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:
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May 29, 2008 LACO Project No. 6833.00

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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 1 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 1 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

[$\mu g/g$]) and TPHmo (less than 70 $\mu g/g$) 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 1 and Phase 11 ESAs. Additional

groundwater samples were collected on April 24, 2008.

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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 asses 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.

May 29, 2008 – Page 3 Phase II ESA & Fill Characterization ROF

Ta	Table A: Phase II Soil Sampling Details				
Boring ID	Soil Sample Depths (feet bgs)	Analytical Suite			
ВН1	1				
BH2	0.75	TPHd, TPHmo per 8015B			
ВН3	1				
BH4	2.5-3	TPHd, TPHmo per 8015B CAM5 per 6010B SVOC per 8270			
ВН9	1.5	TPHd, TPHmo per 8015B CAM5 per 6010B SVOC per 8270			
BH10	1.5	TPHd, TPHmo per 8015B			
BHII	1.5	TOUL TOU			
BH12	0.75	TPHd, TPHmo per 8015B			

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 S	ampling Details	
Sample ID	Date	Groundwater Sample Depths (feet bgs)	Analytical Suite	
BH5	3/13/2008	perched water above 2		
ВН9	3/13/2008	2	TPHg and Full 8260 list	
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	Table C: Nuclear Density Sampling Details					
Backhoe Pit	Soil Sample Depths	Backhoe Pit	Testing Depths			
•	(feet bgs)		(feet bgs)			
BH1	Surface	ВН9	Surface			
ВН1	2	ВН9	2			
BH2	Surface	BH11	Surface			
BH2	2	BH11	1.75			
BH2	4.5	BH11	3.5			
ВН3	Surface	BH11	5			
ВН3	1.75	BH12	Surface			
BH5	Surface	BH12	3			
BH5	1.5	BH13	Surface			
ВН6	Surface	BH14	Surface			
ВН6	1.75	BH15	Surface			
ВН6	5	BH15	2			
BH8	Surface	BH15	3.25			
ВН8	1.75	BH16	Surface			
ВН8	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.

	Soil Sample
Boring ID	Depths
	(feet bgs)
BH2	9.5
ВН3	6.5
BH5	11
ВН9	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	
ВН9 - 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 μ g/g and concentrations of motor oil less then 100 μ g/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	
ВН5	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 gullying,

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, Terzoghi and Peck (1948) indicate a qualitative

description of soil consistence which is presented below in Table G.

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	Number of Blow	Qualitative Description of Soi	
Soil Type	Counts	Consistence	
	0 to 3	Very Soft	
	3 to 5	Soft	
Cohesive (silt and clay)	5 to 8	Medium Stiff	
	8 to 15	Stiff	
	15 to 30	Very Stiff	
	30 to 50	Hard	
	0 to 5	Very loose	
Cohesionless	5 to 10	Loose	
(sand and gravel)	10 to 30	Medium dense	
	30 to 50	Dense	
	50 to 90	Very dense	

Based on blow counts and soil consistence qualified by Terzoghi 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 invetigation 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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implied warranties with respect to the accuracy or interpretations of the data furnished. LACO assumes no responsibility of any third-party reliance on the data presented, and that data generated for this report represent information gathered at that time and at the indicated locations. It should not be utilized by any third party to represent data for any other time or location. It is known that site and subsurface environmental conditions can change with time and under anthropologic influences. This report is valid solely for the purpose, site, and project described in this document. Any alteration, unauthorized distribution, or deviation from this description, will invalidate this report.

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.

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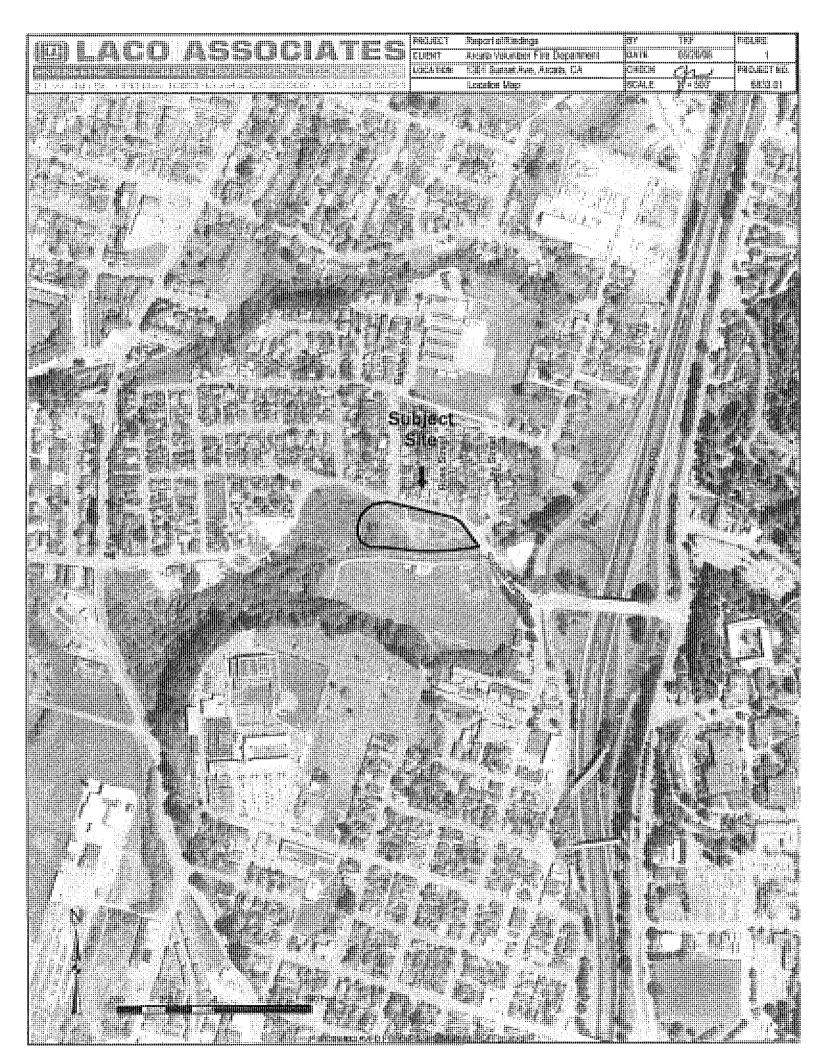
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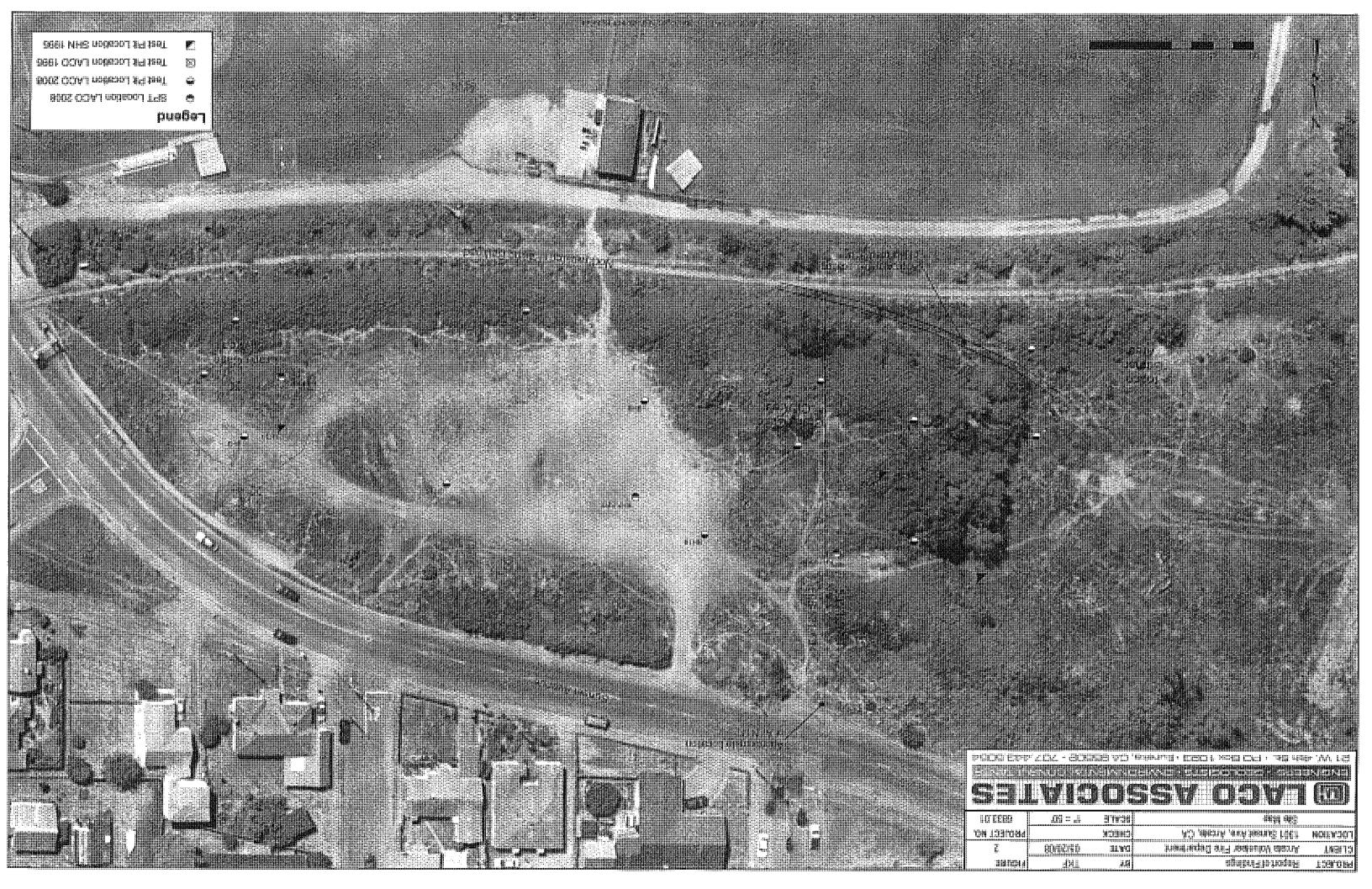


Table 1: Current and Historical Soil Analytical Results

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	Ali 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	Ali 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

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

	Depth		Bulk Density	Dry Density	Moisture
Boring ID	(feet bgs)	Material	dry (pcf)	(pcf)	Content (%)
BH1	Surface			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	FILL		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*		114.7	93	
BH3	6.5*		119.8	97	
BH5	11*		116.3	95	
BH9	7*		109.9	89	
BH12	3	NATIVE	8 th 16	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

	Depth Interval		SPT Blow
Boring ID	(feet bgs)	Material Description	Counts
	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]
	4.5 to 5	· · · · · · · · · · · · · · · · · · ·	3
	5 to 5.5	SILT WITH SAND AND GRAVEL	2
	5.5 to 6		3
ВН4	6 to 6.5		2
23,14	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
•	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
BH7	3 to 3.5		7
Į.	3.5 to 4		9
		SILTY SAND: NATIVE	11
	4.5 to 5		20
	5 to 5.5		28
		SANDY SILT	7
	1.5 to 2		9
BH10	2 to 2.5		11
ļ		SANDY SILT: NATIVE AT 2.75 FEET	4
l	3 to 3.5		5
	3.5 to 4		6

Attachment 1

Attachment 2

Key to Abbreviations

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

Key to Abbreviations (continued)

PCP/TCP	Penta/ Tetra/ Tri Chlorophenol
PFP	Pay-for-Performance
pН	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
Т	Temperature
Т&Р	Tape and Paste
TAME	Tertiary Amyl Methyl Ether
ТВ	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
ТРНg	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 abbrev	iations in this key are used in the report.

Attachment 3

	ENGINEER GEORGES SINGON SINGON SINGEN SERVICES STATES ON SERVICES SERVICES ON SECONS SINGON S	1 Sc. PC			n	a. OAS		107.440		1 2 5 1 7		1 Ш ⊢ Щ	Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-0553	A 95501 (43-5054) (43-0553)	1 1 354 553			ū	сосанон мар	лар	
	Project Name: Project No.: Date: Driller:	1837 1837 1878 1978	6			_	Logged by: Field Point Name: Drilling Method: Auger/Rod Diameter:	Logged by: Field Point Name: Drilling Method; ger/Rod Diameter;	% U U U U U U U U U U U U U U U U U U U	第三年											
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Location Map		Sample Other Remarks	N=None S =Slight Strong St=Split spoon SS=Split spoon CC=Continuous Cores A=Auger CC=Continuous Cores Push tube PPush tube Reage rock size Rock lithology	SI A SS INCLUS Z		SI A SS	St CC PT	SI A SS	د۔ نہ	SI A SS 47.5.5.5	∽	5.9-5 22 SS V IS	CC PT	58-12 27 88 V IS	CC PT	01-5.3 7 + St A St	CC PT 6) V.	SI A SS 27 11 2 11 2 11 2 11 2 11 2 11 2 11	3 10 - 11.	Method:
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Location Map		Sample Other Remarks	Split spoon Cores Continuous	SS K	DE Gat Book 102	SS	ΡΤ	SS	Td (SS	DAILY LANGE	SS	Ld (SS	Td (SS	Ld (SS			a34
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ENGINEERS 21 W. 4th Bt.	Project Name: F Project No.: 1 Date: 3 Driller: 1		Color (Munsell)	Service Control	78/W/S	Mund May	50 P. S.	2000	150			3	イアア							Depth to Water: Casing Type/Diameter:	nterval:
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CONTRACTOR TOTAL 443,5054	Logged by: 合 小を Field Point Name: ほけん Drilling Method: なみ Jer/Rod Diameter: Location: ないいん	Sand & Gravel	Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round Density L=Loose MD=Medium dense	1	10 jose 2 6 vo	F A SA L MD	ж О	(F)A SA L MD	CORPIED VD	F A SA L MD	SR R D			Y (C SK K D VD	; G	F A SA L MD	C SR R D VD	Purge Volume: Purge Method:	A STATE OF THE STA
	Logged by: Field Point Name: Drilling Method: Auger/Rod Diameter: Location:		ST=Stiff H=Hard %Sand F=Fine M=Medium C=Coarse		Σ β			6	3	3 2 2		7	2	8	1			ΣO	<u>a</u> a.	
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ENCINE 21 W. 4u	Project Name: Project No.: Date: Driller: PM:		Color (Munsell)	12.50.51 12.50.51	mark.	P. 40 L		Ž		· 20(0)	4:4	變	Ŝ.	Sagar Saga Saga		B. B.			Depth to Water: Casing Type/Diameter: Screen Interval:	
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Max and Average rock size Other Remarks Rock lithology 2.5-4 LUCAIIOII INIAD edut dau9≃T° 占 SS ᆸ SS ᆸ SS P Ъ SS Ы 占 늡 SS Scalinuous Cores nooqe filq8≈88 ပ္ပ ပ္ပ ပ္ပ S 8 2 ⋖ ⋖ ⋖ ⋖ ⋖ ⋖ ⋖ reguA=/ (നന്നർ) വിപ്പ Sampling Method: St=Strong \overline{S} S ഗ ᇬ ത ℴ ത \overline{S} ് 14gil2=I2 anoN=V ಭ ത് Š ö ÿ ഗ് ಭ z z Z z z z Z Odor Analytes: Closure: *Norganics/Shell Fragments B TEL: (707) 443-5054 FAX: (707) 443-0553 É ≥ betante2=S teW=W ഗ ഗ ≥ Σ တ ≥ ഗ ഗ ഗ ഗ Eureka, CA 95501 taioM=M v₁Cl=C ≥ ≤ ₹ ≥ ≤ ≤ ≤ ≤ Moisture Ω MH CH OH P! GW GP GM GC SW SP SM SC GW GP GM GC SW SP SMSC MH CH OH Pt GW GP GM GC SW SP SM SC GW GP GM GC SW SP SM SC GW GP GM GC SW SP SM)SC MH CH OH PL GW GP GM GC SW SP SM SC GW GP GM GC SW SP SM SC GW GP GM GC MH CH OH Pt MH CH OH Pt SW SP SM SC MH CH OH Pt MH CH OH Pt MH CH OH Pt MLCLOL ML CL OL 집 ML CL OL ML CL OL M C P **Стоир** Бутро 884S-G MTSA 9 ð Ω M 8 9 9 9 D=Dense VD=Very dense 9 S 9 呈 =Loose MD=Medium dense Density Δ ۵ Δ Field Point Name: SA ď SA 2 SA œ 吆 SA bnuoA=A bnuo1-du&=A& Sand & Gravel A=Angular SA=Sub-angular Purge Method: Purge Volume C SR SR SR 21 W. 4th St. • PO Box 1023 • Fureka, CA 95502 • 707,443,5054 SR SR SR SR R Shape/Angularity ⋖ ⋖ ⋖ ⋖ ⋖ ⋖ Drilling Method: $\overline{\circ}$ ō Logged by: Ü Ö O Ç O Auger/Rod Diameter: Location ("2T.0<) esisoO=0 ("&Y.0>) eni==7 %Gravel ∑∖∪ щΣО μΣO ΣŲ Σ ш C=Coarse F=Fine M=Medium B bas2% bieH=H iiis=TS 工工 I ェ I I I 工工 I ᄔ mii=== floS=8 ഗ Consistency ഗ 苾 భ ញ ಭ ŝ ά ಭ ಭ 臼 dgiH=H muibeM=M I ェ エ エ I エ I V=None L=Low Silt & Clay ylioticity z <u>`</u> Σ Σ Σ Σ Z Σ z Σ 飘星 11!5% 2 4 Project Name: France Project No.: 4929 3 Driller: 787 Date: 3 [13 %Clay OD) \mathcal{U} Casing Type/Diameter: Ę. Depth to Water: Screen Interval: Color (Munsell) S, Depth (ft) 4

тосапон мар		Sample	Maxa	SI A SS VZDG	St CC PT	SI A SS	St CC PT 3 MAGG. to grawe)	4	TH C	స	SI A SS	St CC PT	N SI A SS NATIVE @ 7	St CC PT	N SS A	St	SS V	St CC PT	Method:	
A 95501 743-5054 743-653			enusioM P.D.M YND=C W=Wet S=Saturated Sorganics/Shell Fragments	D	S M	مر	3	a (တ ∑ (န) ည) (<u>§</u>	ω O	00 S M	M O	M	Σ D		Σ	s w	Samplin	Analytes: Closure:
Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-0553			D=Dense VD=Very dense ASTM D-2488 Group Symbol	MD GW GP GM GC	VD MH CH OH PI	MD GWJGP GM GC	WLCLOL VD MHCHOHP		VD MH CH OH Pt. MD GW GP GM GC		MD GW GP GM GC SW SP SM SC		MD GW GP GM GC		MD GW GP GM GC SW SP SM SC M C O	VD MH CH OH Pt		VD MHCHOHP		
20.5054	元素	Sand & 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	A SA L	C SR R D	A SA L	(C)SR R D	A SA L	(F) A SA N	SR R D	F A SA L N	R D	A SA L	R R D	AS A	C SR R D V	ξ Σ	R D	Purge Volume:	s Ivieinod:
ILLI INGINETES GEORGESSENENINGONNENINGON STRUCTURA 21 VV. 4th St PO Box 1023 - Eureka, CA 95502 - 707.443.5	Logged by: Field Point Name: Drilling Method: Auger/Rod Diameter:	Sa	%Sand F=Fine M=Medium G=Coarse (Gravel)	% % c		(P) (S) (S)		() () ())) (R)	u S	O) () ()	1000	LΣ	ОШ	. Σ	O	Purge	חטוח∟
ILAJ KIRA INGARANTEN SANJENNANTAN INGINESER GEORGESTES SANJENNANTAN 21 W. 4th St PO Box 1023 · Eureka, CA 95502		Clay	Plasticity N=None L=Low M=Medium H=High Consistency \$=Soft F=Firm ST=Stiff H=Hard	NOGO E	Ŧ	ц 8 <u>л</u>	Н	A CRECEDITE	E	ガンエ	ω J	ינט	ר ט	H TO H	T O	Σ Z Z) 	M H St H		
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INGINEED 21 W. 4th B	Project Name: Arrived Project No.: 100000 Date: 100000 Driller: Loving PM: C.312		Color (Munsell)	J. Larbour	-	NS INCH	Same S	James 4	4 6	C (2)	79	-		7	COX XOS		•	181-1	Deptin to Water; Casing Type/Diameter;	nterval:
			Depth (ft)	6	9	,	7	2,6	75	The state of the s	î		7						Deptin to water: Casing Type/Dig	Screen Interval:

Location Map		Sample Other Remarks	Maxaa	SI A SS NOOT	St CC PT myred grayeled	SI	St CC PT	N SI A SS NATIVE	St CC PT	SS 4	St CC PT	SS A	St CC PT	N SI A SS	St CC PT	N SI A SS	St CC PT	SS A SS	SS Tal OC	J Method:
21 West Fourth Street Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-0553			ASTM D-2488 Group Symbol Moisture D=Dry M=Moist W=Wet S=Saturated W=Wet S=Saturated) 	MLCHOHPI W S	GW GP GM GC D (M)	MATCH OH Pt W S	GW GP GM GC D M	MHCHOHP! (W) S	က ကြက်	MCHOHP! W S	GW GP GM GC D M SW SP SM SC	MLCLOL MHCHOHP! W S	GW GP GM GC D M SW SP SM SC	MLCLOL MHCHOHPI W S	GW GP GM GC D M	ML CL OL MH CH OH Pt W S	GW GP GM GC D M	ML CL OL W S	
	Logged by: ふざこ Field Point Name: わけり Drilling Method: アチ Auger/Rod Diameter: Location: See war	Sand & Gravel	#Gravel F=Fine (<0.75") C=Coarse (>0.75") Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round SR=Sub-round R=Round Density L=Loose MD=Medium dense D=Dense VD=Very dense	LES/FINA SA L' MB	TU C(SR R D VD	(F) (F) A SA L MD G	C SR R D VD	(F) F A SA L MD G	C SR R D VD	M SA L MD G	C SR R D VD	F A SA L MD	CSR RD VD	F A SA L MD	SR R D VD	F A SA L MD	C SR R D VD	F A SA L MD	C C SR R D VD M	Purge Volume: Purge Method:
CEL SWADONWISK	Aug	Silt & Clay	%Silt M=Modium H=High M=Medium H=High Consistency S=Soft F=Firm ST=Stiff H=Hard ST=Stiff H=Hard F=Fine M=Medium		M H St H	s S	M H St	N CF SC P	M H/St/H W	٥	≥ 2	U O	"	 	Ŧ	u. vo Z	H St	w Z	M H St H	**************************************
ET W. 441 St PO Box 1	Project Name: Topology No.: Colonial Project		Depth (ft) Color (Munseil) %Clay	ر د کار		7 A.D. B	2 ,	S.S. dub (1)	>	Part le	2									

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	Project Name: Project No.: Date: Onlier:	Lyans 1975	Sar.				Logged by: Field Point Name: - Orilling Method:	Field Point Name: Logged by: Cristian Point Name: Drilling Method:	る事を	音を子		C/BHID	1						
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Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-0553			884S-M MTSA Group Symbol Moisture Salv M=Moist) ≥	0	≷	G D Se) N) <u>႐</u> ၁၉ ၃၇	×	SW SP SM SC D N	3	႐ ပ္ပ ပ္က	M	GW GP GM GC D N	>		MLCLOL WHCHOHPE W 5	
Eurek TEL:			Density L=Loose MD=Medium dense D=Dense VD=Very dense	(M)	D VD MH	L MD GW SW		S		MD OW	Q.	Sws GW 7	9	S MS QW J	D VD MH (Ø	D VD MH C	MD GWG	D VD MHC	
	で	Sand & Gravel	C=Coarse (>0.75") Shape/Angularity A=Angular SA=Sub-angular SR=Sub-round R=Round	SA	OSR R	A T	SR R	The state of the s	SR/R	S A	SR R	AS A	SR R	S.A.	SR R	F A SA L	C SR R	F A SA L	C SR R	'olume: 1ethod:
ENGINETES (1904 1923 - Eureka, CA 95502 - 707,443 5054	*Lôgged by: G.X Field Point Name: 1941) Drilling Method: (1944) Auger/Rod Diameter: Location:	Sand	C=Coarse %Gravel F=Fine (<0.75")		21,	~	R	7	e l	ي پا	2	LΣ			0				ΣÛ	Purge Volume: Purge Method:
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ENGINE 21 W. 4ch	Project Name: Project No.: Date: Driller: PM:		Color (Munsell)	d brown	L'oran	<u></u>	2000	July Control	Li 6"	wottes	333		2,					******		Depur to Water: Casing Type/Diameter: Screen Interval:
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•		Silt	Silt & Clay				Sand 8	Sand & Gravel			L				Sample	Other Remarks
Depth (ft) - Color (Munsell)	үсіЭ%	NIS%	Plasticity N=None L=Low	M=Medium H=High Çonsistency	mi=== flos=2 S=H=H #ijs=T2	%Sand F=Fine M=Medium C=Coarse	%Gravel F=Fine (<0.75") ("7.0<) 9s1so	Shape/Angularity A=Augula: AS=Aupana-angular	SR=Sub-round R=Round Density L=Loose MD=Medium dense	ASTINITY (157 - CT 32/15/2 C	Moisture D=D vy M=Moiet	D=Dry M=Moist W=Wet S=Saturated WOrganics/Shell Fragments	robC Free SI=Slight SI=Strong	OlC (pmm)	=Si=Split spoon C=Continuous Cores T=Push tube	Max and Average rock size
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госанон мар		Sample Other Bemarks	4=None SI=Slight 5t=Strong Mmm) Auger S=Spiit spoon CCContinuous Cores T=Push tube	SI A SS FI	St CC PT Glassical channel to	SI A SS ATT	St CC PT NATURE (2) 2	Si A Si	St CC PT	ī	St CC PT	SS A SS	St CC PT	SS A	St CC PT	SI A SS	St CC PT	SI A SS	is of		
A 95501) 443-5054) 443-0553			P=Dry M=Moist N=Wet S=Saturated %Organics/Shell Fragments) "			Z		N	S	z. Z	S	Z	S	z Z		Σ.	S	1	Closure:
Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-0553			884S-O MTSA Group Symbol Woisture	GW GP GM GC D	MH CH OH P! W	GW GP GM GC D		GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt W	GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt W	GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt W	GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt	GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt W	GW GP GM GC D SW SP SM SC	ML CL OL MH CH OH Pt W		
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ANGINEES GOODS STANDON NO WATER TO STAND STANDS STA	Logged by Field Point Name Drilling Method Auger/Rod Diameter	ď	%Sand F=Fine M=Medium C=Coarse %Gravel	W I	2	<u>6</u> EE ©∑	2	,		u ∑				т Σ		•		ш ∑		#	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
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ENGINE 21 W. 4th	Project Name: でかた Project No.: 1763 Date: 19 (): Driller: 1944:		Color (Munsell)	C.C.		4 6. 12 .			DUFFER KI											Deptin to water: Casing Type/Diameter: Preen Interval:	
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Project Name: Project No.: Date: Date:	Tr 24, 7	633 15/06				Logged by: Field Point Name: Drilling Method: Auger/Rod Diameter:	Logged by: eld Point Name; 'Drilling Method: r/Rod Diameter;	できる。	产工								
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Eureka, CA 95501 TEL: (707) 443-5054 FAX: (707) 443-665		Sample	L=Loose MD=Medium dense D=Dense VD=Very dense D=Dense VD=Very dense Group Symbol Moisture D=Dry M=Moist M=Nort S=Saturated W=Wet S=Saturated W=Wet S=Saturated S=Saturated M=Worganics/Shell Fragments S=Split spoon St=Strong PID (pmm) PID (pmm) St=Strong S=Split spoon S=Nuger S=Summinuous Cores S=Split spoon S=Summinuous Cores	(MD) (SW SP SM SC D (M) N SI A SS	ΩΛ	SS A IS N	ΛD	A Si N	ΩŅ	MD GW GP GM GC D M N SI A SS SW SP SM SC	VD MHCHOHP: W	MD GW GP GM GC D M N SI A SS	MH CH OH Pt W	MD GW GP GM GC D M N SI A SS SW SP SM SC	VD MHCHOHPI W S St CC PT	MD GW GP GM GC D M N SI A SS	VD MH CH OH PR W S St CC PT	W N	VD MH CHOH Pt W S St CC PT	Sampling Method:	
MICHOSINS BY NEWS	Logged by: 角尾 Field Point Name: 角扎U Drilling Method: 另上U Auger/Rod Diameter:	Sand & Gravel	Talupus-du2=A2 1slupnA=A	¥ (€	S G WO GGR BD	# (X	_	Z F F SA L	C SR	M SA	C SR R	N A SA M	C SR R	A A SA L	C SR	T AS A		F A SA L	C C SR R D	Purge Volume:	Pirae Method:
ENGINEERS GEOVOICES ENVERNMENTAL STATEMENT OF THE STATEMENT OF STATEME	anke 823 13/08 17/08	Silt & Clay	%Clay %Silt M=Mone L=Low M=Medium H=High S=Soft F=Firm S=Soft H=Hard		M H St		H St H W	S CE	W H (St) H	Z Z	ΣΖ	ר	T L	<u>-</u>			τ Σ	и. Ул 	M H St H		
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Attachment 4



April 01, 2008

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

Attn: Chris Watt

RE: 6833 Franke Phase II

Invoice No.: 73600 PO No.:

Order No.:

ELAP No. 1247-Expires July 2008

0803390

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	BH1-1'
02A	BH2-0.75'
03A	BH3-1'
04A	BH4-2.5-3'
05A	BH5
06 A	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 wetweight 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

Date: 01-Apr-2008

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>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	<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>	Result	<u>Limit</u>	<u>Units</u>	$\overline{\mathbf{DF}}$	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	1.0	μg/g	1.0	3/20/08	3/22/08
TPHC Motor Oil	ND	10	μ g /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 1D: 0803390-03A

Matrix: Soil

Test Name: TPH as Diesel/Motor Oil

Reference: EPA 3550/EPA 8015B

<u>Parameter</u>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	<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 1D: 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>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	Analyzed
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

Test Name: LFA 62006		Kelei	ence: EPA C	0300/0200	Ь	
<u>Parameter</u>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	Analyzed
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-Dichlorоргореле	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

Page 2 of 8

Date:	01-Apr-2008			A	ANALYTI	CAL REPORT
WorkOrder:	0803390			-	11 (11111)	
Isopropylbenzei	ne	ND	1.0	μg/L	1.0	3/24/08
Bromobenzene		ND	1.0	μg/L	1.0	3/24/08
n-Propylbenzen	e	ND	1.0	μg/L	1.0	3/24/08
1,1,2,2-Tetrachl	loroethane	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-Trichlorop	ropane	ND	2.0	μg/L	1.0	3/24/08
1,3,5-Trimethylb	oenzen e	ND	1.0	μg/L	1.0	3/24/08
tert-Butylbenzer	ne	ND	1.0	μg/L	1.0	3/24/08
1,2,4-Trimethylb	penzene	ND	1.0	μg/L	1.0	3/24/08
sec-Butylbenzer	ne	ND	1.0	μg/L	1.0	3/24/08
4-Isopropyltolue	ene	ND	1.0	μg/L	1.0	3/24/08
1,3-Dichloroben	zene	ND	1.0	μg/L	1.0	3/24/08
1,4-Dichloroben	zene	ND	1.0	μg/L	1.0	3/24/08
n-Butylbenzene		ND	1.0	μg/L	1.0	3/24/08
1,2-Dichloroben	zene	ND	1.0	μg/L	1,0	3/24/08
1,2-Dibromo-3-c	chloropropane (DBCP)	ND	2.0	μg/L	1.0	3/24/08
1,2,4-Trichlorob	enzene	ND	2.0	μg/L	1.0	3/24/08
Hexachlorobuta	diene	ND	2.0	μg/L	1.0	3/24/08
Naphthalene		ND	2.0	μg/L	1.0	3/24/08
1,2,3-Trichlorob	enzene	ND	2.0	μg/L	1.0	3/24/08
Surrogate: 1,3	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: Di	bromofluoromethane	104	80.4-114	% Rec	1.0	3/24/08

Test Name: TPH as Gasoline Reference: LUFT/EPA 8260B Modified

96.9

Surrogate: Toluene-d8

<u>Parameter</u>	Result	<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

80-120

% Rec

1.0

3/24/08

Date:

01-Apr-2008

WorkOrder: 0803390

ANALYTICAL REPORT

Received: 3/14/08

Collected: 3/13/08 0:00

Lab ID: 0803390-06A

Client Sample ID: BH9-2'

Matrix: Groundwater

Test Name: EPA 8260B Reference: EPA 5030B/8260B

Test Name: EPA 82008		Refer	ence: EPA 5	030B/8260	В	
<u>Parameter</u>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	<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-Dichlaropropene	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

Page 4 of 8

Date:	01-Apr-2008			Δ	NALX	TICAL R	EPORT
WorkOrder:	0803390			1	KT AVYTO 1	ITCALI	EI OILI
isopropylbenz	епе	ND	1.0	µg/L	1.0		3/24/08
Bromobenzen	е	ND	1,0	μg/L	1.0		3/24/08
n-Propylbenze	ene	ND	1.0	μg/L	1.0		3/24/08
1,1,2,2-Tetrac	hloroethane	ND	1.0	μg/L	1.0		3/24/08
2-Chlorotoluer	ne	ND	1.0	μg/L	1.0		3/24/08
4-Chlorotoluer	ne	ND	1.0	μg/L	1.0		3/24/08
1,2,3-Trichloro	propane	ND	2.0	μg/L	1.0		3/24/08
1,3,5-Trimethy	lbenzene	ND	1.0	μg/L	1.0		3/24/08
tert-Butylbenze	ene	ND	1.0	μg/L	1.0		3/24/08
1,2,4-Trimethy	lbenzene	ND	1.0	μg/L	1.0		3/24/08
sec-Butylbenz	еле	ND	1.0	μg/L	1.0		3/24/08
4-Isopropyltolu	iene	ND	1.0	μg/L	1.0		3/24/08
1,3-Dichlorobe	enzene	ND	1.0	μg/L	1.0		3/24/08
1,4-Dichlorobe	enzene	ND	1.0	μg/L	1.0		3/24/08
n-Butylbenzen	e	ND	1.0	μg/L	1.0		3/24/08
1,2-Dichlorobe	enzene	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-Trichloro	benzene	ND	2.0	μg/L	1.0		3/24/08
Hexachlorobut	adiene	ND	2.0	µg/L	1.0		3/24/08
Naphthalene		ND	2.0	µg/L	1.0		3/24/08
1,2,3-Trichloro	benzene	ND	2.0	µg/L	1.0		3/24/08
Surrogate: 1	1,2-Dichloroethane-d4	106	80-120	% Rec	1.0		3/24/08
Surrogate: 1	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: 1	Foluene-d8	96,9	80-120	% Rec	1.0		3/24/08
Test Name:	TPH as Gasoline		Refer	ence: LUFT	T/EPA 8260	B Modified	
<u>Parameter</u>		Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	<u>Analyzed</u>
TPHC Gasolin	e	ND	50	μg/L	1.0		3/24/08
Client Sample	e ID : BH9-1.5		Rec	eived: 3/14/	08	Collected: 3/13/	08 0:00
Lab ID: 0803	3390-07A Matri	k: Soil					
Test Name:	TPH passed through Silic	a Gel Column	Refer	ence: EPA	3550/3630/	GCFID/8015B	
Parameter		Result	Limit	<u>Units</u>	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	15	2.0	<u>μ</u> g/g	1.0	3/20/08	3/28/08
TPHC Motor O	·	96	10	μg/g	1.0	3/20/08	3/28/08

Date:

01-Арг-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

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

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

Parameter Result <u>Limit</u> **Units** DF Extracted Analyzed TPHC Diesel (C12-C22) 1.0 3/31/08 ND 1.0 3/31/08 μg/g 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>	$\overline{\mathbf{DF}}$	Extracted	<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

Test Name: EPA 8250B		Refer	ence: EPA :	5030B/8260	В	
<u>Parameter</u>	Result	<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	μ g /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	μ g /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
a-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

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Date:	01-Apr-2008				ANALYTIC	CAL REPORT
WorkOrder:	0803390					
Isopropylbenzer	ne	ND	1.0	μg/L	1.0	3/25/08
Bromobenzene		ND	1.0	μg/L	1.0	3/25/08
n-Propylbenzen	е	ND	1.0	μg/L	1.0	3/25/08
1,1,2,2-Tetrachl	oroethane	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-Trichlorop	ropane	ND	2.0	μg/L	1.0	3/25/08
1,3,5-Trimethylb	penzene	ND	1.0	μg/L	1.0	3/25/08
tert-Butylbenzer	ne	ND	1.0	μg/L	1.0	3/25/08
1,2,4-Trimethylb	penzene	ND	1.0	μg/L	1.0	3/25/08
sec-Butylbenzer	ne	ND	1.0	μg/L	1.0	3/25/08
4-Isopropyltolue	ne	ND	1.0	μg/L	1.0	3/25/08
1,3-Dichloroben	zene	ND	1.0	μg/L	1.0	3/25/08
1,4-Dichloroben	zene	ND	1.0	μg/L	1.0	3/25/08
n-Butylbenzene		ND	1.0	μg/L	1.0	3/25/08
1,2-Dichloroben	zene	ND	1.0	μg/L	1.0	3/25/08
1,2-Dibromo-3-c	chloropropane (DBCP)	ND	2.0	μg/L	1.0	3/25/08
1,2,4-Trichlorob	enzene	ND	2.0	µg/∟	1.0	3/25/08
Hexachlorobuta	diene [.]	ND	2.0	μg/L	1.0	3/25/08
Naphthalene		ND	2.0	µg/L	1.0	3/25/08
1,2,3-Trichlorob	enzene	ND	2.0	μg/L	1.0	3/25/08
Surrogate: 1,2	2-Dichloroethane-d4	106	80-120	% Rec	1.0	3/25/08
Surrogate: 1,4	4-Dichlorobenzene-d4	103	42.1-150	% Rec	1.0	3/25/08
Surrogate: Di	bromofluoromethane	105	80.4-114	% Rec	1.0	3/25/08
Surrogate: To	oluene-d8	96.8	80-120	% Rec	1.0	3/25/08

Test Name:TPH as GasolineReference:LUFT/EPA 8260B ModifiedParameterResultLimitUnitsDFExtractedAnalyzed

50

μg/L

1.0

ND

TPHC Gasoline

3/25/08

LACO Associates CLIENT:

0803390 Work Order: Project:

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Method Blank

QC SUMMARY REPORT

Date: 01-Apr-2008

Client ID: Run ID: ORGCMS2, 200324A Sequor 732528 Analyse Ling SPK value SPK Ret Val % Rec LowLinit HighLinit RPD Ret Val % RPD RPD III Q Obdictoronethane ND 1.0	Sample ID: MB 032408	38 Batch ID; R51626	Test Code: 8260W	8260W Units: µg/L	Analysis Da	Analysis Date 3/24/08 7:22:00 AM	Prep Date:	
PRESURE Limit SPK value SPK Ref Val % Rec LowLinit HighLinit RPD Ref Val %RPD RPDLinit HighLinit RPD Ref Val %RPD RPDLinit HighLinit RPD Ref Val %RPD RPDLinit RPDLinit HighLinit RPD Ref Val %RPD RPDLinit RPDLinit RPD Ref Val %RPD RPDLinit RPDLinit RPDLinit RPD Ref Val %RPD RPDLinit RPD	Client ID:		Run ID:	ORGCMS2_080324A	SeqNo:	752528		
ND 1.0 ND ND 1.0 ND ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0	Analyte	Result	Limit		LowLimit			nit Qual
ND 2.0 ND 1.0 Dichlorodifluorometha	A NAMES OF THE PARTY OF THE PAR	1.0	A A A A A A A A A A A A A A A A A A A	The state of the s	The state of the s			
ND 1.0 ND ND ND ND ND ND ND N	Chloromethane	QN	2.0					
ND 1.0 ND 1.0	Vinyl chloride	QN	1.0					
ND 1.0 ND 1.0	Bromomethane	QN	1.0					
ND 1.0 ND ND ND ND ND ND ND N	Chloroethane	QN	1.0					
ND 1.0 ND 1.0	Trichlorofluoromethan		1.0					
ND 2.0 1.0	1,1-Dichloroethene	QN	1.0					
ND 1.0	Methylene chloride	QN	2.0					
(MTBE) ND 1.0 E) ND 10 CD 1.0 ND 1.	trans-1,2-Dichloroethe		1.0					
ND 10 ND 10 ND 1.0	Methyl tert-butyl ether		1.0					
E) ND 1.0 ND	Tert-butyl alcohol (TB)		4					
ND 1.0 ND 1.0	Di-isopropyl ether (DIF		1.0					
TAME ND	1,1-Dichloroethane	QN	1.0					
ND 1.0 1.0 ND	Ethyl tert-butyl ether (I		1.0					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 Analyte detected at the Reporting Limit R - RPD outside accepted recovery limits Analyte detected below quantitation limits R - RPD outside accented recovery limits	cis-1,2-Dichloroethen€		1.0					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 Analyte detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits Analyte detected below quantitation limits R - RPD outside accepted recovery limits	2,2-Dichloropropane	QV	1.0					
m ND 1.0 etrachloride ND 1.0 shloroethane ND 1.0 oroethane ND 1.0 athene ND 1.0 oropropane ND 1.0 oropropane ND 1.0 shloromethane ND 1.0	Bromochloromethane		1.0					
etrachloride ND 1.0 inforcethane ND 1.0 oroethane ND 1.0 sthene ND 1.0 oropropane ND 1.0 oropropane ND 1.0 shloromethane ND 1.0 informethane ND 1.0 shloromethane ND 1.0	Chloroform	QN	1.0					
Inderoethane ND 1.0 Propropene ND 1.0 In methyl ether (TAME) ND 1.0 Processing the new thane ND 1.0 Propropane ND 1.0 Propropane ND 1.0 Phoromethane ND 1.0	Carbon Tetrachloride	QN	1.0					
oropropene ND 1.0 I methyl ether (TAME) ND 1.0 oroethane ND 1.0 athene ND 1.0 oropropane ND 1.0 shloromethane ND 1.0 inhoromethane ND 1.0 shloromethane ND 1.0	1,1,1-Trichloroethane	QN	1.0					
I methyl ether (TAME) ND 1.0 oroethane ND 1.0 athene ND 1.0 nethane ND 1.0 oropropane ND 1.0 shloromethane ND 1.0 indrawethane ND 1.0 shloromethane ND 1.0 and the Reporting Limit S - Spike Recovery outside accepted recovery limits J - Analyze detected below quantitation limits R - RPD outside accepted recovery limits	1,1-Dichloropropene	QN	1.0					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 S - Spike Recovery outside accepted recovery limits S - Spike Recovery limits S - Spike	Benzene	QN	0.50					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits	Tert-amyl methyl ethe		1.0					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 ND 1.0 Analyte detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits	1,2-Dichloroethane	QV	1.0					
ND 1.0 ND 1.0 ND 1.0 ND 1.0 - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits R - RPD ontside accepted recovery limits	Trichloroethene	QN	1.0					
ND 1.0 ND 1.0 ND 1.0 - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits R- RPD outside accepted recovery limits	Dibromomethane	QV	1.0					
ND 1.0 - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits Randvie detected below quantitation limits R - RPD ontside accepted recovery limits	1,2-Dichloropropane	QV	1.0					
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits J - Analyte detected below quantitation limits R - RPD ontside accepted recovery limits	Bromodichloromethan		1.0					
	**************************************	D - Not Detected at the Reporting Limit		S - Spike Recovery outs	ide accepted recovery limits	B - Analyte detected in	the associated Method	l Blank
	- [. Analyte detected helow quantitation lin	nits	R - RPD outside accente	ed recovery limits			

CLIENT:	LACO Associates		***************************************		
Work Order:	0803390				QC SUMMARY REPORT
Project:	6833 Franke Phase II				Method Blank
cis-1,3-Dichloropropene)ene	ND	1.0	To complete the control of the contr	
Toluene		Ω	0.50		
Tetrachioroethene		N	1.0		
trans-1,3-Dichloropropene	горепе	Ω	1.0		
1,1,2-Trichloroethane	5	Ω	1.0		
Dibromochloromethane	iane	Ω	1.0		
1,3-Dichloropropane	a	N	1.0		
1,2-Dibromoethane (EDB)	(EDB)	Q.	2.0		
Chlorobenzene		Ω	1.0		
Ethylbenzene		Q	0.50		
1,1,1,2-Tetrachloroethane	ethane	2	1.0		
m,p-Xylene		N	0.50		
o-Xylene		S	0.50		
Bromoform		2	1.0		
Styrene		2	1.0		
Isopropylbenzene		2	1.0		
Bromobenzene		2	1.0		
n-Propylbenzene		0.07916	1.0		7
1,1,2,2-Tetrachloroethane	ethane	2	1.0		
2-Chlorotofuene		2	1.0		
4-Chlorotoluene		2	1.0		
1,2,3-Trichloropropane	ane	2	2.0		
1,3,5-Trimethylbenzene	сепе	2	1.0		
tert-Butylbenzene		2	1.0		
1,2,4-Trimethylbenzene	zene	0.1172	1.0		7
sec-Butylbenzene		2	1.0		
4-Isopropyltoluene		2	1.0		
1,3-Dichlorobenzene	œ.	2	1.0		
1,4-Dichlorobenzene	v	2	1.0		
n-Butylbenzene		2	1.0		
1,2-Dichlorobenzene	u	2	1.0		
1,2-Dibromo-3-chloropropane (DBCP)	ropropane (DBCP)	2	2.0		
1,2,4-Trichlorobenzene	ene	2	2.0		
Hexachlorobutadiene	ъ́	2	2.0		
Oualifiers:	ND - Not Detected at the Reporting Limit	porting Limit		S - Spike Recovery outside accepted recovery limits	B - Analyte detected in the associated Method Blank
·					
	J - Analyte detected below quantitation limits	uantitation limits		K - Ki'D outside accepted recovery limits	

CLIENT:	LACO Associates	ones of the second of the seco		The state of the s	The country of the co			QC SUN	QC SUMMARY REPORT	PORT
Project:	6833 Franke Phase II								Metho	Method Blank
Naphthalene 1,2,3-Trichlorobenzene 1,2-Dichloroethane-d4	ND sne ND 44 0.943	2.0 2.0 0.10	1.00	0	94.3%	08	120			
1,4-Dichlorobenzene-d4 Dibromofluoromethane Toluene-d8	T	0.10	1.00		92.5% 96.5% 97.0%	80 80	150 114 120	000		
Sample ID: MB 032408 Client ID:	408 Batch ID: R 51632	Test Code: Run ID:	GASW-MS Units: ORGCMS2_080324C	Units: µg/L 80324C		Analysis Date SeqNo:		3/24/08 7:22:00 AM 752650	Prep Date:	
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit RP	RPD Ref Val	%RPD RPDLimit	nit Qual
TPHC Gasoline	16.06	50								7
Sample ID: MB-19957 Client ID:	57 Batch ID: 19957	Test Cade: Run ID:	SGTPDMS Uni	Units: µg/g 1327C		Analysis SeqNo:	Analysis Date 3/28/08 12:18:43 AM SeqNo: 753610	I2:18:43 AM	Prep Date: 3/20/08	88
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit RF	RPD Ref Val	%RPD RPDLimit	nit Qual
TPHC Diesel (C12-C22) TPHC Mator Oil		2.0	The state of the s	William Parks			- 100 (MO) (MO) (MO) (MO) (MO) (MO) (MO) (MO)			J J
Sample ID: MB-20027 Client ID:	27 Batch ID: 20027	Test Code: Run ID:	SGTPDMS Uni	Units: µg/g 1331A		Analysis SeqNo:	Analysis Date 3/31/08 7:58:51 PM SeqNo: 754026	7:58:51 PM	Prep Date: 3/31/08	88
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit RP	RPD Ref Val	%RPD RPDLimit	iit Qual
TPHC Diesel (C12-C22) TPHC Mator Oil	ND ND	1.0								
Sample ID: MB-19956 Client ID:	56 Batch ID: 19956	Test Code: Run ID:	TPHDMS Ur ORGC7_080321B	Units: µg/g 21B		Analysis Date SeqNo:	Date 3/21/08 1 752162	3/21/08 10:20:03 PM 752162	Prep Date: 3/20/08	80
Anaiyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit RP	RPD Ref Val	%RPD RPDLimit	ıit Qual
TPHC Diesel (C12-C22) TPHC Motor Oil	0.6374 ND	1.0		The state of the s			Add property and the desired			
Qualifiers:	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits	f mits	S - Sp. R - RF	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits	e accepted recorrect	very limits	B - An	nalyte detected in	B - Analyte detected in the associated Method Blank	Blank

LACO Associates 0803390 CLIENT:

Work Order:

6833 Franke Phase II Project:

Laboratory Control Spike QC SUMMARY REPORT

Date: 01-Apr-2008

Sample ID: LCS-08163	Batch ID: R51626	Test Code: 8260W	8260W	Units: µg/L		Analysis	Date 3/24/	Analysis Date 3/24/08 4:12:00 AM	Prep Date:		
Client ID:		Run ID:	ORGCMS2_080324A	80324A		SeqNo:	752526	56			
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD RP	RPDLimit	Qual
Dichlorodifluoromethane	18.92	1.0	20.0	0	94.6%	5.	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%	9	134	0			
Bromomethane	15.70	1.0	20.0	0	78.5%	9	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%	8	120	0			တ
trans-1,2-Dichloroethene	18.88	1.0	20.0	0	94.4%	78	114	0			
Methyl tert-butyl ether (MTBE)	TBE) 17.41	1.0	20.0	0	87.1%	72	125	0			
Tert-butyl alcohol (TBA)	405.3	5	400	0	101%	99	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)	3E) 18.8G	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%	99	145	0			
Bromochloromethane	19.54	1.0	20.0	0	97.7%	74	119	0			
Chlaroform	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%	88	120	0			
Tert-amyl methyl ether (TAME)	AME) 19.07	1.0	20.0	0	95.4%	9	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%	84	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%	11	120	0			
Qualifiers: ND-	ND - Not Detected at the Reporting Limit		iqS - Spi	S - Spike Recovery outside accepted recovery limits	accepted rec	overy limits	B	B - Analyte detected in the associated Method Blank	the associated Mo	cthod Blan	ا ا
J - Ar	J - Analyte detected below quantitation limits	nits	R - RP	R - RPD outside accepted recovery limits	recovery limit	io.					

CLIENT: LACO Associates

Work Order: 0803390

Project: 6833 Franke Phase II

Laboratory Control Spike

QC SUMMARY REPORT

of a Diablement of the Control of th	0, 0,	7	0 00		707	8		
cis-1,3-Dicnidiapropene	16.49	<u>-</u>	20.0	5	92.4%	79	142	0
Toluene	21.62	0.50	20.0	0	108%	75	115	0
Tetrachloroethene	20.55	1.0	20.0	0	103%	7.	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%	99	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	%2'66	70	118	0
o-Xylene	20.06	0.50	20.0	0	100%	75	112	0
Вготогот	22.67	1.0	20.0	0	113%	65	126	0
Styrene	19.31	1.0	20.0	0	99.96	99	111	0
Isopropylbenzene	19.85	1.0	20.0	0	99.3%	89	120	0
Bromobenzene	20.00	1.0	20.0	0	100%	29	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%	9	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%	7.1	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-IsopropyItoluene	18.98	1.0	20.0	0	94.9%	75	120	0
1,3-Dichlorobenzene	17.72	1.0	20.0	0	88.6%	29	131	0
1,4-Dichlarobenzene	17.56	1.0	20.0	0	87.8%	29	121	0
n-Butylbenzene	18.38	1.0	20.0	0	91.9%	92	117	0
1,2-Dichlorobenzene	17.63	1.0	20.0	0	88.2%	9	120	0
1,2-Dibromo-3-chloropropane (DBCP)	19.02	2.0	20.0	0	95.1%	20	123	0
1,2,4-Trichlorabenzene	19.19	2.0	20.0	0	%0.96	64	125	0
Hexachlorobutadiene	20.77	2.0	20.0	0	104%	72	128	0
Qualifiers: ND - Not Detected at the Reporting Limit	Reporting Limit		S - Spike Rec	covery outside	Spike Recovery outside accepted recovery limits	ry limits	B - Ana	- Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits

CLIENT:	LACO Associates	The second secon		THE PROPERTY OF THE PROPERTY O	WWW.199910.00A.1/7		and the second s	0	OC SUMMARY REPORT
Work Order: Project:	0803390 6833 Franke Phase II								Laboratory Control Spike
Naphthalene		19.28	2.0	20.0	0	96.4%	57	133	0
1,2,3-Tríchlorobenzene	пхепе	18.52	2.0	20.0	0	92.6%	56	127	0
1,2-Dichloroethane-d4	ne-d4	0.919	0.10	1.00	0	91.9%	80	120	0
1,4-Dichlorobenzene-d4	ene-d4	0.954	0.10	1,00	0	95.4%	42	150	0
Dibromofluoromethane	sthane	0.937	0.10	1.00	0	93.7%	80	114	0
Toluene-d8		0.965	0.10	1.00	0	%5'96	80	120	0
Qualifiers:	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits	orting Limit antitation limits		S - Spike Recovery outside accepted reco R - RPD outside accepted recovery limits	overy outside a de accepted re	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits	/ limits	B - Ana	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

Sample ID: LCSD-08163	08163	Batch ID: R51626	Test Code: 8260W	8260W	Units: µg/L		Analysis	Date 3/25/	Analysis Date 3/25/08 3:15:00 AM	Prep Date:	ate:	
Client ID:			Run ID:	ORGCMS2_080324A	180324A		SeqNo:	752537	37	-		
Analyte		Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	hane	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%	9	134	16.4	8.31%	20	
Bromomethane		17.97	1.0	20.0	0	89.8%	90	144	15.7	13.5%	20	
Chloroethane		17.95	1.0	20.0	0	89.7%	69	127	15.0	18.2%	20	
Trichlorofluoromethane	ane	20.87	1.0	20.0	0	104%	71	131	16.5	23.4%	20	œ
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%	8	120	15.7	14.7%	20	
trans-1,2-Dichloroethene	thene	20.68	1.0	20.0	0	103%	78	114	18.9	9.10%	20	
Methyl tert-butyl ether (MTBE)	ner (MTBE)	18.35	1.0	20.0	0	91.7%	72	125	17.4	5,24%	20	
Tert-butyl alcohol (TBA)	TBA)	454.4	10	400	0	114%	99	144	405	11.4%	20	
Di-isopropyl ether (DIPE)	OIPE)	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%	8	120	17.4	12.4%	20	
Ethyl tert-butyl ether (ETBE)	r (ETBE)	18.27	1.0	20.0	0	91.4%	49	126	18.9	3.15%	20	
cis-1,2-Dichloroethene	ane	20.91	1.0	20.0	0	105%	73	112	19.2	8.44%	20	
2,2-Dichloropropane	Φ	14.54	1.0	20.0	0	72.7%	99	145	20.3	33.3%	20	œ
Bromochloromethane	<u>e</u>	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	je Je	21.57	1.0	20.0	0	108%	72	127	20.3	6.14%	20	
1,1,1-Trichloroethane	je Pe	21.73	1.0	20.0	0	109%	74	126	20.2	7.10%	20	
1,1-Dichloropropene	Ф	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)	her (TAME)	18.27	1.0	20.0	0	91.3%	9	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%	84	120	19.6	9.24%	20	
1,2-Dichloropropane	Q J	20.01	1.0	20.0	0	100%	11	117	19.5	2.69%	20	
Bromodichloromethane	lane	20.70	1.0	20.0	0	103%	77	120	19.2	7.61%	20	
cis-1,3-Dichloropropene	эепе	17.86	1.0	20.0	0	89.3%	62	142	18.5	3.47%	20	
Qualifiers:	ND - Not De	ND - Not Detected at the Reporting Limit		S - Sp	S - Spike Recovery outside accepted recovery limits	e accepted rec	overy limits	B	B - Analyte detected in the associated Method Blank	in the associat	ed Method Bla	nk
	J - Analyte dı	J - Analyte detected below quantitation limits	iis	R - R	R - RPD outside accepted recovery limits	recovery limit	ıσ					

CLIENT: LACO Associates
Work Order: 0803390

Work Order: 0803390

Project: 6833 Franke Phase II

QC SUMMARY REPORT
Laboratory Control Spike Duplicate

loinene		20.80	0,50	20.0	0	104%	75	115	21.6	3.88%	20
Tetrachloroethene	d J	19.25	1.0	20.0	0	%6.3%	71	123	20.6	6.53%	20
trans-1,3-Dichloropropene	propene	17.85	1.0	20.0	0	89.2%	74	126	20.1	11.7%	20
1,1,2-Trichloroethane	lane	20.32	1.0	20.0	0	102%	2.2	121	21.3	4.89%	20
Dibromochloromethane	thane	21.88	1.0	20.0	0	109%	72	120	22.9	4.59%	20
1,3-Dichloropropane	ane	20.29	1.0	20.0	0	101%	73	123	21.2	4.27%	20
1,2-Dibromoethane (EDB)	те (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%	88	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	roethane	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	%2'96	70	118	39.9	3.05%	20
o-Xylene		20.35	0.50	20.0	0	102%	75	112	20.1	1.44%	20
Bromoform		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	<i>r</i> .	20.03	1.0	20.0	0	100%	80	120	19.8	0.900%	20
Bromobenzene		20.38	1.0	20.0	0	102%	29	11	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	roethane	18.67	1.0	20.0	0	93.3%	9	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%	7	120	17.8	3.26%	20
1,2,3-Trichloropropane	pane	19.60	2.0	20.0	0	%0'86	8	129	18.6	5.16%	20
1,3,5-Trimethylbenzene	ınzene	19.78	1.0	20.0	0	98.9%	7.5	113	19.0	3.80%	20
tert-Butylbenzene	•	19.77	1.0	20.0	0	98.9%	92	128	19.1	3.49%	20
1,2,4-Trimethylbenzene	ınzene	19.70	1.0	20.0	0	98.5%	23	128	18.8	4.67%	20
sec-Butylbenzene	r.	18.89	1,0	20.0	0	94.4%	71	123	18.1	4.20%	20
4-IsopropyItoluene	Đ	19.52	1.0	20.0	0	%9'.26	75	120	19.0	2.79%	20
1,3-Dichlorobenzene	ene	18.54	1.0	20.0	0	92.7%	29	131	17.7	4.50%	20
1,4-Dichlorobenzene	ene	18.15	1.0	20.0	0	%2'06	29	121	17.6	3.29%	20
n-Butylbenzene		18.71	1.0	20.0	0	93.5%	9/	117	18.4	1.78%	20
1,2-Dichlorobenzene	епе	18.50	1.0	20.0	0	92.5%	99	120	17.6	4.83%	20
1,2-Dibromo-3-ch	,2-Dibromo-3-chloropropane (DBCP)	20.14	2.0	20.0	0	101%	70	123	19.0	5.75%	20
1,2,4-Trichlorobenzene	пzепе	19.30	2.0	20.0	0	%5'96	9	125	19.2	0.575%	20
Hexachforobutadiene	iene	20.46	2.0	20.0	0	102%	72	128	20.8	1.49%	20
Naphthalene		20.00	2.0	20.0	0	100%	22	133	19.3	3.66%	20
Qualifiers:	ND - Not Detected at the Reporting Limit	Reporting Limit		S - Spike Re	covery outside	S - Spike Recovery outside accepted recovery limits	ry limits	B - An	alyte detected in	- Analyte detected in the associated Method Blank	1ethod Blank
	J - Analyte detected below quantitation limits	v quantitation limits		R - RPD outs	R - RPD outside accepted recovery limits	ccovery limits					
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: rder:	LACO Associates 0803390				The state of the s		THE PARTY OF THE P	QC SUMMARY REPORT	IMAR	Y REPC	RT
Project: 6	6833 Franke Phase II							Laboratory Control Spike Duplicate	ontrol	pike Dup	ıcate
1,2,3-Trichlorobenzene	19.02	2.0	20.0	0	95.1%	56	127	18.5	2.63%	20	
1,2-Dichloroethane-d4	1.06	0.10	1.00	0	106%	80	120	0.919	14.3%	20	
1,4-Dichlorobenzene-d4		0.10	1.00	0	89.8%	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	4 Batch ID: R51632	Test Code:	e: GASW-MS	Units: µg/L		Analysis	Date 3/24/(Analysis Date 3/24/08 5:47:00 AM	Prep Date:	ate:	
Client ID:		Run ID:	ORGCMS2_080324C	80324C		SeqNo:	752648	æ			
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	l64 Batch ID: R51632	Test Code:	GASW-MS	Units: µg/L		Analysis	Date 3/25/0	Analysis Date 3/25/08 3:47:00 AM	Prep Date:	ate:	
Client ID:		Run ID:	ORGCMS2_080324C	80324C		SeqNo:	752657	7	•		
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	7 Batch ID: 19957	Test Code;	SGTPDMS	Units: µg/g		Analysis	Date 3/27/0	Analysis Date 3/27/08 11:07:44 PM	Prep Da	Prep Date: 3/20/08	
Client ID:		Run ID:	ORGC14_080327C	1327C		SeqNo:	753608	8			
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22) TPHC Motor Oil	2) 12.09 23.82	2.0	10.0 20.0	0	121%	59	179 158	0	THE THE PARTY OF T		
Sample ID: LCSD-19957	157 Batch ID: 19957	Test Code:	SGTPDMS Uni	Units: µg/g		Analysis Date		3/27/08 11:31:23 PM	Prep Da	Prep Date: 3/20/08	
Analyte	Recult	7 in 15.	SPK value	SPK Ref Val	д М	Sequiro.	Enoce /	8 800 80f Val	, , ,	## E	2
	The state of the s			10000	Na Nec	רטארוווווו		NPD NGI VAI	חבליפ	ארטבווווו	E I
TPHC Diesel (C12-C22)		2.0	10.0	0	128%	23	179	12.1	5.73%	15	
TPHC Mator Oil	26.27	10	20.0	0	131%	74	158	23.8	9.78%	5	

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

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B - Analyte detected in the associated Method Blank

LACO Associates CLIENT:

0803390 Work Order:

6833 Franke Phase II Project:

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Laboratory Control Spike

Sample ID: LCS-20027	Batch ID: 20027	Test Code:	Test Code: SGTPDMS	Units: µg/g		Analysis	Date 3/31/	Analysis Date 3/31/08 6:46:08 PM	Prep Da	Prep Date: 3/31/08	
Client ID:		Run ID:	ORGC14_080331A	1331A		SeqNo:	754025	ro.			
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	High∟imit	LowLimit HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22) TPHC Motor Oil	8.345	1.0	10.0	0 0	83.4% 87.4%	59	179	0			
Sample ID: LCS-19956 Client ID:	Batch ID: 19956	Test Code: TPHDMS Run ID: ORGC7_	TPHDMS Ur ORGC7_080321B	Units: µg/g 121B		Analysis SeqNo:	Date 3/21/08	Analysis Date 3/21/08 8:31:58 PM SeqNo: 752159	Prep Da	Prep Date: 3/20/08	
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	LowLimit HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22) TPHC Matar Oil	13.65	1.0	10.0	0	137% 126%	77 82	125	0			ဟ ဟ
Sample ID: LCSD-19956 Client ID:	Batch ID: 19956	Test Code: TPHDMS Run ID: ORGC7_	TPHDMS Un	Units: µg/g 121B		Analysis SeqNo:	Date 3/21/08 752160	Analysis Date 3/21/08 8:53:39 PM SeqNo: 752160	Prep Da	Prep Date: 3/20/08	
Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	High∟imit	LowLimit HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22) TPHC Motor Oil	13.72 25.10	1.0	10.0	0 0	137% 126%	77	125	13.6 25.2	0.472%	15	တ တ

ND - Not Detected at the Reporting Limit Qualifiers:

J - Analyte detected below quantitution limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

NORTH COAST	LABORATORIES LTD.	Noiso West End Road + Arcata + (A 95521-9202)
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LABORATORY NUMBER:

TAT: 24 Hr 48 Hr 5 Day 5-7 Day	REPORTING REQUIREMENTS: State Forms Preliminary: FAX Verbal By:	CONTAINER CODES: 1— ³ / 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 ₃ SO ₂ ; d—Na ₃ S ₃ O ₃ ; e—NaOH; f—C ₂ H ₄ O ₃ Cl; g—other	SAMPLE CONDITION/SPECIAL INSTRUCTIONS							DATE/TIME SAMPLE DISPOSAL	1520 Return Pickup	CHAIN OF CUSTODY SEALS Y/N/NA SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand
124	7.1	795 T	M JIMIC M	HOLL ISA			4	7			和 CEIVED BY (Sign)	SI 80/H/E	
PRESERVATIVE	CONTAINER	SI	SYJANA	DATE TIME MATRIX*	3/12/08		7 %				DATE/TIME	Kar	
Altention: QJ. Mkt. Aro Ase Address: 21 W. 4th St.	Eurelea, Off Phone: 707 4425-6254 Copies of Report to:	Sampler (Sign & Print): The ACTURK	Project Number: (1823) Project Name: Franke Masett Purchase Order Number:	LE ID		DH2-11-5	P3+4-2.5-3" B1+9	12 PH9 -2	8H 10 - 1.5	BH12-0.75	RELINQUISHED BY (Sign & Print)	Kanir	

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

NORTH COAST	LABORATORIES LTD.	Yoku West End Baad + Acata + UA 95521 9202 707-822-4649 Tax 707-825-6831
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Allowing (2) At						TAT: 24 Hr 48 Hr 5 Day 5-7 Day
ovoice	A TO A TO A TO A TO A TO A TO A TO A TO	-12-1 2EKN				J-STD (2–3 Wk) Other:
Address:		989 				prior authorization is required for rushes
		1EK				REPORTING REOLINGEMENTS: State Forms
Phone: 107 443-505千		NIAI				
The second secon					 	Final Report: I-AX Verbal By:
Samuler (Sign & Print): THE		S) 02				CONTAINER CODES: 1—1/, gal. pl; 2—250 ml pl;
		129				3500 ml pl; 4-1 L Nalgene; 5-250 ml BG;
PROJECT INFORMATION						6—500 ml BG; 7—1 L BG; 8—1 L cg; 9—40 ml VOA;
Project Number: Technology	2	:≥!(-				10—125 IIII VOA, 11—4 02 gidas Jar, 12—6 02 gidas Jar, 13—brass tube; 14—other
Project Name: Franks Phase I	s.H	MA /k				PRESERVATIVE CODES: a—HNO.; b—HCl; c—H.SO.;
Purchase Order Number:	a to the desired and the second and	<u> </u>				d-Na,S,O,; e-NaOH; f-C,H,O,CI; g-other
		22)] [<u> </u>	SINOITO I INTERIOR SECTION STATES
LAB ID SAMPLE ID DATE	IIME MAIRIX*				1	SAMPLE CONDITIONS PORTERS INCLINING
(2)	***************************************	n I				
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RELINQUISHED BY (Sign & Print) D.	DATE/TIME	/ RECE	ു RECEIVED BY (Sign)	DAT	DATE/TIME	SAMPLE DISPOSAL
The Kill		7	3/14/18	(8)		Net Disposal of Nort-Containmants
47(1)	1		Ŧ			
The state of the s						CHAIN OF CUSTODY SEALS Y/N/NA
		7				SHIPPED VIA: UPS Air-Ex Fed-Ex Bus Hand

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

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



May 19, 2008

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

Attn: Chris Watt

RE: 6833 Franke Phase II

SAMPLE IDENTIFICATION

Fraction Client Sample Description

01A BH4-2.5-3'

Order No.: 0805335 Invoice No.: 74592

PO No.:

ELAP No. 1247-Expires July 2008

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

All solid results are expressed on a wetweight basis unless otherwise noted.

REPORT CERTIFIED BY

Laboratory Supervisor(s)

QA Unit

Jesse G. Chaney, Jr. Laboratory Director

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

LACO Associates CLIENT:

0805335 Work Order:

6833 Franke Phase II Project:

C SUMMARY REPORT
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Date: 19-May-2008

Method Blank

Sample ID: MB-20283	20283 Batch ID: 20283	Test Code: 6ICPX	GICPX	Units: µg/L	Analysis Da	Analysis Date 5/19/08 15:10:00	15:10:00	Prep Da	Prep Date: 5/16/08	
Client ID:		Run ID:	INICP1_080519A	P6	SeqNo:	764099				
Analyte	Result	Limit	SPK value	SPK Ref Val % Rec	LowLimit	HighLimit RP	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	GN .	00								
Qualifiers:	ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits	nits	S - Spil	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits	recovery limits mits	B - Ar	B - Analyte detected in the associated Method Blank	te associate	d Method Bla	

LACO Associates CLIENT:

Work Order:

6833 Franke Phase II Project:

0805335

QC SUMMARY REPORT

Date: 19-May-2008

Laboratory Control Spike

Sample ID: LCS-20283	Batch ID: 20283	Test Code:	6ICPX	Units: µg/L		Analysis	Analysis Date 5/19/08 15:14:00	Prep Date: 5/16/08	
Client ID:		Run iD:	INICP1_080519A	119A		SeqNo:	764100		
Analyte	Result	Limit	SPK value	SPK value SPK Ref Val	% Rec	LowLimit	% Rec LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual	Qual
Chromium	1,755	755 100	2,000	0	87.7%	85	85 115 0	The state of the s	

ND - Not Detected at the Reporting Limit Qualifiers:

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



April 15, 2008

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

Attn: Chris Watt

RE: 6833 Franke Phase II

SAMPLE IDENTIFICATION

Fraction Client Sample Description

01A BH4-2.5-3'

02A BH9-1.5

Order No.: 0804060 Invoice No.: 73854

PO No.:

ELAP No. 1247-Expires July 2008

ND = Not Detected at the Reporting Limit

- --ina Limit

Netals

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>	Result	<u>Limit</u>	<u>Units</u>	<u>DF</u>	Extracted	<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>	$\overline{\mathbf{DF}}$	Extracted	Analyzed
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

LACO Associates CLIENT:

0804060 Work Order: Project:

6833 Franke Phase II

Method Blank QC SUMMARY REPORT

Date: 15-Apr-2008

Sample ID: MB-20077	Batch ID: 20077	Test Code: 6ICPS	elcPs	Units: µg/g		Analysis	Date 4/14	Analysis Date 4/14/08 11:53:00 AM	Prep Date: 4/11/08	: 4/11/08	
Client ID:		Run ID:	INICP1_080414A	14A		SeqNo:	756390	06			
Analyte	Result	Limit	SPK value	SPK value SPK Ref Val	% Rec	LowLimit	HighLimit	LowLimit HighLimit RPD Ref Val	%RPD R	RPDLimit	Qual
Садтіцт	and the second s	2.0	TO THE TAXABLE PROPERTY.	O Control of the Cont				** p	-		
Chromium	ΩN	2.0									
Lead	Q	10									
Nickel	QN	5.0									
Zinc	QN	5.0									

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

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

Qualifiers:

North Coast Laboratories, Ltd.

LACO Associates CLIENT:

0804060 Work Order:

6833 Franke Phase II Project:

QC SUMMARY REPORT

Date: 15-Apr-2008

Laboratory Control Spike

Sample ID: LCS-20077	Batch ID: 20077	Test Code:	GICPS	Units: µg/g		Analysis	Date 4/14/	Analysis Date 4/14/08 11:57:00 AM	Prep Date: 4/11/08	
Client ID:		Run ID:	INICP1_080414A	14A		SeqNo:	756391	_		
Analyte	Result	Limit	SPK value	SPK value SPK Ref Val	% Rec	LowLimit	HighLimit	% Rec LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual	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



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

Junda C. Javes





THE LEADER IN ENVIRONMENTAL TESTING

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	870)141002
Colorado -	NA NA	Texas	TX 270-2004A
Connecticut	PH=0691	Utaht	OUAN
Florida*	E87570	Virginia	00178
Georgia	960	Washington	C087
Hawaii	NA 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	S46613

^{*}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>	Sample #	Client Sample ID	Sampling Date	Received Date	
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



LOT RECEIPT CHECKLIST TestAmerica West Sacramento

CLIENT NCL PM KD L	.0G# %	7191
LOT# (QUANTIMS ID) G8D040136 QUOTE# 29175	ツードーブ LOCATION	W20C
DATE RECEIVED 4/3/08 TIME RECEIVED 0905	Initials	Date 13/5/
DELIVERED BY FEDEX CA OVERNIGHT CLIENT		1
☐ AIRBORNE ☐ GOLDENSTATE ☐ DHL		
☐ UPS ☐ BAX GLOBAL ☐ GO-GETTERS		
TAL COURIER VALLEY LOGISTICS MORGAN HILL CO	DURIER	
CUSTODY SEAL STATUS INTACT BROKEN N/A		
CUSTODY SEAL #(S)		-
SHIPPPING CONTAINER(S)		
TEMPERTURE RECORD (IN °C) IR 4 ☐ 5 ☐ ☐ OTHER		
COC #(S)		• —
TEMPERATURE BLANK Observed: 3 Corrected: 4		1/
SAMPLE TEMPERATURE	1/	$f \cdot V$
Observed: 3	V	
COLLECTOR'S NAME:	- a	- J4/4/X
pH MEASURED YES ANOMALY N/A		1 (
LABELED BY		
LABELS CHECKED BYPEER REVIEW		
· · · · · · · · · · · · · · · · · · ·		
SHORT HOLD TEST NOTIFICATION SAMPLE RECEIVING		
WETCHEM N/A		
VOA-ENCORES N/A		
METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL NIA		
DOMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH WAS		
APPRUPRIATE LEMPERATIDES CONTAINEDS DOFORDIGES -	——————————————————————————————————————	
CLOUSEAU TEMPERATURE EXCEEDED (2 °C - 6 °C) N/A		
☐ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS US		, V
Notes:	=n [7]61	M NOTIFIED

^{*1} Acceptable temperature range for State of Wisconsin samples is <4°C. LEAVE NO SPACES BLANK. USE "N/A" IF NOT APPLICABLE.

TestAmerica West Sacramento TestAmerica The LEADER IN ENVIRONMENTAL TESTING

Bottle Lot Inventory

ID: G8D040136

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	2
VOA*														1/				17	1>	打
VOAh*			1/															1	1	+
AGB													 			 		-	+	+
AGBs																		1	1	+-
250AGB										<u> </u>				<u> </u>	<u> </u>	 -	1		 	+-
250AGBs			1	1				-		ĺ	 				-	-		 -	 	+-
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CGJ																 -	<u> </u>	<u> </u>		—
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PJ	ļ																			<u> </u>
PJn			-													<u> </u>				<u> </u>
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Encore		-							-											
Folder/filter										-										
PUF							-													
Petri/Filter					 - -	-														
XAD Trap								-												
Ziploc	-						_													
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	1	7				_														
= hydrochlorid		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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

QA-185 5/05 EM

Page 3

LEAVE NO SPACES BLANK. USE "NA" IF NOT APPLICABLE.

مرن

SOLID, 8270C, SVOC's

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

GC/MS Semivolatiles

Lot-Sample #...: G8D040136-001 Work Order #...: KKPRM1AC Date Sampled...: 03/13/08

Date Received..: 04/03/08

Matrix..... SOLID

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

Analysis Date..: 04/15/08

Prep Batch #...: 8101217 Dilution Factor: 1.01

Moisture....: 23 Method....: SW846_8270C

		REPORTI	1G
PARAMETER	RESULT	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-Chloroethy1)- ether	ND	430	ug/kg
<pre>bis(2-Chloroisopropyl) ether</pre>	ND	430	ug/kg
<pre>bis(2-Ethylhexyl) phthalate</pre>	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	
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	430 430	ug/kg
4,6-Dinitro-	ND	2100	ug/kg
2-methylphenol	1111	2100	ug/kg

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

GC/MS Semivolatiles

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

PARAMETER		REPORTING	3
2,4-Dinitrophenol	RESULT	LIMIT	UNITS
2,4-Dinitrotoluene	ND ·	2100	ug/kg
2,6-Dinitrotoluene		4.3.0	-ug/kg
	ND	430	ug/k g
Di-n-octyl phthalate Fluoranthene	ND	430	ug/kg
Fluoranthene Fluorene	ND	430	ug/kg
	ND	430	ug/kg
Hexachlorobenzene	ND	430	ug/kg
Hexachlorobutadiene	ND	430	ug/k g
Hexachlorocyclopenta-	ND	2100	ug/kg
diene			
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-	ND	430	ug/kg
amine			497.49
Pentachlorophenol	ND	2100	ug/kg
Phenanthrene	ND	430	ug/kg
Phenol	ND	430	ug/kg ug/kg
Pyrene	ND	430	ug/kg ug/kg
1,2,4-Trichloro-	ND	430	
benzene	112	430	ug/kg
2,4,5-Trichloro-	ND	430	/1
phenol	112	430	ug/kg
2,4,6-Trichloro-	ND	430	/
phenol	1417	430	ug/kg
<u> </u>			

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

GC/MS Semivolatiles

Lot-Sample #: G8D040136-001	Work Order #: KKPRM1AC	Matrix SOLID
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SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Chlorophenol-d4	78	(40 - 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.

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

GC/MS Semivolatiles

Lot-Sample #...: G8D040136-002 Work Order #...: KKPRR1AC Date Sampled...: 03/13/08

Date Received..: 04/03/08

Matrix..... SOLID

Prep Date....: 04/10/08 Prep Batch #...: 8101217

Analysis Date..: 04/15/08

Dilution Factor: 1.01

% Moisture....: 38 Method....: SW846_8270C

PARAMETER		REPORTI	NG
Acenaphthene	RESULT	LIMIT	UNITS
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
	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 ug/kg
4-Chlorophenyl phenyl ether	ND	530	ug/kg
Chrysene	ND	530	/1
Dibenz(a,h)anthracene	ND	530	ug/kg
Dibenzofuran	ND	530	ug/kg
Di-n-butyl phthalate	ND	530	ug/kg
l,2-Dichlorobenzene	ND	530	ug/kg
1,3-Dichlorobenzene	ND	530	ug/kg
l,4-Dichlorobenzene	ND .	530	ug/kg
3,3'-Dichlorobenzidine	ND		ug/kg
2,4-Dichlorophenol	ND	2600	ug/kg
Diethyl phthalate	ND	530	ug/kg
2,4-Dimethylphenol	ND	530	ug/kg
Dimethyl phthalate	ND	530	ug/kg
1,6-Dinitro-	ND	530	ug/kg
2-methylphenol	1112	2600	ug/kg

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

GC/MS Semivolatiles

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

PARAMETER		REPORTIN	NG .
2,4-Dinitrophenol	RESULT	LIMIT	UNITS
2,4-Dinitrotoluene	ND	. 2600	ug/kg
2,6-Dinitrotoluene		53-0	373
Di-n-octyl phthalate	ND	5 30	ug/kg
Fluoranthene	ND	530	·ug/kg ··· ··· ··· ··
Fluorene	ND	530	ug/kg
Hexachlorobenzene	ND	530	ug/kg
Hexachlorobutadiene	ND	530	ug/kg
	ND	530	ug/kg
Hexachlorocyclopenta- diene	ND	2600	ug/kg
Hexachloroethane			
	ND	530	ug/kg
Indeno(1,2,3-cd)pyrene	ND	530	ug/k g
Isophorone	ND	530	ug/kg
2-Methylnaphthalene	ND	53 0	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	2622	7
Phenanthrene	ND	2600	ug/kg
Phenol	ND ND	530	ug/kg
Pyrene	ND	530	ug/kg
1,2,4-Trichloro-		530	ug/kg
benzene	ND	530	ug/kg
2,4,5-Trichloro- phenol	ND	530	ug/kg
2,4,6-Trichloro- phenol	ND	530	ug/kg

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):	<u> </u>	

Results and reporting limits have been adjusted for dry weight.

QC DATA ASSOCIATION SUMMARY

G8D040136

Sample Preparation and Analysis Control Numbers

	SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH PREP BATCH # BATCH #	MS RUN#	
7.0 00.000 00.000 00.0000 00.0000 00.0000	001	SOLID	ASTM D 2216-90	8099278	8099153	
		SOLID	SW846 8270C	8101217		
	002	SOLID	ASTM D 2216-90	8099278	8099153	
		SOLID	SW846 8270C	8101217	0033133	
	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

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

Analysis Date..: 04/16/08

Prep Batch #...: 8101217

Dilution Factor: 1

		REPORTI	REPORTING				
PARAMETER	RESULT	LIMIT	UNITS	METHOD			
Acenaphthene	ND	330	ug/kg	SWB46 8270C			
Acenaphthylen e	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)	ND	330	ug/kg	SW846 8270C			
methane			-5,5	5.1010 02700			
bis(2-Chloroethyl)-	ND	330	ug/kg	SW846 8270C			
ether			-515	511040 02700			
bis(2-Chloroisopropyl)	ND	330	ug/kg	SW846 8270C			
ether			~5/ 1.5	57040 62700			
bis(2-Ethylhexyl)	ND	330	ug/kg	SWB46 8270C			
phthalate			-57 1-5	5.1545 62760			
4-Bromophenyl phenyl	ND	330	ug/kg	SW846 8270C			
ether			-5/ 1-9	0.040 02700			
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				
2-Chlorophenol	ND	330	ug/kg	SW846 8270C			
4-Chlorophenyl phenyl	ND	330	ug/kg ug/kg	SW846 8270C			
ether		330	ug/ kg	SW846 B270C			
Chrysene	ND	. 330	ug/kg	CMD46 0220G			
Dibenz(a,h)anthracene	ND	330	ug/kg	SW846 8270C			
Dibenzofuran	ND	330	ug/kg ug/kg	SW846 8270C			
Di-n-butyl phthalate	ND	330	ug/kg ug/kg	SW846 8270C			
1,2-Dichlorobenzene	ND	330	ug/kg ug/kg	SW846 8270C			
1,3-Dichlorobenzene	ND	330	ug/kg ug/kg	SW846 8270C			
1,4-Dichlorobenzene	ND	330	ug/kg ug/kg	SW846 8270C			
3,3'-Dichlorobenzidine	ND	1600		SW846 8270C			
2,4-Dichlorophenol	ND	330	ug/kg	SW846 8270C			
Diethyl phthalate	ND		ug/kg	SW846 8270C			
2,4-Dimethylphenol	ND	330	ug/kg	SW846 8270C			
Dimethyl phthalate	ND ND	330	ug/kg	SW846 8270C			
4,6-Dinitro-	ND	330	ug/kg	SW846 8270C			
2-methylphenol	NO	1600	ug/kg	SW846 8270C			
2,4-Dinitrophenol	ND	3.5	.				
2,4-Dinitrotoluene	ND	1600	ug/kg	SW846 8270C			
,	MD	330	ug/kg	SW846 8270C			

METHOD BLANK REPORT

GC/MS Semivolatiles

		REPORT	ENG	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,6-Dinitrotoluene	ND	330	ug/kg	SW846 B270C
Di-n-octyl phthalate	ND	. 330	ug/kg	SW846 8270C
Fluoranthene	ND	330	ug/kg	SW846 B270C
Fluorene	ND	330	ug/kg	SWB46 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 ug/kg	
Isophorone	ND	. 330	ug/kg ug/kg	SW846 8270C
2-Methylnaphthalene	ND	330	ug/kg ug/kg	SW846 8270C
2-Methylphenol	ND	330	ug/kg ug/kg	SW846 8270C
4-Methylphenol	ND	330	ug/kg ug/kg	SW846 8270C
Naphthalene	ND	330	ug/kg	SW846 B270C
2-Nitroaniline	ND	1600	ug/kg ug/kg	SW846 8270C
3-Nitroaniline	ND	1600	ug/kg ug/kg	SW846 8270C
-Nitroaniline	ND	1600	ug/kg ug/kg	SW846 8270C
Nitrobenzene	ND	330		SW846 8270C
2-Nitrophenol	ND	. 330	ug/kg ug/kg	SW846 8270C
-Nitrophenol	ND	1600		SW846 8270C
N-Nitrosodiphenylamine	ND	330	ug/kg	SW846 8270C
I-Nitrosodi-n-propyl- amine	MD	330	ug/kg ug/kg	SW846 8270C SW846 8270C
Pentachlorophenol	ND	1600	11er/le=	0110.45 000-5
henanthrene	ND	330	ug/kg	SW846 8270C
henol	ND	330	ug/kg	SW846 8270C
yrene	ND	330	ug/kg	SW846 8270C
,2,4-Trichloro-	. ND	. 330	ug/kg	SW846 8270C
benzene			ug/kg	SW846 8270C
,4,5-Trichloro- phenol	ND	330	ug/kg	SW846 8270C
,4,6-Trichloro- phenol	ND	330	ug/kg	SW846 8270C
	PERCENT	RECOVERY	<u>.</u>	
URROGATE	RECOVERY	LIMITS		
-Chlorophenol-d4	76	(48 - 10	04)	
,2-Dichlorobenzene-d4	82	(33 - 10	•	
-Fluorobiphenyl	81	(48 - 11	•	
-Fluorophenol	75	(43 - 98		
itrobenzene-d5	78	(43 - 10		
nenol-d5	77	(49 - 10		
erphenyl-d14	98	(44 - 15		
,4,6-Tribromophenol	61	1	• •	

(Continued on next page)

(27 - 144)

61

2,4,6-Tribromophenol

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KK22D1AC

Analysis Date..: 04/15/08

Matrix....: SOLID

LCS Lot-Sample#: G8D100000-217

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

Prep Batch #...: 8101217

Dilution Factor: 1

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	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)	3330	2770	ug/kg	83	SW846 8270C
methane					
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)	3330	3140	ug/kg	94	SW846 8270C
phthalate			-5/15	74	BM046 82/UC
4-Bromophenyl phenyl	3330	3040	ug/kg	91	SW846 8270C
ether			-37 123	7 4	54046 82/UC
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	8 4	
4-Chlorophenyl phenyl	3330	2950	ug/kg	88	SW846 8270C SW846 8270C
ether			49/ kg	00	5MB46 82/UC
Chrysene	3330	2940	ug/kg	88	CHOAC GORDO
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 76	SW846 8270C
1,4-Dichlorobenzene	3330	2500	ug/kg	75	SW846 8270C
3,3'-Dichlorobenzidine	3330	2520	ug/kg	75 75	SW846 8270C
2,4-Dichlorophenol	3330	2780	ug/kg		SW846 8270C
Diethyl phthalate	3330	3070	ug/kg ug/kg	83	SW846 8270C
_		2070	ug/xg	92	SW846 8270C

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KK22D1AC Matrix.....: SOLID

LCS Lot-Sample#: G8D100000-217

	SPIKE	MEASURED		PERCENT	
PARAMETER	AMOUNT	AMOUNT	UNITS	RECOVERY	METHOD
2,4-Dimethylphenol	3330	2500	ug/kg	75	SW846 8270C
Dimethyl phthalate	3330	2960	ug/kg	89	"SW846"8270C
4,6-Dinitro-	3330	2210	ug/kg	66	SW846 8270C
2-methylphenol			-3,3	00	DN040 82/UC
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	5W846 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-	3330	2450	ug/kg	74 74	SW846 8270C
diene			-37-1-3	17	58046 82/UC
Hexachloroethane	3330	2680	ug/kg	80	CMOAS BOTOS
Indeno(1,2,3-cd)pyrene	3330	3270	ug/kg	98	SW846 8270C SW846 8270C
Isophorone	3330	2920	ug/kg	88	
2-Methylnaphthalene	3330	2760	ug/kg	83	SW846 8270C 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	
Nitrobenzene	3330	2720	ug/kg	82	SW846 8270C
2-Nitrophenol	3330	2750	ug/kg	82 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-	3330	2980	ug/kg	90	SW846 8270C
amine		2500	ug/ kg	90	SW846 8270C
Pentachlorophenol	3330	2920	ug/kg	88	GH046 0000
Phenanthrene	3330	3090	ug/kg	93	SW846 8270C
Phenol	3330	2840	ug/kg ug/kg		SW846 8270C
Pyrene	3330	2850	ug/kg ug/kg	85	SW846 8270C
1,2,4-Trichloro-	3330	2660		85	SW846 8270C
benzene	2220	2000	ug/kg	80	SW846 8270C
2,4,5-Trichloro-	3330	3000	n a /1		
phenol		3000	ug/kg	90	SW846 8270C

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KK22D1AC

Matrix..... SOLID

LCS Lot-Sample#: G8D100000-217

PARAMETER 2,4,6-Trichloro- phenol	SPIKE AMOUNT 3330	MEASURED AMOUNT 3080	UNITS ug/kg	PERCENT RECOVERY 92	METHOD SW846 8270C
SURROGATE 2-Chlorophenol-d4 1,2-Dichlorobenzene-d4 2-Fluorobiphenyl 2-Fluorophenol Nitrobenzene-d5 Phenol-d5 Terphenyl-d14 2,4,6-Tribromophenol		PERCENT RECOVERY 86 86 85 81 83 87 97	RECOVERY LIMITS (48 - 104) (33 - 105) (48 - 114) (43 - 98) (43 - 103) (49 - 106) (44 - 157) (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 #...: KK22DlAC

Analysis Date..: 04/15/08

Matrix..... SOLID

LCS Lot-Sample#: G8D100000-217

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

Prep Batch #...: 8101217

Dilution Factor: 1

	PERCENT	DD001H-01-		
PARAMETER	RECOVERY	RECOVERY	Marian	
Acenaphthene	85	LIMITS	METHOD	:
Acenaphthylene	85	(58 ~ 98)	SW846 8270C	
Anthracene	84	(48 ~ 105)	SW846 8270C	
Benz(a) anthracene	91	(66 - 106)	SW846 8270C	
Benzo(b) fluoranthene	98	(73 - 113)	SW846 8270C	
Benzo(k) fluoranthene	81	(71 - 128) (61 - 119)	SW846 8270C	
Benzo(ghi)perylene	89	(43 - 133)	SW846 8270C	
Benzo(a)pyrene	85	(74 - 114)	SW846 8270C	
bis(2-Chloroethoxy)	83	(55 - 95)	SW846 8270C	
methane		(33 - 33)	SW846 8270C	
bis(2-Chloroethyl)-	81	(49 ~ 99)	THE AC SOURCE	
ether	51	(43 ~ 33)	SW846 8270C	
bis(2-Chloroisopropyl) et	89 a	(37 - 85)	CM046 00700	
bis(2-Rthylhexyl)	94	(73 - 114)	SW846 8270C	
phthalate		(12 - 114)	SW846 8270C	
4-Bromophenyl phenyl	91	(67 - 109)	5994C 0270G	
ether		(07 105)	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	88	(57 ~ 105)	SW846 8270C	
ether		(5) ~ 103)	SM846 82/UC	
Chrysene	88	(70 - 110)	SW846 8270C	
Dibenz(a,h)anthracene	90	(55 - 133)	SW846 8270C	
Dibenzofuran	84	(62 - 102)		
Di-n-butyl phthalate	90	(68 - 112)	SW846 8270C 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	
-	- -	(20 - 112)	5M040 82/UC	

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KK22D1AC Matrix.....: SOLID

LCS Lot-Sample#: G8Dl00000-217

	PERCENT	RECOVERY	
PARAMETER	RECOVERY	LIMITS	METHOD
2,4-Dimethylphenol	75	(51 - 91)	SW846 8270C
Dimethyl phthalate	89	(45 - 108)	SW846 8270C
4,6-Dinitro-	66	(17 - 125)	SWB46 8270C
2-methylphenol			
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-	74	(39 - 100)	SW846 8270C
diene		•	
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	9B	(42 - 128)	SW846 8270C
N-Nitrosodiphenylamine	90	(58 - 107)	SW846 8270C
N-Nitrosodi-n-propyl-	90	(37 - 90)	SW846 8270C
amine		(3, 30)	5H040 6270C
Pentachlorophenol	88	(24 - 125)	SW846 8270C
Phenanthrene	93	(66 - 106)	SW846 8270C
Phenol	85	(48 - 88)	SW846 8270C
Ругеле	85	(62 - 120)	SW846 8270C
1,2,4-Trichloro-	80	(54 - 94)	
benzene	- 0	(J# - J#)	SW846 8270C
2,4,5-Trichloro-	90	(61 - 105)	5₩846 B270C
phenol	_ _	(01 103)	DN040 0270C

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: G8D040136

LCS Lot-Sample#: G8D100000-217

Work Order #...: KK22D1AC

Matrix..... SOLID

2,4,6-Trichloro-	PERCENT RECOVERY 92	RECOVERY LIMITS (61 - 102)	METHOD SW846 8270C
phenol		(01 - 102)	SW040 82/UC

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.

GC/MS Semivolatiles

Client Lot #...: G8D040136

MS Lot-Sample #: G8D040136-001

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

Matrix..... SOLID

Date Sampled...: 03/13/08
Prep Date..... 04/10/08

Date Received..: 04/03/08

Analysis Date..: 04/03/08

Prep Batch #...: 8101217

	SAMPLE	SPIKE	MEASRD		PERCNT			
PARAMETER	AMOUNT	AMT	AMOUNT	UNITS	RECVRY		METHO	NT)
Acenaphthene	ND	4370	3790	ug/kg	87	KFD		8270C
	ND	4370	3590	ug/kg	82	5.6		
Acenaphthylene	ND	4370	3780	ug/kg	87	5.0		8270C
	ND	4370	3690	ug/kg	84	2.6		8270C
Anthracene	ND	4370	3610	ug/kg	82	2.0		8270C
	ND	4370	3530	ug/kg	81	2.0		8270C
Benz (a) anthracene	ND	4370	4030	ug/kg	92	2.0		8270C 8270C
	ND	4370	3830	ug/kg	88	5.0		8270C
Benzo(b) fluoranthene	ND	4370	4090	ug/kg	94	3.0		8270C 8270C
	ND	4370	4430	ug/kg	102	8.0		8270C 8270C
Benzo(k) fluoranthene	ND	4370	3800	ug/kg	87	0.0		8270C 8270C
	ND	4370	3070	ug/kg	70	21		
Benzo(ghi)perylene	ND	4370	3960	ug/kg	91	21		8270C
	ND	4370	3830	ug/kg	88	3.3		8270C
Benzo(a)pyrene	ND	4370	3870	ug/kg	89	3.3		8270C
	ND	4370	3640	ug/kg	83	6.1		8270C
<pre>bis(2-Chloroethoxy) methane</pre>	ND	4370	3300	ug/kg	75	6.1		8270C 8270C
	ND	4370	3230	ug/kg	74	2.2	SW846	8270C
<pre>bis(2-Chloroethyl) - ether</pre>	NID	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/kq	79		SW846	8270C
	ND	4370		ug/kg		0 52	SW846	
<pre>bis(2-Ethylhexyl) phthalate</pre>	ND	4370		ug/kg	95	0.52		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		4370	4040	ug/kg	93		SW846	8270C
4 6 7 - 1 - 1	ND	4370	3990	ug/kg	91	1.3	SW846	
4-Chloroaniline		4370	2980	ug/kg	68		SW846	= =
. 51.7	ND	4370	2770	ug/kg	63	7.4	SW846	
4-Chloro-3-methylphenol	ND	4370			92		SW846	
	ND	4370	4090	ug/kg	94	2.0	SW846	

GC/MS Semivolatiles

Client Lot #...: G8D040136

MS Lot-Sample #: G8D040136-001

Work Order #...: KKPRM1AD-MS

KKPRM1AE-MSD

Matrix....: SOLID

	SAMPLE	SPIKE	MEASRD		PERCNT	•	
PARAMETER	AMOUNT	AMT	AMOUNT	בדומט	RECVRY	RPD	METHOD
2-Chloronaphthalene	MD	4370	3730	ug/kg	85		
	ND	4370	3610	ug/kg ug/kg	83	7.0	SW846 8270C
2-Chlorophenol	ND	4370	3490	ug/kg ug/kg		3.2	SW846 8270C
	ND	4370	3420	ug/kg ug/kg	80		SW846 8270C
4-Chlorophenyl pbenyl ether	ND	4370	3910	ug/kg ug/kg	78 89	1.9	SW846 8270C 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	2.0	SW846 8270C
	ND	4370	3760	ug/kg	86	4.9	SW846 8270C
Dibenzofuran	ND	4370	3830	ug/kg	88	4.7	SW846 8270C
	ND	4370	3680	ug/kg	84	4.0	SW846 8270C
Di-n-butyl phthalate	ND	4370	3520	ug/kg	81	1.0	SW846 8270C
	ND	4370	3630	ug/kg	83	3.0	SW846 8270C
1,2-Dichlorobenzene	ND	4370	3150	ug/kg	72	3.0	SW846 8270C
	ND	4370	3090	ug/kg	71	1.8	SW846 8270C
1,3-Dichlorobenzene	ND	4370	3070	ug/kg	70	1.0	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	3ĺ20	ug/kg	71	0 08	SW846 8270C
3,3'-Dichlorobenzidine	ND	4370	2510	ug/kg	57	0.00	SW846 8270C
	ND	4370	2450	ug/kg	56	2.4	SW846 8270C
2,4-Dichlorophenol	ND	4370	3740	ug/kg	86	2	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	5W846 8270C
Dimethyl phthalate	ND	4370	4020	ug/kg	92		SW846 8270C
	ND	4370	3890	ug/kg	89	3.2	SW846 8270C
4,6-Dinitro-	ND	4370	3970	ug/kg	91		SW846 8270C
2-methylphenol				J J			54040 82700
	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-Dimitrotoluene	ND	4370	4180	ug/kg	96	J.J	SW846 8270C
	ND	4370	4070	ug/kg	93	2.5	SW846 8270C
2,6~Dinitrotoluene	ND	4370	4040	ug/kg	92	- .J	SW846 8270C
	ND	4370	4090	ug/kg		1.3	SW846 8270C
			-	-313	<i>→</i> -	3	DH040 02/UC

GC/MS Semivolatiles

Client Lot #...: G8D040136 Wo

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

Matrix..... SOLID

MS Lot-Sample #: G8D040136-001

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	INITE	PERCNT			_
	12100112	7411	MOUNT	UNITS	RECVRY	KPD	METHO	D
Di-n-octyl phthalate	ND	4370	4090	ug/kg	94		CEOAC	00700
	ND	4370	3760	ug/kg	86	8.3		8270C
Fluoranthene	ND	4370	3700	ug/kg	85	0.3		8270C
·	ND	4370	3560	ug/kg ug/kg	82			8270C
Fluorene	ND	4370	3890	ug/kg ug/kg	89	3.8		8270C
	ND	4370	3800	ug/kg ug/kg	87			8270C
Hexachlorobenzene	ND	4370	3830	ug/kg	8 <i>7</i> 88	2.4		8270C
	ND	4370	3750	ug/kg	86	2 3		8270C
Hexachlorobutadiene	ND	4370	3200	ug/kg ug/kg		2.3		8270C
	ND	4370	3100	ug/kg ug/kg	73			8270C
Hexachlorocyclopenta-	ND	4370	2640	_	71	3.2		8270C
diene		49,0	2010	ug/kg	60		SW846	8270C
	ND	4370	2650	/le	6-1			
	112	4370	2030	ug/kg	61	0.19	SW846	8270C
Hexachloroethane	ND	4370	3150		70			
	ND	4370	3110	ug/kg	72			8270C
Indeno(1,2,3-cd)pyrene	ND	4370		ug/kg	71	1.1	SW846	
- interest of Pirents	ND	4370	4110	ug/kg	94			8270C
Isophorone	ND	4370	3770	ug/kg	86	8.6	SW846	
	ND		3590	ug/kg	82		SW846	
2-Methylnaphthalene		4370	3530	ug/kg	81	1.6	SW846	
zcom/imphcharene	ND	4370	3520	ug/kg	81		SW846	
2-Methylphenol	ND	4370	3500	ug/kg	80	0.74	SW846	8270C
2-nechylphenor	ND	4370	3470	ug/kg	80		SW846	8270C
4-Methylphenol	ND	4370	3410	ug/kg	78	1.9	SW846	8270C
* Mechylphenot	ND 	8740	7180	ug/kg	82		SW846	8270C
Nambehaless	ND	8730	7110	ug/kg	81	0.87	SW846	8270C
Naphthalene	ND	4370	3260	ug/kg	75		SW846	8270C
2.31.4	ND	4370	3120	ug/kg	72	4.3	SW846	8270C
2-Nitroaniline	ND	4370	3890	ug/kg	8 9		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	
4-Nitroaniline	ND	4370	3090	ug/kg	71		SW846	
	ND	4370	3440	ug/kg	79	11	SW846	-
Nitrobenzene	ND	4370		ug/kg	74		SW846	
	ND	4370			72	3.2	SW846	
2-Nitrophenol	ND	4370		ug/kg	75		SW846	
	ND	4370		ug/kg		1.9	SW846	
4-Nitrophenol		4370			85		SW846	
		4370				12	SW846	
N-Nitrosodiphenylamine		4370		<u>.</u> –	90			
- -		4370					SW846	
	<u>-</u>		2,00	-3/ 1 9	00	4.2	SW846	8270C

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KKPRM1AD-MS

Matrix..... SOLID

MS Lot-Sample #: G8D040136-001

KKPRMLAE-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNI RECVRY		метно	D
N-Nitrosodi-n-propyl- amine	ND.	4370	3560	ug/kg	82	11.00	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		8270C
Phenanthrene	ND	4370	4210	ug/kg	96			8270C
	ND	4370	3990	ug/kg	91	5.3		8270C
Phenol	ND	4370	3360	ug/kg	77			8270C
	ND	4370	3200	ug/kg	73	4.9		8270C
Pyrene	ND	4370	3760	ug/kg	86	_		8270C
	ND	4370	3670	ug/kg	84	2.4	_	8270C
1,2,4-Trichloro- benzene	ND	4370	3200	ug/kg	73			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
		PE	RCENT		RECOVERY			
SURROGATE	_	RE	COVERY		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 - 30)			
		72		-	(43 - 103)			
Phenol-d5		7. 1. 7.9			(43 - 103) (49 - 106)			
		78	,		-			
Terphenyl-d14		95			(49 - 106)			
.		94			(44 - 157)			
		94			(44 - 157)			

GC/MS Semivolatiles

Client Lot #...: G8D040136

Wor:

Work Order #...: KKPRM1AD-MS

15

Matrix....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRM1AE-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
2,4,6-Tribromophenol	90 89 ,	(27 - 144) (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.

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KKPRMIAD-MS 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 % Moisture....: 23

The Distriction	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
Acenaphthene	87	(58 - 98)			SW846 8270C
Accompany to the contract of t	82	(58 - 98)	5.6	(0-20)	SW846 8270C
Acenaphthylene	87	(48 - 105)			SW846 8270C
Anthracene	84	(48 - 105)	2.6	(0-20)	SW846 8270C
Althracene	82	(66 – 106)			SW846 8270C
Dona (a) anti-	81	(66 - 106)	2.0	(0-20)	SW846 8270C
Benz(a)anthracene	92	(73 ~ 113)			SW846 8270C
Donos (h) flore e ex	88	(73 - 113)	5.0	(0-20)	SW846 8270C
Benzo(b)fluoranthene	94	(71 - 128)			SW846 B270C
D 12-1 52	102	(71 - 128)	8.0	(0-21)	SW846 8270C
Benzo(k)fluoranthene	87	(61 - 119)			SW846 8270C
P (1 1 1 1 -	70	(61 - 119)	21	(0-30)	SW846 8270C
Benzo(ghi)perylene	91	(43 - 133)			SW846 8270C
7/	88	(43 - 133)	3.3	(0-24)	SW846 8270C
Benzo(a)pyrene	89	(74 - 114)			SW846 8270C
1.1 (0.00)	83	(74 - 114)	6.1	(0-20)	SW846 B270C
<pre>bis(2-Chloroethoxy) methane</pre>	7 5	(55 – 95)			SW846 8270C
	74	(55 - 95)	2.2	(0-20)	SW846 8270C
<pre>bis(2-Chloroethyl)- ether</pre>	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
<pre>bis(2-Ethylhexyl) phthalate</pre>	95	(73 - 114)	-	(5 20)	SWB46 B270C
	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)		(0 22)	SW846 8270C
	94	(64 - 104)	2.0	(0-32)	SW846 8270C
		101/	2.0	(0.22)	20040 02/UC

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KKPRMlAD-MS Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD

	PERCENT	RECOVERY		RPD	•
PARAMETER	<u>RECOVERY</u>	LIMITS	RPD	LIMITS	METHOD
2-Chloronaphthalene	85	(56 - 96)			SM946 B3700
	83	(56 - 96)	3.2	(0-20)	SW846 8270C SW846 8270C
2-Chlorophenol	80	(49 - 89)	0.2	(0 20)	SW846 8270C
• •	78	(49 - 89)	1.9	(0-20)	SW846 8270C
4-Chlorophenyl phenyl ether	89	(57 - 105)		(0 20)	SW846 8270C
	88	(57 - 105)	2.1	(0-20)	SW846 8270C
Chrysene	90	(70 - 110)			SW846 8270C
	85	(70 - 110)	5.6	(0-20)	
Dibenz(a,h)anthracene	90	(55 - 133)	3.0	(0-20)	SW846 8270C SW846 8270C
	86	(55 - 133)	4.9	(0-20)	SW846 8270C
Dibenzofuran	88	(62 - 102)	1.5	(0 - 20)	SW846 8270C
	84	(62 - 102)	4.0	(0-20)	SW846 8270C
Di-n-butyl phthalate	81	(68 - 112)	2.0	(0 20)	SW846 8270C
	83	(68 - 112)	3.0	(0-20)	SW846 8270C
1,2-Dichlorobenzene	72	(48 - 89)	3.0	(0 20)	SW846 8270C
	71	(48 - 89)	1.8	(0-20)	SW846 8270C
1,3-Dichlorobenzene	70	(50 - 90)	1.0	(0 20)	SW846 8270C
	7 0	(50 - 90)	1.0	(0-49)	SW846 8270C
1,4-Dichlorobenzene	71	(49 - 89)		(0 13)	SW846 8270C
	71	(49 - 89)	0.08	(0-51)	SW846 8270C
3,3'-Dichlorobenzidine	5 7	(37 - 99)	0.00	(0-31)	SW846 8270C
	56	(37 - 99)	2.4	(0-44)	SW846 8270C
2,4-Dichlorophenol	86	(58 - 98)		(0 11)	SW846 8270C
	82	(58 - 98)	4.3	(0-21)	SW846 8270C
Diethyl phthalate	92	(50 - 113)		(0 21)	SW846 8270C
	88	(50 ~ 113)	4.3	(0-25)	SW846 8270C
2,4-Dimethylphenol	78	(51 - 91)		(0 23)	SW846 8270C
	79	(51 - 91)	1.2	(0-28)	SW846 8270C
Dimethyl phthalate	92	(45 - 108)		(5 20)	SW846 8270C
	89	(45 - 108)	3.2	(0-27)	SW846 8270C
1,6-Dinitro- 2-methylphenol	91	(17 - 125)		(0 27)	SW846 8270C
	8 5	(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)		33,	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

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KKPRMIAD-MS Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD

•	PERCENT	RECOVERY		RPD	
PARAMETER	RECOVERY	LIMITS	RPD	LIMITS	METHOD
Di-n-octyl phthalate	94	(68 - 126)			CARAC DOZOG
	86	(68 - 126)	8.3	(0-20)	SW846 8270C SW846 8270C
Fluoranthene	85	(57 - 123)	0,5	(0-20)	SW846 8270C
	82	(57 - 123)	3.8	(0-20)	
Fluorene	89	(63 - 107)	3.0	(0-20)	SW846 8270C
	87	(63 - 107)	2.4	(0-20)	SW846 8270C
Hexachlorobenzene	88	(69 - 109)	2.4	(0-20)	SW846 827DC
	86	(69 - 109)	2.3	(0-20)	SW846 8270C
Hexachlorobutadiene	73	(53 - 93)	2.3	(0~20)	SW846 8270C
	71	(53 - 93)	3.2	(0.20)	SW846 8270C
Hexachlorocyclopenta-	6 0	(39 - 100)	3.2	(0-20)	SW846 8270C
diene	J U	(35 - 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)		(0 23)	SW846 8270C
	86	(50 - 139)	8.6	(0-23)	SW846 8270C
Isophorone	82	(56 - 96)	0.0	(0-23)	SW846 8270C
	81	(56 - 96)	1.6	(0-20)	
2-Methylnaphthalene	81	(58 - 98)	1.0	(0-20)	SW846 8270C
- "	80	(58 - 98)	0.74	(0-45)	SW846 8270C
2-Methylphenol	80	(52 - 92)	0.72	(0-45)	SW846 8270C
- -	78	(52 - 92)	1.9	(0-48)	SW846 8270C
4-Methylphenol	82	(49 - 89)	4.5	(0-46)	SW846 8270C
	81	(49 - 89)	0.87	(0.22)	SW846 8270C
Naphthalene	75	(54 - 94)	0.67	(0-23)	SW846 8270C
_	72	(54 - 94)	4 3	(0.54)	SW846 8270C
2-Nitroaniline	89	(62 - 102)	4.3	(0-24)	SW846 8270C
	87	(62 - 102)	2 1	(0.55)	SW846 8270C
3-Nitroaniline	83	(33 - 104)	2.1	(0-20)	SW846 8270C
	74			(0.0.)	SW846 8270C
4-Nitroaniline	71	(33 - 104)	11	(0-24)	SW846 8270C
	79	(43 - 127)		(5.55)	SW846 8270C
Nitrobenzene	74	(43 - 127)	11	(0-28)	SW846 8270C
<u></u>	7 4 72	(51 - 91)			SW846 8270C
2-Nitrophenol	72 75	(51 - 91)	3.2	(0-36)	SW846 8270C
		(56 - 96)			SW846 8270C
4-Nitrophenol	7 4 85	(56 - 96)	1.9	(0-20)	SW846 8270C
	96	(42 - 128)	- i		SW846 8270C
N-Nitrosodiphenylamine		(42 - 128)	12	(0-30)	SW846 8270C
	90	(58 - 107)			SW846 8270C
	86	(58 - 107)	4.2	(0-20)	SW846 8270C

GC/MS Semivolatiles

Client Lot #...: G8D040136 Work Order #...: KKPRM1AD-MS Matrix.....: SOLID

MS Lot-Sample #: G8D040136-001 KKPRM1AE-MSD

PARAMETER	PERCENT	RECOVERY	4	RPD		
I FACTA MI I DE	<u>RECOVERY</u>	LIMITS	RPD	LIMITS	METHO	D
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)		8270C
Phenanthrene	96	(66 – 106)			SW846	8270C
m	91	(66 – 106)	5.3	(0-20)	SW846	8270C
Phenol	77	(48 - 88)			SW846	8270C
Pa	73	(48 - 88)	4.9	(0-20)		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
		PERCENT		THEOLOGIC		
SURROGATE		RECOVERY		RECOVERY		
2-Chlorophenol-d4	_	80	,	<u>LIMITS</u> (48 - 104	_	
		81		(48 - 104		
1,2-Dichlorobenzene-d4		78		(33 - 104)		
		77		(33 - 105)	-	
2-Fluorobiphenyl		85		(48 - 114)		
		81		(48 - 114)		
2-Fluorophenol		74		(43 - 98)	,	
		73		(43 - 98)		
Nitrobenzene-d5		76		(43 - 103)	١	
		72		(43 - 103)		
Phenol-d5		79		(49 - 106)		
		78		(49 - 106)		
Terphenyl-d14		95		(44 ~ 157)		
		94 -		(44 ~ 157)		,
				,		

GC/MS Semivolatiles

Client Lot #...: G8D040136

Work Order #...: KKPRMlAD-MS

Matrix....: SOLID

MS Lot-Sample #: G8D040136-001

KKPRMLAE-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS	
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

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	Page	Project No.
SOIL BULK DENSITY	1	6833.01.
Project	Tested By	Date
FRANKE PROPERTY PHASE 2	DLR	4/2/2008
Location	Checked By	Date
ARCATA		
Client	Sample ID:	
ARCATA VOLUNTEER FIRE DEPT	08-0	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)

B2	B3	B5	B9
9.5'	6.5'	11.0'	7.0'
127.3	109.5	121.3	109.9
56.1	51.0	54.6	49.9
71.2	58.5	66.7	60.0
131.1	111.1	121.7	109.8
0.3	0.8	1.2	7.7
0.0	1.0	2.0	2.0
1.84	1.92	1.86	1.76
114.7	119.8	116.3	109.9

		Page	Project No.
	SOIL BULK DENSITY	1	6833.01.
	Project	Tested By	Date
	FRANKE PROPERTY PHASE 2	DLR	4/2/2008
ENGINEERS - GEOLOGISIS / SWRONNSARZI (ORAS DE ASARE)	Location	Checked By	Date
21 W. 4/19 FO Box 1023 - Euroba, CA-REEG - 707 443.5564	ARCATA		
	Client	Sample ID:	
	ARCATA VOLUNTEER FIRE DEPT	08-	-025

WORKSHEET FOR SOIL BULK DENSITY

Sami	nle l	Num	har
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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	