2.0									
Lead	ND	10									
Nickel	ND	5.0									
Zinc	ND	5.0									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: LACO Associates
Work Order: 0804060
Project: 6833 Franke Phase II

QC SUMMARY REPORT
Laboratory Control Spike

Sample ID: LCS-20077	Batch ID: 20077	Test Code: 6ICPS	Units: µg/g	Analysis Date 4/14/08 11:57:00 AM	Prep Date: 4/11/08						
Client ID:	Run ID: INICP1_080414A	SeqNo: 756391									
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	87.82	2.0	100	0	87.8%	85	115	0			
Chromium	88.90	2.0	100	0	88.9%	85	115	0			
Lead	90.36	10	100	0	90.4%	85	115	0			
Nickel	91.65	5.0	100	0	91.6%	85	115	0			
Zinc	87.12	5.0	100	0	87.1%	85	115	0			

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank



THE LEADER IN ENVIRONMENTAL TESTING

April 18, 2008

TestAmerica Project Number: G8D040136

PO/Contract: NA

Chris Watt
LACO Associates
21 West 4th Street
Eureka, CA 95501

Dear Mr. Watt,

This report contains the analytical results for the samples received under chain of custody by TestAmerica on April 3, 2008. These samples are associated with your Franke Phase II project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4362.

Sincerely,

Linda C. Laver
Project Manager

TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
Alaska	UST-055	New York*	11666
Arizona	AZ0616	Oregon*	CA 200005
Arkansas	04-067-0	Pennsylvania	68-1272
California*	01119CA	South Carolina	87014002
Colorado	NA	Texas	TX 270-2004A
Connecticut	PH-0691	Utah*	QUANI
Florida*	E87570	Virginia	00178
Georgia	960	Washington	C087
Hawaii	NA	West Virginia	9930C, 334
Kansas*	E10375	Wisconsin	998204680
Louisiana*	01944	NFESC	NA
Michigan	9947	USACE	NA
Nevada	CA44	USDA Foreign Plant	37-82605
New Jersey*	CA005	USDA Foreign Soil	S-46613

*NELAP accredited. A more detailed parameter list is available upon request. Updated 9/21/07

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Sample Summary

TestAmerica West Sacramento Project Number G8D040136

<u>WO#</u>	<u>Sample #</u>	<u>Client Sample ID</u>	<u>Sampling Date</u>	<u>Received Date</u>
KKPRM	1	0804059-1A BH4-2.5-3'	3/13/2008	4/3/2008 09:05 AM
KKPRR	2	0804059-2A BH9-1.5'	3/13/2008	4/3/2008 09:05 AM
KKPRV	3	0804059-2B BH9-1.5'	3/13/2008	4/3/2008 09:05 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST TestAmerica West Sacramento

CLIENT NCL PM KD LOG # 51191
LOT# (QUANTIMS ID) G8D040136 QUOTE# 29173 LOCATION W20C
78049
DATE RECEIVED 4/3/08 TIME RECEIVED 0905 Initials PV Date 4/3/08

DELIVERED BY ☒ FEDEX ☐ CA OVERNIGHT ☐ CLIENT
☐ AIRBORNE ☐ GOLDENSTATE ☐ DHL
☐ UPS ☐ BAX GLOBAL ☐ GO-GETTERS
☐ TAL COURIER ☐ VALLEY LOGISTICS ☐ MORGAN HILL COURIER
☐ OTHER

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☒ N/A
CUSTODY SEAL #(S) _____

SHIPPING CONTAINER(S) ☐ TAL ☐ CLIENT ☒ N/A
TEMPERATURE RECORD (IN °C) IR 4 ☒ 5 ☐ OTHER _____

COC #(S) _____

TEMPERATURE BLANK Observed: 3 Corrected: 4

SAMPLE TEMPERATURE
Observed: 3 3 4 Average: 3 Corrected Average: 3

COLLECTOR'S NAME: ☐ Verified from COC ☒ Not on COC

pH MEASURED ☐ YES ☐ ANOMALY ☒ N/A

LABELED BY _____

LABELS CHECKED BY _____

PEER REVIEW ☒ NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING
WETCHEM ☒ N/A
VOA-ENCORES ☒ N/A

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☒ N/A
☒ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH
APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☒ N/A
☒ CLOUSEAU ☐ TEMPERATURE EXCEEDED (2 °C - 6 °C)* ☒ N/A

☐ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED ☒ PM NOTIFIED

Notes: _____

*1 Acceptable temperature range for State of Wisconsin samples is $\leq 4^{\circ}\text{C}$.

LEAVE NO SPACES BLANK. USE "N/A" IF NOT APPLICABLE.

Bottle Lot Inventory

Lot
 ID:

G8D040136

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
VOA*																				
VOAh*																				
AGB																				
AGBs																				
250AGB																				
250AGBs																				
250AGBn																				
500AGB																				
AGJ																				
500AGJ																				
250AGJ																				
125AGJ																				
CGJ																				
500CGJ																				
250CGJ																				
125CGJ																				
PJ																				
PJn																				
500PJ																				
500PJn																				
500PJna																				
500PJzn/na																				
250PJ																				
250PJn																				
250PJna																				
250PJzn/na																				
Acetate Tube																				
"CT																				
Encore																				
Folder/filter																				
PUF																				
Petri/Filter																				
XAD Trap																				
Ziploc																				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

h = hydrochloric acid s = sulfuric acid na = sodium hydroxide n = nitric acid zn = zinc acetate

Number of VOAs with air bubbles present / total number of VOA's

**SOLID, 8270C,
SVOC's**

LACO Associates

Client Sample ID: 0804059-1A BH4-2.5-3'

GC/MS Semivolatiles

Lot-Sample #....: G8D040136-001 Work Order #....: KKPRM1AC Matrix.....: SOLID
 Date Sampled....: 03/13/08 Date Received...: 04/03/08
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1.01
 % Moisture.....: 23 Method.....: SW846-8270C

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Acenaphthene	ND	430	ug/kg
Acenaphthylene	ND	430	ug/kg
Anthracene	ND	430	ug/kg
Benz(a)anthracene	ND	430	ug/kg
Benzo(b)fluoranthene	ND	430	ug/kg
Benzo(k)fluoranthene	ND	430	ug/kg
Benzo(ghi)perylene	ND	430	ug/kg
Benzo(a)pyrene	ND	430	ug/kg
bis(2-Chloroethoxy) methane	ND	430	ug/kg
bis(2-Chloroethyl)- ether	ND	430	ug/kg
bis(2-Chloroisopropyl) ether	ND	430	ug/kg
bis(2-Ethylhexyl) phthalate	ND	430	ug/kg
4-Bromophenyl phenyl ether	ND	430	ug/kg
Butyl benzyl phthalate	ND	430	ug/kg
4-Chloroaniline	ND	430	ug/kg
4-Chloro-3-methylphenol	ND	430	ug/kg
2-Chloronaphthalene	ND	430	ug/kg
2-Chlorophenol	ND	430	ug/kg
4-Chlorophenyl phenyl ether	ND	430	ug/kg
Chrysene	ND	430	ug/kg
Dibenz(a,h)anthracene	ND	430	ug/kg
Dibenzofuran	ND	430	ug/kg
Di-n-butyl phthalate	ND	430	ug/kg
1,2-Dichlorobenzene	ND	430	ug/kg
1,3-Dichlorobenzene	ND	430	ug/kg
1,4-Dichlorobenzene	ND	430	ug/kg
3,3'-Dichlorobenzidine	ND	2100	ug/kg
2,4-Dichlorophenol	ND	430	ug/kg
Diethyl phthalate	ND	430	ug/kg
2,4-Dimethylphenol	ND	430	ug/kg
Dimethyl phthalate	ND	430	ug/kg
4,6-Dinitro- 2-methylphenol	ND	2100	ug/kg

(Continued on next page)

LACO Associates

Client Sample ID: 0804059-1A BH4-2.5-3'

GC/MS Semivolatiles

Lot-Sample #....: G8D040136-001 Work Order #....: KKPRM1AC Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2100	ug/kg
2,4-Dinitrotoluene	ND	430	ug/kg
2,6-Dinitrotoluene	ND	430	ug/kg
Di-n-octyl phthalate	ND	430	ug/kg
Fluoranthene	ND	430	ug/kg
Fluorene	ND	430	ug/kg
Hexachlorobenzene	ND	430	ug/kg
Hexachlorobutadiene	ND	430	ug/kg
Hexachlorocyclopenta- diene	ND	2100	ug/kg
Hexachloroethane	ND	430	ug/kg
Indeno(1,2,3-cd)pyrene	ND	430	ug/kg
Isophorone	ND	430	ug/kg
2-Methylnaphthalene	ND	430	ug/kg
2-Methylphenol	ND	430	ug/kg
4-Methylphenol	ND	430	ug/kg
Naphthalene	ND	430	ug/kg
2-Nitroaniline	ND	2100	ug/kg
3-Nitroaniline	ND	2100	ug/kg
4-Nitroaniline	ND	2100	ug/kg
Nitrobenzene	ND	430	ug/kg
2-Nitrophenol	ND	430	ug/kg
4-Nitrophenol	ND	2100	ug/kg
N-Nitrosodiphenylamine	ND	430	ug/kg
N-Nitrosodi-n-propyl- amine	ND	430	ug/kg
Pentachlorophenol	ND	2100	ug/kg
Phenanthrene	ND	430	ug/kg
Phenol	ND	430	ug/kg
Pyrene	ND	430	ug/kg
1,2,4-Trichloro- benzene	ND	430	ug/kg
2,4,5-Trichloro- phenol	ND	430	ug/kg
2,4,6-Trichloro- phenol	ND	430	ug/kg

(Continued on next page)

LACO Associates

Client Sample ID: 0804059-1A BH4-2.5-3'

GC/MS Semivolatiles

Lot-Sample #...: G8D040136-001 Work Order #...: KKPRMLAC Matrix.....: SOLID

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Chlorophenol-d4	78	(48 - 104)
1,2-Dichlorobenzene-d4	74	(33 - 105)
2-Fluorobiphenyl	74	(48 - 114)
2-Fluorophenol	73	(43 - 98)
Nitrobenzene-d5	69	(43 - 103)
Phenol-d5	78	(49 - 106)
Terphenyl-d14	92	(44 - 157)
2,4,6-Tribromophenol	89	(27 - 144)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

LACO Associates

Client Sample ID: 0804059-2A BH9-1.5'

GC/MS Semivolatiles

Lot-Sample #....: G8D040136-002 Work Order #....: KKPRR1AC Matrix.....: SOLID
 Date Sampled....: 03/13/08 Date Received...: 04/03/08
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1.01
 % Moisture.....: 38 Method.....: SW846-8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Acenaphthene	ND	530	ug/kg
Acenaphthylene	ND	530	ug/kg
Anthracene	ND	530	ug/kg
Benz(a)anthracene	ND	530	ug/kg
Benzo(b)fluoranthene	ND	530	ug/kg
Benzo(k)fluoranthene	ND	530	ug/kg
Benzo(ghi)perylene	ND	530	ug/kg
Benzo(a)pyrene	ND	530	ug/kg
bis(2-Chloroethoxy) methane	ND	530	ug/kg
bis(2-Chloroethyl)- ether	ND	530	ug/kg
bis(2-Chloroisopropyl) ether	ND	530	ug/kg
bis(2-Ethylhexyl) phthalate	ND	530	ug/kg
4-Bromophenyl phenyl ether	ND	530	ug/kg
Butyl benzyl phthalate	ND	530	ug/kg
4-Chloroaniline	ND	530	ug/kg
4-Chloro-3-methylphenol	ND	530	ug/kg
2-Chloronaphthalene	ND	530	ug/kg
2-Chlorophenol	ND	530	ug/kg
4-Chlorophenyl phenyl ether	ND	530	ug/kg
Chrysene	ND	530	ug/kg
Dibenz(a,h)anthracene	ND	530	ug/kg
Dibenzofuran	ND	530	ug/kg
Di-n-butyl phthalate	ND	530	ug/kg
1,2-Dichlorobenzene	ND	530	ug/kg
1,3-Dichlorobenzene	ND	530	ug/kg
1,4-Dichlorobenzene	ND	530	ug/kg
3,3'-Dichlorobenzidine	ND	2600	ug/kg
2,4-Dichlorophenol	ND	530	ug/kg
Diethyl phthalate	ND	530	ug/kg
2,4-Dimethylphenol	ND	530	ug/kg
Dimethyl phthalate	ND	530	ug/kg
4,6-Dinitro- 2-methylphenol	ND	2600	ug/kg

(Continued on next page)

LACO Associates

Client Sample ID: 0804059-2A BH9-1.5'

GC/MS Semivolatiles

Lot-Sample #....: G8D040136-002 Work Order #....: KKPRR1AC Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS
2,4-Dinitrophenol	ND	2600	ug/kg
2,4-Dinitrotoluene	ND	530	ug/kg
2,6-Dinitrotoluene	ND	530	ug/kg
Di-n-octyl phthalate	ND	530	ug/kg
Fluoranthene	ND	530	ug/kg
Fluorene	ND	530	ug/kg
Hexachlorobenzene	ND	530	ug/kg
Hexachlorobutadiene	ND	530	ug/kg
Hexachlorocyclopenta- diene	ND	2600	ug/kg
Hexachloroethane	ND	530	ug/kg
Indeno (1,2,3-cd)pyrene	ND	530	ug/kg
Isophorone	ND	530	ug/kg
2-Methylnaphthalene	ND	530	ug/kg
2-Methylphenol	ND	530	ug/kg
4-Methylphenol	ND	530	ug/kg
Naphthalene	ND	530	ug/kg
2-Nitroaniline	ND	2600	ug/kg
3-Nitroaniline	ND	2600	ug/kg
4-Nitroaniline	ND	2600	ug/kg
Nitrobenzene	ND	530	ug/kg
2-Nitrophenol	ND	530	ug/kg
4-Nitrophenol	ND	2600	ug/kg
N-Nitrosodiphenylamine	ND	530	ug/kg
N-Nitrosodi-n-propyl- amine	ND	530	ug/kg
Pentachlorophenol	ND	2600	ug/kg
Phenanthrene	ND	530	ug/kg
Phenol	ND	530	ug/kg
Pyrene	ND	530	ug/kg
1,2,4-Trichloro- benzene	ND	530	ug/kg
2,4,5-Trichloro- phenol	ND	530	ug/kg
2,4,6-Trichloro- phenol	ND	530	ug/kg

(Continued on next page)

LACO Associates

Client Sample ID: 0804059-2A BH9-1.5'

GC/MS Semivolatiles

Lot-Sample #....: G8D040136-002 Work Order #....: KKPRR1AC Matrix.....: SOLID

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	80	(48 - 104)
1,2-Dichlorobenzene-d4	68	(33 - 105)
2-Fluorobiphenyl	77	(48 - 114)
2-Fluorophenol	75	(43 - 98)
Nitrobenzene-d5	72	(43 - 103)
Phenol-d5	79	(49 - 106)
Terphenyl-d14	88	(44 - 157)
2,4,6-Tribromophenol	86	(27 - 144)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

QC DATA ASSOCIATION SUMMARY

G8D040136

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	SOLID	ASTM D 2216-90		8099278	8099153
	SOLID	SW846 8270C		8101217	
002	SOLID	ASTM D 2216-90		8099278	8099153
	SOLID	SW846 8270C		8101217	
003	SOLID	SW846 8290		8099385	
	SOLID	ASTM D 2216-90		8099278	8099153

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136
 MB Lot-Sample #: G8D100000-217

Work Order #....: KK22D1AA

Matrix.....: SOLID

Analysis Date...: 04/16/08

Prep Date.....: 04/10/08

Dilution Factor: 1

Prep Batch #....: 8101217

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	METHOD
Acenaphthene	ND	330	ug/kg	SW846 8270C
Acenaphthylene	ND	330	ug/kg	SW846 8270C
Anthracene	ND	330	ug/kg	SW846 8270C
Benz(a)anthracene	ND	330	ug/kg	SW846 8270C
Benzo(b)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(k)fluoranthene	ND	330	ug/kg	SW846 8270C
Benzo(ghi)perylene	ND	330	ug/kg	SW846 8270C
Benzo(a)pyrene	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethoxy) methane	ND	330	ug/kg	SW846 8270C
bis(2-Chloroethyl)- ether	ND	330	ug/kg	SW846 8270C
bis(2-Chloroisopropyl) ether	ND	330	ug/kg	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	330	ug/kg	SW846 8270C
4-Bromophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Butyl benzyl phthalate	ND	330	ug/kg	SW846 8270C
4-Chloroaniline	ND	330	ug/kg	SW846 8270C
4-Chloro-3-methylphenol	ND	330	ug/kg	SW846 8270C
2-Chloronaphthalene	ND	330	ug/kg	SW846 8270C
2-Chlorophenol	ND	330	ug/kg	SW846 8270C
4-Chlorophenyl phenyl ether	ND	330	ug/kg	SW846 8270C
Chrysene	ND	330	ug/kg	SW846 8270C
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C
Dibenzofuran	ND	330	ug/kg	SW846 8270C
Di-n-butyl phthalate	ND	330	ug/kg	SW846 8270C
1,2-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,3-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
1,4-Dichlorobenzene	ND	330	ug/kg	SW846 8270C
3,3'-Dichlorobenzidine	ND	1600	ug/kg	SW846 8270C
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C
Diethyl phthalate	ND	330	ug/kg	SW846 8270C
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C
Dimethyl phthalate	ND	330	ug/kg	SW846 8270C
4,6-Dinitro- 2-methylphenol	ND	1600	ug/kg	SW846 8270C
2,4-Dinitrophenol	ND	1600	ug/kg	SW846 8270C
2,4-Dinitrotoluene	ND	330	ug/kg	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136

Work Order #....: KK22D1AA

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD
		LIMIT	UNITS		
2,6-Dinitrotoluene	ND	330	ug/kg	SW846	8270C
Di-n-octyl phthalate	ND	330	ug/kg	SW846	8270C
Fluoranthene	ND	330	ug/kg	SW846	8270C
Fluorene	ND	330	ug/kg	SW846	8270C
Hexachlorobenzene	ND	330	ug/kg	SW846	8270C
Hexachlorobutadiene	ND	330	ug/kg	SW846	8270C
Hexachlorocyclopenta- diene	ND	1600	ug/kg	SW846	8270C
Hexachloroethane	ND	330	ug/kg	SW846	8270C
Indeno(1,2,3-cd)pyrene	ND	330	ug/kg	SW846	8270C
Isophorone	ND	330	ug/kg	SW846	8270C
2-Methylnaphthalene	ND	330	ug/kg	SW846	8270C
2-Methylphenol	ND	330	ug/kg	SW846	8270C
4-Methylphenol	ND	330	ug/kg	SW846	8270C
Naphthalene	ND	330	ug/kg	SW846	8270C
2-Nitroaniline	ND	1600	ug/kg	SW846	8270C
3-Nitroaniline	ND	1600	ug/kg	SW846	8270C
4-Nitroaniline	ND	1600	ug/kg	SW846	8270C
Nitrobenzene	ND	330	ug/kg	SW846	8270C
2-Nitrophenol	ND	330	ug/kg	SW846	8270C
4-Nitrophenol	ND	1600	ug/kg	SW846	8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846	8270C
N-Nitrosodi-n-propyl- amine	ND	330	ug/kg	SW846	8270C
Pentachlorophenol	ND	1600	ug/kg	SW846	8270C
Phenanthrene	ND	330	ug/kg	SW846	8270C
Phenol	ND	330	ug/kg	SW846	8270C
Pyrene	ND	330	ug/kg	SW846	8270C
1,2,4-Trichloro- benzene	ND	330	ug/kg	SW846	8270C
2,4,5-Trichloro- phenol	ND	330	ug/kg	SW846	8270C
2,4,6-Trichloro- phenol	ND	330	ug/kg	SW846	8270C

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
2-Chlorophenol-d4	76	(48 - 104)
1,2-Dichlorobenzene-d4	82	(33 - 105)
2-Fluorobiphenyl	81	(48 - 114)
2-Fluorophenol	75	(43 - 98)
Nitrobenzene-d5	78	(43 - 103)
Phenol-d5	77	(49 - 106)
Terphenyl-d14	98	(44 - 157)
2,4,6-Tribromophenol	61	(27 - 144)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136 Work Order #....: KK22D1AC Matrix.....: SOLID
 LCS Lot-Sample#: G8D100000-217
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	3330	2850	ug/kg	85	SW846 8270C
Acenaphthylene	3330	2850	ug/kg	85	SW846 8270C
Anthracene	3330	2820	ug/kg	84	SW846 8270C
Benz(a)anthracene	3330	3020	ug/kg	91	SW846 8270C
Benzo(b)fluoranthene	3330	3250	ug/kg	98	SW846 8270C
Benzo(k)fluoranthene	3330	2690	ug/kg	81	SW846 8270C
Benzo(ghi)perylene	3330	2970	ug/kg	89	SW846 8270C
Benzo(a)pyrene	3330	2850	ug/kg	85	SW846 8270C
bis(2-Chloroethoxy) methane	3330	2770	ug/kg	83	SW846 8270C
bis(2-Chloroethyl)- ether	3330	2700	ug/kg	81	SW846 8270C
bis(2-Chloroisopropyl) et	3330	2970 a	ug/kg	89	SW846 8270C
bis(2-Ethylhexyl) phthalate	3330	3140	ug/kg	94	SW846 8270C
4-Bromophenyl phenyl ether	3330	3040	ug/kg	91	SW846 8270C
Butyl benzyl phthalate	3330	3120	ug/kg	94	SW846 8270C
4-Chloroaniline	3330	2210	ug/kg	66	SW846 8270C
4-Chloro-3-methylphenol	3330	3170	ug/kg	95	SW846 8270C
2-Chloronaphthalene	3330	2780	ug/kg	83	SW846 8270C
2-Chlorophenol	3330	2800	ug/kg	84	SW846 8270C
4-Chlorophenyl phenyl ether	3330	2950	ug/kg	88	SW846 8270C
Chrysene	3330	2940	ug/kg	88	SW846 8270C
Dibenz(a,h)anthracene	3330	3010	ug/kg	90	SW846 8270C
Dibenzofuran	3330	2800	ug/kg	84	SW846 8270C
Di-n-butyl phthalate	3330	3000	ug/kg	90	SW846 8270C
1,2-Dichlorobenzene	3330	2600	ug/kg	78	SW846 8270C
1,3-Dichlorobenzene	3330	2540	ug/kg	76	SW846 8270C
1,4-Dichlorobenzene	3330	2500	ug/kg	75	SW846 8270C
3,3'-Dichlorobenzidine	3330	2520	ug/kg	75	SW846 8270C
2,4-Dichlorophenol	3330	2780	ug/kg	83	SW846 8270C
Diethyl phthalate	3330	3070	ug/kg	92	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136

Work Order #....: KK22D1AC

Matrix.....: SOLID

LCS Lot-Sample#: G8D100000-217

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,4-Dimethylphenol	3330	2500	ug/kg	75	SW846 8270C
Dimethyl phthalate	3330	2960	ug/kg	89	SW846 8270C
4,6-Dinitro- 2-methylphenol	3330	2210	ug/kg	66	SW846 8270C
2,4-Dinitrophenol	3330	1590	ug/kg	48	SW846 8270C
2,4-Dinitrotoluene	3330	3250	ug/kg	97	SW846 8270C
2,6-Dinitrotoluene	3330	3120	ug/kg	94	SW846 8270C
Di-n-octyl phthalate	3330	2910	ug/kg	87	SW846 8270C
Fluoranthene	3330	2870	ug/kg	86	SW846 8270C
Fluorene	3330	2900	ug/kg	87	SW846 8270C
Hexachlorobenzene	3330	3070	ug/kg	92	SW846 8270C
Hexachlorobutadiene	3330	2550	ug/kg	76	SW846 8270C
Hexachlorocyclopenta- diene	3330	2450	ug/kg	74	SW846 8270C
Hexachloroethane	3330	2680	ug/kg	80	SW846 8270C
Indeno (1,2,3-cd)pyrene	3330	3270	ug/kg	98	SW846 8270C
Isophorone	3330	2920	ug/kg	88	SW846 8270C
2-Methylnaphthalene	3330	2760	ug/kg	83	SW846 8270C
2-Methylphenol	3330	2750	ug/kg	83	SW846 8270C
4-Methylphenol	6670	5590	ug/kg	84	SW846 8270C
Naphthalene	3330	2560	ug/kg	77	SW846 8270C
2-Nitroaniline	3330	3080	ug/kg	92	SW846 8270C
3-Nitroaniline	3330	2580	ug/kg	77	SW846 8270C
4-Nitroaniline	3330	2330	ug/kg	70	SW846 8270C
Nitrobenzene	3330	2720	ug/kg	82	SW846 8270C
2-Nitrophenol	3330	2750	ug/kg	82	SW846 8270C
4-Nitrophenol	3330	3260	ug/kg	98	SW846 8270C
N-Nitrosodiphenylamine	3330	3010	ug/kg	90	SW846 8270C
N-Nitrosodi-n-propyl- amine	3330	2980	ug/kg	90	SW846 8270C
Pentachlorophenol	3330	2920	ug/kg	88	SW846 8270C
Phenanthrene	3330	3090	ug/kg	93	SW846 8270C
Phenol	3330	2840	ug/kg	85	SW846 8270C
Pyrene	3330	2850	ug/kg	85	SW846 8270C
1,2,4-Trichloro- benzene	3330	2660	ug/kg	80	SW846 8270C
2,4,5-Trichloro- phenol	3330	3000	ug/kg	90	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136

Work Order #....: KK22D1AC

Matrix.....: SOLID

LCS Lot-Sample#: G8D100000-217

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,4,6-Trichloro-phenol	3330	3080	ug/kg	92	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	86	(48 - 104)
1,2-Dichlorobenzene-d4	86	(33 - 105)
2-Fluorobiphenyl	85	(48 - 114)
2-Fluorophenol	81	(43 - 98)
Nitrobenzene-d5	83	(43 - 103)
Phenol-d5	87	(49 - 106)
Terphenyl-d14	97	(44 - 157)
2,4,6-Tribromophenol	91	(27 - 144)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136 Work Order #....: KK22D1AC Matrix.....: SOLID
 LCS Lot-Sample#: G8D100000-217
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Acenaphthene	85	(58 - 98)	SW846 8270C
Acenaphthylene	85	(48 - 105)	SW846 8270C
Anthracene	84	(66 - 106)	SW846 8270C
Benz(a)anthracene	91	(73 - 113)	SW846 8270C
Benzo(b)fluoranthene	98	(71 - 128)	SW846 8270C
Benzo(k)fluoranthene	81	(61 - 119)	SW846 8270C
Benzo(ghi)perylene	89	(43 - 133)	SW846 8270C
Benzo(a)pyrene	85	(74 - 114)	SW846 8270C
bis(2-Chloroethoxy) methane	83	(55 - 95)	SW846 8270C
bis(2-Chloroethyl)- ether	81	(49 - 99)	SW846 8270C
bis(2-Chloroisopropyl) et	89 a	(37 - 85)	SW846 8270C
bis(2-Ethylhexyl) phthalate	94	(73 - 114)	SW846 8270C
4-Bromophenyl phenyl ether	91	(67 - 109)	SW846 8270C
Butyl benzyl phthalate	94	(72 - 114)	SW846 8270C
4-Chloroaniline	66	(26 - 77)	SW846 8270C
4-Chloro-3-methylphenol	95	(64 - 104)	SW846 8270C
2-Chloronaphthalene	83	(56 - 96)	SW846 8270C
2-Chlorophenol	84	(49 - 89)	SW846 8270C
4-Chlorophenyl phenyl ether	88	(57 - 105)	SW846 8270C
Chrysene	88	(70 - 110)	SW846 8270C
Dibenz(a,h)anthracene	90	(55 - 133)	SW846 8270C
Dibenzofuran	84	(62 - 102)	SW846 8270C
Di-n-butyl phthalate	90	(68 - 112)	SW846 8270C
1,2-Dichlorobenzene	78	(48 - 89)	SW846 8270C
1,3-Dichlorobenzene	76	(50 - 90)	SW846 8270C
1,4-Dichlorobenzene	75	(49 - 89)	SW846 8270C
3,3'-Dichlorobenzidine	75	(37 - 99)	SW846 8270C
2,4-Dichlorophenol	83	(58 - 98)	SW846 8270C
Diethyl phthalate	92	(50 - 113)	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KK22D1AC Matrix.....: SOLID
 LCS Lot-Sample#: G8D100000-217

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,4-Dimethylphenol	75	(51 - 91)	SW846 8270C
Dimethyl phthalate	89	(45 - 108)	SW846 8270C
4,6-Dinitro- 2-methylphenol	66	(17 - 125)	SW846 8270C
2,4-Dinitrophenol	48	(10 - 113)	SW846 8270C
2,4-Dinitrotoluene	97	(61 - 117)	SW846 8270C
2,6-Dinitrotoluene	94	(63 - 110)	SW846 8270C
Di-n-octyl phthalate	87	(68 - 126)	SW846 8270C
Fluoranthene	86	(57 - 123)	SW846 8270C
Fluorene	87	(63 - 107)	SW846 8270C
Hexachlorobenzene	92	(69 - 109)	SW846 8270C
Hexachlorobutadiene	76	(53 - 93)	SW846 8270C
Hexachlorocyclopenta- diene	74	(39 - 100)	SW846 8270C
Hexachloroethane	80	(37 - 90)	SW846 8270C
Indeno (1,2,3-cd)pyrene	98	(50 - 139)	SW846 8270C
Isophorone	88	(56 - 96)	SW846 8270C
2-Methylnaphthalene	83	(58 - 98)	SW846 8270C
2-Methylphenol	83	(52 - 92)	SW846 8270C
4-Methylphenol	84	(49 - 89)	SW846 8270C
Naphthalene	77	(54 - 94)	SW846 8270C
2-Nitroaniline	92	(62 - 102)	SW846 8270C
3-Nitroaniline	77	(33 - 104)	SW846 8270C
4-Nitroaniline	70	(43 - 127)	SW846 8270C
Nitrobenzene	82	(51 - 91)	SW846 8270C
2-Nitrophenol	82	(56 - 96)	SW846 8270C
4-Nitrophenol	98	(42 - 128)	SW846 8270C
N-Nitrosodiphenylamine	90	(58 - 107)	SW846 8270C
N-Nitrosodi-n-propyl- amine	90	(37 - 90)	SW846 8270C
Pentachlorophenol	88	(24 - 125)	SW846 8270C
Phenanthrene	93	(66 - 106)	SW846 8270C
Phenol	85	(48 - 88)	SW846 8270C
Pyrene	85	(62 - 120)	SW846 8270C
1,2,4-Trichloro- benzene	80	(54 - 94)	SW846 8270C
2,4,5-Trichloro- phenol	90	(61 - 105)	SW846 8270C

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KK22D1AC Matrix.....: SOLID
 LCS Lot-Sample#: G8D100000-217

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,4,6-Trichloro-phenol	92	(61 - 102)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	86	(48 - 104)
1,2-Dichlorobenzene-d4	86	(33 - 105)
2-Fluorobiphenyl	85	(48 - 114)
2-Fluorophenol	81	(43 - 98)
Nitrobenzene-d5	83	(43 - 103)
Phenol-d5	87	(49 - 106)
Terphenyl-d14	97	(44 - 157)
2,4,6-Tribromophenol	91	(27 - 144)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136 Work Order #....: KKPRM1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD
 Date Sampled....: 03/13/08 Date Received...: 04/03/08
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1 % Moisture.....: 23

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	4370	3790	ug/kg	87		SW846 8270C
	ND	4370	3590	ug/kg	82	5.6	SW846 8270C
Acenaphthylene	ND	4370	3780	ug/kg	87		SW846 8270C
	ND	4370	3690	ug/kg	84	2.6	SW846 8270C
Anthracene	ND	4370	3610	ug/kg	82		SW846 8270C
	ND	4370	3530	ug/kg	81	2.0	SW846 8270C
Benz (a) anthracene	ND	4370	4030	ug/kg	92		SW846 8270C
	ND	4370	3830	ug/kg	88	5.0	SW846 8270C
Benzo (b) fluoranthene	ND	4370	4090	ug/kg	94		SW846 8270C
	ND	4370	4430	ug/kg	102	8.0	SW846 8270C
Benzo (k) fluoranthene	ND	4370	3800	ug/kg	87		SW846 8270C
	ND	4370	3070	ug/kg	70	21	SW846 8270C
Benzo (ghi) perylene	ND	4370	3960	ug/kg	91		SW846 8270C
	ND	4370	3830	ug/kg	88	3.3	SW846 8270C
Benzo (a) pyrene	ND	4370	3870	ug/kg	89		SW846 8270C
	ND	4370	3640	ug/kg	83	6.1	SW846 8270C
bis (2-Chloroethoxy) methane	ND	4370	3300	ug/kg	75		SW846 8270C
	ND	4370	3230	ug/kg	74	2.2	SW846 8270C
bis (2-Chloroethyl) - ether	ND	4370	3270	ug/kg	75		SW846 8270C
	ND	4370	3160	ug/kg	72	3.4	SW846 8270C
bis (2-Chloroisopropyl) et	ND	4370	3460	ug/kg	79		SW846 8270C
	ND	4370	3440	ug/kg	79	0.52	SW846 8270C
bis (2-Ethylhexyl) phthalate	ND	4370	4160	ug/kg	95		SW846 8270C
	ND	4370	4000	ug/kg	92	3.8	SW846 8270C
4-Bromophenyl phenyl ether	ND	4370	3920	ug/kg	90		SW846 8270C
	ND	4370	3790	ug/kg	87	3.2	SW846 8270C
Butyl benzyl phthalate	ND	4370	4040	ug/kg	93		SW846 8270C
	ND	4370	3990	ug/kg	91	1.3	SW846 8270C
4-Chloroaniline	ND	4370	2980	ug/kg	68		SW846 8270C
	ND	4370	2770	ug/kg	63	7.4	SW846 8270C
4-Chloro-3-methylphenol	ND	4370	4010	ug/kg	92		SW846 8270C
	ND	4370	4090	ug/kg	94	2.0	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136

Work Order #....: KKPRM1AD-MS

Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRM1AE-MSD

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
2-Chloronaphthalene	ND	4370	3730	ug/kg	85		SW846 8270C
	ND	4370	3610	ug/kg	83	3.2	SW846 8270C
2-Chlorophenol	ND	4370	3490	ug/kg	80		SW846 8270C
	ND	4370	3420	ug/kg	78	1.9	SW846 8270C
4-Chlorophenyl phenyl ether	ND	4370	3910	ug/kg	89		SW846 8270C
	ND	4370	3830	ug/kg	88	2.1	SW846 8270C
Chrysene	ND	4370	3920	ug/kg	90		SW846 8270C
	ND	4370	3700	ug/kg	85	5.6	SW846 8270C
Dibenz (a,h) anthracene	ND	4370	3950	ug/kg	90		SW846 8270C
	ND	4370	3760	ug/kg	86	4.9	SW846 8270C
Dibenzofuran	ND	4370	3830	ug/kg	88		SW846 8270C
	ND	4370	3680	ug/kg	84	4.0	SW846 8270C
Di-n-butyl phthalate	ND	4370	3520	ug/kg	81		SW846 8270C
	ND	4370	3630	ug/kg	83	3.0	SW846 8270C
1,2-Dichlorobenzene	ND	4370	3150	ug/kg	72		SW846 8270C
	ND	4370	3090	ug/kg	71	1.8	SW846 8270C
1,3-Dichlorobenzene	ND	4370	3070	ug/kg	70		SW846 8270C
	ND	4370	3040	ug/kg	70	1.0	SW846 8270C
1,4-Dichlorobenzene	ND	4370	3120	ug/kg	71		SW846 8270C
	ND	4370	3120	ug/kg	71	0.08	SW846 8270C
3,3'-Dichlorobenzidine	ND	4370	2510	ug/kg	57		SW846 8270C
	ND	4370	2450	ug/kg	56	2.4	SW846 8270C
2,4-Dichlorophenol	ND	4370	3740	ug/kg	86		SW846 8270C
	ND	4370	3580	ug/kg	82	4.3	SW846 8270C
Diethyl phthalate	ND	4370	4010	ug/kg	92		SW846 8270C
	ND	4370	3840	ug/kg	88	4.3	SW846 8270C
2,4-Dimethylphenol	ND	4370	3420	ug/kg	78		SW846 8270C
	ND	4370	3460	ug/kg	79	1.2	SW846 8270C
Dimethyl phthalate	ND	4370	4020	ug/kg	92		SW846 8270C
	ND	4370	3890	ug/kg	89	3.2	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	4370	3970	ug/kg	91		SW846 8270C
	ND	4370	3690	ug/kg	85	7.3	SW846 8270C
2,4-Dinitrophenol	ND	4370	3860	ug/kg	88		SW846 8270C
	ND	4370	3640	ug/kg	83	5.9	SW846 8270C
2,4-Dinitrotoluene	ND	4370	4180	ug/kg	96		SW846 8270C
	ND	4370	4070	ug/kg	93	2.5	SW846 8270C
2,6-Dinitrotoluene	ND	4370	4040	ug/kg	92		SW846 8270C
	ND	4370	4090	ug/kg	94	1.3	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136
MS Lot-Sample #: G8D040136-001

Work Order #....: KKPRM1AD-MS
KKPRM1AE-MSD

Matrix.....: SOLID

PARAMETER	SAMPLE	SPIKE	MEASRD	UNITS	PERCNT		METHOD
	AMOUNT	AMT	AMOUNT		RECVRY	RPD	
Di-n-octyl phthalate	ND	4370	4090	ug/kg	94		SW846 8270C
	ND	4370	3760	ug/kg	86	8.3	SW846 8270C
Fluoranthene	ND	4370	3700	ug/kg	85		SW846 8270C
	ND	4370	3560	ug/kg	82	3.8	SW846 8270C
Fluorene	ND	4370	3890	ug/kg	89		SW846 8270C
	ND	4370	3800	ug/kg	87	2.4	SW846 8270C
Hexachlorobenzene	ND	4370	3830	ug/kg	88		SW846 8270C
	ND	4370	3750	ug/kg	86	2.3	SW846 8270C
Hexachlorobutadiene	ND	4370	3200	ug/kg	73		SW846 8270C
	ND	4370	3100	ug/kg	71	3.2	SW846 8270C
Hexachlorocyclopenta- diene	ND	4370	2640	ug/kg	60		SW846 8270C
	ND	4370	2650	ug/kg	61	0.19	SW846 8270C
Hexachloroethane	ND	4370	3150	ug/kg	72		SW846 8270C
	ND	4370	3110	ug/kg	71	1.1	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	4370	4110	ug/kg	94		SW846 8270C
	ND	4370	3770	ug/kg	86	8.6	SW846 8270C
Isophorone	ND	4370	3590	ug/kg	82		SW846 8270C
	ND	4370	3530	ug/kg	81	1.6	SW846 8270C
2-Methylnaphthalene	ND	4370	3520	ug/kg	81		SW846 8270C
	ND	4370	3500	ug/kg	80	0.74	SW846 8270C
2-Methylphenol	ND	4370	3470	ug/kg	80		SW846 8270C
	ND	4370	3410	ug/kg	78	1.9	SW846 8270C
4-Methylphenol	ND	8740	7180	ug/kg	82		SW846 8270C
	ND	8730	7110	ug/kg	81	0.87	SW846 8270C
Naphthalene	ND	4370	3260	ug/kg	75		SW846 8270C
	ND	4370	3120	ug/kg	72	4.3	SW846 8270C
2-Nitroaniline	ND	4370	3890	ug/kg	89		SW846 8270C
	ND	4370	3810	ug/kg	87	2.1	SW846 8270C
3-Nitroaniline	ND	4370	3620	ug/kg	83		SW846 8270C
	ND	4370	3250	ug/kg	74	11	SW846 8270C
4-Nitroaniline	ND	4370	3090	ug/kg	71		SW846 8270C
	ND	4370	3440	ug/kg	79	11	SW846 8270C
Nitrobenzene	ND	4370	3240	ug/kg	74		SW846 8270C
	ND	4370	3130	ug/kg	72	3.2	SW846 8270C
2-Nitrophenol	ND	4370	3270	ug/kg	75		SW846 8270C
	ND	4370	3210	ug/kg	74	1.9	SW846 8270C
4-Nitrophenol	ND	4370	3690	ug/kg	85		SW846 8270C
	ND	4370	4190	ug/kg	96	12	SW846 8270C
N-Nitrosodiphenylamine	ND	4370	3920	ug/kg	90		SW846 8270C
	ND	4370	3760	ug/kg	86	4.2	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136
MS Lot-Sample #: G8D040136-001

Work Order #...: KKPRM1AD-MS
KKPRM1AE-MSD

Matrix.....: SOLID

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
N-Nitrosodi-n-propyl-amine	ND	4370	3560	ug/kg	82		SW846 8270C
	ND	4370	3500	ug/kg	80	1.9	SW846 8270C
Pentachlorophenol	ND	4370	3880	ug/kg	89		SW846 8270C
	ND	4370	3970	ug/kg	91	2.2	SW846 8270C
Phenanthrene	ND	4370	4210	ug/kg	96		SW846 8270C
	ND	4370	3990	ug/kg	91	5.3	SW846 8270C
Phenol	ND	4370	3360	ug/kg	77		SW846 8270C
	ND	4370	3200	ug/kg	73	4.9	SW846 8270C
Pyrene	ND	4370	3760	ug/kg	86		SW846 8270C
	ND	4370	3670	ug/kg	84	2.4	SW846 8270C
1,2,4-Trichloro-benzene	ND	4370	3200	ug/kg	73		SW846 8270C
	ND	4370	3130	ug/kg	72	2.2	SW846 8270C
2,4,5-Trichloro-phenol	ND	4370	3680	ug/kg	84		SW846 8270C
	ND	4370	3830	ug/kg	88	3.9	SW846 8270C
2,4,6-Trichloro-phenol	ND	4370	4330	ug/kg	99		SW846 8270C
	ND	4370	4060	ug/kg	93	6.5	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	80	(48 - 104)
	81	(48 - 104)
1,2-Dichlorobenzene-d4	78	(33 - 105)
	77	(33 - 105)
2-Fluorobiphenyl	85	(48 - 114)
	81	(48 - 114)
2-Fluorophenol	74	(43 - 98)
	73	(43 - 98)
Nitrobenzene-d5	76	(43 - 103)
	72	(43 - 103)
Phenol-d5	79	(49 - 106)
	78	(49 - 106)
Terphenyl-d14	95	(44 - 157)
	94	(44 - 157)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136
MS Lot-Sample #: G8D040136-001

Work Order #....: KKPRM1AD-MS
KKPRM1AE-MSD

Matrix.....: SOLID

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2,4,6-Tribromophenol	90	(27 - 144)
	89	(27 - 144)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Results and reporting limits have been adjusted for dry weight.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136 Work Order #....: KKPRM1AD-MS Matrix.....: SOLID
 MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD
 Date Sampled....: 03/13/08 Date Received...: 04/03/08
 Prep Date.....: 04/10/08 Analysis Date...: 04/15/08
 Prep Batch #....: 8101217
 Dilution Factor: 1 % Moisture.....: 23

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Acenaphthene	87	(58 - 98)			SW846 8270C
	82	(58 - 98)	5.6	(0-20)	SW846 8270C
Acenaphthylene	87	(48 - 105)			SW846 8270C
	84	(48 - 105)	2.6	(0-20)	SW846 8270C
Anthracene	82	(66 - 106)			SW846 8270C
	81	(66 - 106)	2.0	(0-20)	SW846 8270C
Benz(a)anthracene	92	(73 - 113)			SW846 8270C
	88	(73 - 113)	5.0	(0-20)	SW846 8270C
Benzo(b)fluoranthene	94	(71 - 128)			SW846 8270C
	102	(71 - 128)	8.0	(0-21)	SW846 8270C
Benzo(k)fluoranthene	87	(61 - 119)			SW846 8270C
	70	(61 - 119)	21	(0-30)	SW846 8270C
Benzo(ghi)perylene	91	(43 - 133)			SW846 8270C
	88	(43 - 133)	3.3	(0-24)	SW846 8270C
Benzo(a)pyrene	89	(74 - 114)			SW846 8270C
	83	(74 - 114)	6.1	(0-20)	SW846 8270C
bis(2-Chloroethoxy) methane	75	(55 - 95)			SW846 8270C
	74	(55 - 95)	2.2	(0-20)	SW846 8270C
bis(2-Chloroethyl)- ether	75	(49 - 99)			SW846 8270C
	72	(49 - 99)	3.4	(0-58)	SW846 8270C
bis(2-Chloroisopropyl) et	79	(37 - 85)			SW846 8270C
	79	(37 - 85)	0.52	(0-20)	SW846 8270C
bis(2-Ethylhexyl) phthalate	95	(73 - 114)			SW846 8270C
	92	(73 - 114)	3.8	(0-20)	SW846 8270C
4-Bromophenyl phenyl ether	90	(67 - 109)			SW846 8270C
	87	(67 - 109)	3.2	(0-20)	SW846 8270C
Butyl benzyl phthalate	93	(72 - 114)			SW846 8270C
	91	(72 - 114)	1.3	(0-20)	SW846 8270C
4-Chloroaniline	68	(26 - 77)			SW846 8270C
	63	(26 - 77)	7.4	(0-93)	SW846 8270C
4-Chloro-3-methylphenol	92	(64 - 104)			SW846 8270C
	94	(64 - 104)	2.0	(0-32)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KKPRM1AD-MS

Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRM1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2-Chloronaphthalene	85	(56 - 96)			SW846 8270C
	83	(56 - 96)	3.2	(0-20)	SW846 8270C
2-Chlorophenol	80	(49 - 89)			SW846 8270C
	78	(49 - 89)	1.9	(0-20)	SW846 8270C
4-Chlorophenyl phenyl ether	89	(57 - 105)			SW846 8270C
	88	(57 - 105)	2.1	(0-20)	SW846 8270C
Chrysene	90	(70 - 110)			SW846 8270C
	85	(70 - 110)	5.6	(0-20)	SW846 8270C
Dibenz (a,h) anthracene	90	(55 - 133)			SW846 8270C
	86	(55 - 133)	4.9	(0-20)	SW846 8270C
Dibenzofuran	88	(62 - 102)			SW846 8270C
	84	(62 - 102)	4.0	(0-20)	SW846 8270C
Di-n-butyl phthalate	81	(68 - 112)			SW846 8270C
	83	(68 - 112)	3.0	(0-20)	SW846 8270C
1,2-Dichlorobenzene	72	(48 - 89)			SW846 8270C
	71	(48 - 89)	1.8	(0-20)	SW846 8270C
1,3-Dichlorobenzene	70	(50 - 90)			SW846 8270C
	70	(50 - 90)	1.0	(0-49)	SW846 8270C
1,4-Dichlorobenzene	71	(49 - 89)			SW846 8270C
	71	(49 - 89)	0.08	(0-51)	SW846 8270C
3,3'-Dichlorobenzidine	57	(37 - 99)			SW846 8270C
	56	(37 - 99)	2.4	(0-44)	SW846 8270C
2,4-Dichlorophenol	86	(58 - 98)			SW846 8270C
	82	(58 - 98)	4.3	(0-21)	SW846 8270C
Diethyl phthalate	92	(50 - 113)			SW846 8270C
	88	(50 - 113)	4.3	(0-25)	SW846 8270C
2,4-Dimethylphenol	78	(51 - 91)			SW846 8270C
	79	(51 - 91)	1.2	(0-28)	SW846 8270C
Dimethyl phthalate	92	(45 - 108)			SW846 8270C
	89	(45 - 108)	3.2	(0-27)	SW846 8270C
4,6-Dinitro- 2-methylphenol	91	(17 - 125)			SW846 8270C
	85	(17 - 125)	7.3	(0-20)	SW846 8270C
2,4-Dinitrophenol	88	(10 - 113)			SW846 8270C
	83	(10 - 113)	5.9	(0-39)	SW846 8270C
2,4-Dinitrotoluene	96	(61 - 117)			SW846 8270C
	93	(61 - 117)	2.5	(0-27)	SW846 8270C
2,6-Dinitrotoluene	92	(63 - 110)			SW846 8270C
	94	(63 - 110)	1.3	(0-20)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #....: G8D040136

Work Order #....: KKPRM1AD-MS

Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRM1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Di-n-octyl phthalate	94	(68 - 126)			SW846 8270C
	86	(68 - 126)	8.3	(0-20)	SW846 8270C
Fluoranthene	85	(57 - 123)			SW846 8270C
	82	(57 - 123)	3.8	(0-20)	SW846 8270C
Fluorene	89	(63 - 107)			SW846 8270C
	87	(63 - 107)	2.4	(0-20)	SW846 8270C
Hexachlorobenzene	88	(69 - 109)			SW846 8270C
	86	(69 - 109)	2.3	(0-20)	SW846 8270C
Hexachlorobutadiene	73	(53 - 93)			SW846 8270C
	71	(53 - 93)	3.2	(0-20)	SW846 8270C
Hexachlorocyclopenta- diene	60	(39 - 100)			SW846 8270C
	61	(39 - 100)	0.19	(0-31)	SW846 8270C
Hexachloroethane	72	(37 - 90)			SW846 8270C
	71	(37 - 90)	1.1	(0-23)	SW846 8270C
Indeno(1,2,3-cd)pyrene	94	(50 - 139)			SW846 8270C
	86	(50 - 139)	8.6	(0-23)	SW846 8270C
Isophorone	82	(56 - 96)			SW846 8270C
	81	(56 - 96)	1.6	(0-20)	SW846 8270C
2-Methylnaphthalene	81	(58 - 98)			SW846 8270C
	80	(58 - 98)	0.74	(0-45)	SW846 8270C
2-Methylphenol	80	(52 - 92)			SW846 8270C
	78	(52 - 92)	1.9	(0-48)	SW846 8270C
4-Methylphenol	82	(49 - 89)			SW846 8270C
	81	(49 - 89)	0.87	(0-23)	SW846 8270C
Naphthalene	75	(54 - 94)			SW846 8270C
	72	(54 - 94)	4.3	(0-24)	SW846 8270C
2-Nitroaniline	89	(62 - 102)			SW846 8270C
	87	(62 - 102)	2.1	(0-20)	SW846 8270C
3-Nitroaniline	83	(33 - 104)			SW846 8270C
	74	(33 - 104)	11	(0-24)	SW846 8270C
4-Nitroaniline	71	(43 - 127)			SW846 8270C
	79	(43 - 127)	11	(0-28)	SW846 8270C
Nitrobenzene	74	(51 - 91)			SW846 8270C
	72	(51 - 91)	3.2	(0-36)	SW846 8270C
2-Nitrophenol	75	(56 - 96)			SW846 8270C
	74	(56 - 96)	1.9	(0-20)	SW846 8270C
4-Nitrophenol	85	(42 - 128)			SW846 8270C
	96	(42 - 128)	12	(0-30)	SW846 8270C
N-Nitrosodiphenylamine	90	(58 - 107)			SW846 8270C
	86	(58 - 107)	4.2	(0-20)	SW846 8270C

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KKPRM1AD-MS Matrix.....: SOLID
MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
N-Nitrosodi-n-propyl- amine	82	(37 - 90)			SW846 8270C
	80	(37 - 90)	1.9	(0-68)	SW846 8270C
Pentachlorophenol	89	(24 - 125)			SW846 8270C
	91	(24 - 125)	2.2	(0-20)	SW846 8270C
Phenanthrene	96	(66 - 106)			SW846 8270C
	91	(66 - 106)	5.3	(0-20)	SW846 8270C
Phenol	77	(48 - 88)			SW846 8270C
	73	(48 - 88)	4.9	(0-20)	SW846 8270C
Pyrene	86	(62 - 120)			SW846 8270C
	84	(62 - 120)	2.4	(0-34)	SW846 8270C
1,2,4-Trichloro- benzene	73	(54 - 94)			SW846 8270C
	72	(54 - 94)	2.2	(0-20)	SW846 8270C
2,4,5-Trichloro- phenol	84	(61 - 105)			SW846 8270C
	88	(61 - 105)	3.9	(0-24)	SW846 8270C
2,4,6-Trichloro- phenol	99	(61 - 102)			SW846 8270C
	93	(61 - 102)	6.5	(0-21)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	80	(48 - 104)
	81	(48 - 104)
1,2-Dichlorobenzene-d4	78	(33 - 105)
	77	(33 - 105)
2-Fluorobiphenyl	85	(48 - 114)
	81	(48 - 114)
2-Fluorophenol	74	(43 - 98)
	73	(43 - 98)
Nitrobenzene-d5	76	(43 - 103)
	72	(43 - 103)
Phenol-d5	79	(49 - 106)
	78	(49 - 106)
Terphenyl-d14	95	(44 - 157)
	94	(44 - 157)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KKPRM1AD-MS

Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRM1AE-MSD

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2,4,6-Tribromophenol	90	(27 - 144)
	89	(27 - 144)

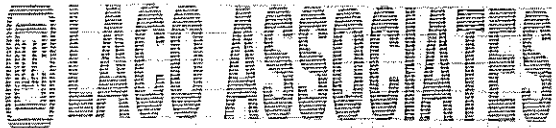
NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

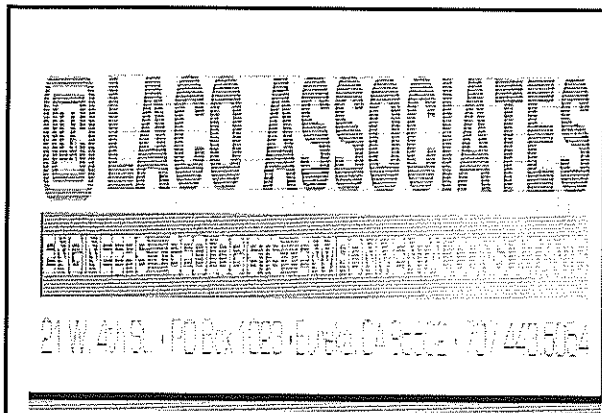
Results and reporting limits have been adjusted for dry weight.

Attachment 5

 LAGO ASSOCIATES ENVIRONMENTAL CONSULTANTS 210 W. 4th St. • P.O. Box 1023 • Arcata, CA 95521 • 707/449-5054	SOIL BULK DENSITY		Page 1	Project No. 6833.01.
	Project FRANKE PROPERTY PHASE 2		Tested By DLR	Date 4/2/2008
	Location ARCATA		Checked By	Date
	Client ARCATA VOLUNTEER FIRE DEPT		Sample ID: 08-025	

WORKSHEET FOR SOIL BULK DENSITY

Sample Number	B2	B3	B5	B9
Depth	9.5'	6.5'	11.0'	7.0'
A. Dry weight before wax coating (gm)	127.3	109.5	121.3	109.9
B. Wax coated clod in water (gm)	56.1	51.0	54.6	49.9
C. Dry Volume (cc) A.-B.	71.2	58.5	66.7	60.0
D. Oven dry weight (gm)	131.1	111.1	121.7	109.8
E. > 2mm Particles (gm)	0.3	0.8	1.2	7.7
F. Volume of Water Displaced by >2mm Particles (cc)	0.0	1.0	2.0	2.0
Bulk Density Dry (gm/cc) (D-E)/(C-F)	1.84	1.92	1.86	1.76
Bulk Density Dry (pcf)	114.7	119.8	116.3	109.9



SOIL BULK DENSITY		Page 1	Project No. 6833.01.
Project FRANKE PROPERTY PHASE 2		Tested By DLR	Date 4/2/2008
Location ARCATA		Checked By	Date
Client ARCATA VOLUNTEER FIRE DEPT		Sample ID: 08-025	

WORKSHEET FOR SOIL BULK DENSITY

Sample Number

Depth

A. Dry weight before wax coating (gm)

B. Wax coated clod in water (gm)

C. Dry Volume (cc) A.-B.

D. Oven dry weight (gm)

E. > 2mm Particles (gm)

F. Volume of Water Displaced by >2mm Particles (cc)

Bulk Density Dry (gm/cc) (D-E)/(C-F)

Bulk Density Dry (pcf)

B15	B16		
4.0'	4.0'		
119.2	116.0		
52.6	51.1		
66.6	64.9		
118.8	116.5		
1.8	0.0		
1.0	0.0		
1.78	1.80		
111.3	112.1		