99 APR 28 PM 1: 43

Manmohan S. Chopra 4216 Warbler Loop FREMONT, CA 94555 4/23/99

Alameda County Department of Environmental Health 1131 Harbor Way Parkway, 2nd Floor ALAMEDA, CA 94502-6577

ATTN:

Mr Scott Seery

SUB:

Quarterly Ground Water Monitoring & Sampling Report

1401 Grand Ave. San Leandro, CA

Dear Mr Seery,

Attached, for your review and records, please find a copy of Quarterly Ground Water Monitoring and Sampling Report for the above site. The report is self explanatory and is in standard format. However, if you have any questions or comments, please contact the undersigned at 510-790-9252 or write me at the above address.

Sincerely,

Manmohan S. Chopra

Moreopen

Property Owner

SOIL BORING RESULTS REPORT

ARCO Service Station 1401 Grand Avenue San Leandro, California

Aegis Project No. 91-001

June 10, 1991

Prepared By: **AEGIS ENVIRONMENTAL, INC.**801 Riverside Avenue, Suite C

Roseville, California 95678

(916) 782-2110

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1.0 INTRODUCTION

This report presents the results of a subsurface soil assessment conducted by Aegis Environmental, Inc. (Aegis), at 1401 Grand Avenue, San Leandro, Alameda County, California (site, Figure 1).

1.1 Background

Aegis was authorized by Mr. Wyman Hong of the Alameda County Water Resources Management Department (ACWRMD) to install four soil borings as a preliminary assessment of the subject site. The activities associated with this scope of work are outlined below.

1.2 Scope

The work associated with this assessment was performed in accordance with methods described in Aegis' Standard Operating Procedures (SOPs) included as Appendix A. The scope of Aegis' services included:

- o Obtaining authorization from the ACWRMD to complete four soil borings at the locations shown on the Site Map (Figure 2).
- o Mobilizing to the site April 24, 1991, with a truck-mounted drill rig, to complete four, 8-inch-diameter, hollow-stem auger soil borings to a depth of 40 feet below grade.
- o Soil samples were recovered from each test boring at 5-foot intervals as described in Aegis' SOPs.
- o Recovered soil samples were classified in accordance with the Unified Soil Classification System (USCS). A log of each test boring is included in Appendix B.
- o Soils recovered from the borings were screened for the presence of organic vapors with an hNu photoionization detector (PID). The highest PID reading from each sample was recorded on the soil boring logs.
- Soil samples from each boring were selected for laboratory analysis due to field observations that included PID screening, lithology, and the proximity to potential source(s) of petroleum hydrocarbons.

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- o Individual soil samples were submitted to a California-certified laboratory to be analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), total purgeable petroleum hydrocarbons (TPH), total lead, ethylene dibromide (EDB), and 1,2-dichloroethane (EDC). The analysis for BTEX, TPH, EDC, and EDB were by EPA Method 8260 (a certified method utilizing a gas chromatograph/mass spectrometer, select ion mode quantification). Total lead was analyzed by EPA Method 7420. The results of each analysis are included in the certified laboratory reports (Appendix C).
- o Drill cuttings were placed on and covered by plastic sheeting. A total of four grab samples were collected from the stockpiled soil at representative locations (Figure 2). These samples were collected into brass tubes.
- o A composite sample was prepared in the laboratory from the four grab samples of stockpiled drill cuttings. The composite sample was analyzed for BTEX, TPH, EDB, EDC, total lead, as well as soluble lead, reactivity, corrossivity, ignitability, and select additional parameters in order to meet disposal criteria at BFI Waste Systems facility in Alameda County. The results of these tests are included in the certified laboratory reports (Appendix C).
- o The data resulting from the investigation was evaluated and presented in this report.

1.3 Site Description

The site is currently operated as an ARCO service station and convenience market by an independent lessee, Mr. Jay Anast. The current property owner is Mr. Manmohan Chopra, who purchased the site in March 1988. Mr. Chopra operated the station first as a lessee between July 1986 and March 1988, then as owner until August 1990 (when Mr. Anast initiated business at the site).

The site setting is in a commercial/residential district adjacent to State Highway 580. There appears to be no adjacent sites with a history of distributing or storing petroleum products. The surface of the site is predominantly paved by both concrete and asphalt (Figure 2).

1.4 Previous Work

This assessment represents the only known subsurface investigation performed to date at the subject site.

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2.0 ASSESSMENT RESULTS

The results of this subsurface investigation are based upon fieldwork conducted by Aegis. This work includes the initial site reconnaissance which was followed by the drilling of four soil borings to total depths of 40 feet each.

2.1 Subsurface Conditions

The locations of the four soil borings were selected in close proximity to the edges of the three underground storage tanks to characterize existing conditions. Each boring location incorporated constraints due to proximity to subgrade fixtures (tanks). Careful handaugering and probing was performed in the top 5 feet of each hole to avoid damaging any improvements. No fixtures were encountered during this work.

Soil samples from each test boring were classified in accordance with the USCS. A description of the specific soil classifications are included on the boring logs (Appendix B). In general, possible to the boring as 10 feet. The soil characteristics correlate consistently between each boring, with the exception of SH-2, where a 10-feet-thick sand layer was noted between the depths of 23 to 33 feet below surface grade.

2.2 Results of PID Screening

PID screening of soil samples was completed according to methods described in Appendix A. Results of PID screening are recorded on the soil boring logs included in Appendix B. Organic vapors were detected in the soil samples. PID readings ranged from 0 parts per million (ppm) to 600 ppm. Samples from three of the four borings (SB-1, SB-2, and SB-3) yielded PID readings at or above 100 ppm.

2.3 Soil Sample Analytical Test Results

2.3.1 Test Borings

Soil samples from the test borings were submitted to an analytical laboratory for chemical analysis due to field observations that indicated the potential presence of gasoline constituents. A California-certified laboratory analyzed the samples to speciate the TPH (as gasoline, diesel #2, jet fuel, kerosene, Stoddard solvent, or mineral spirits, and to quantify any BTEX, EDB, EDC, and total lead.

Soil boring analytical results are presented in Table 1 in ppm. The maximum concentration reported in soil was TPH as gasoline at 66 ppm at a depth of 26 feet, at the location of SB-2 (Figure 2). Copies of the certified laboratory results reports are attached with a completed chain-of-custody form as Appendix C.

TABLE 1
SOIL ANALYTICAL RESULTS (PPM)

Sample No.	Depth (Feet)	Benzene	Toluene	Ethyl Benzene	Xylene	EDB	EDC	TPH as Gas	Total Lead
SB-1-3	16.0 - 16.5	ND	ND	ND	ND	ND	ND	ND	NA
SB-1-7	35.5 - 36.0	0.076	0.003	0.004	0.015	ND	ND	0.2	ND
SB-2-2	11.0 - 11.5	ND	ND	ND	ND	ND	ND	ND	NA
SB-2-5	25.5 - 26.0	0.94	3.8	1.3	8.7	ND	ND	66	3
SB-2-8	40.5 - 41.0	0.46	0.30	0.049	0.24	ND	ND	2.0	NA
SB-3-3	16.0 - 16.5	ND	ND	ND	ND	ND	ND	ND	NA
SB-3-7	36.0 - 36.5	0.022	0.004	0.004	0.033	ND	ND	0.2	ND
SB-4-4	21.0 - 21.5	ND	ND.	ND	ND	ND	ND	ND	NA
SB-4-7	35.5 - 36.0	0.48	0.003	0.021	0.007	ND	ND	1.4	ND
SS-1A, 1B, 1C, 1D	1.0 - 1.5	0.002	ND	ND	0.005	ND	ND	0.7	0.06*

ND = Not detected at the specific, Practical Quantitation Limit shown on the respective laboratory reports (Appendix C).

NA = Not analyzed.

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^{* =} Soluble lead test result (by CAL WET extraction) as prerequisite for landfill disposal.

2.3.2 Drill Cuttings

The soil stockpile of drill cuttings from the test borings was sampled for characterization prior to disposal. These soil samples were specifically identified as SS-1A, SS-1B, SS-1C, and SS-1D. Prior to analysis, the four discrete samples were composited into one sample at the laboratory. The stockpile samples were collected the same day that the drilling was performed (April 24, 1991), from representative locations.

The test results are shown, in part, on Table 1. The requested analyses were chosen to meet disposal criteria at a local landfill in Alameda County. The landfill (BFI Waste Systems) requested the following analyses: TPH, BTEX, EDB, EDC, soluble lead (by CAL WET extraction), and a hazardous materials screen (including ignitability and reactivity criteria). The complete laboratory reports are included in Appendix C.

3.0 DISCUSSION OF RESULTS

3.1 Extent of Petroleum Hydrocarbons in Soil

Subsurface soil conditions at the site are summarized as follows:

- o Soil at each of the four boring locations was tested for the potential presence of gasoline, which was quantified, at concentrations that ranged from not detected to 66 ppm TPH at a depth of 26 feet at SB-2 (Table 1). The location of each soil boring is shown in Figure 2.
- o Aegis selected specific soil samples for total lead analysis based upon PID readings that identified the potential presence of gasoline. The test results ranged from not detected to 3 ppm (Table 1). The relative absence of total lead may indicate unleaded gasoline as the fuel type detected.
- The soil cuttings generated from the test borings will be legally disposed of at an appropriately permitted facility.
- o Groundwater was not encountered during the drilling operations conducted April 24, 1991. The total depths of each of the four borings were 41 feet below surface grade.

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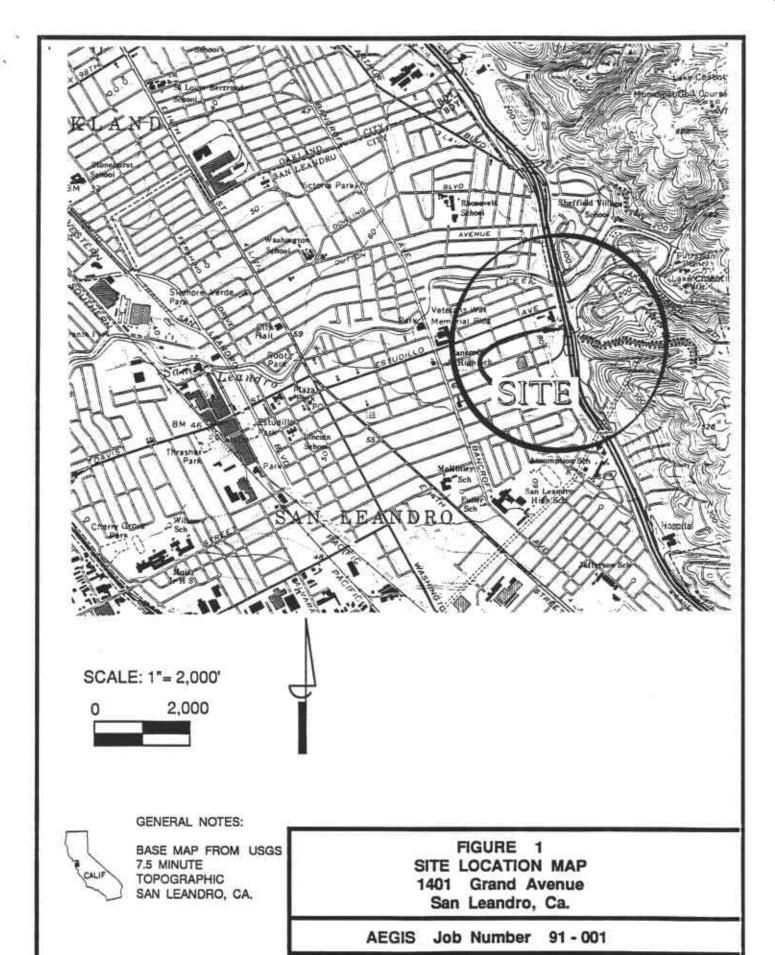
AEGIS ENVIRONMENTAL, INC.

4.0 REMARKS/SIGNATURES

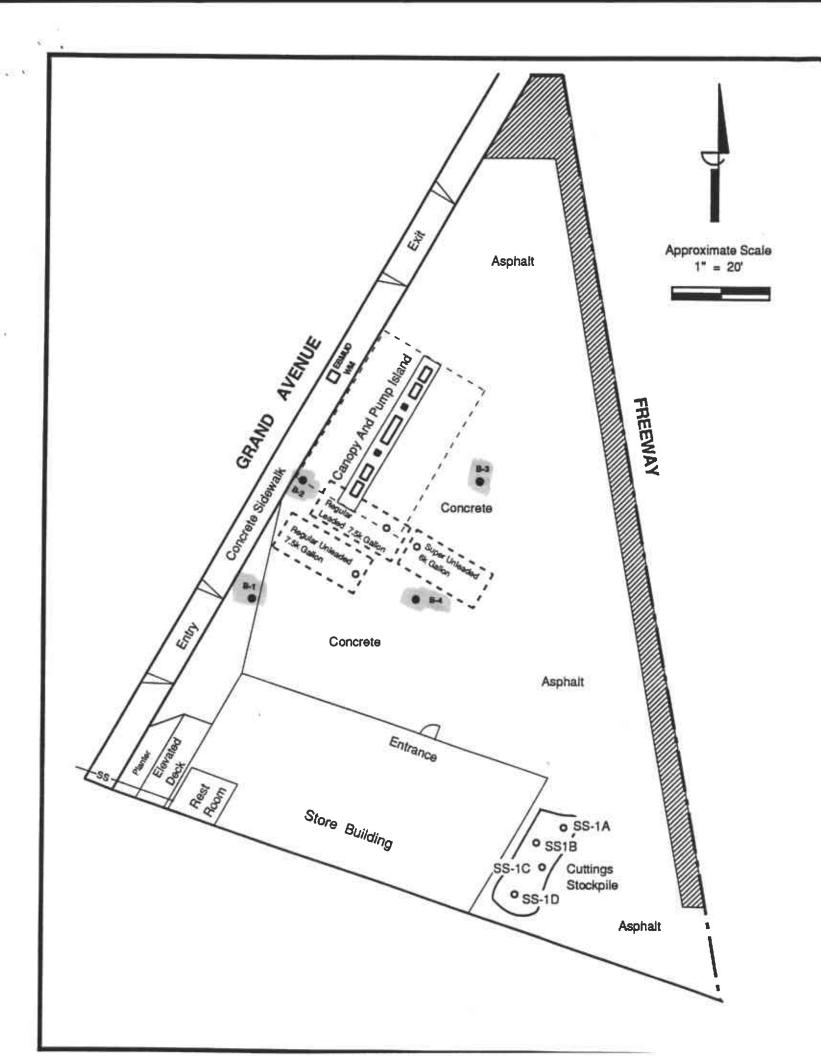
The interpretations and conclusions contained in this work plan represent our professional opinions. These opinions are based on currently available information, and were developed in accordance with currently accepted hydrogeologic and engineering practices at this time and for this specific site. Other than this, no warranty is implied or intended.

This report was prepared by: Robert P. Warner Senior Geologist Date: _____ This report was reviewed by: Brian Garber Senior Geologist Date: The work described herein will be performed under the direct supervision of a geologist registered with the State of California: Clarke H. Owen Registered Geologist CRG #4987 Date:

91-001A.RPT



DRAWN BY: Ed Bernard DATE: Feb. 12, 1991
REVIEWED BY: RPW DATE: Feb. 26, 1991



LEGEND

7.5k	7500 Gallon Underground Storage Tank
6k	6000 Gallon Underground Storage Tank
-SS-	Sanitary Sewer Line
EBMUD	East Bay Municipal Utility District
wm	Water Meter
•	Proposed Soil Boring Locations
0	Cuttings Stockpile Soil Sample Locations

NOTE: Site Sketch After Generalized As Built Plan, Drawing Scale Approximate

> FIGURE 2 SITE MAP 1401 Grand Avenue San Leandro, Ca.

AEGIS Job Number 91 - 001

DRAWN BY: Ed Bernard REVIEWED BY: R.P. Warner

DATE: May 23,1991 DATE: May 23,1991

APPENDIX A STANDARD OPERATING PROCEDURES

AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES RE: SOIL BORING SAMPLING

SOP-1

Soil samples for chemical analysis are collected in thin-walled brass tubes, 4- or 6-inches long by 2-inches outside diameter. Three or four of the tubes, plus a spacer tube, are set in a 2-inch inside diameter 18-inch split-barrel sampler.

Where possible, the split-barrel sampler is driven its entire length either hydraulically or using a 140-pound drop hammer. The sampler is extracted from the borehole and the brass tubes, containing the soil samples, are removed. Upon removal from the sampler, the selected brass tubes are immediately trimmed and capped with either aluminum foil or Teflon sheets and plastic caps. They are then hermetically sealed with duct tape, labeled and refrigerated for delivery, under strict chain-of-custody, to the analytical laboratory. These procedures minimize the potential for cross-contamination and volatilization of volatile organic compounds (VOC) prior to chemical analysis.

One soil sample collected at each sampling interval is analyzed in the field using either a portable photoionization detector (PID), flame ionization detector, organic vapor analyzer, catalytic gas detector or an explosimeter. The purpose of this field analysis is to qualitatively determine the presence or absence of hydrocarbons, and the samples to be analyzed at the laboratory. The soil sample is sealed in either a brass tube, glass jar or plastic bag to allow for some volatilization of VOC. The PID is then used to measure the concentrations of hydrocarbons within the containers's head space. The data is recorded on both field notes and the boring logs at the depth corresponding to the sampling point.

Other soil samples are collected to document the soil and/or stratigraphic profile beneath the project site, and estimate the relative permeability of the subsurface materials. All drilling and sampling equipment are either steam-cleaned or washed in trisodium phosphate solution and double-rinsed in deionized water prior to use at each site and between boreholes to minimize the potential for cross-contamination.

AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES RE: SOIL CLASSIFICATION

SOP-3

Soil samples are classified according to the Unified Soil Classification System (USCS). Representative portions of the samples may be shipped under strict chain-of-custody to an analytical laboratory for further examination and verification of the in-field classification, and analysis of soil mechanical and/or petrophysical properties. The soil types are indicated on logs of either excavations or borings together with depths corresponding to the sampling points, and other pertinent information.

AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES RE: SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES SOP-4

Sample identification and chain-of-custody procedures ensure sample integrity, and document sample possession from the time of collection to its ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on site personnel and any other pertinent field observations also recorded on the field excavation or boring log.

Chain-of-custody forms are used to record possession of the sample from time of collection to its arrival at the laboratory. During shipment, the person with custody of the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample-control officer at the laboratory will verify sample integrity, correct preservation, confirm collection in the proper container(s) and ensure adequate volume for analysis.

If these conditions are met, the samples will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, client's name and any other relevant information will also be recorded.

AEGIS ENVIRONMENTAL, INC. STANDARD OPERATING PROCEDURES

RE: LABORATORY ANALYTICAL QUALITY ASSURANCE AND CONTROL

SOP-5

In addition to routine calibration of the analytical instruments with standards and blanks, the laboratory analyst is required to run duplicates and spikes on 10 percent of the analyses to insure an added measure of precision and accuracy. Accuracy is also verified through the following:

- U.S. Environmental Protection Agency (EPA) and State certification programs;
- 2. Participation in an inter-laboratory or "round-robin" quality assurance program;
- Verification of results with an alternative method. For example, calcium may be determined by atomic absorption, ion chromatography, or titrimetric methods.
 Volatile organic compounds may be determined through either purge and trap or liquid-liquid extraction methods; and,
- 4. Miscellaneous checks of equipment accuracy. Where trace analysis is involved, purity of the solvents, reagents and gases employed is of great concern. The laboratory maintains a service contract on all major instrumentation, including gas chromatograph, atomic absorption, ion chromatography and total organic carbon analyzers. Each of these instruments are serviced and maintained regularly.

APPENDIX B BORING LOGS

		NAM	·			•		PROJECT NUMBER: 91-001	BORING NUMBER:	RING MBER: SHEET		
					forni	ia		CONTRACTOR: DF West Hazmat Drilling MF			NG : 8" H.S.A.	
								DRILLER: DRICK Scott Krueger RI			NG CME-75	
LANI OWN		Mr.	Ma	nmol	han (Chopr	·a	START DATE: 04/24/91 CO TIME: 10:00 a.m. TI			FED: 04/24/91 10:40 a.m	
M P P E	A U M M	T	A :	N T F				DESCRIPTION OF M AND CONDITI		DIG mqq)	1	
	:					0		C/AB; asphalt su between-0.5' - 1. GILTY CLAY; dark noist (CL)	0,		No odor	
CAM		15/ 21/ 25			16/ 18	5	*	LAY; drk brown,	moist (CI		No odor	
CAM		13/ 14/ 15			15/ 18	10	— <u>r</u>	CLAY; mediunoist, very fine- and-component-(C	grained		No odor	
CAM	SB1	8/ 12/ 15			15/ 18	15		LAYEY SILT; medi noist (ML)	um brown,		No odor	
CAM	SB1 -4		20 21		16/ 18	20		LAYEY SILT; medi noist (ML)	um brown,	- 0	No odor	
CAM	SB1 -5	11/ 16/ 18			16/ 18	25	— a	ILT; light brown raction increasi			No odor	
CAM	SB1 -6	11/ 13/ 15			15/ 18	30	Transfer of the state of the st	AMDY SILT; grayinoist, poorly gra in the same same same same same same same sam	ded, and		Slight gas	
Fi	leld	Note							Aec	nviron	mental ultants	

		E/LOCA' Avenue		:	PROJECT NUMBER: 91-001	BORING NUMBER:	SB-1	SHEET 2 OF	
		, Cali		ia	CONTRACTOR: West Hazmat Drill		DRILLING METHOD: 8" H.S.A.		
					DRILLER: Scott Krueger		DRILLIN RIG:	G CME-75	
LAND OWNER:	: Mr.	Manmol	nan C	Chopra	START DATE: 04/2 TIME: 10:4		COMPLET	ED: 04/24/91 11:00 a.m	
AYA MPM PEP LLL	M O U	A N M T P L F		DEPTH (ft.)	DESCRIPTION OF MA AND CONDITIO		PID (ppm)		
CAM SI		30.0- 31.5	15/ 18		SANDY SILT; grayis poorly graded, and band, perv throughout sample	asive		Slight gas odor	
CAM SI		35.0- 36.0	12/	35 — — — 40 —	throughout sample SILT; greenish-grarelict sand struct ible, apparently i chem. weathered Fr Formation serpenti SILT; greenish-graslightly cemented, above (ML)EOB; end of boring	y, moist ure vis- n-situ anciscan ne (ML) y, moist same as		Moderate gas odor Slight gas odor	
Fiel	Ld Not	es:	1	<u> </u>	<u> </u>	Aeg	nvironm	ental ltants	

PROJECT	NAM	E/LOCAT	ION:		PROJECT NUMBER: 91-001	BORING NUMBER	: SB-2	SHEET 1 OF 2			
1401 Gr San Lea			forni	.a	CONTRACTOR: West Hazmat Dril	ling	DRILLING METHOD: 8" H.S.A.				
					DRILLER: Scott Krueger		DRILLING RIG:	G CME-75			
LAND OWNER:	Mr.	Manmoh	nan C	hopra	START DATE: 04/2 TIME: 8:45	4/91 a.m.	COMPLET	ED: 04/24/91 9:30 a.m.			
	L O O U W N T	AN MT P LF	S R A E M C P O L V E	DEPTH (ft.)	DESCRIPTION OF M AND CONDITI		PID (ppm)	GENERAL OBSERVATION NOTES			
CAM SB2	11/ 15/ 25	5.0- 6.5	16/ 18	 	CONCRETE; aggrega between 0.5 - 1.0 SILTY CLAY; brown slight odor immed below concrete dr CLAY; dark brownl	<pre>/ , moist, iately iveway(C)</pre>	20	odor			
CAM SB2		•	15/ 18		SILTY CLAY; dark moist, moderate p			No odor			
CAM SB2			16/ 18	-	CLAYEY SILT; gray moist, very fine- sand fraction (M	grained,	s,	No odor			
CAM SB2		1	15/ 18	20	SANDY SILT; grayi moist, poorly gra sive throughout sa	ded, web	* - 0	No odor			
CAM SB2		25.0- 26.5	15/ 18		SAND; grayish-browell graded, with the same of the sam	waans	E, E	Strong odor			
CAM SB2			15/ 18		SAND; grayish-browell graded, same		-	Strong odor			
Field	Note	es:		<u>-</u>			gis Environmo Consu	ental ltants			
						Logge	ed By: R	obert Warner			

PROJECT			ION:		PROJECT NUMBER: 91-001	BORING NUMBER:	SB-2	SHEET 2 OF 2	
1401 Gr San Lea			orni	.a	CONTRACTOR: West Hazmat Drilli		DRILLING METHOD: 8" H.S.A.		
				 	DRILLER: Scott Krueger		DRILLING RIG:	G CME-75	
LAND OWNER:	Mr.	Manmoh	nan C	hopra	START DATE: 04/24 TIME: 9:30	•	COMPLET:	ED: 04/24/91 10:00 a.m.	
AYAU	L O O U W N T	AN MT P	1	DEPTH (ft.)	DESCRIPTION OF MAT AND CONDITION		(ppm)	GENERAL OBSERVATION NOTES	
CAM SB2		30.0- 31.5	15/ 18	_	SAND; grayish-brown well graded, silt gather through small grave classes (SW)	rains	, _	Strong odor	
CAM SB2			11/ 18		SANDY SILT; greenis moist, relict sand surviving chemical weathering (ML) SANDY SILT; greenis	grains	E	Moderate strong odor	
CAM SB2		40.0- 41.0	12/ 18	40 —	moist, same as above	re (ML)	- 44	*Slight odor	
				45 — — —					
				50 -					
				55 —					
				60 — —			- - - -		
Field	Note	es:		-		Aeg E	nvironmo	ental ltants	
						Logge	d By: Ro	obert Warner	

PPO	ገምርጥ -	NAMI	E/LOCA	י גרעדין		PROJECT		BORING		
			-	LION		NUMBER:	91-001		₃ SB−3	SHEET 1 OF 2
			Avenue , Cali	forni	.a	CONTRACT West Haz	OR:	ing	DRILLIN METHOD:	
									DRILLIN RIG:	G CME-75
LANI	_	Mr.	Manmol	nan C	Chopra	START DA	TE: 04/24 11:30		COMPLET TIME:	ED: 04/24/91 12:30 p.m.
M P	M M	L O O U W N T	M T P		DEPTH (ft.)		ION OF MA		PID (ppm)	GENERAL OBSERVATION NOTES
					—] — [1	oetween-0	aggregate .5 - 1.0' Y; dark by		0	No odor
CAM	SB3		5.0- 6.5	18/ 18	5 —	CLAY; dar	k brown, 1	moist(CL	.)	No odor
CAM			10.0-	10/ 18		SILTY CLA noist (CL	Y; dark b	rown,		No odor
CAM			15.0- 16.5	15/ 18		SANDY SIL	T; medium)	brown,	0	No odor
CAM	SB3 -4		20.0- 21.5	16/ 18			LT; medium derate pla			No odor
CAM	SB3 -5		25.0- 26.5	14/ 18	n 	noist, co visible (1	LT; light ttony ceme ML) T; light o	ent		No odor
CAM			30.0- 31.0	12/ 18	30 —	orown, mo	ist, poor te cottony reous (ML)	ly grade mined cement	d -	Wery slight gas odor
Fi	eld.	Note	s:					Aeg E	nvironme	ental ltants
								Logge	d By: Ro	obert Warner

					·								
			E/LOCA: Avenue	CION:		PROJECT NUMBER:	91-001		ORING UMBER:	SB-3	SHEET 2 OF 2		
	_		, Calii	forni	.a						DRILLING METHOD: 8" H.S.A.		
						DRILLER: Scott Kr				DRILLING RIG:	G CME-75		
LANI	_	Mr.	Manmol	an (hopra	START DA		04/24/ L2:30		COMPLET	ED: 04/24/91 1:00 p.m.		
A Y M P P E	A U M M		A N M T		DEPTH (ft.)	DESCRIPT AND	CONDI			PID (ppm)	GENERAL OBSERVATION NOTES		
CAM			30.0- 31.0	12/ 18	<u> </u>	SANDY SII brown, mo	ist, r	Maria Property	grade	de	Very slight gas odor		
CAM	SB3 -7		35.0- 36.0	12/ 18	35 — —	SANDY SI I moist, sa	T; gre	eenish above	-gray, (ML)		Moderate gas odor		
CAM	SB3 -8		40.0- 41.0	10/ 18	40 —	SANDY SII moist, sa EOB; end	me as	above	(ML)	-	Slight gas odor		
والمال والمال المال					45 — — —								
					50 — —								
					55 — —								
				: :	60 — — —								
Fi	.eld	Note							Aeg	nvironm	ental ltants		
									Logge	d By: R	obert Warner		

1401 Grand Avenue San Leandro, California CONTRACTOR: West Hazmat Drilling DRILLING METHOD: 8" H.S.A. DRILLER: Scott Krueger LAND START DATE: 04/24/91 COMPLETED: 04/24/91	<u>`</u>									
San Leandro, California				·	CION:				SB-4	SHEET 1 OF 2
Scott Krueger RIG: CME-75					forni	.a	1			
OWNER: Mr. Manmohan Chopra										
A Y A U L O A N A E M C DEPTH M M O U M T M C DEPTH DESCRIPTION OF MATERIALS PID OBSERVATION NOTES L L E T L F L V F L			Mr.	Manmoi	nan C	hopra				ED: 04/24/91 1:45 p.m.
CAM SB4 8/ 5.0- 15/ 5 CLAY; drk brown, moist (CL) O No odor	A Y M P P E L	A U M M P B L E	L O O U W N T	AN MT P LF	A E M C P O L V				l l	OBSERVATION
CAM SB4 8/ 10.0- 16/ 10 SILTY CLAY; medium brown, 0 No odor moist (CL) CAM SB4 11/ 15.0- 18/ 15 CLAYEY SILT; medium brown, 0 No odor moist (ML) CAM SB4 25/ 20.0- 18/ 25 CLAYEY SILT; medium brown, 0 No odor moist (ML) CAM SB4 25/ 21.5 18 CAM SB4 16/ 25.0- 18/ 20 CLAYEY SILT; medium brown, 0 No odor moist (ML) CAM SB4 16/ 25.0- 18/ 25 moist (ML) CAM SB4 16/ 25.0- 18/ 25 moist (ML) CAM SB4 50 30.0- 12/ 30 moist (ML) CAM SB4 50 30.0- 12/ 30 moist, apparently chemical weathering (ML) Field Notes: Aegis Environmental							between-0.5 - 1.0'- SILTY CLAY; dark br		-	No odor
CAM SB4 11/ 15.0- 18/ 15 — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) CAM SB4 25/ 20.0- 18/ 20 — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) CAM SB4 25/ 21.5 18 — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) CAM SB4 16/ 25.0- 18/ 25 — moist (ML) — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) — m	CAM		11/			5 —	CLAY, drk brown, mo	ist (CL)	No odor
CAM SB4 25/ 20.0- 18/ 20 — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) — CLAYEY SILT; medium brown, — 0 No odor — moist (ML) SANDY SILT; light greenish— moist — light greenish— m	CAM		19/					brown,		No odor
-4 35/ 21.5 18 — moist (ML) — — — — — — — — — — — — — — — — — — —	CAM		21/					brown,	0	No odor
CAM SB4 16/ 25.0- 18/ 25 — moist (ML) SANDY SILT; -5 27/ 26.5 18 — light greenish-brown, moist - light greenish-brown, moist - clasta still surviving (ML) - SANDY SILT; light greenish - CAM SB4 50 30.0- 12/ 30 — brown, moist, apparently - 6 R = 31.0 18 — remnants of in-situ - chemical weathering (ML) Field Notes: Aegis Environmental	CAM	1	35/		1 .			brown,	0	No odor
CAM SB4 50 30.0- 12/ 30 — brown, moist, apparently — No odor — remnants of in-situ — chemical weathering (ML) Field Notes: Aegis Environmental	CAM		27/		1 '	25 —	moist (ML) SANDY S light greenish-brow	ILT; n, mois graine	- - -	No odor
Aegis Environmental	CAM		R =	1		30 —	SANDY SILT; light g brown, moist, appar remnants of in-situ	reenish ently	-	No odor
Logged By: Robert Warner	Fi	leld	Note	25:				E	nvironm Consu	ltants

DBO TI	ron	NAME	T / T OCAT	TOM.		PROJEC		<u> </u>	BORING			
			:/LOCAI	TON:		NUMBER		-001	1	SB-4	SHEET 2 OF 2	
			venue Calif	orni	а	CONTRA	CTOR:			DRILLI	NG .	
Jan 1	DEGI:	iui o ,	Culli	.01111	·u		CONTRACTOR: West Hazmat Drilling			METHOD: 8" H.S.A.		
						DRILLE Scott		jer		DRILLI RIG:	NG CME-75	
LAND OWNER		Mr.	Manmoh	an C	hopra	START TIME:	DATE:			COMPLE TIME:	TED: 04/24/91 2:00 p.m.	
AYA MPA PEI	A U M M	Т	ANMT PLF		DEPTH (ft.)			OF MA	TERIALS NS	PID mqq)	1	
CAM			30.0- 31.0	12/ 18		brown, structu	moist res v	, reli ⁄isible	greenish ct sand , appar- in-situ	"%"	No odor	
CAM	- 7		35.0- 36.0	12/ 18	35 —	chemica SANDY S	l wea	atherin greeni			Very slight gas odor	
CAM			40.0- 41.0	10/ 18	40 —	moist,	same	as abo	sh-gray, ve (ML) at 41'	- 4	Very slight gas odor	
					45 — —							
					50 —							
					55 — —							
					60 — —							
Fie	eld	Note	es:						Aec I	nviron	mental ultants	
									Logge	ed By:	Robert Warner	

APPENDIX C LABORATORY ANALYTICAL REPORTS

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: NC-\$24\$-1 Collected: \$4/24/91

\$4/26/91 RECEIVED

Ans'd bw

Tested: Ø5/Ø7/91

Collected by: R. Warner MAY 1 3 1991

FUEL FINGERPRINT ANALYSIS

CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5939 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8Ø1 Riverside, Suite C Roseville, CA 95678 SAMPLE DESCRIPTION: Project #91-001

1491 Grand Avenue, San Leandro, CA

Received:

Federated Claim #83A-19954

SB-1-3, S.W. Soil Boring @ 16.0-16.5', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)* 	Concentration in mg/kg
Benzene	Ø.ØØ1	not found
Toluene	Ø.ØØ1	not found
Ethylbenzene	Ø.ØØ1	not found
Xylenes	Ø.ØØ1	not found
1,2-Dichloroethane (EDC)	Ø.ØØ7	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Purgeable Petroleum Hydr	 ocarbons	
(Gasoline)		not found
Stoddard Solvent, Mineral Spir	its) Ø.1	not found
BTX as a Percent of Total Fuel		n/a
Percent Surrogate Recoveries		83/91/1 16
*/Proctical Quantitation Limit		

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

Man Hauleal,

Mary Havlicek, Ph.D.

President

MSD #1-5/Ø8 NCØ24Ø1F1.wr1/FFP73 MH/hc/gb/hc

^{**}Soil Sonicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93491
(805) 543-2553

Lab Number: NC-\$24\$-2
Collected: \$4/24/91
Received: \$4/26/91
Tested: \$5/\$7/91
Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5939 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678 SAMPLE DESCRIPTION: Project #91-##1

1491 Grand Avenue, San Leandro, CA

Federated Claim #83A-10054

SB-1-7, S.W. Soil Boring @ 35.5-36.0', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
	·	
Benzene	Ø.ØØ1	Ø.Ø76
Toluene	Ø.ØØ1	Ø.ØØ3
Ethylbenzene	Ø.ØØ1	Ø. ØØ4
Kylenes	Ø.ØØ1	Ø.Ø15
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Purgeable Petroleum Hydro (Gasoline)	Ø.1	ø.2
Diesel #2, Jet Fuel, Kerosene,		
Stoddard Solvent, Mineral Spiri	ts) Ø. I	not found
BTX as a Percent of Total Fuel		47%
Percent Surrogate Recoveries		89/93/112
*(Practical Quantitation Limit) *#Soil Sonicated during extract		

Constituents reported as "not found" would have been reported if present

at or above the listed practical quantitation limit.

Respectfully submitted, COAST-to-COAST ANALYTICAL SERVICES

President

MSD #1-5/Ø8 NCØ24Ø2F1.wr1/FFP73 MH/hc/gb/hc

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 934#1
(8#5) 543-2553

Lab Number: NC-9249-3
Collected: 94/24/91
Received: 94/26/91
Tested: 95/97/91
Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5939 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678 SAMPLE DESCRIPTION: Project #91-001

1491 Grand Avenue, San Leandro, CA

Federated Claim #83A-10954

SB-2-2, S.W. Soil Boring @ 11.0-11.5', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
Benzene	Ø.ØØ1	not foumd
Toluene	Ø.ØØ1	not found
Ethylbenzene	Ø.ØØ1	not found
Xylenes	Ø.ØØ1	not found
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline) Ø.1 (Diesel #2, Jet Fuel, Kerosene, Stoddard Solvent, Mineral Spirits) Ø.1		not found
BTX as a Percent of Total Fuel		n/a
Percent Surrogate Recoveries		89/91/117
#(Beaching) Augustination (inch		

*(Practical Quantitation Limit)

**Soil Sonicated during extraction

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Mavlicek, Ph.D.

President

MSD #1-5/Ø8 NCØ24Ø3F1.wr1/FFP73 MH/hc/gb/hc

Coast-to-Coast Analytical

Coast-to-Coast Analytical Services, Inc. 141 Suburban Road , Suite C-4 Services | San Luis Obispo, California 93491 (805) 543-2553

Lab Number: NC-Ø24Ø-4 Collected: Ø4/24/91 Received: Ø4/26/91 Tested: Ø5/Ø8/91 Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 824#/826#-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8**91** Riverside, Suite C Roseville, CA 95678

SAMPLE DESCRIPTION: Project #91-001

1401 Grand Avenue, San Leandro, CA

Federated Claim #83A-19954

SB-2-5, N.W. Soil Boring @ 25.5-26.0', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
Benzene	Ø.Ø5	Ø.85
Toluene	Ø.Ø5	3.5
Ethylbenzene	Ø.Ø5	1.2
Xylenes	Ø.Ø5	7.6
1,2-Dichloroethane (EDC)	Ø.Ø5	not found
Ethylene Dibromide (EDB)	Ø.Ø5	not found
Total Purgeable Petroleum Hydrocarbons (Gasoline)		6Ø.
BTX as a Percent of Total Fuel		20%
Percent Surrogate Recoveries		140/96/118
		2222222222222 2

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Note: High concentration of some analytes caused the sample to be run diluted, resulting in raised detection limits for all analytes. Refer to the Instrument Blank for undiluted detection limits.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Hadlicek, Ph.D.

President

MSD #1-5/8 NCØ24Ø4F1.wr1/FFP73 MH/hc/gb/gb

^{**}Soil Sonicated during extraction

Coast-to-Coast Analytical |

Coast-to-Coast Analytical Services, Inc. Suburban Road , Suite C-4 141 Suburban Road , Suite C-4 Services | San Luis Obispo, California 93491 (895) 543-2553

Lab Number: NC-9249-4dup Collected: Ø4/24/91 Received: Ø4/26/91 Tested: Ø5/Ø8/91 Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5036 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8 0 1 Riverside, Suite C Roseville, CA 95678	SAMPLE DESCRIPTION: Project #91-##1 14#1 Grand Avenue, San Leandro, CA Federated Claim #83A-1##54 SB-2-5, N.W. Soil Boring # 25.5-26.#', Soil DUPLICATE ANALYSIS		
Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg	
Benzene Toluene Ethylbenzene Xylenes 1,2-Dichloroethane (EDC) Ethylene Dibromide (EDB)	Ø. Ø5 Ø. Ø5 Ø. Ø5 Ø. Ø5 Ø. Ø5 Ø. Ø5	Ø.94 3.8 1.3 8.7 not found not found	
Total Purgeable Petroleum Hydrocart (Gasoline)	5.	66. not found	
BTX as a Percent of Total Fuel		20%	
Percent Surrogate Recoveries		120/97/104	

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Note: High concentration of some analytes caused the sample to be run diluted, resulting in raised detection limits for all analytes. Refer to the Instrument Blank for undiluted detection limits.

> Respectfully submitted, COAST-to-COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.

President

MSD #1-5/8 NCØ24Ø4G2.wr1/FFP73 MH/hc/gb/gb

^{**}Soil Sonicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93491
(895) 543-2553

Lab Number: NC-#24#-5
Collected: #4/24/91
Received: #4/26/91
Tested: #5/#8/91
Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678 SAMPLE DESCRIPTION: Project #91-001

1481 Grand Avenue, San Leandro, CA

Federated Claim #83A-10054

SB-2-8, N.E. Soil Boring @ 49.5-41.0', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
Benzene	Ø.ØØ1	Ø.46
Toluene	Ø.ØØ1	Ø.3Ø
Ethylbenzene	Ø.ØØ1	Ø.Ø49
Xylenes	Ø.ØØ1	Ø.24
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Purgeable Petroleum Hydrod (Gasoline)	carbons	2.Ø
scoaddid solvenc, Mineral spirit	25) 0.1	noc round
BTX as a Percent of Total Fuel		50%
Percent Surrogate Recoveries		122/99/122

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Harlicek, Ph.D.

President

MSD #1-5/8 NCØ24Ø5F1.wr1/FFP73 MH/hc/gb/gb

^{**}Soil Sonicated during extraction

Coast-to-Coast Analytical

Coast-to-Coast Analytical Services, Inc. 141 Suburban Road , Suite C-4 Services | San Luis Obispo, California 93491 (805) 543-2553

Lab Number: NC-9249-6 Collected: Ø4/24/91 Received: Ø4/26/91 Tested: Ø5/Ø8/91 Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5#3# (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678

SAMPLE DESCRIPTION: Project #91-901

1401 Grand Avenue, San Leandro, CA

Federated Claim #83A-10054

SB-3-3, N.E. Soil Boring @ 16.0-16.5', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
Benzene	Ø.ØØ1	not found
Toluene	Ø.ØØ1	not found
Ethylbenzene	Ø.ØØ1	not found
Xylenes	Ø.ØØ1	not found
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Purgeable Petroleum Hydro (Gasoline)	Ø . 1 ,	not found
BTX as a Percent of Total Fuel		n/a
Percent Surrogate Recoveries		116/99/110
*(Practical Quantitation Limit		

Constituents reported as "not found" would have been reported if present

Respectfully submitted, COAST-to-COAST ANALYTICAL SERVICES

Mary Hawlicek, Ph.D. President

MSD #1-5/8 NCØ24Ø6F1.wr1/FFP73 MH/hc/gb/gb

**Soil Sonicated during extraction

at or above the listed practical quantitation limit.

Coast-to-Coast Analytical Services, Inc. 141 Suburban Road , Suite C-4 San Luis Obispo, California 93401 (8Ø5) 543-2553

Lab Number: NC-#249-7 Collected: Ø4/24/91 Received: **Ø4/26/9**1 Tested: Ø5/Ø8/91 Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 824#/826#-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8**61** Riverside, Suite C Roseville, CA 95678

SAMPLE DESCRIPTION: Project #91-001

1491 Grand Avenue, San Leandro, CA

Federated Claim #83A-10054

SB-3-7, N.E. Soil Boring @ 36.0-36.5', Soil

Compound Analyzed	Detection Limit	Concentration	
	in mg/kg (PQL)*	in mg/kg	
Benzene	Ø.ØØ1	Ø. Ø22	
Toluene	Ø.ØØ1	Ø. ØØ4	
Ethylbenzene	Ø.ØØ1	0.004	
Xylenes	Ø.ØØ1	Ø.Ø33	
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found	
Ethylene Dibromide (EDB)	Ø.ØØ1	not found	
Total Purgeable Petroleum Hydroc (Gasoline)		ø.2	
(Diesel #2, Jet Fuel, Kerosene,			
Stoddard Solvent, Mineral Spirit	:s) Ø.1	not found	
BTX as a Percent of Total Fuel		30%	
Percent Surrogate Recoveries		125/98/110	
= B = B = E = E = E = E = E = E = E = E		******	
*(Practical Quantitation Limit)			

**Soil Sonicated during extraction

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

> Respectfully submitted, COAST-to-COAST ANALYTICAL SERVICES

Mary Howlicek, Ph.D. President

MSD #1-5/8 NCØ24Ø7F1.wr1/FFP73 MH/hc/gb/gb

Coast-to-Coast Analytical Services, Inc. 141 Suburban Road , Suite C-4 San Luis Obispo, California 93491 (805) 543-2553

Lab Number: NC-5246-8 Collected: Ø4/24/91 Received: Ø4/26/91 Tested: Ø5/Ø8/91 Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678

SAMPLE DESCRIPTION: Project #91-001

1481 Grand Avenue, San Leandro, CA

Federated Claim #83A-10054

SB-4-4, S.E. Soil Boring @ 21.#-21.5', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg	
Benzene	Ø.ØØ1	not found	
Toluene	Ø.ØØ1	not found	
Ethylbenzene	Ø. ØØ1	not found	
Xylenes	Ø.ØØ1	not found	
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found	
Ethylene Dibromide (EDB)	Ø.ØØ1	not found	
Total Purgeable Petroleum Hydro (Gasoline)	Ø.1 ,	not found	
BTX as a Percent of Total Fuel		n/a	
Percent Surrogate Recoveries		119/95/11Ø	

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

law Davleceto,

Mary Havlicek, Ph.D.

President

MSD #1-5/8 NCØ24Ø8F1.wr1/FFP73 MH/hc/gb/gb

^{**}Soil Sonicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93481
(885) 543-2553

Lab Number: NC-#24#-9
Collected: #4/24/91
Received: #4/26/91
Tested: #5/#7/91
Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8#1 Riverside, Suite C Roseville, CA 95678 SAMPLE DESCRIPTION: Project #91-001

1491 Grand Avenue, San Leandro, CA

Federated Claim #83A-19954

SB-4-7, S.W. Soil Boring @ 35.5-36.0', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
Benzene	Ø.ØØ1	Ø.48
Toluene	Ø.ØØ1	Ø.ØØ3
Ethylbenzene	Ø.ØØ1	Ø.Ø21
Xylenes	Ø.ØØ1	Ø.ØØ7
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Total Dunashla Dahalan Hudus		
Total Purgeable Petroleum Hydro (Gasoline)		1.4
(Diesel #2, Jet Fuel, Kerosene,	·	
Stoddard Solvent, Mineral Spiri	its) Ø.1	not found
BTX as a Percent of Total Fuel		35%
Percent Surrogate Recoveries		94/96/101
*(Practical Quantitation Limit)	: * * * * * * * * * * * * * * * * * * *	

Constituents reported as "not found" would have been reported if present

at or above the listed practical quantitation limit.

Respectfully submitted, COAST-to-COAST ANALYTICAL SERVICES

Mary Haylicek, Ph.D.

President

MSD #1-5/08 NC02409F1.wr1/FFP72 MH/hc/gb/hc

**Soil Sonicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 934Ø1
(8Ø5) 543-2553

Lab Number: NC-\$24\$-1\$
Collected: \$4/24/91
Received: \$4/26/91
Tested: \$5/\$7/91
Collected by: R. Warner

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

Attn: Robert P. Warner Aegis Environmental 8Ø1 Riverside, Suite C Roseville, CA 95678

SAMPLE DESCRIPTION: Project #91-##1

1401 Grand Avenue, San Leandro, CA

Federated Claim #83A-19854

SB-1-A, SB-1-B, SB-1-C, SB-1-D Composite Cutting Stockpile @ 1.0-1.5', Soil

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg
_		
Benzene	Ø. ØØ1	0.002
Toluene	Ø.ØØ1	not found
Ethylbenzene	Ø.ØØ1	not found
Xylenes	Ø. ØØ1	Ø.ØØ5
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found
Ethylene Dibromide (EDB)	Ø.ØØ1	not found
Takal Burnashia Dahari aya Hudasa		
Total Purgeable Petroleum Hydroca (Light Petroleum Hydrocarbon Solv (Gasoline, Diesel #2, Jet Fuel, F	/ent., Ø,1	Ø.7
Stoddard Solvent, Mineral Spirits		not found
BTX as a Percent of Total Fuel		1.0%
Percent Surrogate Recoveries		94/94/100

^{*(}Practical Quantitation Limit)

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Hovlicek, Ph.D.

President

MSD #1-5/Ø8 NCØ241ØF1.wr1/FFP72 MH/hc/gb/hc

^{**}Soil Somicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: BØ5Ø71

Collected: Received:

Tested:

Ø5/Ø7/91

Collected by:

FUEL FINGERPRINT ANALYSIS

CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS)

Extracted by EPA Method 5030 (purge-and-trap)**

CCAS-NAPA

SAMPLE DESCRIPTION: Instrument Blank for Ø5/Ø7/91 MSD#1

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg		
		**		
Benzene	ø.øø1	not found		
Toluene	Ø.ØØ1	not found		
Ethylbenzene	Ø.ØØ1	not found		
Xylenes	Ø ØØ1	not found		
1,2-Dichloroethane (EDC)	ø.øø1	not found		
Ethylene Dibromide (EDB)	Ø.ØØ1	not found		
Total Purgeable Petroleum Hydro	carbons			
(Gasoline)		not found		
(Diesel #2, Jet Fuel, Kerosene,				
Stoddard Solvent, Mineral Spiri	ts) Ø.1	not found		
BTX as a Percent of Total Fuel		n/a		
Percent Surrogate Recoveries		99/92/106		
	***************	#########		
*(Practical Quantitation Limit)				
**Soils sonicated during extract	tion			

Constituents reported as "not found" would have been reported if present

at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Hawlicek, Ph.D.

President

MSD #1-5/Ø8 BØ5Ø71FS.wr1/FFP73 MH/hc/gb/hc Coast-to-Coast Analytical

Coast-to-Coast Analytical Services, Inc.

Collected:

QSØ5Ø71

141 Suburban Road , Suite C-4

Received:

Services

San Luis Obispo, California 93461 (8\$5) 543-2553

Tested: Collected by:

Lab Number:

Ø5/Ø7/91

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8249/8269-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

CCAS-NAPA

SAMPLE DESCRIPTION:

Roasted Soil Spiked to 1.42ppm with Super Unleaded Gasoline

Compound Analyzed	#PQL mg/kg	Expected in mg/kg	Actual in mg/kg	Percent Recovery
Benzene	Ø.ØØ1	Ø.Ø52	Ø.Ø51	98%
Toluene	Ø.ØØ1	Ø.16	Ø.14	88%
Ethylbenzene	Ø.ØØ1	Ø.Ø29	Ø.Ø25	86%
Xylenes	Ø.ØØ1	Ø.17	Ø.13	76%
1,2-Dichloroethane (EDC)	Ø.ØØ1	not spiked		
Ethylene Dibromide (EDB)	Ø.ØØ1	not spiked		
Total Purgeable Petroleum H	lydrocarbo	 ns		
(Gasoline)	Ø.1	1.42	1.47	1Ø4%
(Diesel #2, Stoddard Solven Kerosene, Jet Fuel, Minero) not spiked		
BTX as a Percent of Total F	uel		22%	n/a
Percent Surrogate Recoverie	s			87/93/123

^{*}Practical Quantitation Limit

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted.

COAST-to-COAST ANALYTICAL SERVICES

Mary Haylicek, Ph.D.

President

MSD #1-5/8 QSØ5Ø71G.wr1/FFP72 MH/hc/gb/gb

^{**}Soils sonicated during extraction

Coast-to-Coast
Analytical Services, Inc.
141 Suburban Road , Suite C-4
San Luis Obispo, California 93401
(805) 543-2553

Lab Number: BØ5Ø81

Collected: Received:

Tested: \$5/\$8/91

Collected by:

FUEL FINGERPRINT ANALYSIS

CAL DHS (TPH Draft) Method & EPA Method 8248/8268-(GC/MS)

Extracted by EPA Method 5838 (purge-and-trap)**

CCAS-NAPA

SAMPLE DESCRIPTION:

Instrument Blank for \$5/\$8/91 MSD#1

Compound Analyzed	Detection Limit in mg/kg (PQL)*	Concentration in mg/kg		
Benzene	Ø.ØØ1	not found		
Toluene	Ø.ØØ1	not found		
Ethylbenzene	Ø.ØØ1	not found		
Xylenes	Ø.ØØ1	not found		
1,2-Dichloroethane (EDC)	Ø.ØØ1	not found		
Ethylene Dibromide (EDB)	Ø.ØØ1	not found		
Total Purgeable Petroleum Hydroco				
(Gasoline)	Ø.1	not found		
Stoddard Solvent, Mineral Spirits	s) Ø.1	not found		
BTX as a Percent of Total Fuel		n/a		
Percent Surrogate Recoveries		1Ø6/96/123		
*(Practical Quantitation Limit) **Soils sonicated during extracti	:======±==============================			

Constituents reported as "not found" would have been reported if present

at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Havlicek, Ph.D.

President

MSD #1-5/9 BØ5Ø81FS.wr1/FFP73 MH/hc/gb/gb

Coast-to-Coast Analytical Services, Inc. Collected: 141 Suburban Road , Suite C-4 Received: San Luis Obispo, California 93401 Tested: (8Ø5) 543-2553

Lab Number: QSØ5Ø81

Ø5/Ø8/91

Collected by:

FUEL FINGERPRINT ANALYSIS CAL DHS (TPH Draft) Method & EPA Method 8240/8260-(GC/MS) Extracted by EPA Method 5030 (purge-and-trap)**

CCAS-NAPA

SAMPLE DESCRIPTION: Roasted Soil Spiked to 1.42ppm with Super Unleaded Gasoline

Compound Analyzed	#PQL mg/kg	Expected in mg/kg	Actual in mg/kg	Percent Recovery
Benzene	Ø,ØØ1	Ø.Ø52	Ø.Ø53	102%
Toluene	Ø.ØØ1	Ø.16	Ø.15	94%
Ethylbenzene	Ø.ØØ1	Ø.Ø29	Ø.Ø27	93%
Xylenes	Ø.ØØ1	Ø.17	Ø.13	7 6%
1,2-Dichloroethane (EDC)	Ø.ØØ1	not spiked		
Ethylene Dibromide (EDB)	Ø.ØØ1	not spiked		
Total Purgeable Petroleum H (Gasoline)	ydrocarbor Ø.1	1 . 42	1.38	97%
(Diesel #2, Stoddard Solven Kerosene, Jet Fuel, Minera) not spiked		
BTX as a Percent of Total F	uel		24%	n/a
Percent Surrogate Recoverie	s			113/96/124
	* * * * * * * * * *			

^{*}Practical Quantitation Limit

Constituents reported as "not found" would have been reported if present at or above the listed practical quantitation limit.

Respectfully submitted,

COAST-to-COAST ANALYTICAL SERVICES

Mary Haylicek, Ph.D.

President

MSD #1-5/9 QSØ5Ø81G.wr1/FFP73 MH/hc/gb/gb

^{**}Soils sonicated during extraction

Acceptance Officer

Phone (916) 782 2110 FAX (916) 786-7830

AEGIS Environmental Consultants, Inc. Sample Identification/Field Chain of Custody Record

Aegis Environmental 801 Riverside, Suite C Roseville, CA 95678

				For Shell Projects Only			
91.00	01 / Direct hill 8	3 A-10054 Ms.	Kathu Lunch	<u></u>	WIC:		
AEGIS Project #: 71-00 Shipped By: Robert	Pr Warner		 		CT/DL;		
Shipped To: CCAS					Shell Engineer		
Project Manager Robert	P. Warner				-	crials Suspected? (yes/	no)
Sampling Point	Location	Field 1D#	Date	Sample Type	No. of Containers	Analysis Required	NC-240
Southwest soil boing	16.0-16.5'	58-1-3	4/24/91	Soil	l	Fuel Fingeopriat	
Southwest soil boring		SB-1-7	4/24/91	Sei 1	ĺ	Fuel Fingerprint, To	tal -2
Northwest soil boiling	11.0 - 11.5"	58-2-3	4/24/21	Seil	1	Fuel Fingerprint	3
Northwest soil being	25.5'-26.0'	58-2-5	4/24/91	Seil	1	Fuel Fingespirit,	atal -4
Northwest soil boring	40.5'- 41.0'	5B-2-8	4/24/91	Soil	1	Feel Fingerprint	
Northeast soil baring		58-3-3	4/24/91	Seil	1	Fuel Fingespirit	
Northeast soil boing	36.0-36.51	S8-3-7	4/24/91	501		Ful Fingerprint, I	and 7
Southeast soil boring	21.0-21.5	56-4-4	4/24/91	5:1	1	Fuel Figerprint	-8
Sampler(s) (signature)	it P. Warney	A	A			U	
Field ID	Relinquished By (signature)	Received II	y (signature)	Di	ite/Time	Comments	
8 brass soil tubes L	best. Warrer			1/26/1	1 31557~	<u> </u>	
1/2	Methony W. Bell	<u> </u>	` \	043091	5		
•	ر ا						
Sealed for shipment by: (signature	() Rlate Warm	Date/Time:	4/26/91 11:001	M Shipment M	Acthod: <u>Dicect</u>	hand carry by la	towier
Received for Lab by: (signature)_	assistant W. E	Delline Date/Time:					1X result
	ilable, souple sout to	alves fix a indicated e	nds toward c	enter, retu	en icecho	st CSI	
	_ 	Please return original form	after signing for re	eceint of samo	les		

Phone (916) 782 2110 FAX (916) 786-7830

AEGIS Environmental Consultants, Inc.Sample Identification/Field Chain of Custody Record



Aegis Environmental 801 Riverside, Suite C. Roseville, CA 95678

Idal Callan I fa in the Cities of the Calland				for Shell Proj VIC:	-	
	/ Pirect bill 831.				AFE:	
Shipped By: Rober + (, Warner				 CT/DL:	
Shipped To: CCAS					•	
Project Manager Relatif	P. Warner				_	terials Suspected? (yes/no)
Sampling Point	Location	Field ID#	Date	Sample Type	No. of Containers	Analysis Required
Switheast Soil boring	35.5-36.01	56-4-7	4/24/91	50:1	<u> </u>	Frel Figurpinst, Lead -9
Cuttings Stackpile	1.0-1.5	55-1-4	4/24/91	Seil	j	Full Fingerprint - 10 can well for read 5 TZC
Cuttings Stuckpile	1.0 - 1.5"	55·1-B	4/24/11	5011	1	Composite (citie)
Cuttings Stockpile	1.0 - 1.5	55-1-C	4/24/91	Seil	1	Hintel (Acid)
Cuttings Stockpile	1.0-1.5'	55-10	4/24/11	Soil	1	in laboratory)
						cyavide Scifide
			·			
Sampler(s) (signature)	IP. Warnes					
Field ID	Relinquished By (signature)	Received I	y (signature)	Date	e/Time	Comments
5 brass tubes RB	ett. Warner			1/26/41	5.55pr	
	Juthons W. Bolls	me 1		04304/	,	
,			i)	777		
Sealed for shipment by: (signature)	Relitt. Warner	Date/Time:	4/20/91 11:00/9	Shipment Me	shod: <u>Direct</u>	hand every by lab tourier
Decembed for Lab but (vignature)	aschow 11 Belli	Date/Time	04399111193	O Commenter	Runting Tu	Charaund FAX Coulte
as seen as availa	ble, Sample select t	ubec from Indicate	ed ends towner	d center, off	icially con	firm represented analysis
by phone with me A						CST
-	**	Please return original forn Original Yellow/Lab Copy	n after signing for ro Pink/File Copy	eccipt of sample	S.	

ANALYTICAL **ERVICES**

Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories MAY 2 0 1991 Air, Water & Hazardous Waste Sampling, Analysis & Consultation

141 Suburban Road 751 S. Kellogg, Suite A

1885 North Kelly Road 9333 Tech Center Dr., Ste. 800 Sacramento, CA 95826 2400 Cumberland Dr. Valparaiso, Indiana 46383

5an Luis Obispo, CA 93401 Goleta, CA 93117 Napa, CA 94558

(805) 543-2553 (805) 964-7838 Fax (805) 967-4386

(707) 257-7211 Fax (707) 226-1001

Fax (916) 362-2484 (916) 368-1333 (219) 464-2389 Fax (219) 462-2953

Lab Number : H-1691-1

Project

: 91-001/ 1401 Grand

Avenue, San Leandro

801 Riverside Avenue, Suite C

AEGIS Environmental Consultants, Inc

Roseville, CA 95678

CLIENT: Robert P. Warner

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLE	D BY	SA	MPLED DATE	RECE	EIVED
NC-240-2 Southwest Soil Boring 35.5-36.0' SB-1-7	Soil	Robert	Warne	.	04/24/91	04/3	30/91
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY	NOTES
Lead, Total	1.	ИD	mg/Kg	EPA 742	0 05/09/91	KS	1

San Luis Obispo Division is certified by CA Department of Health Services: Laboratory #131 *RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) Sample Preparation on 05/07/91 by MDH using EPA 3050

05/16/91

MH/jmw/kes/wjm

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

James White, Group Leader Manstaulines

Mary Havlicek, Ph.D.



Air, Water & Hazardous Waste Sampling, Analysis & Consultation Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

141 Suburban Road 751 S. Kellogg, Suite A 1885 North Kelly Road 9333 Tech Center Dr., Ste. 800

2400 Cumberland Dr.

San Luis Obispo, CA 93401 Goleta, CA 93117 Napa, CA 94558

Sacramento, CA 95826

Valparaiso, Indiana 46383

(805) 543-2553

Fax (805) 543-2685

(805) 964-7838 (707) 257-7211 Fax (805) 967-4386 Fax (707) 226-1001

(916) 368-1333 (219) 464-2389

Fax (916) 362-2484 Fax (219) 462-2953

Lab Number : H-1691-2

Project

: 91-001/ 1401 Grand

Avenue, San Leandro

CLIENT: Robert P. Warner AEGIS Environmental Consultants, Inc.

801 Riverside Avenue, Suite C

Roseville, CA 95678

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLE	D BY	SAM	IPLED DATE	RECEI	VED
NC-240-4 Northwest Soil Boring 25.5- 26.0' SB-2-5	Soil	Robert	Warner	. 0	4/24/91	04/30	/91
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY N	OTES
Lead, Total	1.	3.	mg/Kg	EPA 7420	05/09/91	KS	1

San Luis Obispo Division is certified by CA Department of Health Services: Laboratory #131 *RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) Sample Preparation on 05/07/91 by MDH using EPA 3050

05/14/91

MH/jmw/kes/wjm

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC. Julio 2

James White, Group Leader
Many Hunlice Le

Mary Havlicek, Ph.D.



CLIENT: Robert P. Warner

Air, Water & Hazardous Waste Sampling, Analysis & Consultation Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

141 Suburban Road 751 S. Kellogg, Suite A 1885 North Kelly Road

9333 Tech Center Dr., Ste. 800 2400 Cumberland Dr.

AEGIS Environmental Consultants, Inc

San Luis Obispo, CA 93401 Goleta, CA 93117

Napa, CA 94558

(805) 543-2553 (805) 964-7838 Fax (805) 543-2685

Fax (805) 967-4386 (707) 257-7211 Fax (707) 226-1001

Sacramento, CA 95826 (916) 368-1333 (219) 464-2389 Valparaiso, Indiana 46383

Fax (916) 362-2484 Fax (219) 462-2953

Lab Number : H-1691-3

Project

: 91-001/ 1401 Grand

Avenue, San Leandro

801 Riverside Avenue, Suite C Roseville, CA 95678

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
NC-240-7 Northeast Soil Boring 36.0-36.5' SB-3-7	Soil	Robert Warner	04/24/91	04/30/91
CONSTITUENT	*PQL	RESULT UNITS M	ETHOD ANALYZED	BY NOTES
Lead, Total	1.	ND mg/Kg E	PA 7420 05/09/91	KS 1

San Luis Obispo Division is certified by CA Department of Health Services: Laboratory #131 *RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) Sample Preparation on 05/07/91 by MDH using EPA 3050

05/14/91

MH/jmw/kes/wjm

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

James White, Group Leader
Man Kulleil

Mary Havlicek, Ph.D.



Air, Water & Hazardous Waste Sampling, Analysis & Consultation Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

141 Suburban Road 751 S. Kellogg, Suite A 1885 North Kelly Road

9333 Tech Center Dr., Ste. 800 2400 Cumberland Dr.

San Luis Obispo, CA 93401 Goleta, CA 93117

Napa, CA 94558

Sacramento, CA 95826

Valparaiso, Indiana 46383

(805) 543-2553 (805) 964-7838 Fax (805) 543-2685

Fax (805) 967-4386 (707) 257-7211 Fax (707) 226-1001

(916) 368-1333 Fax (916) 362-2484 (219) 464-2389 Fax (219) 462-2953

Lab Number : H-1691-4

Project

: 91-001/ 1401 Grand

Avenue, San Leandro

801 Riverside Avenue, Suite C

AEGIS Environmental Consultants, Inc

Roseville, CA 95678

CLIENT: Robert P. Warner

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE	RECEIVED
NC-240-9 Southeast Soil Boring 35.5-36.0' SB-4-7	Soil	Robert Warner	04/24/91	04/30/91
CONSTITUENT	*PQL	RESULT UNITS	METHOD ANALYZED	BY NOTES
Lead, Total	1.	ND mg/Kg	EPA 7420 05/09/91	KS 1

San Luis Obispo Division is certified by CA Department of Health Services: Laboratory #131 *RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit) (1) Sample Preparation on 05/07/91 by MDH using EPA 3050

05/14/91

MH/jmw/kes/wjm

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

James White, Group Leader

Many Wallell

Mary Havlicek, Ph.D.

COAST - TO -COAST ANALYTICAL SERVICES

Air, Water & Hazardous Waste Sampling, Analysis & Consultation Certified Hazardous Waste, Chemistry, Bacteriology & Bioassay Laboratories

141 Suburban Road 751 S. Kellogg, Suite A 1885 North Kelly Road

9333 Tech Center Dr., Ste. 800 2400 Cumberland Dr. San Luis Obispo, CA 93401 Goleta, CA 93117

Napa, CA 94558

(805) 543-2553 (805) 964-7838 Fax (805) 543-2685 Fax (805) 967-4386

(805) 964-7838 • Fax (80 (707) 257-7211 • Fax (70

Fax (707) 226-1001 Fax (916) 362-2484

Sacramento, CA 95826 • (916) 368-1333 Valparaiso, Indiana 46383 • (219) 464-2389

2389 • Fax

Fax (219) 462-2953

Lab Number : H-1691-5

Project

: 91-001/ 1401 Grand

Avenue, San Leandro

AEGIS Environmental Consultants, Inc 801 Riverside Avenue, Suite C

Roseville, CA 95678

CLIENT: Robert P. Warner

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLE	D BY	SAM	PLED DATE	RECEI	VED
NC-240-10 A,B,C,&D Cuttings Stockpile 1.0-1.5' SS-1-A,B,C,&D	Soil	Robert	: Warne	r 0	4/24/91	04/30	91
CONSTITUENT	*PQL	RESULT	UNITS	METHOD	ANALYZED	BY N	TOTES
CAL WET extraction with citrate Lead, Soluble	0.02	0.06	mg/L		05/08/91 05/13/91		1 2

San Luis Obispo Division is certified by CA Department of Health Services: Laboratory #131
*RESULTS listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit)

(1) Sample Preparation on 05/08/91

(2) Sample Preparation on 05/11/91 by JLW using EPA 3005

05/14/91

MH/jmw/kes/wjm

Respectfully submitted,

COAST-TO-COAST ANALYTICAL SERVICES, INC.

James White, Group Leader

Man Vaulued
Mary Havlicek, Ph.D.

Coast-to-Coast Analytical Services 141 Suburban Road, Suite C-4 San Luis Obispo, California 93451 (895) 543-2553

Lab Number: Collected: Received: Tested:

Collected by:

H-1691-5 Comp. Ø4/24/91

>200. Deg. F

Ø4/3Ø/91 As Listed Robert Warner

Sample Description:

Project: 91-991/1491 Grand Ave., San Leandro, NC-249-10 A,B,C,&D Cuttings Stockpile 1.6-1.5' SS-1-A,B,C,&D, Soil

IGNITABILITY AND REACTIVITY CRITERIA, 22 CAL ADM CODE ART 11, SEC 66702/66705 & 40CFR261 HAZARDOUS MATERIALS SCREEN

DESCRIPTION OF TEST

Roseville, CA 95678

ATTN: Robert P. Warner

801 Riverside Avenue, Suite C

AEGIS Environmental Consultants, Inc.

AND TEST METHOD NO. DATE TESTED/ANALYST **OBSERVATIONS** RESULTS APPEARANCE . Ø5/Ø7/91 AES 4 soil samples ranging (ASTM D4979) from dark brown to light brown REACTION WITH WATER Ø5/Ø7/91 AES Undissolved, density Undissolved (ASTM D5Ø58) greater than water, no change in color or temp., gas evolved REACTION WITH ACID Ø5/Ø7/91 AES Partially dissolved, Partially dissolved (ASTM D5Ø58) density greater than water, no change in color or temp., gas evolved pH (units) Ø5/Ø7/91 AES 7.8 (EPA 9Ø45) CONDUCTIVITY (micromhos) Ø5/Ø7/91 AES 54. (EPA 9Ø5Ø) PRESENCE OF OXIDIZER Ø5/Ø7/91 AES Oxidizer not present Negative (ASTM D1498) PRESENCE OF SULFIDE Ø5/Ø7/91 AES Sulfide not present Negative (EPA 376.2) at >10. mg/kg PRESENCE OF CYANIDE Ø5/Ø7/91 AES Cyanide not present Negative (ASTM D-5Ø49) at >10. mg/kg PRESENCE OF FLUORIDE Ø5/Ø7/91 AES Fluoride not present Negative (EPA 34Ø.1) at >10. mg/kg COMBUSTIBILITY Ø5/Ø7/91 AES No ignition (flash or Negative Flame (ASTM D4982) burning) Potential

REMARKS: The material is not hazardous according to 22 Cal Adm Code Art 11 Sec. 66702/66705 & 40CFR261 ignitability criteria.

Ø5/1Ø/91 HC

Ø5/14/91 H1691-5A.WRT/#14 MH/ke

FLASHPOINT

(EPA 1020)

Respectfully submitted, mankant Mary Havlicek, Ph.D., President

AEGIS Environmental Consultants, Inc. Sample Identification/Field Chain of Custody Record

Send results to:

Aegis Environmental,

801 Riverside, Suite C

Roseville, CA 95678

Sile Address: 1401 Grand Avenua/San Leandro, California					For Shell Projects Only		
AEGIS Project #: 91-001 / Direct bill 83 A-10054 Ms. Kathy Lynch				h	WIC:		
Shipped By: Robert Po Warner					CT/DL:		
Shipped To: CCA					Shell Engineer		
Project Manager Rehar	+ P. Warner				_	terials Suspected? (yes/no)	1691
Sampling Point	Location	Field ID#	Date	Sample Type	No. of Containers	Analysis A.	-
Southwest soil boring	y 16.0-16.5'	58-1-3	4/24/91	Soil	1	Frel Fingesprint	-1
Southwest soil bor.	my 35.5-36.01	58-1-7	4/24/91	Seil			-2-
Northwest sail being	9 11.0 - 11.5'	58-2-2	4/24/11	Seil	1	Fuel Fingerprint	-3
Northwest soil beging	25.5'-26.0'	5B-2-5	4/24/91	Seil	1		-4-
Northwest soil boin	ng 40.5'- 41.0'	SB-2-8	4/24/91	Soil		Fred Flagerpoint	-5
Northeast soil barin	9 16.0-16.5	56-3-3	4/24/91	Seil		, •	-6
Northeast soil boing	36.0-36.51	58-3-7	4/24/91	551	1	Frel Fingerprint, Lind	-7
Southeast soil boring	9 21.0-21.5	56-4-4	4/24/91	52:1	1	Fuel Figurpint	-8
Sampler(s) (signature)	best P. Warney					0 1	
Field ID	Relinquished By (signature)	Received B	y (signature)	, Dat	e/Time	Comments	
8 brass soil tubes	Cobert . Warner			1/26/1	7:557~		
	Exthory W. Bellin	$\lambda \mid \begin{array}{c} \lambda \mid \\ \end{array} $	` \	043091 @ 1530			
		Darea E	Lowide	6.1.91		wed seared	<i>ฟ</i> กา
Sealed for shipment by: (signati	ire) Robert P. Warran	Datc/fime: _	4/26/91 11:00 1		eshod: Dicect	hand carry by lab tour	ier.
Received for Lab by: (signature		Date/lime:		Comments:	Routine	Turnaround FAX con	ulte
as some as av	nilable, sample sourt to	his firm indicated ex	ids toward co	inter, retur	n lack	42	-,
	•			,			

AEGIS Environmental Consultants, Inc. Sample Identification/Field Chain of Custody Record

Send results to:

Aegis Environmental
801 Riverside, Suite C

Roseville, CA 95678 For Shell Projects Only 1401 Grand Avenue / San Leandro, California Site Address: -91-001 / Pirect bill 831-10054 Ms. Kathy Lynch AEGIS Project #:-Robert P. Warner Shipped By: _ CT/DL: _____ CCA-5 Shipped To: _ Shell Engineer: Robert P. Wheney Project Manager _ Hazardous Materials Suspected? (yes/no) Sampling Sample No. of Analysis **Point** Location Field ID# Date Type Containers Required 4/24/91 Switheast soil boring 35.5-36.01 Fuel Fingerprint, Lear SB-4-7 50:1 1.0-1.5 Cuttings Stockpile 55-1-1 4/24/91 Seil Full Fingerprint 1.0-1.5 4/24/11 Cuttings Stockpile 55.1-13 Soil Compusite 1.0 - 1.5 4/24/91 Cuttings Stockpile 55-1-(4 into 1 Soil 1.0-1.5 Cuttings Stockpile 55-10 4/24/11 in laboratory Soil Refrest P. Warner Sampler(s) (signature) Field ID Relinquished By (signature) Received By (signature) Date/Time Comments 5 wass tubes Robert P. Warnes 4/26/81 3.5500 04 304/ @1530 la Clawick 1200 Scaled for shipment by: (signature) Rlett, Warren Date/Time: 4/21/91 11:00 AM Shipment Method: Direct hand earry by 14b tourier Received for Lab by: (signature) Comments: Routine Turnaround, FAX Casults Date/Time: as soon as available, sample select tubes from indicated ends toward center, officially confirm requested analysis by phone with me ASAP. Return Icechest

DOCUMENT REVIEW AND TRACKING

roject Name: roject Manager uthor: ocument Type:		1401 Grand Avenu	<u>e</u> Project No — <u>11-00 </u>	o.: <u>01-001</u>	
REVIEW PROCESS	DATE IN	DATE OUT	SIGNATURE	RETURNED TO:	
Author (typed/written by): 1st Draft	6/4/91	6/5/91	Robert S. Warner		
Graphics - Figures Logs Data - Tables					
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