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LETTER OF TRANSMITTAL

TO: HCDEH
100 H St., Suite 100
Eureka, CA 95501
ATTN: Mark Verhey

DATE: September 19, 2005
JOB NO.: 4844.01
PROJECT: Former Zenker-Felt Motors

TRANSMITTED BY: ☒ Mail ☐ Delivered In Person ☐ Fax

No. Copies		Description
1	1.	Subsurface Investigation Report of Findings
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REMARKS:

THIS MATERIAL SENT FOR: ☒ As Requested ☒ Information ☐ Approval ☐

cc: Donald Murrish

By: for
Gary L. Manhart

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SUBSURFACE INVESTIGATION
REPORT OF FINDINGS

Former Zenker-Felt Motors
22 West Fourth Street, Eureka, California

LOP No. 12290

Prepared for:
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925 Sixth Street
Eureka, California 95501

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September 19, 2005
Project No. 4844.01

SUBSURFACE INVESTIGATION REPORT OF FINDINGS

Former Zenker-Felt Motors; 22 West Fourth Street, Eureka, California
LOP No. 12290; LACO ASSOCIATES Project No. 4844.01

EXECUTIVE SUMMARY

Field work to verify the degradation of the petroleum hydrocarbon mass, evaluate metals concentrations, and potential halogenated hydrocarbons originating from the former waste oil underground storage tank (UST) at the former Zenker-Felt Motors site, was conducted on July 29, 2005 (Figure 1). The work was performed according to the July 26, 2005, *Additional Site Assessment Letter Workplan*, prepared by LACO ASSOCIATES (LACO) in response to the Humboldt County Division of Environmental Health (HCDEH) letter dated April 22, 2005, outlining regulatory closure requirements for the site.

LACO, under the observation of a staff geologist, installed temporary soil borings B13, B14, and B15 (Figure 2) to determine if degradation of total petroleum hydrocarbons as diesel (TPHd) and motor oil (TPHmo) contamination in soil and groundwater is occurring at the site. Boring logs from the installation are included as Attachment 1. Analysis of the soil and groundwater samples collected from these borings indicates that the petroleum hydrocarbon mass has degraded in soil and groundwater in this location, adjacent to the primary source area. Based on analytical results from this investigation and the stability of the defined groundwater plume identified during previous investigations, corrective action at the site appears complete and we request case closure.

BACKGROUND

One 1,000-gallon waste oil UST was removed from the site in June 1990 by Beacom Construction of Fortuna, California. The HCDEH notes from the tank pull indicated that "there was clear evidence of over fill/spill at fi(ller) [sic]". Additionally, the notes indicated that the tank appeared sound.

Three early phases of subsurface work were performed to delineate the extent of contamination at the site in May 2000, November 2001, and February 2002. These three phases of work were presented in our May 2000 and June 2002 reports. In January 2005, one additional boring was installed to asses the potential for degradation of contaminants. Laboratory results of the January 2005 investigation were reported as below the standard detection limit. LACO requested closure of the site in *Subsurface Investigation Report of Findings*, dated April 6, 2005. Concentrations of motor oil in soil greater than 1,000 parts per million (ppm) were reported in historical borings

B3, B5 (May 2000), and B6 (November 2001) between depths of approximately 5 and 10 feet. Low, and below standard detection limits (less than 170 ppm), motor oil concentrations reported in historical borings B1, B2, B4, and B7 through B11, essentially surrounding borings B3, B5, and B6, delineated the extent of the sorbed-phase mass at the site. Additionally, groundwater impacted by waste oil at the site was identified in only two borings (B3 and B6). Based on this analytical data, LACO concluded the plume to be "defined and stable." The HCDEH concurred with the state of the plume in their letter dated September 2003. The HCDEH did not concur with site closure, citing the need for additional assessment of California Assessment Manual (CAM) 5 metals (cadmium, chromium, nickel, lead, and zinc), an evaluation of the groundwater gradient at the site, and that the motor oil does did not degrade from concentrations around 10,000 ppb to less than 170 ppb in a few years.

SITE DESCRIPTION

The subject property is located on the north side of Fourth Street, approximately 100 feet west of the Fourth and A Streets intersection (Figure 2). The site is located on the filled tidal margin of Humboldt Bay. Surface drainage is generally toward the west. Native soil encountered during this boring installation was capped by approximately 5 feet of dredge fill. A peat layer was identified in the boring at a depth of approximately 5.7 feet. Native soil consisted of gray silty sand. Borings B13, B14, and B15 were installed to collect samples to determine if degradation of contaminants was occurring, and to evaluate the dissolved concentration of CAM 5 metals. Soils observed in borings B13, B14, and B15 during this investigation are typical of soils observed in historical borings across the site. Soil conditions were saturated beginning at a depth of approximately 4 feet in all borings at the time of this investigation.

METHODS

Field Methods

In accordance with our approved workplan, LACO installed and sampled three temporary borings (B13 through B15) at the former Zenker-Felt Motors site on July 29, 2005. The borings were installed using direct push Geoprobe technology to a depth of approximately 8 feet. Boring B13 was installed adjacent to historic borings B6 and B12. Boring B14 was installed adjacent to boring B5 in the former tank cavity. Boring B15 was installed between borings B3 and B7. Locations were chosen to evaluate degradation and obtain data from similar sample locations in soil and groundwater.

Three soil samples were collected at depths of approximately 6 feet from borings B13, B14, and B15. The samples were collected in brass tubes, sealed with Teflon film, and capped with plastic end caps. The samples were stored and transported in a chilled ice chest, and submitted under chain of custody to a State-certified laboratory for analysis of:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 5035/GCFID
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B
- Methyl tertiary butyl ether (MTBE) by EPA Method 8021B
- TPHd and TPHmo by EPA Method 3550 with silica gel cleanup
- Halogenated hydrocarbons by EPA Method 601/8021B

Three groundwater samples were collected from borings B13, B14, and B15 from a screened interval of approximately 4 to 8 feet below ground surface (bgs). The groundwater samples were collected using hydro-punch technology. The hydro-punch sampler was driven down to the target depth and no more than 4 feet of screen was exposed. The sample was collected using a tubing bottom check-ball valve and decanted directly into a laboratory-supplied container. The sample was placed in a chilled cooler to ensure the preservation of analytes. The sample was then submitted to a State-certified laboratory for analysis under chain-of-custody protocol for analysis of:

- TPHg by EPA Method 8260
- BTEX by EPA Method 8260
- MTBE by EPA Method 8260
- TPHd and TPHmo by EPA Method 3550 with silica gel cleanup
- Halogenated hydrocarbons By EPA Method 8021B
- LUFT metals, CAM 5 Dissolved By EPA Method 20.7/200.9 Filtered

RESULTS OF INVESTIGATION

Analytical Results

Analysis of the soil and groundwater samples collected from borings B13, B14, and B15 detected the presence of TPHg, TPHd, TPHmo, and MTBE. Samples from borings B13 and B14 showed lower levels of TPHd and TPHmo, potentially indicating some degradation of analytes. All samples submitted for halogenated hydrocarbons were below the standard detection limit. Current and historical soil and groundwater analytical results from temporary borings are

summarized in Tables 1 and 2, respectively. Table 3 is the laboratory data from sampling the HCDEH conducted during the tank pull. Figure 3 presents current and historical soil contaminant concentrations at the site. Figure 4 presents current and historical groundwater contaminant concentrations at the site. Copies of the laboratory reports are included as Attachment 2.

DISCUSSION

The purpose of borings B13, B14, and B15 was to confirm contaminant concentrations and the potential for degradation at the site. The soil and groundwater contaminant masses at the site were defined by the 2000, 2001, and 2002 subsurface investigations. Data generated from these boring installations suggest that the majority of the soil contamination mass associated with the former waste oil UST is minimal, not mobile, and does not extend laterally further than approximately 5 feet from the tank cavity. The groundwater plume appeared to be delineated to within 5 feet of the tank cavity, as identified in samples collected from all borings. All analytes in groundwater samples from borings B1, B2, B4, and B7 through B12 were below the standard detection limit (with the exception of MTBE). Metals encountered in borings B3 and B5 from previous investigations were sampled for total metal concentrations. Re-sampling for dissolved metals in borings B13, B14, and B15 showed all metals to be below the standard detection limits.

Based on the reported absence of halogenated hydrocarbons and dissolved metals, along with the lower levels of TPHd and TPHmo from this investigation, it appears that the contaminant mass continues to maintain stability in both soil and groundwater adjacent to the former UST. It also appears that degradation of TPHd and TPHmo has occurred, since 2002, in the vicinity of borings B5 and B6.

As stated in LACO's 2002 report, and in conjunction with data collected during this investigation, MTBE detected in groundwater is likely due to upgradient LOP sites. Historically, the subject property operated as an automotive repair business. The UST removed from the site in 1990 was used to hold waste oil only. Gasoline products were not sold or stored at this site. MTBE has been indicated in groundwater samples from neighboring upgradient UST sites. It appears that the low concentrations of MTBE have migrated onto the site from upgradient sources such as the former Ehret Dodge and Eureka Toyota sites.

Notes from the tank pull by a representative of the HCDEH indicated that the cause of contaminated soil and groundwater is due to over filling or spillage of the tank. This may explain the limited nature of the soil and groundwater plumes. The main area of soil contamination is at

the southwest portion of the tank cavity near the fill port. Groundwater gradients from adjacent sites around the subject site range between northeast and northwest, and are generally less than one percent in slope. Adjacent sites include the former Ehret Dodge, Eureka Toyota, Harper Lease Plans, and Fluhrer Trucking. The southwest nature of the soil plume is most likely due to the fill port location (at the western end of the tank) of the fill around the tank and the depth to groundwater. A potential preferential pathway in the fill around the tank, the depth to groundwater, and the flat nature of the groundwater gradient are the most likely scenario for the soil plume location.

RECOMMENDATIONS

Having satisfied the regulatory requirements for evaluating closure as defined in the April 22, 2005, HCDEH correspondence, LACO recommends that no further action be required for this site and requests case closure.

LIMITATIONS

LACO ASSOCIATES has conducted the services identified herein in a manner consistent with the levels of care and skill ordinarily exercised by members of our profession currently practicing in our area under similar conditions as this project. No other warranty or representation, expressed or implied, is included or intended for this document.

This report is an instrument of service of LACO ASSOCIATES and was prepared for, and was intended for the exclusive use of, Murrish and Associates. The contents of this report may not be relied upon by any other party other than Murrish and Associates without the express written permission of LACO ASSOCIATES.

This report's findings are based on conditions that existed on the dates indicated and in the specified locations where samples were taken. The findings herein should not be relied on to precisely report conditions at any other time or location.

LIST OF FIGURES, TABLES, AND ATTACHMENTS

Figure 1: Location Map
Figure 2: Site Map
Figure 3: Soil Contaminant Concentration Map
Figure 4: Groundwater Contaminant Concentration Map

Table 1: Soil Analytical Results

Table 2: Groundwater Analytical Results

Table 3: Tank Pull Soil and Groundwater Lab Results

Attachment 1: Temporary Boring Logs

Attachment 2: Laboratory Analytical Reports

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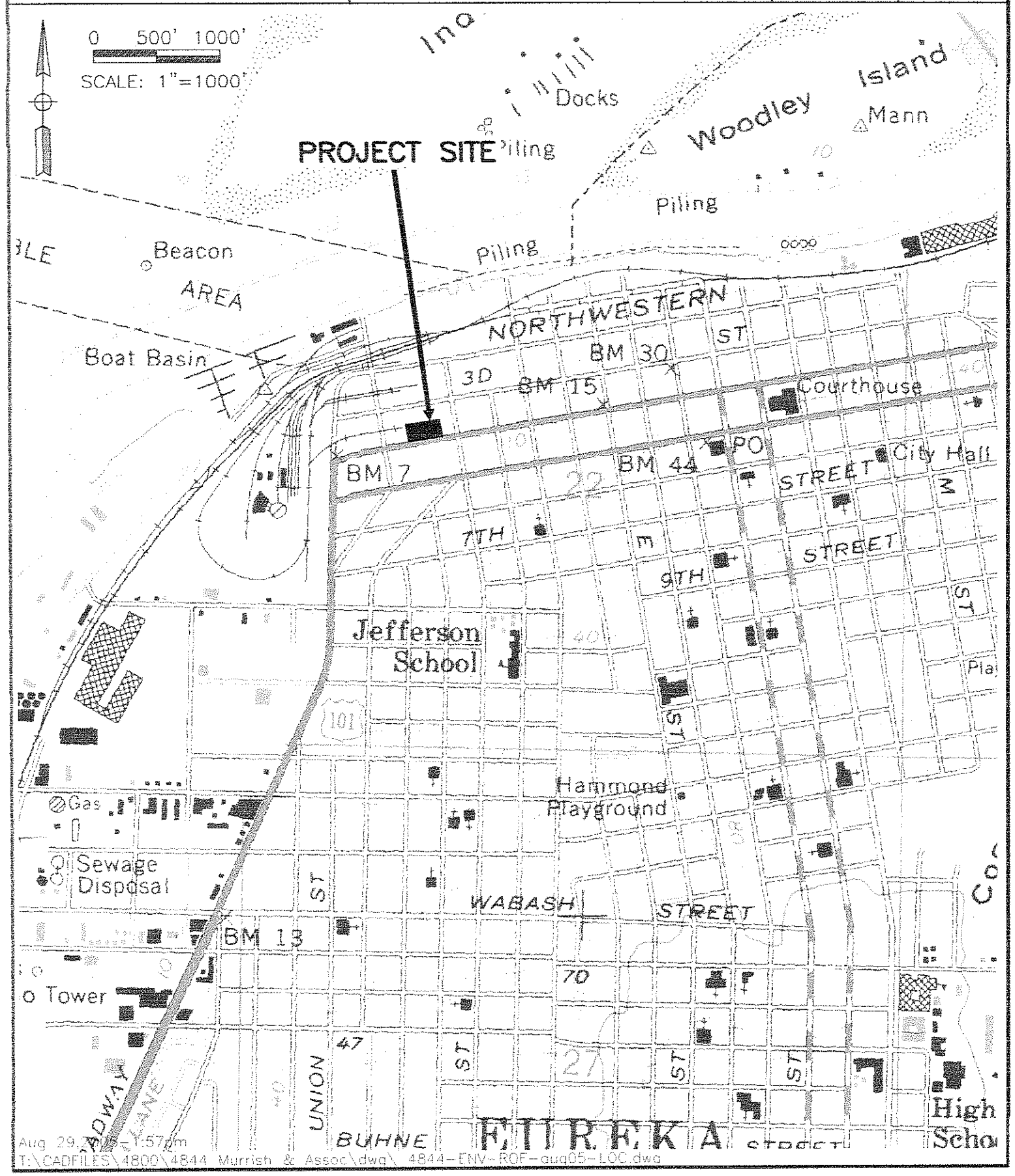
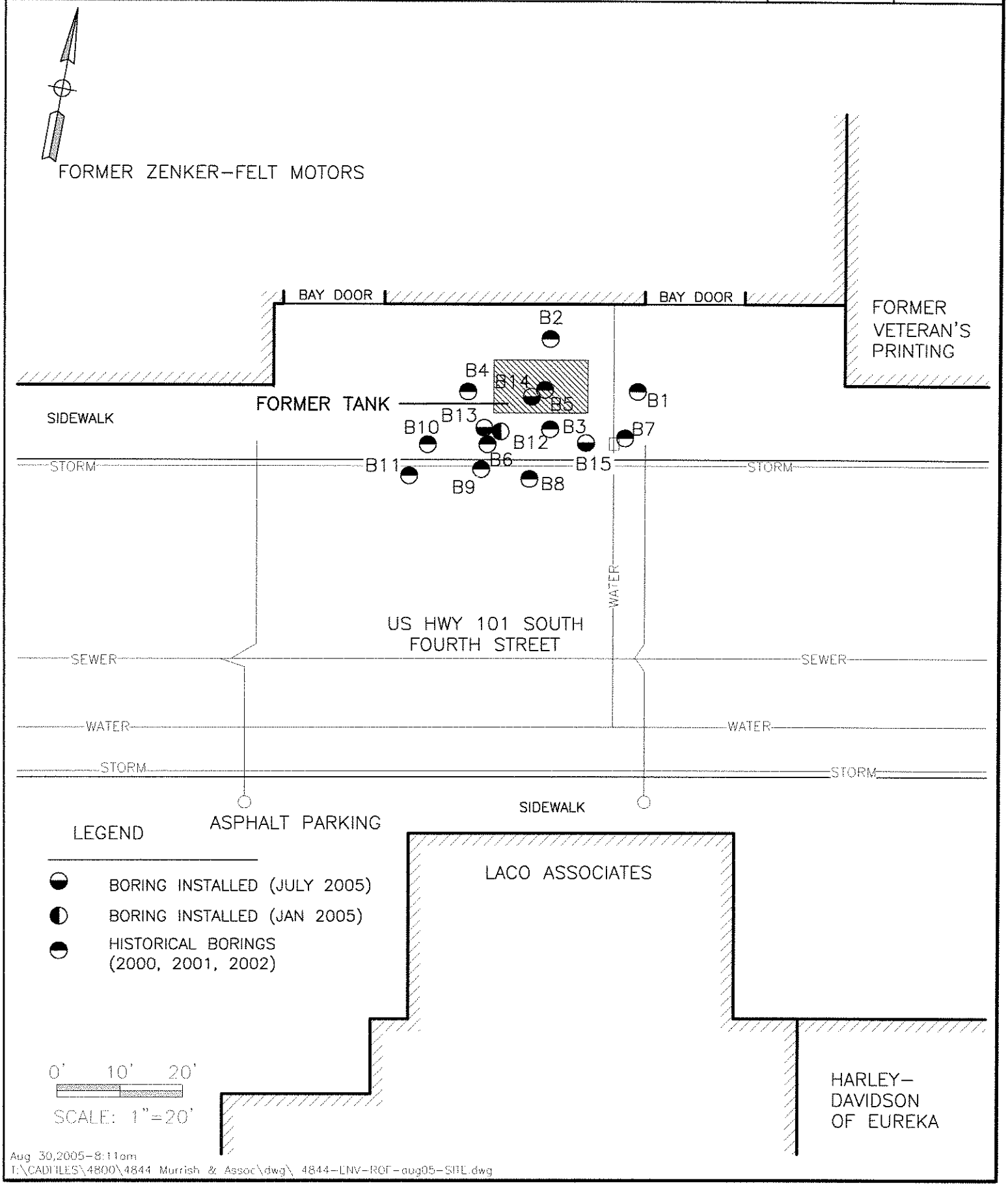
LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT	REPORT OF FINDINGS; REQUEST FOR CLOSURE	BY	RJM	FIGURE
	CLIENT	MURRISH & ASSOCIATES	DATE	8/29/05	1
	LOCATION	ZENKER-FELT MOTORS	CHECK	RJM	JOB NO.
		LOCATION MAP	SCALE	1"=1000'	4844.01



LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT	REPORT OF FINDINGS; REQUEST FOR CLOSURE	BY	RJM	FIGURE
	CLIENT	MURRISH & ASSOCIATES	DATE	8/29/05	2
	LOCATION	ZENKER-FELT MOTORS	CHECK	7 lm	JOB NO.
		SITE MAP	SCALE	1"=20'	4844.01



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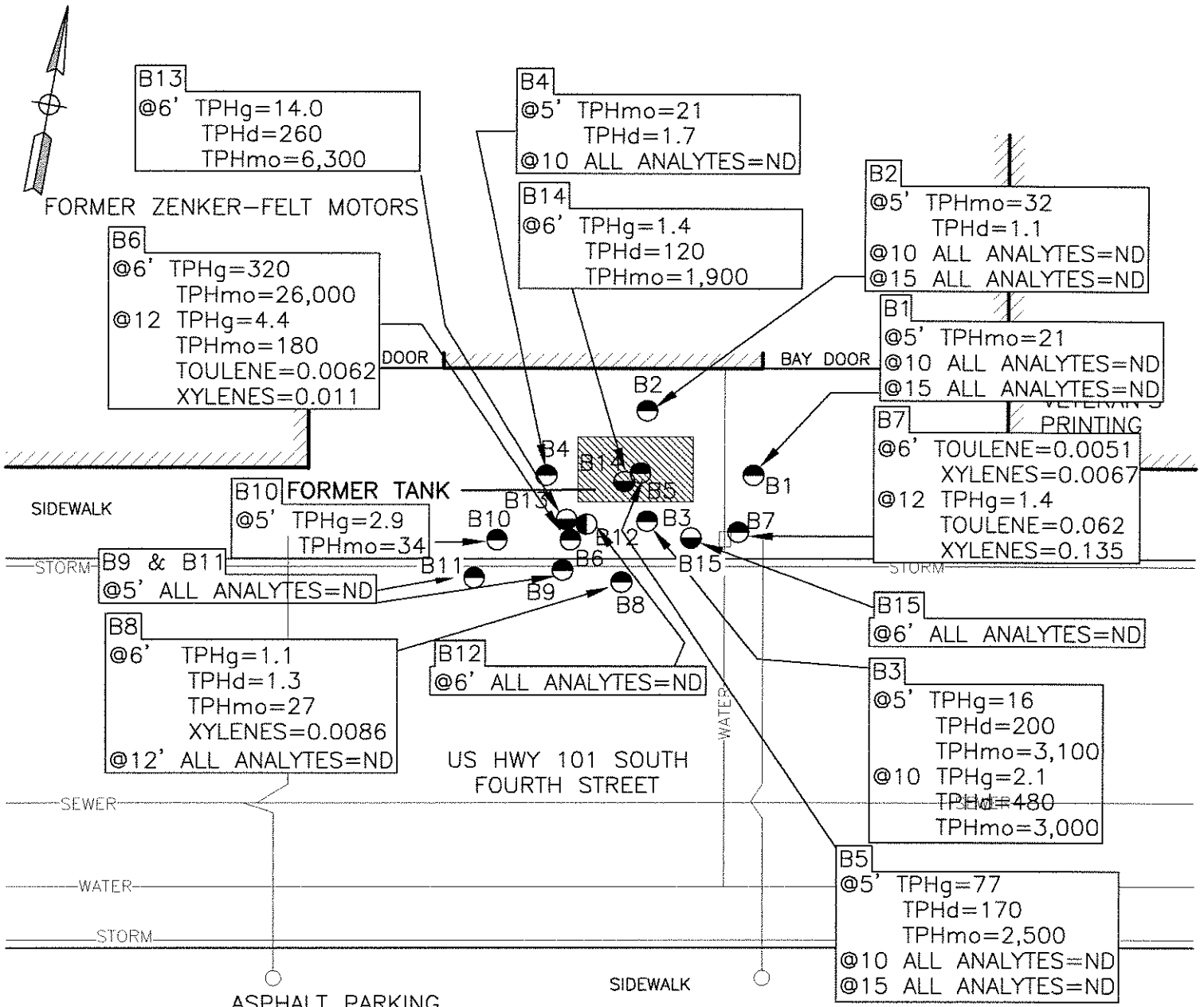
LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT: REPORT OF FINDINGS; REQUEST FOR CLOSURE	BY: RJM	FIGURE: 3
	CLIENT: MURRISH & ASSOCIATES	DATE: 8/29.05	
	LOCATION: ZENKER–FELT MOTORS	CHECK:	JOB NO. 4844.01
	SOIL CONTAMINANT CONCENTRATION MAP	SCALE: 1"=20'	



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LACO ASSOCIATES CONSULTING ENGINEERS 21 W 4TH ST. EUREKA, CA 95501 (707)443-5054	PROJECT: REPORT OF FINDINGS; REQUEST FOR CLOSURE	BY: RJM	FIGURE: 4
	CLIENT: MURRISH & ASSOCIATES	DATE: 8/29/05	
	LOCATION: ZENKER-FELT MOTORS	CHECK: GLM	JOB NO. 4844.01
	GROUNDWATER CONTAMINANT CONCENTRATION MAP	SCALE: 1"=20'	

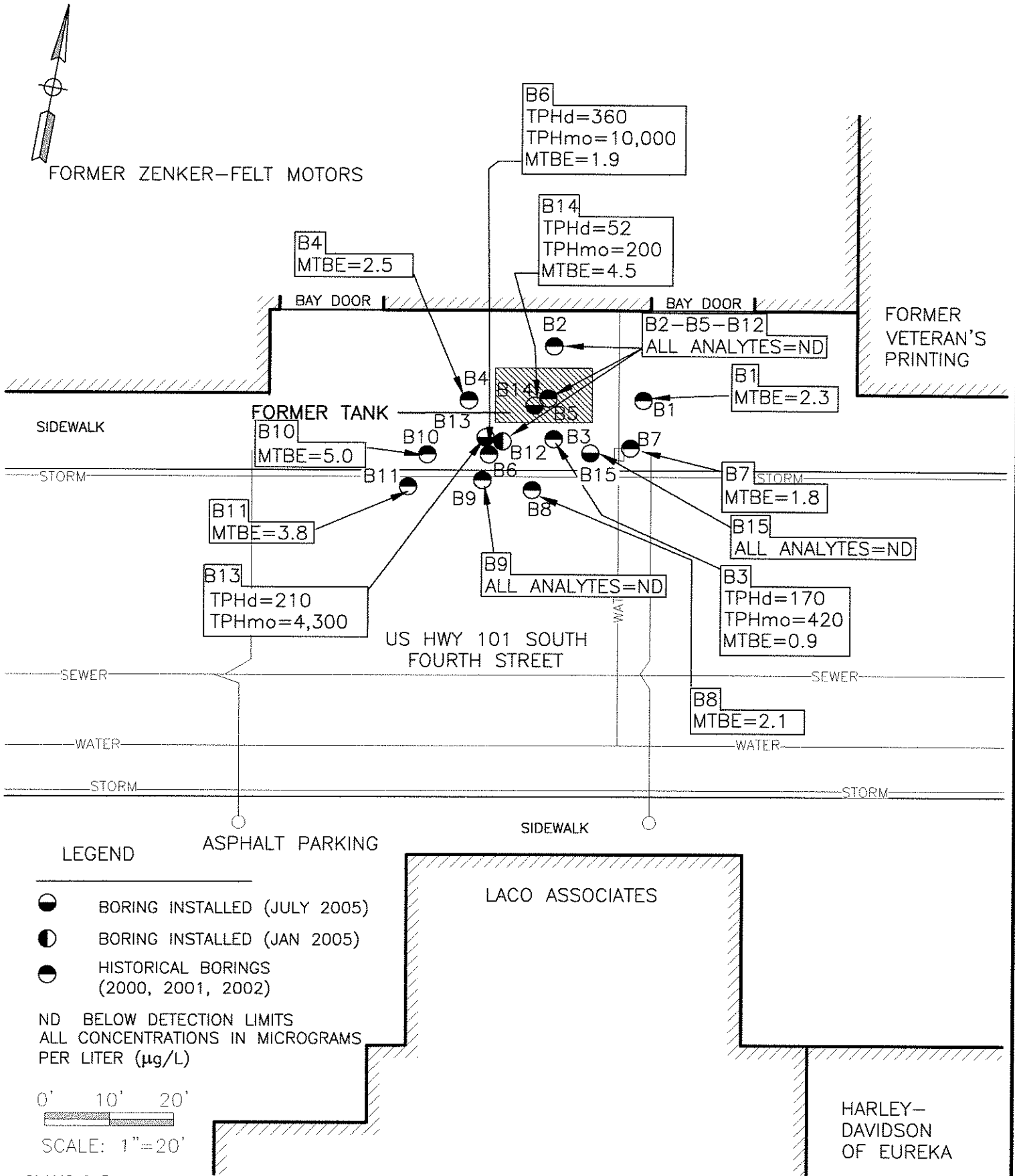

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TABLE 1: SOIL ANALYTICAL RESULTS
Former Zenker-Felt Motors
22 W. 4th Street, Eureka
LACO No. 4844.00

Sample Number	Sample Date	TPHg (µg/g)	TPHd (µg/g)	TPHmo (µg/g)	Benzene (µg/g)	Toluene (µg/g)	Ethylbenzene (µg/g)	Xylenes (µg/g)	MTBE (µg/g) +	Halogenated Volatiles (µg/g)
2000 Investigation										
B1 @ 5'	5/17/2000	ND <1.0	ND <1.0	**21**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B1 @ 10'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B1 @ 15'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.020	ND <0.005	ND <0.005	ND <0.050	---
B2 @ 5'	5/17/2000	ND <1.0	**1.1**	**32**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B2 @ 10'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B2 @ 15'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B3 @ 5'	5/17/2000	**16**	**200**	**3,100**	ND <0.005	ND <0.010	ND <0.010	ND <0.010	ND <0.050	---
B3 @ 10'	5/17/2000	**2.1**	**480**	**3,000**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
B4 @ 5'	5/17/2000	ND <1.0	**1.7**	**21**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B4 @ 10'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B5 @ 5'	5/17/2000	**77**	**170**	**2,500**	ND <0.050	ND <0.40	ND <0.40	ND <0.80	ND <0.50	---
B5 @ 10'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
B5 @ 15'	5/17/2000	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.050	---
2001 Investigation										
B6 @ 6'	11/13/2001	**320**	ND <1,000	**26,000**	ND <0.05	ND <0.5	ND <0.5	ND <0.5	ND <0.5	---
B6 @ 12'	11/13/2001	**4.4**	ND <10	**180**	ND <0.005	**0.0062**	ND <0.005	**0.011**	ND <0.005	---
B7 @ 6'	11/13/2001	ND <1.0	ND <1.0	ND <10	ND <0.005	**0.0051**	ND <0.005	**0.0067**	ND <0.005	---
B7 @ 12'	11/13/2001	**1.4**	ND <1.0	ND <10	ND <0.005	**0.062**	ND <0.005	**0.135**	ND <0.005	---
B8 @ 6'	11/13/2001	**1.1**	**1.3**	**27**	ND <0.005	ND <0.005	ND <0.005	**0.0086**	ND <0.005	---
B8 @ 12'	11/13/2001	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
2002 Investigation										
B9 @ 4.5'	2/22/2002	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
B10 @ 5'	2/22/2002	ND <1.0	**2.9**	**34**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
B11 @ 5'	2/22/2002	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
2005 Investigation										
B12 @ 6'	1/24/2005	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	---
B13 @ 6'	7/29/2005	**14.0**	**260**	**6,300**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	All ND
B14 @ 6'	7/29/2005	**1.4**	**120**	**1,900**	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	All ND
B15 @ 6'	7/29/2005	ND <1.0	ND <1.0	ND <10	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	All ND

TABLE 2: GROUNDWATER ANALYTICAL RESULTS
Former Zenker-Felt Motors
22 W. 4th Street, Eureka
LACO No. 4844.00

Sample Number	Sample Date	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Xylenes (µg/l)	MTBE (µg/l)	Other Oxygenates (µg/l)	Lead Scavengers (µg/l)	Creosote (µg/l)	Halogenated Volatiles (µg/l)	Cam 5 Metals (µg/l)	EPA 601 (µg/l)	EPA 8310 (µg/l)	EPA 608 (µg/l)	TCP PCP (µg/l)
2000 Investigation																		
B1	5/17/2000	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**2.3**	ND	ND	---	---	---	---	---	---	---
B2	5/17/2000	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND	ND	---	---	---	---	---	---	---
B3	5/17/2000	ND < 50	**170**	**420**	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**0.9**	ND	ND	Absent	---	(total metals) **Cd ND Cr 180 PB 73 Ni 240 Zn 200**	ND < 1.0	ND	ND	ND
B4	5/17/2000	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**2.5**	ND	ND	---	---	---	---	---	---	---
B5	5/17/2000	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND	ND	Absent	---	(total metals) **Cd ND Cr 230 PB 500 Ni 270 Zn 500**	ND < 1.0	ND	ND	ND
2001 Investigation																		
B6	11/13/2001	ND < 50	**360**	**10,000**	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**1.9**	ND < 120	---	---	---	---	---	---	---	---
B7	11/13/2001	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**1.8**	ND < 120	---	---	---	---	---	---	---	---
B8	11/13/2001	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**2.1**	ND < 120	---	---	---	---	---	---	---	---
2002 Investigation																		
B9	2/22/2002	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 3.0	---	---	---	---	---	---	---	---	---
B10	2/22/2002	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**5.0**	---	---	---	---	---	---	---	---	---
B11	2/22/2002	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**3.8**	---	---	---	---	---	---	---	---	---
2005 Investigation																		
B12	1/24/2005	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 1.0	ND	---	---	---	---	---	---	---	---
B13	7/29/2005	ND < 50	**210**	**4,300**	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 1.0	All ND	---	---	All ND	*All ND	---	---	---	---
B14	7/29/2005	ND < 50	**52**	**2,000**	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	**4.5**	All ND	---	---	All ND	*All ND	---	---	---	---
B15	7/29/2005	ND < 50	ND < 50	ND < 170	ND < 0.50	ND < 0.50	ND < 0.50	ND < 0.50	ND < 1.0	All ND	---	---	All ND	*All ND	---	---	---	---

Fuel Oxygenates include: di-isopropyl ether (DIPE), methanol, ethanol, ethyl tertiary butyl ether (ETBE), tert-amyl methyl ether (TAME) and tert-butyl alcohol (TBA)
Lead Scavengers (former fuel additives): ethylene dibromide (EDB), dichloroethane (DCA), dichlorobenzene, and chlorobenzene.
* Dissolved Metals (filtered)

TABLE 3: Tank Pull Soil and Groundwater Lab Results
Zenker-Felt Motors
Eureka, CA
LACO No. 4844.01

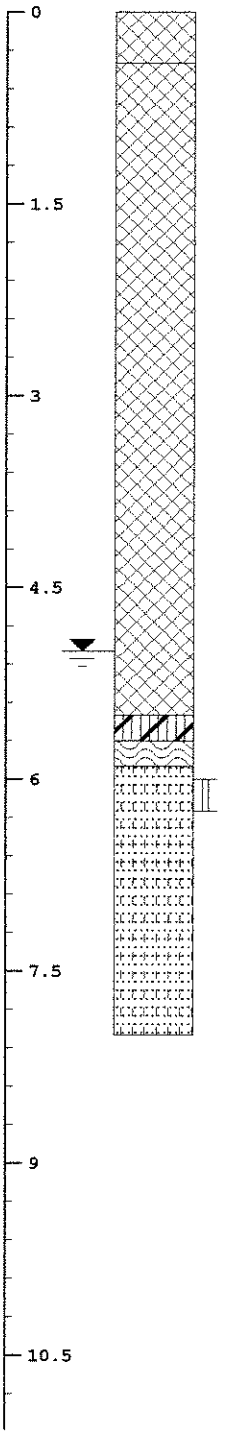
SOIL								
Sample Number	**Sample Date**	**TPHg (µg/g)**	**Benzene (µg/g)**	**Toluene (µg/g)**	**Ethylbenzene (µg/g)**	**Xylenes (µg/g)**	**TPHd (µg/g)**	**grease & Oil (µg/g)**
Tank Pull								
Zink 9' west	7/25/1990	ND <1.0	ND <0.05	ND <0.05	ND <0.05	ND <0.025	ND <1.0	ND <250
Zink 9' east	7/25/1990	ND <1.0	ND <0.05	ND <0.05	ND <0.05	ND <0.025	ND <1.0	ND <250
GROUNDWATER								
Sample Number	**Sample Date**	**TPHg (µg/L)**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Xylenes (µg/L)**	**TPHd (µg/L)**	**grease & Oil (µg/L)**
Tank Pull								
Zink 12' middle	7/25/1990	**6,000**	ND <10	**13**	**23**	**140**	**22,000**	**44**

Attachment 1

ENVIRONMENTAL BORING LOG

Boring No. B13

PROJECT: ZENKER FELT MOTORS
PROJECT NO.: 4844.00
BORING LOCATION: 0.5 FOOT FROM BORING B6
DATE: 7/29/05
DRILLING METHOD: DIRECT PUSH
ELEVATION: APPROX 5 FEET MSL
DRILLER: LACO INSTALLED
LOGGED BY:
DEPTH TO WATER: INITIAL ▽ : 5 FOOT **COMPLETION** ▼ : 5 FOOT
SITE GEOLOGY: FILLED BAY MARGIN



ELEVATION/ DEPTH	SOIL SYMBOLS, SAMPLERS AND TEST DATA	USCS	Description	P.I.D. ppm	Hanby result
		FILL	CONCRETE		
		FILL	DREDGE FILL: Silty sand, loose, gray, moist.		
		CL-ML	SILTY CLAY: Soft, gray, wet to saturated.		
		OL	ORGANIC SILT/PEAT: Medium stiff, dark brown to black, wet.		
		SW-SM	WELL GRADED SAND WITH SILT: With fine gravel, medium dense, gray, saturated.		
			BOTTOM OF BORING AT 8 FEET IN SAME.		

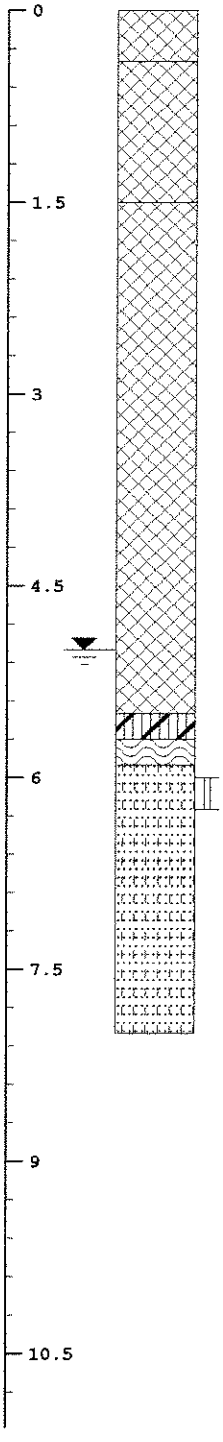
Collected soil sample at a depth of approximately 6 feet. Collected groundwater sample using hydropunch technology. Hydropunch screen interval set at approximately 4 to 8 feet bgs.

Figure _____

ENVIRONMENTAL BORING LOG

Boring No. B14

PROJECT: ZENKER FELT MOTORS
PROJECT NO.: 4844.00
BORING LOCATION: IN THE FORMER UST CAVITY NEER B5
DATE: 7/29/05
DRILLING METHOD: DIRECT PUSH
ELEVATION: APPROX 5 FEET MSL
DRILLER: LACO INSTALLED
LOGGED BY:
DEPTH TO WATER: INITIAL ▽ : 5 FOOT
COMPLETION ▼ : 5 FOOT
SITE GEOLOGY: FILLED BAY MARGIN



ELEVATION/ DEPTH	SOIL SYMBOLS, SAMPLERS AND TEST DATA	USCS	Description	P.I.D. ppm	Hanby result
		FILL	CONCRETE		
		FILL	Aggragate base.		
		FILL	DREDGE/CAVITY BACK FILL: Silty sand, loose, gray, moist.		
		CL-ML	SILTY CLAY: Soft, gray, wet to saturated.		
		OL	ORGANIC SILT/PEAT: Medium stiff, dark brown to black, wet.		
		SW-SM	WELL GRADED SAND WITH SILT: With fine gravel, medium dense, gray, saturated.		
			BOTTOM OF BORING AT 8 FEET IN SAME.		

Collected soil sample at a depth of approximately 6 feet. Collected groundwater sample using hydropunch technology. Hydropunch screen interval set at approximately 4 to 8 feet bgs.

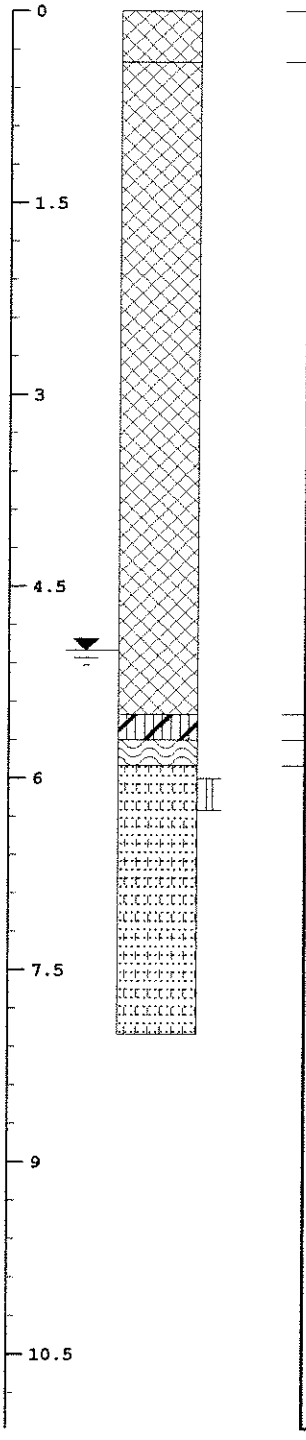
Figure _____

ENVIRONMENTAL BORING LOG

Boring No. B15

PROJECT: ZENKER FELT MOTORS
BORING LOCATION: BTWN BORING B3 and B7
DRILLING METHOD: DIRECT PUSH
DRILLER: LACO INSTALLED
DEPTH TO WATER: INITIAL ▽ : 5 FOOT
SITE GEOLOGY: FILLED BAY MARGIN

PROJECT NO.: 4844.00
DATE: 7/29/05
ELEVATION: APPROX 5 FEET MSL
LOGGED BY:
COMPLETION ▼ : 5 FOOT



ELEVATION/ DEPTH	SOIL SYMBOLS, SAMPLERS AND TEST DATA	USCS	Description	P.I.D. ppm	Hanby result
		FILL	CONCRETE		
		FILL	DREDGE FILL: Silty sand, loose, gray, moist.		
		CL-ML	SILTY CLAY: Soft, gray, wet to saturated.		
		OL	ORGANIC SILT/PEAT: Medium stiff, dark brown to black, wet.		
		SW-SM	WELL GRADED SAND WITH SILT: With fine gravel, medium dense, gray, saturated.		
			BOTTOM OF BORING AT 8 FEET IN SAME.		

Collected soil sample at a depth of approximately 6 feet. Collected groundwater sample using hydropunch technology. Hydropunch screen interval set at approximately 4 to 8 feet bgs.

Figure _____

Attachment 2

NORTH COAST LABORATORIES LTD.

RECEIVED
LACO ASSOCIATES
AUG 17 2005
BY: JR

August 12, 2005

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

Attn: Gary Manhart

RE: 4844.00, Zenker-Felt

Order No.: 0507595
Invoice No.: 52010
PO No.:
ELAP No. 1247-Expires July 2006

SAMPLE IDENTIFICATION

Fraction	Client Sample Description
01A	4844-B13-S6
01B	4844-B13-S6
01C	4844-B13-S6
02A	4844-B14-S6
02B	4844-B14-S6
02C	4844-B14-S6
03A	4844-B15-S6
03B	4844-B15-S6
03C	4844-B15-S6
04A	4844-B13-W
04D	4844-B13-W
04E	4844-B13-W
04H	4844-B13-W (Dissolved)
05A	4844-B14-W
05D	4844-B14-W
05E	4844-B14-W
05H	4844-B14-W (Dissolved)
06A	4844-B15-W
06D	4844-B15-W
06E	4844-B15-W
06H	4844-B15-W (Dissolved)
07A	Travel Blank

ND = Not Detected at the Reporting Limit

Limit = Reporting Limit

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

LMO
✓DRG
DNL
GH
GEO
HPI
GLM

File
Project #

REPORT CERTIFIED BY

Laboratory Supervisor(s) | QA Unit | Jesse G. Chaney, Jr. Laboratory Director

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CASE NARRATIVE

All samples submitted for a silica gel cleanup were initially analyzed for diesel/motor oil. The samples showing no detectable levels of the analytes were not subjected to the cleanup procedure.

TPH as Gasoline - Soil:
Samples 4844-B13-S6 and 4844-B14-S6 do not present a peak pattern consistent with that of gasoline. The reported results represent the amount of material in the gasoline range.

BTEX - Soil:
Some reporting limits were raised for sample 4844-B13-S6 due to matrix interference.

EPA 8021B - Water:
The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recoveries were above the upper acceptance limits for several analytes. 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.

The relative percent difference (RPD) for the laboratory control samples was above the upper acceptance limit for 1,3-dichlorobenzene. This indicates that the results could be variable. Since there were no detectable levels of analyte in the samples, the data were accepted.

EPA 8021B - Soil:
The bromomethane reporting limit was raised due to a loss of instrument response.

The LCS/LCSD recoveries were above the upper acceptance limit for bromomethane. These recoveries indicate that the sample results may be erroneously high. There were no detectable levels of the analyte in the samples; therefore, the data were accepted.

The RPD's for the laboratory control samples were above the upper acceptance limits for 1,2-dichloropropane and 1,4-dichlorobenzene. This indicates that the results could be variable. Since there were no detectable levels of the analytes in the samples, the data were accepted.

TPH as Diesel/Motor Oil with Silica Gel Cleanup - Water:
Sample 4844-B13-W contains some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights.

Sample 4844-B13-W and 4844-B14-W contains material in the diesel range of molecular weights, but the material does not exhibit the peak pattern typical of diesel oil.

The RPD for the laboratory control samples was above the upper acceptance limit for diesel. This

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indicates that the results could be variable.

TPH as Diesel/Motor Oil with Silica Gel Cleanup - Soil:
Sample 4844-B13-S6 contains some material lighter than diesel. However, some of this material extends into the diesel range of molecular weights.

Sample 4844-B13-S6 and 4844-B14-S6 contains material in the diesel range of molecular weights and beyond. This suggests the presence of an oil heavier than diesel.

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B13-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-01A **Matrix:** Soil

Test Name: BTEX **Reference:** EPA 5035/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
MTBE	ND	0.050	µg/g	1.0	8/1/05	8/2/05
Benzene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Toluene	ND	0.15	µg/g	1.0	8/1/05	8/2/05
Ethylbenzene	ND	0.075	µg/g	1.0	8/1/05	8/2/05
m,p-Xylene	ND	0.050	µg/g	1.0	8/1/05	8/2/05
o-Xylene	ND	0.20	µg/g	1.0	8/1/05	8/2/05
Surrogate: Cis-1,2-Dichloroethylene	98.6	71.8-135	% Rec	1.0	8/1/05	8/2/05

Test Name: TPH as Gasoline **Reference:** EPA 5035/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	14	1.0	µg/g	1.0	8/1/05	8/2/05

Client Sample ID: 4844-B13-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-01B **Matrix:** Soil

Test Name: TPH as Diesel/Motor Oil w/ Silica Gel Cleanup **Reference:** EPA 3550/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	260	50	µg/g	50	8/3/05	8/5/05
TPHC Motor Oil	6,300	2,500	µg/g	250	8/3/05	8/5/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B13-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-01C **Matrix:** Soil

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Vinyl Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromomethane	ND	0.20	µg/g	1.0	8/3/05	8/4/05
Chloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichlorofluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Methylene Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,2-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloroform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,1-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Carbon Tetrachloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloropropane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichloroethylene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromodichloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
2-Chloroethylvinyl Ether	ND	0.050	µg/g	1.0	8/3/05	8/4/05
cis-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Dibromochloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Tetrachloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromoform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2,2-Tetrachloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,3-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,4-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Surrogate: 2-Bromo-1-chloropropane	93.4	39.1-125	% Rec	1.0	8/3/05	8/4/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B14-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-02A **Matrix:** Soil

Test Name: BTEX **Reference:** EPA 5035/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
MTBE	ND	0.050	µg/g	1.0	8/1/05	8/2/05
Benzene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Toluene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Ethylbenzene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
m,p-Xylene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
o-Xylene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Surrogate: Cis-1,2-Dichloroethylene	99.4	71.8-135	% Rec	1.0	8/1/05	8/2/05

Test Name: TPH as Gasoline **Reference:** EPA 5035/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	1.4	1.0	µg/g	1.0	8/1/05	8/2/05

Client Sample ID: 4844-B14-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-02B **Matrix:** Soil

Test Name: TPH as Diesel/Motor Oil w/ Silica Gel Cleanup **Reference:** EPA 3550/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	120	50	µg/g	50	8/3/05	8/5/05
TPHC Motor Oil	1,900	500	µg/g	50	8/3/05	8/5/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B14-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-02C **Matrix:** Soil

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Vinyl Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromomethane	ND	0.20	µg/g	1.0	8/3/05	8/4/05
Chloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichlorofluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Methylene Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,2-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloroform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,1-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Carbon Tetrachloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloropropane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichloroethylene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromodichloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
2-Chloroethylvinyl Ether	ND	0.050	µg/g	1.0	8/3/05	8/4/05
cis-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Dibromochloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Tetrachloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromoform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2,2-Tetrachloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,3-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,4-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Surrogate: 2-Bromo-1-chloropropane	83.0	39.1-125	% Rec	1.0	8/3/05	8/4/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B15-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-03A **Matrix:** Soil

Test Name: BTEX **Reference:** EPA 5035/EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
MTBE	ND	0.050	µg/g	1.0	8/1/05	8/2/05
Benzene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Toluene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Ethylbenzene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
m,p-Xylene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
o-Xylene	ND	0.0050	µg/g	1.0	8/1/05	8/2/05
Surrogate: Cis-1,2-Dichloroethylene	100	71.8-135	% Rec	1.0	8/1/05	8/2/05

Test Name: TPH as Gasoline **Reference:** EPA 5035/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gas (C6-C14)	ND	1.0	µg/g	1.0	8/1/05	8/2/05

Client Sample ID: 4844-B15-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-03B **Matrix:** Soil

Test Name: TPH as Diesel/Motor Oil **Reference:** EPA 3550/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	1.0	µg/g	1.0	7/29/05	7/29/05
TPHC Motor Oil	ND	10	µg/g	1.0	7/29/05	7/29/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B15-S6 **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-03C **Matrix:** Soil

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Vinyl Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromomethane	ND	0.20	µg/g	1.0	8/3/05	8/4/05
Chloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichlorofluoromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Methylene Chloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,2-Dichloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chloroform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,1-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Carbon Tetrachloride	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichloropropane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Trichloroethylene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromodichloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
2-Chloroethylvinyl Ether	ND	0.050	µg/g	1.0	8/3/05	8/4/05
cis-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
trans-1,3-Dichloropropene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2-Trichloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Dibromochloromethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Tetrachloroethene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Chlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Bromoform	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,1,2,2-Tetrachloroethane	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,3-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,4-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
1,2-Dichlorobenzene	ND	0.050	µg/g	1.0	8/3/05	8/4/05
Surrogate: 2-Bromo-1-chloropropane	99.7	39.1-125	% Rec	1.0	8/3/05	8/4/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B13-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-04A **Matrix:** Groundwater

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/9/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/9/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/9/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/9/05
Benzene	ND	0.50	µg/L	1.0		8/9/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/9/05
Toluene	ND	0.50	µg/L	1.0		8/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/9/05
o-Xylene	ND	0.50	µg/L	1.0		8/9/05
Surrogate: 1,4-Dichlorobenzene-d4	104	80.8-139	% Rec	1.0		8/9/05

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

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/9/05

Client Sample ID: 4844-B13-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-04D **Matrix:** Groundwater

Test Name: TPH as Diesel/Motor Oil w/ Silica Gel Cleanup **Reference:** EPA 3510/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	210	50	µg/L	1.0	8/3/05	8/5/05
TPHC Motor Oil	4,300	1,700	µg/L	10	8/3/05	8/5/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B13-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-04E **Matrix:** Groundwater

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		8/2/05
Chloromethane	ND	1.0	µg/L	1.0		8/2/05
Vinyl Chloride	ND	1.0	µg/L	1.0		8/2/05
Bromomethane	ND	1.0	µg/L	1.0		8/2/05
Chloroethane	ND	1.0	µg/L	1.0		8/2/05
Trichlorofluoromethane	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
Methylene Chloride	ND	1.0	µg/L	1.0		8/2/05
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Chloroform	ND	1.0	µg/L	1.0		8/2/05
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Carbon Tetrachloride	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloropropane	ND	1.0	µg/L	1.0		8/2/05
Trichloroethene	ND	1.0	µg/L	1.0		8/2/05
Bromodichloromethane	ND	1.0	µg/L	1.0		8/2/05
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
Dibromochloromethane	ND	1.0	µg/L	1.0		8/2/05
Tetrachloroethene	ND	1.0	µg/L	1.0		8/2/05
Chlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Bromoform	ND	1.0	µg/L	1.0		8/2/05
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		8/2/05
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Surrogate: 2-Bromo-1-chloropropane	121	75.2-125	% Rec	1.0		8/2/05

Client Sample ID: 4844-B13-W (Dissolved) **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-04H **Matrix:** Groundwater

Test Name: ICAP Metals with Acid Digestion **Reference:** EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Cadmium	ND	10	µg/L	1.0	7/29/05	8/1/05
Chromium	ND	10	µg/L	1.0	7/29/05	8/1/05
Nickel	ND	20	µg/L	1.0	7/29/05	8/1/05
Zinc	ND	20	µg/L	1.0	7/29/05	8/1/05

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Date: 12-Aug-05

ANALYTICAL REPORT

WorkOrder: 0507595

Test Name: Lead **Reference:** EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Lead	ND	10	µg/L	1.0	7/29/05	8/1/05

Client Sample ID: 4844-B14-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00

Lab ID: 0507595-05A **Matrix:** Groundwater

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	4.5	1.0	µg/L	1.0		8/9/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/9/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/9/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/9/05
Benzene	ND	0.50	µg/L	1.0		8/9/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/9/05
Toluene	ND	0.50	µg/L	1.0		8/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/9/05
o-Xylene	ND	0.50	µg/L	1.0		8/9/05
Surrogate: 1,4-Dichlorobenzene-d4	103	80.8-139	% Rec	1.0		8/9/05

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

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/9/05

Client Sample ID: 4844-B14-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00

Lab ID: 0507595-05D **Matrix:** Groundwater

Test Name: TPH as Diesel/Motor Oil w/ Silica Gel Cleanup **Reference:** EPA 3510/3630/GCFID(LUFT)/8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	52	50	µg/L	1.0	8/3/05	8/5/05
TPHC Motor Oil	2,000	170	µg/L	1.0	8/3/05	8/5/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B14-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-05E **Matrix:** Groundwater

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		8/2/05
Chloromethane	ND	1.0	µg/L	1.0		8/2/05
Vinyl Chloride	ND	1.0	µg/L	1.0		8/2/05
Bromomethane	ND	1.0	µg/L	1.0		8/2/05
Chloroethane	ND	1.0	µg/L	1.0		8/2/05
Trichlorofluoromethane	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
Methylene Chloride	ND	1.0	µg/L	1.0		8/2/05
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Chloroform	ND	1.0	µg/L	1.0		8/2/05
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Carbon Tetrachloride	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloropropane	ND	1.0	µg/L	1.0		8/2/05
Trichloroethene	ND	1.0	µg/L	1.0		8/2/05
Bromodichloromethane	ND	1.0	µg/L	1.0		8/2/05
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
Dibromochloromethane	ND	1.0	µg/L	1.0		8/2/05
Tetrachloroethene	ND	1.0	µg/L	1.0		8/2/05
Chlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Bromoform	ND	1.0	µg/L	1.0		8/2/05
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		8/2/05
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Surrogate: 2-Bromo-1-chloropropane	85.4	75.2-125	% Rec	1.0		8/2/05

Client Sample ID: 4844-B14-W (Dissolved) **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-05H **Matrix:** Groundwater

Test Name: ICAP Metals with Acid Digestion **Reference:** EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Cadmium	ND	10	µg/L	1.0	7/29/05	8/1/05
Chromium	ND	10	µg/L	1.0	7/29/05	8/1/05
Nickel	ND	20	µg/L	1.0	7/29/05	8/1/05
Zinc	ND	20	µg/L	1.0	7/29/05	8/1/05

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Date: 12-Aug-05

ANALYTICAL REPORT

WorkOrder: 0507595

Test Name: Lead **Reference:** EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Lead	ND	10	µg/L	1.0	7/29/05	8/1/05

Client Sample ID: 4844-B15-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00

Lab ID: 0507595-06A **Matrix:** Groundwater

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/9/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/9/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/9/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/9/05
Benzene	ND	0.50	µg/L	1.0		8/9/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/9/05
Toluene	ND	0.50	µg/L	1.0		8/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/9/05
o-Xylene	ND	0.50	µg/L	1.0		8/9/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/9/05

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

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Gasoline	ND	50	µg/L	1.0		8/9/05

Client Sample ID: 4844-B15-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00

Lab ID: 0507595-06D **Matrix:** Groundwater

Test Name: TPH as Diesel/Motor Oil **Reference:** EPA 3510/GCFID(LUFT)/EPA 8015B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
TPHC Diesel (C12-C22)	ND	50	µg/L	1.0	8/2/05	8/3/05
TPHC Motor Oil	ND	170	µg/L	1.0	8/2/05	8/3/05

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Date: 12-Aug-05
WorkOrder: 0507595

ANALYTICAL REPORT

Client Sample ID: 4844-B15-W **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-06E **Matrix:** Groundwater

Test Name: Halogenated Volatiles **Reference:** EPA 8021B

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Dichlorodifluoromethane	ND	1.0	µg/L	1.0		8/2/05
Chloromethane	ND	1.0	µg/L	1.0		8/2/05
Vinyl Chloride	ND	1.0	µg/L	1.0		8/2/05
Bromomethane	ND	1.0	µg/L	1.0		8/2/05
Chloroethane	ND	1.0	µg/L	1.0		8/2/05
Trichlorofluoromethane	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
Methylene Chloride	ND	1.0	µg/L	1.0		8/2/05
trans-1,2-Dichloroethene	ND	1.0	µg/L	1.0		8/2/05
1,1-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Chloroform	ND	1.0	µg/L	1.0		8/2/05
1,1,1-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloroethane	ND	1.0	µg/L	1.0		8/2/05
Carbon Tetrachloride	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichloropropane	ND	1.0	µg/L	1.0		8/2/05
Trichloroethene	ND	1.0	µg/L	1.0		8/2/05
Bromodichloromethane	ND	1.0	µg/L	1.0		8/2/05
cis-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
trans-1,3-Dichloropropene	ND	1.0	µg/L	1.0		8/2/05
1,1,2-Trichloroethane	ND	1.0	µg/L	1.0		8/2/05
Dibromochloromethane	ND	1.0	µg/L	1.0		8/2/05
Tetrachloroethene	ND	1.0	µg/L	1.0		8/2/05
Chlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Bromoform	ND	1.0	µg/L	1.0		8/2/05
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	1.0		8/2/05
1,3-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,4-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
1,2-Dichlorobenzene	ND	1.0	µg/L	1.0		8/2/05
Surrogate: 2-Bromo-1-chloropropane	99.9	75.2-125	% Rec	1.0		8/2/05

Client Sample ID: 4844-B15-W (Dissolved) **Received:** 7/29/05 **Collected:** 7/29/05 0:00
Lab ID: 0507595-06H **Matrix:** Groundwater

Test Name: ICAP Metals with Acid Digestion **Reference:** EPA 200.7

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Cadmium	ND	10	µg/L	1.0	7/29/05	8/1/05
Chromium	ND	10	µg/L	1.0	7/29/05	8/1/05
Nickel	ND	20	µg/L	1.0	7/29/05	8/1/05
Zinc	ND	20	µg/L	1.0	7/29/05	8/1/05

Date: 12-Aug-05

ANALYTICAL REPORT

WorkOrder: 0507595

Test Name: Lead **Reference:** EPA 200.9

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Lead	ND	10	µg/L	1.0	7/29/05	8/1/05

Client Sample ID: Travel Blank **Received:** 7/29/05 **Collected:**

Lab ID: 0507595-07A **Matrix:** Trip Blank

Test Name: Gasoline Components/Additives **Reference:** LUFT/EPA 8260B Modified

Parameter	Result	Limit	Units	DF	Extracted	Analyzed
Methyl tert-butyl ether (MTBE)	ND	1.0	µg/L	1.0		8/9/05
Tert-butyl alcohol (TBA)	ND	10	µg/L	1.0		8/9/05
Di-isopropyl ether (DIPE)	ND	1.0	µg/L	1.0		8/9/05
Ethyl tert-butyl ether (ETBE)	ND	1.0	µg/L	1.0		8/9/05
Benzene	ND	0.50	µg/L	1.0		8/9/05
Tert-amyl methyl ether (TAME)	ND	1.0	µg/L	1.0		8/9/05
Toluene	ND	0.50	µg/L	1.0		8/9/05
Ethylbenzene	ND	0.50	µg/L	1.0		8/9/05
m,p-Xylene	ND	0.50	µg/L	1.0		8/9/05
o-Xylene	ND	0.50	µg/L	1.0		8/9/05
Surrogate: 1,4-Dichlorobenzene-d4	101	80.8-139	% Rec	1.0		8/9/05

North Coast Laboratories, Ltd.

Date: 12-Aug-05

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-13948** Batch ID: **13948** Test Code: **8010S** Units: **µg/g** Analysis Date: **8/3/05 10:13:38 PM** Prep Date: **8/3/05**

Client ID: Run ID: **ORGC1_050803A** SeqNo: **521378**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	0.050									
Chloromethane	ND	0.050									
Vinyl Chloride	ND	0.050									
Bromomethane	0.09387	0.20									J
Chloroethane	ND	0.050									
Trichlorofluoromethane	ND	0.050									
1,1-Dichloroethene	ND	0.050									
Methylene Chloride	ND	0.050									
trans-1,2-Dichloroethene	ND	0.050									
1,1-Dichloroethane	ND	0.050									
Chloroform	ND	0.050									
1,1,1-Trichloroethane	ND	0.050									
1,2-Dichloroethane	ND	0.050									
Carbon Tetrachloride	ND	0.050									
1,2-Dichloropropane	ND	0.050									
Trichloroethylene	ND	0.050									
Bromodichloromethane	ND	0.050									
2-Chloroethylvinyl Ether	0.04346	0.050									J
cis-1,3-Dichloropropene	ND	0.050									
trans-1,3-Dichloropropene	ND	0.050									
1,1,2-Trichloroethane	ND	0.050									
Dibromochloromethane	ND	0.050									
Tetrachloroethene	ND	0.050									
Chlorobenzene	ND	0.050									
Bromoform	ND	0.050									
1,1,2,2-Tetrachloroethane	ND	0.050									
1,3-Dichlorobenzene	ND	0.050									
1,4-Dichlorobenzene	ND	0.050									

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Method Blank

1,2-Dichlorobenzene	ND	0.050						
2-Bromo-1-chloropropane	0.946	0.10	1.00	0	94.7%	39	125	0

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT
Method Blank

Sample ID: **MB 080205** Batch ID: **R36222** Test Code: **8010W** Units: **µg/L** Analysis Date: **8/2/05 5:52:38 PM** Prep Date:
Client ID: Run ID: **ORGC1_050802A** SeqNo: **521236**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0									
Chloromethane	ND	1.0									
Vinyl Chloride	ND	1.0									
Bromomethane	ND	1.0									
Chloroethane	ND	1.0									
Trichlorofluoromethane	ND	1.0									
1,1-Dichloroethene	ND	1.0									
Methylene Chloride	ND	1.0									
trans-1,2-Dichloroethene	ND	1.0									
1,1-Dichloroethane	ND	1.0									
Chloroform	ND	1.0									
1,1,1-Trichloroethane	ND	1.0									
1,2-Dichloroethane	ND	1.0									
Carbon Tetrachloride	ND	1.0									
1,2-Dichloropropane	ND	1.0									
Trichloroethene	ND	1.0									
Bromodichloromethane	ND	1.0									
cis-1,3-Dichloropropene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
1,1,2-Trichloroethane	ND	1.0									
Dibromochloromethane	ND	1.0									
Tetrachloroethene	ND	1.0									
Chlorobenzene	ND	1.0									
Bromoform	ND	1.0									
1,1,2,2-Tetrachloroethane	ND	1.0									
1,3-Dichlorobenzene	ND	1.0									
1,4-Dichlorobenzene	ND	1.0									
1,2-Dichlorobenzene	ND	1.0									
2-Bromo-1-chloropropane	1.12	0.10	1.00	0	112%	75	125	0			

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Method Blank

Sample ID: **MB 080905** Batch ID: **R36342** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **8/9/05 9:07:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809B** SeqNo: **522773**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	1.0									
Tert-butyl alcohol (TBA)	ND	10									
Di-isopropyl ether (DIPE)	ND	1.0									
Ethyl tert-butyl ether (ETBE)	ND	1.0									
Benzene	ND	0.50									
Tert-amyl methyl ether (TAME)	ND	1.0									
Toluene	ND	0.50									
Ethylbenzene	0.09773	0.50									J
m,p-Xylene	0.1856	0.50									J
o-Xylene	0.1214	0.50									J
1,4-Dichlorobenzene-d4	1.01	0.10	1.00	0	101%	81	139	0			

Sample ID: **MB-13936** Batch ID: **13936** Test Code: **BTXES** Units: **µg/g** Analysis Date: **8/2/05 1:14:04 AM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801B** SeqNo: **520644**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	ND	0.050									
Benzene	ND	0.0050									
Toluene	ND	0.0050									
Ethylbenzene	ND	0.0050									
m,p-Xylene	ND	0.0050									
o-Xylene	ND	0.0050									
Cis-1,2-Dichloroethylene	1.02	0.10	1.00	0	102%	72	135	0			

Sample ID: **MB 080905** Batch ID: **R36341** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **8/9/05 9:07:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809A** SeqNo: **522748**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	17.96	50									J

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-13917P** Batch ID: **13917** Test Code: **ICPX** Units: **µg/L** Analysis Date: **8/1/05 5:48:00 PM** Prep Date: **7/29/05**
Client ID: Run ID: **INICP1_050801A** SeqNo: **520190**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	ND	10									
Chromium	ND	10									
Nickel	ND	20									
Zinc	ND	20									

Sample ID: **MB-13917A** Batch ID: **13917** Test Code: **PB200.9X** Units: **µg/L** Analysis Date: **8/1/05 4:58:00 PM** Prep Date: **7/29/05**
Client ID: Run ID: **INAA2_050801D** SeqNo: **520259**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	10									

Sample ID: **MB-13949** Batch ID: **13949** Test Code: **SGTPDMS** Units: **µg/g** Analysis Date: **8/4/05 11:02:13 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804B** SeqNo: **521316**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	0.5165	1.0									J
TPHC Motor Oil	ND	10									

Sample ID: **MB-13950** Batch ID: **13950** Test Code: **SGTPDMW** Units: **µg/L** Analysis Date: **8/4/05 10:27:44 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804A** SeqNo: **521295**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	ND	50									
TPHC Motor Oil	ND	170									

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Method Blank

Sample ID: **MB-13936** Batch ID: **13936** Test Code: **TPHCGS** Units: **µg/g** Analysis Date: **8/2/05 1:14:04 AM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801A** SeqNo: **520337**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	0.4884	1.0									J

Sample ID: **MB-13920** Batch ID: **13920** Test Code: **TPHDMS** Units: **µg/g** Analysis Date: **7/29/05 6:37:55 PM** Prep Date: **7/29/05**
Client ID: Run ID: **ORGC7_050729A** SeqNo: **520208**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	0.5601	1.0									J
TPHC Motor Oil	ND	10									

Sample ID: **MB-13941** Batch ID: **13941** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **8/2/05 3:21:39 PM** Prep Date: **8/2/05**
Client ID: Run ID: **ORGC7_050802A** SeqNo: **520731**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	44.15	50									J
TPHC Motor Oil	68.41	170									J

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

North Coast Laboratories, Ltd.

Date: 12-Aug-05

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-13948** Batch ID: **13948** Test Code: **8010S** Units: **µg/g** Analysis Date: **8/3/05 6:28:25 PM** Prep Date: **8/3/05**

Client ID: Run ID: **ORGC1_050803A** SeqNo: **521375**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	0.1785	0.050	0.250	0	71.4%	25	137	0			
Chloromethane	0.1696	0.050	0.250	0	67.8%	25	196	0			
Vinyl Chloride	0.1969	0.050	0.250	0	78.7%	30	109	0			
Bromomethane	0.2445	0.20	0.250	0	97.8%	6	90	0			S
Chloroethane	0.1822	0.050	0.250	0	72.9%	3	81	0			
Trichlorofluoromethane	0.2073	0.050	0.250	0	82.9%	62	141	0			
1,1-Dichloroethene	0.2127	0.050	0.250	0	85.1%	52	125	0			
Methylene Chloride	0.2116	0.050	0.250	0	84.6%	13	130	0			
trans-1,2-Dichloroethene	0.2201	0.050	0.250	0	88.0%	33	151	0			
1,1-Dichloroethane	0.2174	0.050	0.250	0	86.9%	77	118	0			
Chloroform	0.2071	0.050	0.250	0	82.8%	77	124	0			
1,1,1-Trichloroethane	0.2294	0.050	0.250	0	91.8%	75	129	0			
1,2-Dichloroethane	0.1973	0.050	0.250	0	78.9%	49	129	0			
Carbon Tetrachloride	0.2230	0.050	0.250	0	89.2%	77	134	0			
1,2-Dichloropropane	0.2488	0.050	0.250	0	99.5%	77	130	0			
Trichloroethylene	0.2342	0.050	0.250	0	93.7%	58	131	0			
Bromodichloromethane	0.2104	0.050	0.250	0	84.1%	79	111	0			
2-Chloroethylvinyl Ether	0.2402	0.050	0.250	0	96.1%	67	127	0			
cis-1,3-Dichloropropene	0.2303	0.050	0.250	0	92.1%	83	115	0			
trans-1,3-Dichloropropene	0.2277	0.050	0.250	0	91.1%	72	127	0			
1,1,2-Trichloroethane	0.2270	0.050	0.250	0	90.8%	57	124	0			
Dibromochloromethane	0.2795	0.050	0.250	0	112%	67	119	0			
Tetrachloroethene	0.2143	0.050	0.250	0	85.7%	63	133	0			
Chlorobenzene	0.2216	0.050	0.250	0	88.6%	74	122	0			
Bromoform	0.2171	0.050	0.250	0	86.8%	59	137	0			
1,1,2,2-Tetrachloroethane	0.2467	0.050	0.250	0	98.7%	49	119	0			
1,3-Dichlorobenzene	0.2516	0.050	0.250	0	101%	41	148	0			
1,4-Dichlorobenzene	0.2375	0.050	0.250	0	95.0%	39	141	0			

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

1,2-Dichlorobenzene	0.2385	0.050	0.250	0	95.4%	63	125	0
2-Bromo-1-chloropropane	1.05	0.10	1.00	0	105%	39	125	0

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-13948** Batch ID: **13948** Test Code: **8010S** Units: **µg/g** Analysis Date: **8/3/05 7:24:45 PM** Prep Date: **8/3/05**

Client ID: Run ID: **ORGC1_050803A** SeqNo: **521376**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	0.1604	0.050	0.250	0	64.2%	25	137	0.178	10.7%	15	
Chloromethane	0.1640	0.050	0.250	0	65.6%	25	196	0.170	3.32%	15	
Vinyl Chloride	0.1842	0.050	0.250	0	73.7%	30	109	0.197	6.64%	15	
Bromomethane	0.2422	0.20	0.250	0	96.9%	6	90	0.244	0.925%	15	S
Chloroethane	0.1920	0.050	0.250	0	76.8%	3	81	0.182	5.20%	15	
Trichlorofluoromethane	0.2322	0.050	0.250	0	92.9%	62	141	0.207	11.3%	15	
1,1-Dichloroethene	0.2243	0.050	0.250	0	89.7%	52	125	0.213	5.29%	15	
Methylene Chloride	0.1891	0.050	0.250	0	75.6%	13	130	0.212	11.2%	15	
trans-1,2-Dichloroethene	0.2157	0.050	0.250	0	86.3%	33	151	0.220	2.04%	15	
1,1-Dichloroethane	0.2362	0.050	0.250	0	94.5%	77	118	0.217	8.30%	15	
Chloroform	0.2396	0.050	0.250	0	95.8%	77	124	0.207	14.6%	15	
1,1,1-Trichloroethane	0.2411	0.050	0.250	0	96.4%	75	129	0.229	4.98%	15	
1,2-Dichloroethane	0.2237	0.050	0.250	0	89.5%	49	129	0.197	12.5%	15	
Carbon Tetrachloride	0.2233	0.050	0.250	0	89.3%	77	134	0.223	0.0991%	15	
1,2-Dichloropropane	0.2140	0.050	0.250	0	85.6%	77	130	0.249	15.0%	15	R
Trichloroethylene	0.2166	0.050	0.250	0	86.6%	58	131	0.234	7.82%	15	
Bromodichloromethane	0.2272	0.050	0.250	0	90.9%	79	111	0.210	7.71%	15	
2-Chloroethylvinyl Ether	0.2656	0.050	0.250	0	106%	67	127	0.240	10.0%	15	
cis-1,3-Dichloropropene	0.2274	0.050	0.250	0	91.0%	83	115	0.230	1.28%	15	
trans-1,3-Dichloropropene	0.2168	0.050	0.250	0	86.7%	72	127	0.228	4.88%	15	
1,1,2-Trichloroethane	0.2262	0.050	0.250	0	90.5%	57	124	0.227	0.352%	15	
Dibromochloromethane	0.2819	0.050	0.250	0	113%	67	119	0.280	0.856%	15	
Tetrachloroethene	0.2319	0.050	0.250	0	92.8%	63	133	0.214	7.91%	15	
Chlorobenzene	0.1991	0.050	0.250	0	79.7%	74	122	0.222	10.7%	15	
Bromoform	0.2305	0.050	0.250	0	92.2%	59	137	0.217	5.98%	15	
1,1,2,2-Tetrachloroethane	0.2433	0.050	0.250	0	97.3%	49	119	0.247	1.40%	15	
1,3-Dichlorobenzene	0.2283	0.050	0.250	0	91.3%	41	148	0.252	9.69%	15	
1,4-Dichlorobenzene	0.2030	0.050	0.250	0	81.2%	39	141	0.238	15.6%	15	R
1,2-Dichlorobenzene	0.2057	0.050	0.250	0	82.3%	63	125	0.238	14.8%	15	

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

2-Bromo-1-chloropropane	1.02	0.10	1.00	0	102%	39	125	1.05	3.16%	15

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-05488** Batch ID: **R36222** Test Code: **8010W** Units: **µg/L** Analysis Date: **8/2/05 4:00:07 PM** Prep Date:

Client ID: Run ID: **ORGC1_050802A** SeqNo: **521234**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	7.099	1.0	5.00	0	142%	50	149	0			
Chloromethane	7.210	1.0	5.00	0	144%	61	155	0			
Vinyl Chloride	5.959	1.0	5.00	0	119%	64	141	0			
Bromomethane	5.802	1.0	5.00	0	116%	80	142	0			
Chloroethane	5.162	1.0	5.00	0	103%	81	129	0			
Trichlorofluoromethane	5.196	1.0	5.00	0	104%	76	136	0			
1,1-Dichloroethene	6.058	1.0	5.00	0	121%	78	131	0			
Methylene Chloride	5.911	1.0	5.00	0	118%	73	135	0			
trans-1,2-Dichloroethene	5.303	1.0	5.00	0	106%	78	125	0			
1,1-Dichloroethane	5.366	1.0	5.00	0	107%	78	119	0			
Chloroform	5.184	1.0	5.00	0	104%	82	114	0			
1,1,1-Trichloroethane	4.945	1.0	5.00	0	98.9%	79	119	0			
1,2-Dichloroethane	5.982	1.0	5.00	0	120%	78	117	0			S
Carbon Tetrachloride	5.048	1.0	5.00	0	101%	70	129	0			
1,2-Dichloropropane	4.973	1.0	5.00	0	99.5%	80	119	0			
Trichloroethene	6.278	1.0	5.00	0	126%	80	119	0			S
Bromodichloromethane	5.700	1.0	5.00	0	114%	80	120	0			
cis-1,3-Dichloropropene	5.749	1.0	5.00	0	115%	77	119	0			
trans-1,3-Dichloropropene	5.012	1.0	5.00	0	100%	78	121	0			
1,1,2-Trichloroethane	5.102	1.0	5.00	0	102%	85	116	0			
Dibromochloromethane	5.407	1.0	5.00	0	108%	75	131	0			
Tetrachloroethene	5.621	1.0	5.00	0	112%	79	115	0			
Chlorobenzene	5.694	1.0	5.00	0	114%	79	117	0			
Bromoform	5.627	1.0	5.00	0	113%	72	127	0			
1,1,2,2-Tetrachloroethane	5.288	1.0	5.00	0	106%	78	126	0			
1,3-Dichlorobenzene	5.334	1.0	5.00	0	107%	76	122	0			
1,4-Dichlorobenzene	5.291	1.0	5.00	0	106%	74	125	0			
1,2-Dichlorobenzene	5.511	1.0	5.00	0	110%	79	120	0			
2-Bromo-1-chloropropane	1.14	0.10	1.00	0	114%	75	125	0			

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-05488** Batch ID: **R36222** Test Code: **8010W** Units: **µg/L** Analysis Date: **8/2/05 4:56:12 PM** Prep Date:

Client ID: Run ID: **ORGC1_050802A** SeqNo: **521235**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	7.488	1.0	5.00	0	150%	50	149	7.10	5.33%	15	S
Chloromethane	7.731	1.0	5.00	0	155%	61	155	7.21	6.97%	15	
Vinyl Chloride	6.273	1.0	5.00	0	125%	64	141	5.96	5.14%	15	
Bromomethane	6.698	1.0	5.00	0	134%	80	142	5.80	14.3%	15	
Chloroethane	5.928	1.0	5.00	0	119%	81	129	5.16	13.8%	15	
Trichlorofluoromethane	5.429	1.0	5.00	0	109%	76	136	5.20	4.40%	15	
1,1-Dichloroethene	5.357	1.0	5.00	0	107%	78	131	6.06	12.3%	15	
Methylene Chloride	5.714	1.0	5.00	0	114%	73	135	5.91	3.40%	15	
trans-1,2-Dichloroethene	4.864	1.0	5.00	0	97.3%	78	125	5.30	8.65%	15	
1,1-Dichloroethane	5.417	1.0	5.00	0	108%	78	119	5.37	0.945%	15	
Chloroform	5.662	1.0	5.00	0	113%	82	114	5.18	8.81%	15	
1,1,1-Trichloroethane	5.432	1.0	5.00	0	109%	79	119	4.94	9.39%	15	
1,2-Dichloroethane	6.540	1.0	5.00	0	131%	78	117	5.98	8.91%	15	S
Carbon Tetrachloride	5.420	1.0	5.00	0	108%	70	129	5.05	7.12%	15	
1,2-Dichloropropane	4.851	1.0	5.00	0	97.0%	80	119	4.97	2.50%	15	
Trichloroethene	5.839	1.0	5.00	0	117%	80	119	6.28	7.24%	15	
Bromodichloromethane	5.731	1.0	5.00	0	115%	80	120	5.70	0.545%	15	
cis-1,3-Dichloropropene	5.164	1.0	5.00	0	103%	77	119	5.75	10.7%	15	
trans-1,3-Dichloropropene	5.329	1.0	5.00	0	107%	78	121	5.01	6.13%	15	
1,1,2-Trichloroethane	5.896	1.0	5.00	0	118%	85	116	5.10	14.4%	15	S
Dibromochloromethane	5.892	1.0	5.00	0	118%	75	131	5.41	8.58%	15	
Tetrachloroethene	6.102	1.0	5.00	0	122%	79	115	5.62	8.22%	15	S
Chlorobenzene	5.623	1.0	5.00	0	112%	79	117	5.69	1.25%	15	
Bromoform	5.611	1.0	5.00	0	112%	72	127	5.63	0.286%	15	
1,1,2,2-Tetrachloroethane	5.123	1.0	5.00	0	102%	78	126	5.29	3.16%	15	
1,3-Dichlorobenzene	6.429	1.0	5.00	0	129%	76	122	5.33	18.6%	15	SR
1,4-Dichlorobenzene	5.275	1.0	5.00	0	106%	74	125	5.29	0.295%	15	
1,2-Dichlorobenzene	5.803	1.0	5.00	0	116%	79	120	5.51	5.16%	15	
2-Bromo-1-chloropropane	1.22	0.10	1.00	0	122%	75	125	1.14	6.39%	15	

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-05505** Batch ID: **R36342** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **8/9/05 6:34:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809B** SeqNo: **522771**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.10	1.0	20.0	0	95.5%	80	120	0			
Tert-butyl alcohol (TBA)	395.5	10	400	0	98.9%	25	162	0			
Di-isopropyl ether (DIPE)	19.68	1.0	20.0	0	98.4%	80	120	0			
Ethyl tert-butyl ether (ETBE)	19.42	1.0	20.0	0	97.1%	77	120	0			
Benzene	19.64	0.50	20.0	0	98.2%	78	117	0			
Tert-amyl methyl ether (TAME)	19.07	1.0	20.0	0	95.3%	64	136	0			
Toluene	19.73	0.50	20.0	0	98.6%	80	120	0			
Ethylbenzene	19.20	0.50	20.0	0	96.0%	80	120	0			
m,p-Xylene	38.60	0.50	40.0	0	96.5%	80	120	0			
o-Xylene	18.59	0.50	20.0	0	93.0%	80	120	0			
1,4-Dichlorobenzene-d4	1.08	0.10	1.00	0	108%	81	139	0			

Sample ID: **LCSD-05505** Batch ID: **R36342** Test Code: **8260OXYW** Units: **µg/L** Analysis Date: **8/9/05 7:00:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809B** SeqNo: **522772**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	19.02	1.0	20.0	0	95.1%	80	120	19.1	0.413%	20	
Tert-butyl alcohol (TBA)	392.3	10	400	0	98.1%	25	162	396	0.812%	20	
Di-isopropyl ether (DIPE)	19.46	1.0	20.0	0	97.3%	80	120	19.7	1.13%	20	
Ethyl tert-butyl ether (ETBE)	19.15	1.0	20.0	0	95.7%	77	120	19.4	1.39%	20	
Benzene	19.70	0.50	20.0	0	98.5%	78	117	19.6	0.297%	20	
Tert-amyl methyl ether (TAME)	19.03	1.0	20.0	0	95.1%	64	136	19.1	0.209%	20	
Toluene	19.52	0.50	20.0	0	97.6%	80	120	19.7	1.09%	20	
Ethylbenzene	19.02	0.50	20.0	0	95.1%	80	120	19.2	0.907%	20	
m,p-Xylene	38.52	0.50	40.0	0	96.3%	80	120	38.6	0.186%	20	
o-Xylene	18.65	0.50	20.0	0	93.2%	80	120	18.6	0.299%	20	
1,4-Dichlorobenzene-d4	1.08	0.10	1.00	0	108%	81	139	1.08	0.0947%	20	

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-13936** Batch ID: **13936** Test Code: **BTXES** Units: **µg/g** Analysis Date: **8/1/05 10:17:55 PM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801B** SeqNo: **520642**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	0.3896	0.050	0.400	0	97.4%	75	124	0			
Benzene	0.05016	0.0050	0.0500	0	100%	80	128	0			
Toluene	0.05340	0.0050	0.0500	0	107%	85	126	0			
Ethylbenzene	0.05050	0.0050	0.0500	0	101%	80	126	0			
m,p-Xylene	0.09706	0.0050	0.100	0	97.1%	84	130	0			
o-Xylene	0.04827	0.0050	0.0500	0	96.5%	84	125	0			
Cis-1,2-Dichloroethylene	1.06	0.10	1.00	0	106%	72	135	0			

Sample ID: **LCSD-13936** Batch ID: **13936** Test Code: **BTXES** Units: **µg/g** Analysis Date: **8/1/05 10:53:11 PM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801B** SeqNo: **520643**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
MTBE	0.3936	0.050	0.400	0	98.4%	75	124	0.390	1.03%	15	
Benzene	0.05085	0.0050	0.0500	0	102%	80	128	0.0502	1.38%	15	
Toluene	0.05381	0.0050	0.0500	0	108%	85	126	0.0534	0.762%	15	
Ethylbenzene	0.05116	0.0050	0.0500	0	102%	80	126	0.0505	1.29%	15	
m,p-Xylene	0.09822	0.0050	0.100	0	98.2%	84	130	0.0971	1.19%	15	
o-Xylene	0.04896	0.0050	0.0500	0	97.9%	84	125	0.0483	1.43%	15	
Cis-1,2-Dichloroethylene	0.931	0.10	1.00	0	93.1%	72	135	1.06	12.7%	15	

Sample ID: **LCS-05506** Batch ID: **R36341** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **8/9/05 7:51:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809A** SeqNo: **522746**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	937.7	50	1,000	0	93.8%	80	120	0			

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-05506** Batch ID: **R36341** Test Code: **GASW-MS** Units: **µg/L** Analysis Date: **8/9/05 8:16:00 AM** Prep Date:
Client ID: Run ID: **ORGCMS3_050809A** SeqNo: **522747**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gasoline	917.0	50	1,000	0	91.7%	80	120	938	2.24%	20	

Sample ID: **LCS-13917P** Batch ID: **13917** Test Code: **ICPX** Units: **µg/L** Analysis Date: **8/1/05 5:51:00 PM** Prep Date: **7/29/05**
Client ID: Run ID: **INICP1_050801A** SeqNo: **520191**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	505.1	10	500	0	101%	85	115	0			
Chromium	488.1	10	500	0	97.6%	85	115	0			
Nickel	500.8	20	500	0	100%	85	115	0			
Zinc	493.4	20	500	0	98.7%	85	115	0			

Sample ID: **LCS-13917A** Batch ID: **13917** Test Code: **PB200.9X** Units: **µg/L** Analysis Date: **8/1/05 5:04:00 PM** Prep Date: **7/29/05**
Client ID: Run ID: **INAA2_050801D** SeqNo: **520260**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	39.82	10	40.0	0	99.6%	85	115	0			

Sample ID: **LCS-13949** Batch ID: **13949** Test Code: **SGTPDMS** Units: **µg/g** Analysis Date: **8/4/05 8:10:05 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804B** SeqNo: **521314**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	6.748	1.0	10.0	0	67.5%	27	118	0			
TPHC Motor Oil	16.01	10	20.0	0	80.0%	38	117	0			

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike Duplicate

Sample ID: **LCSD-13949** Batch ID: **13949** Test Code: **SGTPDMS** Units: **µg/g** Analysis Date: **8/4/05 8:44:22 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804B** SeqNo: **521315**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	6.605	1.0	10.0	0	66.0%	27	118	6.75	2.14%	15	
TPHC Motor Oil	18.12	10	20.0	0	90.6%	38	117	16.0	12.4%	15	

Sample ID: **LCS-13950** Batch ID: **13950** Test Code: **SGTPDMW** Units: **µg/L** Analysis Date: **8/4/05 7:01:21 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804A** SeqNo: **521289**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	405.4	50	500	0	81.1%	42	96	0			
TPHC Motor Oil	949.1	170	1,000	0	94.9%	52	103	0			

Sample ID: **LCSD-13950** Batch ID: **13950** Test Code: **SGTPDMW** Units: **µg/L** Analysis Date: **8/4/05 7:35:33 PM** Prep Date: **8/3/05**
Client ID: Run ID: **ORGC5_050804A** SeqNo: **521293**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	346.0	50	500	0	69.2%	42	96	405	15.8%	15	R
TPHC Motor Oil	861.6	170	1,000	0	86.2%	52	103	949	9.67%	15	

Sample ID: **LCS-13936-G** Batch ID: **13936** Test Code: **TPHCGS** Units: **µg/g** Analysis Date: **8/1/05 11:28:23 PM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801A** SeqNo: **520335**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	11.76	1.0	10.0	0	118%	94	140	0			

Sample ID: **LCSD-13936-G** Batch ID: **13936** Test Code: **TPHCGS** Units: **µg/g** Analysis Date: **8/2/05 12:03:42 AM** Prep Date: **8/1/05**
Client ID: Run ID: **ORGC8_050801A** SeqNo: **520336**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Gas (C6-C14)	12.04	1.0	10.0	0	120%	94	140	11.8	2.36%	15	

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

CLIENT: LACO Associates
Work Order: 0507595
Project: 4844.00, Zenker-Felt

QC SUMMARY REPORT

Laboratory Control Spike

Sample ID: **LCS-13920** Batch ID: **13920** Test Code: **TPHDMS** Units: **µg/g** Analysis Date: **7/29/05 4:35:36 PM** Prep Date: **7/29/05**
Client ID: Run ID: **ORGC7_050729A** SeqNo: **520206**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	10.48	1.0	10.0	0	105%	85	153	0			
TPHC Motor Oil	20.82	10	20.0	0	104%	76	133	0			

Sample ID: **LCSD-13920** Batch ID: **13920** Test Code: **TPHDMS** Units: **µg/g** Analysis Date: **7/29/05 4:55:52 PM** Prep Date: **7/29/05**
Client ID: Run ID: **ORGC7_050729A** SeqNo: **520207**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	10.56	1.0	10.0	0	106%	85	153	10.5	0.702%	15	
TPHC Motor Oil	21.64	10	20.0	0	108%	76	133	20.8	3.87%	15	

Sample ID: **LCS-13941** Batch ID: **13941** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **8/2/05 1:20:51 PM** Prep Date: **8/2/05**
Client ID: Run ID: **ORGC7_050802A** SeqNo: **520728**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	525.1	50	500	0	105%	72	124	0			
TPHC Motor Oil	1,078	170	1,000	0	108%	71	139	0			

Sample ID: **LCSD-13941** Batch ID: **13941** Test Code: **TPHDMW** Units: **µg/L** Analysis Date: **8/2/05 1:40:40 PM** Prep Date: **8/2/05**
Client ID: Run ID: **ORGC7_050802A** SeqNo: **520729**

Analyte	Result	Limit	SPK value	SPK Ref Val	% Rec	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPHC Diesel (C12-C22)	527.2	50	500	0	105%	72	124	525	0.399%	15	
TPHC Motor Oil	1,055	170	1,000	0	105%	71	139	1,080	2.19%	15	

Qualifiers:
ND - Not Detected at the Reporting Limit
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R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

NORTH COAST LABORATORIES LTD.
5680 West End Road • Arcata • CA 95521-9202
707-822-4649 Fax 707-822-6831

Chain of Custody

LABORATORY NUMBER: 0507595

Attention: GARY L. MANHART
Results & Invoice to: LACO ASSOCIATES
Address: 21 W 4TH ST.
EUREKA CA 95501
Phone: 443-5054
Copies of Report to:
Sampler (Sign & Print): GARY L MANHART

TAT: ☐ 24 Hr ☐ 48 Hr ☐ 5 Day ☐ 5–7 Day
☒ STD (2–3 Wk) ☐ Other:
PRIOR AUTHORIZATION IS REQUIRED FOR RUSHES

REPORTING REQUIREMENTS: State Forms ☐
Preliminary: FAX ☒ Verbal ☐ By: __/__/__
Final Report: FAX ☐ Verbal ☐ By: __/__/__

CONTAINER CODES: 1—½ 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_2SO_4; d—$Na_2S_2O_3$; e—NaOH; f—$C_2H_3O_2Cl$; g—other

PROJECT INFORMATION

Project Number: 4844.00
Project Name: ZENKER - FELT
Purchase Order Number:

LAB ID	SAMPLE ID	DATE	TIME	MATRIX*	PRESERVATIVE	CONTAINER	ANALYSIS: TPH-D/HFT	ANALYSIS: TOH/CLMD W/SGC	ANALYSIS: 8021B *	ANALYSIS: KEMCO LIST	ANALYSIS: TOH/CLMD W/SGC	ANALYSIS: 8021B *	ANALYSIS: DISSOLVED CAM 5
	4844-B13-S6	2-24-05	AM	S		13	1	1	1				
	4844-B14-S6					13	1	1	1				
	4844-B15-S6					13	1	1	1				
	4844-B13-W			GW		9				3	1	3	1
	4844-B14-W					7				3	1	3	1
	4844-B15-W					9				3	1	3	1

SAMPLE CONDITION/SPECIAL INSTRUCTIONS

FILTER THE DISSOLVED CAM 5

JUST COLLECTED INFAST

RELINQUISHED BY (Sign & Print)	DATE/TIME	RECEIVED BY (Sign)	DATE/TIME
	2/24/05 1045		2/24/05 1045

SAMPLE DISPOSAL
☒ NCL Disposal of Non-Contaminated
☐ Return ☐ Pickup

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

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

ALL CONTAMINATED NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT