3971

SOIL AND GROUNDWATER INVESTIGATION REPORT 505 CEDAR STREET OAKLAND, CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.
PROJECT NO. 94-911

Prepared For:

STATE DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL ENGINEERING BRANCH
111 Grand Avenue, 14th Floor
Oakland, California 94623-0660

Contract Number 53U495
Task Order Number 04-192211-05

September 27, 1994

Prepared By:

STATE OF CALIFORNIA

OFFICE MEMO
STD. 100 (REV. 10-91)

DATE: 11/4/94

TO: Susan Hugo

ROOM/STA. NO.:

FROM: Chris Wilson
Caltrans Environmental Eng.

PHONE NUMBER: 286-5647 ATSS ☐
ROOM/STA. NO.:

SUBJECT: Cal-East Foods site

3971

Susan:

Here is the soil and groundwater investigation report from the Cal-East foods site (505 Cedar Street). If you have any questions please call.

Chris Wilson

P.S. Sorry for the month-long delay in sending this.

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Prepared By:

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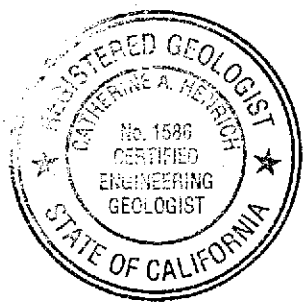

TABLE OF CONTENTS
SOIL AND GROUNDWATER INVESTIGATION REPORT
CAL EAST
OAKLAND, CALIFORNIA

LIST OF TABLES

LIST OF FIGURES

The contents of this report reflect the views of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the California Department of Transportation or the Federal Highway administration. This report does not constitute a standard, specification, or regulation.

1.0 INTRODUCTION

1. Environmental Solutions, Inc., a wholly owned subsidiary of TRC Companies, has prepared this Soil and Groundwater Investigation Report for the Caltrans Cal East site (Site), located at 505 Cedar Street in Oakland, California (Figure 1), as part of Task Order 04-192211-05 of Contract Number 53U495.

2. The purpose of the Task Order was to install and sample three groundwater monitoring wells to assess if soil and groundwater in the vicinity of the former underground storage tank has been impacted by petroleum hydrocarbons. This report presents the results of the field investigation performed by Environmental Solutions, Inc.

2.0 SITE DESCRIPTION/SITE HISTORY

1. The site project area is located at 505 Cedar Street in Oakland, California (Figure 2). The site was formerly occupied by Cal East Foods, a seafood distributor, and contains a large building and a concrete parking area. In November 1993, Reidel Environmental Services (RES) removed a 2,500-gallon gasoline underground storage tank (UST) from the site. Results of soil testing identified concentrations of gasoline, diesel, benzene, ethylbenzene, toluene, and xylenes in the soil on the Caltrans site. Over-excavation was performed by RES in November 1993, and the tank pit backfilled. RES prepared a workplan for monitoring well installation at the site, dated February 17, 1994. Environmental Solutions, Inc. utilized this workplan for the field activities performed.

3.0 FIELD INVESTIGATION

1. The field investigation was performed on April 4 and July 21, 1994. The scope of work for this task order, as outlined in the RES workplan, consisted of drilling three soil borings to depths of approximately 30 feet below grade, collecting soil samples during drilling, installing two 2-inch, and one 4-inch diameter monitoring wells in the borings, and collecting groundwater samples from the three newly installed monitoring wells. One of the groundwater monitoring wells was installed as a 4-inch diameter well, for potential future use as a groundwater extraction well.

2. The field work was performed in two phases. The first phase, conducted on April 4, 1994, consisted of installing one soil boring and one groundwater monitoring well. A broken slide hammer on the drill rig terminated drilling activities for the day. Relocation of one of the monitoring wells postponed the second phase until July 21, 1994 (See section 3.1, paragraph 3).

3. The following sections describe the drilling and monitoring well installation procedures, groundwater sampling procedures, and the analytical testing program.

3.1 Drilling and Monitoring Well Installation Procedures

1. Monitoring Well locations are shown on Figure 3. The drilling was performed by West Hazmat Drilling, of Newark, California, under the direction of an Environmental Solutions, Inc. geologist. The borings were drilled using a truck-mounted drilling rig equipped with 8-inch and 10-inch hollow-stem augers. Soil samples were collected from each boring for chemical testing at five foot intervals starting from five feet below ground surface (ft bgs). The soil samples were lithologically classified using the Unified Soil Classification System (USCS) and Munsell color standards. An organic vapor meter (OVM) was used to take readings on selected soil samples, and from borehole conditions during drilling (OVM readings are included on Boring logs in Appendix A). Soil samples were collected using an 18-inch long California modified split spoon sampler, lined with three 6-inch long, 2-inch diameter stainless steel tubes. After collection, the ends of the sample tubes were capped with teflon tape, followed by a plastic cap. No adhesive tape was used on the sample containers. The containers were labeled and placed in

a cooler with blue ice, and transported under chain-of-custody documentation to Chromolab, Inc., in San Ramon, California.

2. All drilling tools were decontaminated by either a high-pressure hot water wash, or alconox wash with deionized water rinse, before and between each use. Decontamination water was drummed and stored on site in labeled 55-gallon drums. The soil cuttings were placed in seven labeled 55-gallon drums, and stored on site pending disposal.

3. Originally, Monitoring Well MW-1 was to be located in the former UST area. Boring B-1 was drilled and sampled in April 1994, and then grouted to the surface with neat cement. However, during drilling, depth to water was found to be at nine feet below ground surface, and the Alameda County Health Department would not allow the well to be screened in the former UST backfill material. This caused an additional boring to be installed on the site. Monitoring Well MW-1 was relocated on Cedar Street, (Figure 2). The installation of the well was delayed for several months because encroachment and excavation permits were required from the City of Oakland Department of Public Works.

4. A fifteen-foot length of 4-inch diameter, 0.01 inch slotted screen, was placed from 5 to 20 ft bgs in Monitoring Well MW-1, through the hollow stem augers. Attached above the screen, five feet of blank casing was placed from ground surface to five ft bgs. As the augers were slowly pulled up, #2/12 Lonestar sand was installed through the augers to a depth of one foot above the top of the slotted screen interval. A weighted measuring tape was used during sand installation to insure proper depth placement, and to prevent bridging of the sand. A one foot thick layer of bentonite pellets was installed on top of the sand, and hydrated with deionized water. The remainder of the annular space was filled with a 5% bentonite grout using a tremie pipe. The top of the casing was covered with a locking waterproof expandable cap, and a traffic rated cover box was installed over the well casing. This procedure was repeated for MW-2, with ten feet of .01 inch slotted two-inch diameter screen placed from nine to nineteen ft bgs, attached to nine feet of blank casing placed from ground surface to nine ft bgs, and for MW-3, with ten feet of .01 inch slotted two-inch diameter screen placed from five to fifteen ft bgs, attached to five feet of blank casing placed from ground surface to five ft bgs.

5. The monitoring wells were developed on July 25, 1994, four days after completing the installation. Well development was performed by surging and pumping at least 10 wet well casing volumes from each well. The wells were allowed to recover at least 24-hours before sampling activities began. Development water was contained in labeled 55-gallon drums, and stored onsite pending disposal.

3.2 Groundwater Sampling Procedures

1. Groundwater sampling was performed on July 27, 1994, two days after well development. Prior to groundwater sample collection, depth to groundwater was measured with an electric water level meter in each well, and the wells were purged of at least 3 wet well casing volumes before samples were collected. During purging of each well, electrical conductivity and temperature measurements were collected with every well volume removed (Table 2). All development, purging, and sampling equipment was decontaminated prior to and between each use. Purge water was placed in two labelled 55-gallon drums, and stored on site pending disposal.

2. Groundwater samples were collected from the monitoring wells on July 27, 1994, using disposable two inch bailers. In order to reduce the loss of volatile constituents, samples for volatile organic compounds analysis were dispensed from the bailer using a disposable VOC sampler. The water samples were released into laboratory-supplied, sterile sample containers. The sample containers were labeled, placed in a cooler on ice, and transported under chain of custody documentation to Chromolab, Inc., in San Ramon, California.

3.3 Analytical Testing Program

1. The soil and water samples were submitted to Chromolab, Inc., in San Ramon, California, for the following analytical tests:

- EPA Method 6010, Heavy Metal Scan
- EPA Method 8015 Modified for gasoline
- EPA Method 5520 Oil and Grease
- EPA Method 8015 Modified for diesel (water samples only)
- EPA Method 8020 Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)
- EPA 8240 Volatile Organic Compounds

4.0 RESULTS

1. The soils present at the site consist of brown, fine to medium grained, sands and clayey sands. The soils appear to be fill material, probably placed during the earlier part of this century to fill in existing wetlands on the San Francisco Bay margin.

2. The three groundwater monitoring wells were surveyed by Kistor, Savio & Rei, Inc. on August 5, 1994. Top of casing elevations and ground surface elevations were surveyed to an existing benchmark in the area. Elevation data is included in Table 1.

3. The groundwater at the site was found to be at a depth of approximately nine feet below ground surface, approximately one half foot above mean sea level (Table 1). The groundwater was determined to flow toward the southeast at a gradient of 0.0052 feet/foot (Figure 3).

4. Analytical results for soil and groundwater samples are presented in Tables 3a, 3b, 3c, 3d, and 3e, and are discussed below.

4.1 Analytical Results

4.1.1 Soil

1. TPH-gas and Oil and Grease were detected in the soil sample collected at 5 ft bgs from Boring MW-3 at concentrations of 1.5 mg/kg, and 71 mg/kg, respectively. No other soil samples showed the presence of these constituents.

2. Lead was detected in soil samples from Borings B-1 at 25 ft bgs, MW-1 at 5 and 10 ft bgs, and MW-3 at 5 and 10 ft bgs at concentrations ranging from 5.7 mg/kg to 27 mg/kg. None of these concentrations exceed ten times the STLC value for lead of 5 mg/kg, therefore WET analysis was not performed.

3. Volatile organic compounds (EPA test Method 8240) were detected in soil samples collected from Borings B-1 and MW-3. Benzene was detected in Boring B-1 in a soil sample collected at 15 ft bgs, at a concentration of 130 ug/kg. Soil samples collected from Boring MW-3 at 5 ft bgs contained the following constituents: acetone at a concentration of 60 ug/kg, benzene at a concentration of 25 ug/kg,

ethylbenzene at a concentration of 39 ug/kg, and total xylenes at a concentration of 7.7 ug/kg.

4.1.2 Groundwater

1. TPH-gas was detected in groundwater samples collected from monitoring wells MW-1 and MW-3 at concentrations of 0.12 mg/l, and 0.13 mg/l respectively. Oil and Grease was not detected in groundwater samples collected from the three monitoring wells. Diesel was not detected in groundwater samples from the three monitoring wells, however, a groundwater sample from Monitoring Well MW-3 had an unknown hydrocarbon detected in the gasoline/kerosene range. The laboratory quantified the unknown compound at 62 ug/l and suggested that it resembled weathered gasoline.

2. Heavy metals detected in groundwater samples were all well below the STLC respective values for each constituent detected.

3. Volatile organic compounds were detected in the groundwater samples collected from Monitoring Well MW-1, and included Methyl Ethyl Ketone (MEK) at a concentration of 3.4 ug/l and 1,2-Dichloroethane (1,2-DCA) at a concentration of 43 ug/l.

4. This concentration of 1,2-DCA exceeds the California Maximum Contaminant Level (MCL) for drinking water of 0.5 ug/l.[1] Other contaminants present in groundwater samples, including gasoline and MEK, are unregulated or unlisted in the MCLs.

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[1] State of California, Department of Health Services, Office of Drinking Water Maximum Contaminant Levels, May 1994.

5.0 CONCLUSIONS

1. On the basis of groundwater depth measurements collected on July 27, 1994, it appears that the groundwater flows toward the southeast at a gradient of 0.0052 vertical feet per horizontal foot. The flow direction and gradient may be influenced by several factors including seasonal fluctuations, local variation in soil composition, and the presence of braided stream channel sediments known to exist in the west Oakland area.

2. On the basis of soil and groundwater samples collected during this investigation, and laboratory analyses of these samples, it appears that both soil and groundwater have been impacted by petroleum hydrocarbons and volatile organic compounds (VOCs).

3. The presence of VOCs in soil samples collected from Borings B-1 and MW-3, and TPH-gas and Oil and Grease in soil samples collected from Boring MW-3 indicates that not all of the contaminated soil at the site has been removed.

4. The presence of TPH-gas and VOCs in the groundwater samples collected from Monitoring Well MW-1, and the presence of TPH-gas in the groundwater samples collected from Monitoring Well MW-3, indicates that constituents of the former UST may have migrated through the soils surrounding the former UST and impacted the groundwater. On the basis of the placement of Monitoring Wells MW-1 and MW-3, and the groundwater flow direction, it appears that contaminants have migrated off the site. Offsite concentrations of test method compounds are low, and the presence of Methyl Ethyl Ketone (MEK) may be due to degradation of naturally occurring organic matter in the soil.

5. The presence of 1,2-Dichloroethane (1,2-DCA) at a concentration of 43 ug/l in groundwater samples collected from Monitoring Well MW-1, is well above the MCL of 0.5 ug/l set by the State of California for drinking water. TPH-gasoline and MEK, compounds also present in groundwater samples from MW-1, are unregulated or unlisted in the MCLs. The groundwater in the site vicinity is not used for domestic purposes.

6.0 SCHEDULE

1. Environmental Solutions, Inc. is performing quarterly monitoring and sampling of the groundwater at the site for the next three consecutive quarters until March, 1995. Environmental Solutions, Inc. will monitor and sample the groundwater at the site again in October 1994.

Caltrans - Cal East
ESI Project #94-911

Well Identification	Top of Casing Elevation*	Measuring Date	Depth to Water #	Water Level Elevation*
MW-1	9.25	7/22/94	8.83	0.42
MW-2	9.84	7/22/94	9.24	0.60
MW-3	9.41	7/22/94	8.94	0.47

* = Measurements in feet above USGS Mean Sea Level
# = Depths measured in feet from top of casing

Caltrans - Cal East
ESI Project #94-911

Well Identification	Measuring Date	Temperature*	Conductivity+
MW-1	7/27/94	67.0	1158
MW-2	7/27/94	65.4	1040
MW-3	7/27/94	66.6	1756

* Temperature in degrees fahrenheit
+ = Conductivity in umhos

TABLE 3a: PETROLEUM HYDROCARBONS

Caltrans - Cal East
ESI Project #94-911

		Boring Location:	B-1	B-1	MW-1	MW-1	MW-1	MW-1
		Soil Sample Depth (in feet):	15	25	5	10	15	20
		Reporting Limit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH -Gasoline	EPA 8015	1.0	ND	ND	ND	ND	ND	ND
Oil & Grease	STD 5520	50	ND	ND	ND	ND	ND	ND

		Boring Location:	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3
		Soil Sample Depth (in feet):	5	10	15	5	10	16.5
		Reporting Limit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH -Gasoline	EPA 8015	1.0	ND	NT	ND	**1.5**	ND	ND
Oil & Grease	STD 5520	50	ND	ND	ND	**71**	ND	ND

		Boring Location:	MW-1	MW-2	MW-3
		Sample	Water	Water	Water
		Reporting Limit			
TPH - Gasoline	EPA 8015	0.05 mg/l	**0.12**	ND	**0.13**
Oil & Grease	STD 5520	1.0 mg/l	ND	ND	ND
TPH - Diesel	EPA 8015	50 ug/l	ND	ND	ND*

* = Unknown hydrocarbon in gasoline/kerosene range was observed in sample. Quantified at 62 ug/kg
ND = Not detected at or above reporting limit
NT = Not tested

ENVIRONMENTAL SOLUTIONS

TABLE 3b BTEX IN SOIL

Caltrans - Cal East
ESI Project #94-911

		Boring Location:	B-1	B-1	MW-1	MW-1	MW-1	MW-1
		Sample Depth (in feet):	15	25	5	10	15	20
		Reporting Limit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Benzene	EPA 8020	5.0	NT*	ND	NT*	NT*	NT*	NT*
Toluene	EPA 8020	5.0	NT*	ND	NT*	NT*	NT*	NT*
Ethylbenzene	EPA 8020	5.0	NT*	ND	NT*	NT*	NT*	NT*
Total Xylenes	EPA 8020	5.0	NT*	ND	NT*	NT*	NT*	NT*

		Boring Location:	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3
		Sample Depth (in feet):	5	10	15	5	10	16.5
		Reporting Limit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Benzene	EPA 8020	5.0	NT*	NT*	ND	NT*	NT*	NT*
Toluene	EPA 8020	5.0	NT*	NT*	ND	NT*	NT*	NT*
Ethylbenzene	EPA 8020	5.0	NT*	NT*	ND	NT*	NT*	NT*
Total Xylenes	EPA 8020	5.0	NT*	NT*	ND	NT*	NT*	NT*

ND = Not detected at or above reporting limit
NT* = Not tested by this method, see Table 3d (EPA Method 8240)

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TABLE 3c: LEAD IN SOIL

Caltrans - Cal East
ESI Project #94-911

			Boring Location:	B-1	B-1	MW-1	MW-1	MW-1	MW-1
			Sample Depth (in feet):	15	25	5	10	15	20
			Reporting Limit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LEAD	EPA 3050	2.5		**4.3**	**6.3**	NT*	NT*	NT*	NT*

			Boring Location:	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3
			Sample Depth (in feet):	5	10	15	5	10	16.5
			Reporting Limit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LEAD	EPA 3050	2.5		**5.8**	NT*	**13**	NT*	NT*	NT*

ND = Not detected at or above reporting limit
NT* = Not tested, see Table 3e (Heavy Metals)

TABLE 3d: VOLATILE ORGANIC COMPOUNDS

Caltrans - Cal East
ESI Project #94-911

Boring Location:		B-1	B-1	MW-1	MW-1	MW-1	MW-1
Soil Sample Depth (in feet):		15	25	5	10	15	20
	Reporting Limit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	25	ND	NT	ND	ND	ND	ND
Benzene	5	**130**	NT*	ND	ND	ND	ND
Bromodichloromethane	5	ND	NT	ND	ND	ND	ND
Bromoform	5	ND	NT	ND	ND	ND	ND
Bromomethane	5	ND	NT	ND	ND	ND	ND
2-Butanone	5	ND	NT	ND	ND	ND	ND
Carbon Tetrachloride	5	ND	NT	ND	ND	ND	ND
Chlorobenzene	5	ND	NT	ND	ND	ND	ND
Chloroethane	5	ND	NT	ND	ND	ND	ND
2-Chloroethylvinyl Ether	5	ND	NT	ND	ND	ND	ND
Chloroform	5	ND	NT	ND	ND	ND	ND
Chloromethane	5	ND	NT	ND	ND	ND	ND
Dibromochloromethane	5	ND	NT	ND	ND	ND	ND
1, 1-Dichloroethane	5	ND	NT	ND	ND	ND	ND
1, 2-Dichloroethene	5	ND	NT	ND	ND	ND	ND
1, 1-Dichloroethene	5	ND	NT	ND	ND	ND	ND
1, 2-Dichloroethene (CIS)	5	ND	NT	ND	ND	ND	ND
1, 2-Dichloroethene (TRANS)	5	ND	NT	ND	ND	ND	ND
1, 2-Dichloropropane	5	ND	NT	ND	ND	ND	ND
1, 3-Dichloropropene (CIS)	5	ND	NT	ND	ND	ND	ND
1, 3-Dichloropropene (TRANS)	5	ND	NT	ND	ND	ND	ND
Ethylbenzene	5	ND	NT*	ND	ND	ND	ND
2-Hexanone	5	ND	NT	ND	ND	ND	ND
Methylene Chloride	25	ND	NT	ND	ND	ND	ND
4-Methyl-2-Pentanone	5	ND	NT	ND	ND	ND	ND
Styrene	5	ND	NT	ND	ND	ND	ND
1, 1, 2, 2-Tetrachloroethane	5	ND	NT	ND	ND	ND	ND
Tetrachloroethene	5	ND	NT	ND	ND	ND	ND
Toluene	5	ND	NT*	ND	ND	ND	ND
1, 1, 1-Trichloroethane	5	ND	NT	ND	ND	ND	ND
1, 1, 2-Trichloroethane	5	ND	NT	ND	ND	ND	ND
Trichloroethene	5	ND	NT	ND	ND	ND	ND
Trichlorofluoromethane	5	ND	NT	ND	ND	ND	ND
Vinyl Acetate	5	ND	NT	ND	ND	ND	ND
Vinyl Chloride	5	ND	NT	ND	ND	ND	ND
Xylenes (TOTAL)	5	ND	NT*	ND	ND	ND	ND

ND = Not detected at or above reporting limit
NT = Not tested
NT* = Not Tested by this method, see Table 3b

TABLE 3d: VOLATILE ORGANIC COMPOUNDS

Caltrans - Cal East
ESI Project #94-911

Boring Location:		MW-2	MW-2	MW-2	MW-3	MW-3	MW-3
Soil Sample Depth (in feet):		5	10	15	5	10	16.5
	Reporting Limit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Acetone	25	ND	ND	NT	**60**	ND	ND
Benzene	5	ND	ND	NT*	**25**	ND	ND
Bromodichloromethane	5	ND	ND	NT	ND	ND	ND
Bromoform	5	ND	ND	NT	ND	ND	ND
Bromomethane	5	ND	ND	NT	ND	ND	ND
2-Butanone	5	ND	ND	NT	ND	ND	ND
Carbon Tetrachloride	5	ND	ND	NT	ND	ND	ND
Chlorobenzene	5	ND	ND	NT	ND	ND	ND
Chloroethane	5	ND	ND	NT	ND	ND	ND
2-Chloroethylvinyl Ether	5	ND	ND	NT	ND	ND	ND
Chloroform	5	ND	ND	NT	ND	ND	ND
Chloromethane	5	ND	ND	NT	ND	ND	ND
Dibromochloromethane	5	ND	ND	NT	ND	ND	ND
1, 1-Dichloroethane	5	ND	ND	NT	ND	ND	ND
1, 2-Dichloroethene	5	ND	ND	NT	ND	ND	ND
1, 1-Dichloroethene	5	ND	ND	NT	ND	ND	ND
1, 2-Dichloroethene (CIS)	5	ND	ND	NT	ND	ND	ND
1, 2-Dichloroethene (TRANS)	5	ND	ND	NT	ND	ND	ND
1, 2-Dichloropropane	5	ND	ND	NT	ND	ND	ND
1, 3-Dichloropropene (CIS)	5	ND	ND	NT	ND	ND	ND
1, 3-Dichloropropene (TRANS)	5	ND	ND	NT	ND	ND	ND
Ethylbenzene	5	ND	ND	NT*	**39**	ND	ND
2-Hexanone	5	ND	ND	NT	ND	ND	ND
Methylene Chloride	25	ND	ND	NT	ND	ND	ND
4-Methyl-2-Pentanone	5	ND	ND	NT	ND	ND	ND
Styrene	5	ND	ND	NT	ND	ND	ND
1, 1, 2, 2-Tetrachloroethane	5	ND	ND	NT	ND	ND	ND
Tetrachloroethene	5	ND	ND	NT	ND	ND	ND
Toluene	5	ND	ND	NT*	ND	ND	ND
1, 1, 1-Trichloroethane	5	ND	ND	NT	ND	ND	ND
1, 1, 2-Trichloroethane	5	ND	ND	NT	ND	ND	ND
Trichloroethene	5	ND	ND	NT	ND	ND	ND
Trichlorofluoromethane	5	ND	ND	NT	ND	ND	ND
Vinyl Acetate	5	ND	ND	NT	ND	ND	ND
Vinyl Chloride	5	ND	ND	NT	ND	ND	ND
Xylenes (TOTAL)	5	ND	ND	NT*	**7.7**	ND	ND

ND = Not detected at or above reporting limit
NT = Not tested
NT* = Not Tested by this method, see Table 3b

TABLE 3d: VOLATILE ORGANIC COMPOUNDS

Caltrans - Cal East
ESI Project #94-911

Boring Location:		MW-1	MW-2	MW-3
	Sample	Water	Water	Water
	Reporting Limit	ug/L	ug/L	ug/L
Acetone	5.0	ND	ND	ND
Benzene	2.0	ND	ND	ND
Bromodichloromethane	2.0	ND	ND	ND
Bromoform	2.0	ND	ND	ND
Bromomethane	2.0	ND	ND	ND
Methyl Ethyl Ketone	2.0	**3.4**	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND
Chlorobenzene	2.0	ND	ND	ND
Chloroethane	2.0	ND	ND	ND
2-Chloroethylvinyl Ether	2.0	ND	ND	ND
Chloroform	2.0	ND	ND	ND
Chloromethane	2.0	ND	ND	ND
Dibromochloromethane	2.0	ND	ND	ND
1, 1-Dichloroethane	2.0	ND	ND	ND
1, 2-Dichloroethane	2.0	**43**	ND	ND
1, 1-Dichloroethene	2.0	ND	ND	ND
1, 2-Dichloroethene (CIS)	2.0	ND	ND	ND
1, 2-Dichloroethene (TRANS)	2.0	ND	ND	ND
1, 2-Dichloropropane	2.0	ND	ND	ND
1, 3-Dichloropropene (CIS)	2.0	ND	ND	ND
1, 3-Dichloropropene (TRANS)	2.0	ND	ND	ND
Ethylbenzene	2.0	ND	ND	ND
2-Hexanone	2.0	ND	ND	ND
Methylene Chloride	5.0	ND	ND	ND
Methyl Isobutyl Ketone	2.0	ND	ND	ND
Styrene	2.0	ND	ND	ND
1, 1, 2, 2-Tetrachloroethane	2.0	ND	ND	ND
Tetrachloroethene	2.0	ND	ND	ND
Toluene	2.0	ND	ND	ND
1, 1, 1-Trichloroethane	2.0	ND	ND	ND
1, 1, 2-Trichloroethane	2.0	ND	ND	ND
Trichloroethene	2.0	ND	ND	ND
Trichlorofluoromethane	2.0	ND	ND	ND
Vinyl Acetate	2.0	ND	ND	ND
Vinyl Chloride	2.0	ND	ND	ND
Xylenes (TOTAL)	2.0	ND	ND	ND

ND = Not detected at or above reporting limit
NT = Not tested

TABLE 3e: HEAVY METALS

Caltrans - Cal East
ESI Project #94-911

		Boring Location:	B-1	B-1	MW-1	MW-1	MW-1	MW-1
		Soil Sample Depth (in feet):	15	25	5	10	15	20
		Reporting Limit	(mg/kg)	(mg/kg)	mg/kg	mg/kg	mg/kg	mg/kg
Antimony	EPA 6010	1.0	NT	NT	**3.5**	**1.4**	ND	**1.7**
Arsenic	EPA 6010	0.25	NT	NT	ND	ND	ND	ND
Barium	EPA 6010	0.25	NT	NT	**63**	**58**	**55**	**47**
Beryllium	EPA 6010	0.05	NT	NT	**0.14**	ND	ND	ND
Cadmium	EPA 6010	0.05	NT	NT	ND	ND	ND	ND
Chromium	EPA 6010	0.5	NT	NT	**74**	**54**	**58**	**54**
Cobalt	EPA 6010	0.5	NT	NT	**5.7**	**5.7**	**6.6**	**5.1**
Copper	EPA 6010	0.25	NT	NT	**7.7**	**6.9**	**5.3**	**5.7**
Lead	EPA 6010	0.5	NT*	NT*	**5.9**	**5.7**	**4.0**	**3.4**
Molybdenum	EPA 6010	0.25	NT	NT	ND	ND	ND	ND
Nickel	EPA 6010	0.5	NT	NT	**42**	**36**	**36**	**32**
Selemium	EPA 6010	0.5	NT	NT	**24**	ND	ND	ND
Silver	EPA 6010	0.25	NT	NT	ND	ND	ND	ND
Thallium	EPA 6010	2.0	NT	NT	ND	ND	ND	ND
Vanadium	EPA 6010	0.5	NT	NT	**38**	**26**	**21**	**21**
Zinc	EPA 6010	0.25	NT	NT	**31**	**26**	**26**	**26**
Mercury	EPA 6010	0.05	NT	NT	ND	ND	ND	ND

ND = Not Detected at or above reporting limit
NT* = Not Tested by this method, see Table 3c

TABLE 3e: HEAVY METALS

Caltrans - Cal East
ESI Project #94-911

		Boring Location:	MW-2	MW-2	MW-2	MW-3	MW-3	MW-3
		Soil Sample Depth (in feet):	5	10	15	5	10	16.5
		Reporting Limit	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Antimony	EPA 6010	1.0	NT	ND	NT	ND	ND	**1.9**
Arsenic	EPA 6010	0.25	NT	ND	NT	ND	ND	ND
Barium	EPA 6010	0.25	NT	**55**	NT	**44**	**62**	**50**
Beryllium	EPA 6010	0.05	NT	ND	NT	ND	ND	ND
Cadmium	EPA 6010	0.05	NT	**0.6**	NT	ND	ND	ND
Chromium	EPA 6010	0.5	NT	**30**	NT	**42**	**53**	**47**
Cobalt	EPA 6010	0.5	NT	**6.2**	NT	**6.1**	**6.4**	**4.6**
Copper	EPA 6010	0.25	NT	**7.9**	NT	**18**	**7.6**	**4.6**
Lead	EPA 6010	0.5	NT*	**1.2**	NT*	**27**	**9.1**	**4.4**
Molybdenum	EPA 6010	0.25	NT	**1.6**	NT	ND	ND	ND
Nickel	EPA 6010	0.5	NT	**37**	NT	**15**	**38**	**29**
Selemium	EPA 6010	0.5	NT	ND	NT	ND	ND	**8.1**
Silver	EPA 6010	0.25	NT	**0.95**	NT	ND	ND	ND
Thallium	EPA 6010	2.0	NT	ND	NT	ND	ND	ND
Vanadium	EPA 6010	0.5	NT	**27**	NT	**22**	**25**	**19**
Zinc	EPA 6010	0.25	NT	**21**	NT	**69**	**26**	**21**
Mercury	EPA 6010	0.05	NT	ND	NT	**0.18**	ND	ND

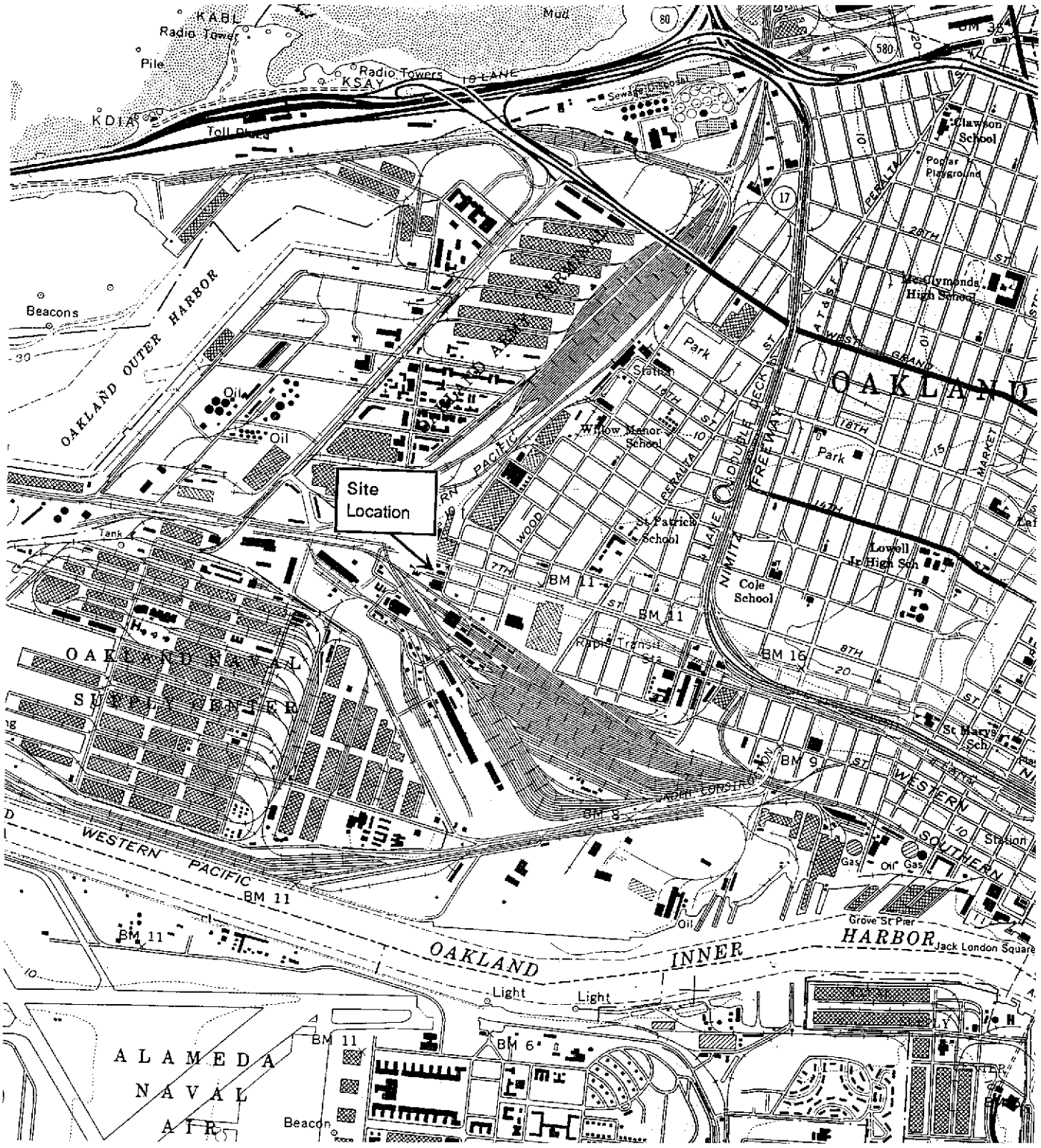
ND = Not Detected at or above reporting limit
NT* = Not Tested by this method, see Table 3c

TABLE 3e: HEAVY METALS

Caltrans - Cal East
ESI Project #94-911

		Boring Location:	MW-1	MW-2	MW-3
		Sample	Water	Water	Water
		Reporting Limit	(mg/L)	(mg/L)	(mg/L)
Antimony	EPA 6010	0.02	ND	ND	ND
Arsenic	EPA 6010	0.005	ND	ND	ND
Barium	EPA 6010	0.005	**0.069**	**0.011**	**0.21**
Beryllium	EPA 6010	0.001	ND	ND	ND
Cadmium	EPA 6010	0.001	ND	ND	ND
Chromium	EPA 6010	0.01	**0.011**	ND	ND
Cobalt	EPA 6010	0.01	ND	ND	ND
Copper	EPA 6010	0.005	ND	ND	ND
Lead	EPA 6010	0.01	ND	ND	ND
Molybdenum	EPA 6010	0.005	**0.0059**	**0.0066**	ND
Nickel	EPA 6010	0.02	ND	ND	ND
Selemium	EPA 6010	0.01	ND	ND	ND
Silver	EPA 6010	0.005	ND	ND	ND
Thallium	EPA 6010	0.01	**0.04**	**0.017**	ND
Vanadium	EPA 6010	0.01	ND	ND	ND
Zinc	EPA 6010	0.01	**0.38**	**0.012**	**0.17**
Mercury	EPA 6010	0.001	ND	ND	ND

ND = Not Detected at or above reporting limit



0 1/2

Statute Miles

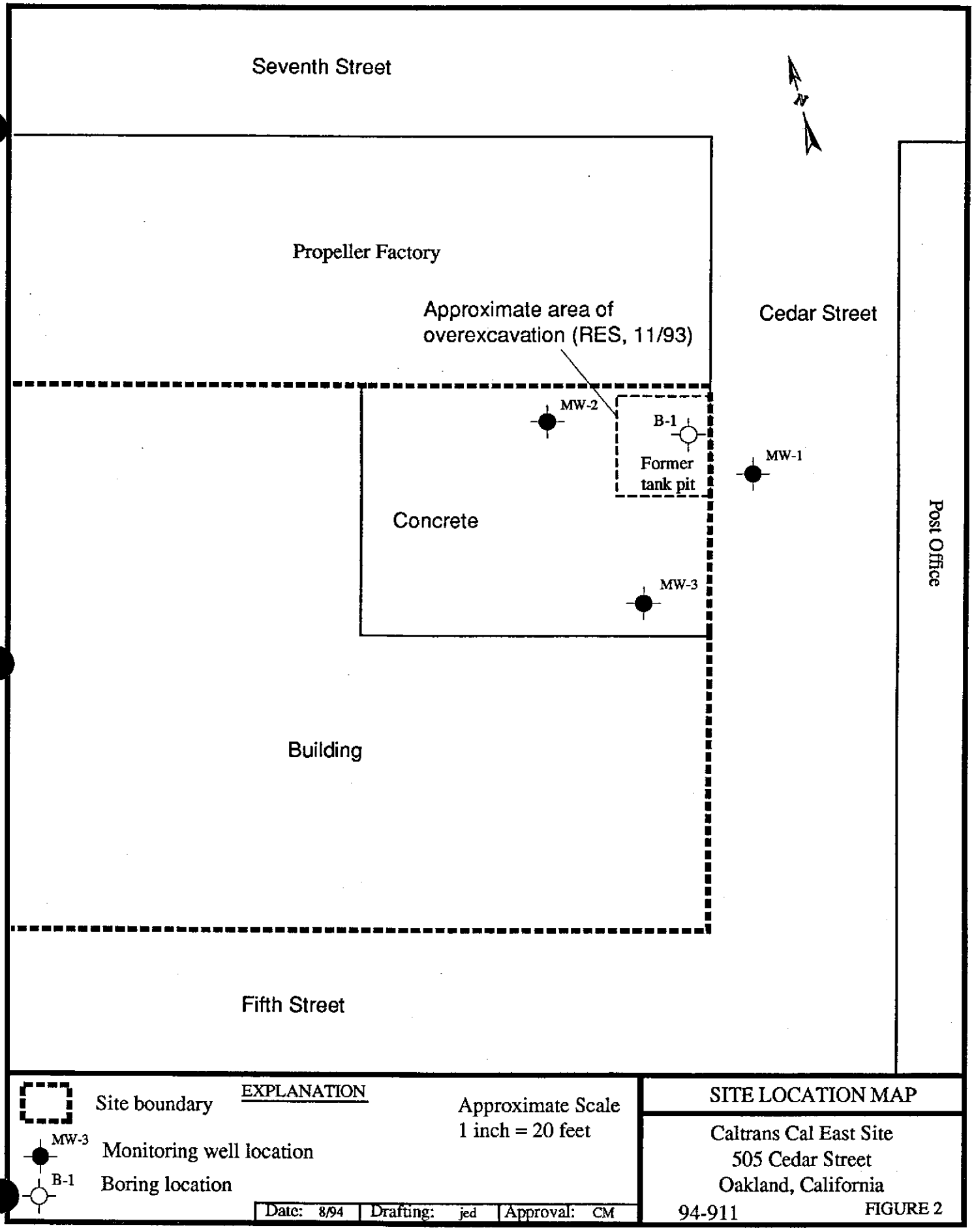
USGS 1: 24,000 SCALE
OAKLAND WEST
QUADRANGLE TOPOGRAPHIC MAP

Date: 8/94	Drafting: JED	Approval: CM

SITE VICINITY MAP

Caltrans Cal East Site
505 Cedar Street
Oakland, California

94-911 FIGURE 1



EXPLANATION

Site boundary

MW-3 Monitoring well location

B-1 Boring location

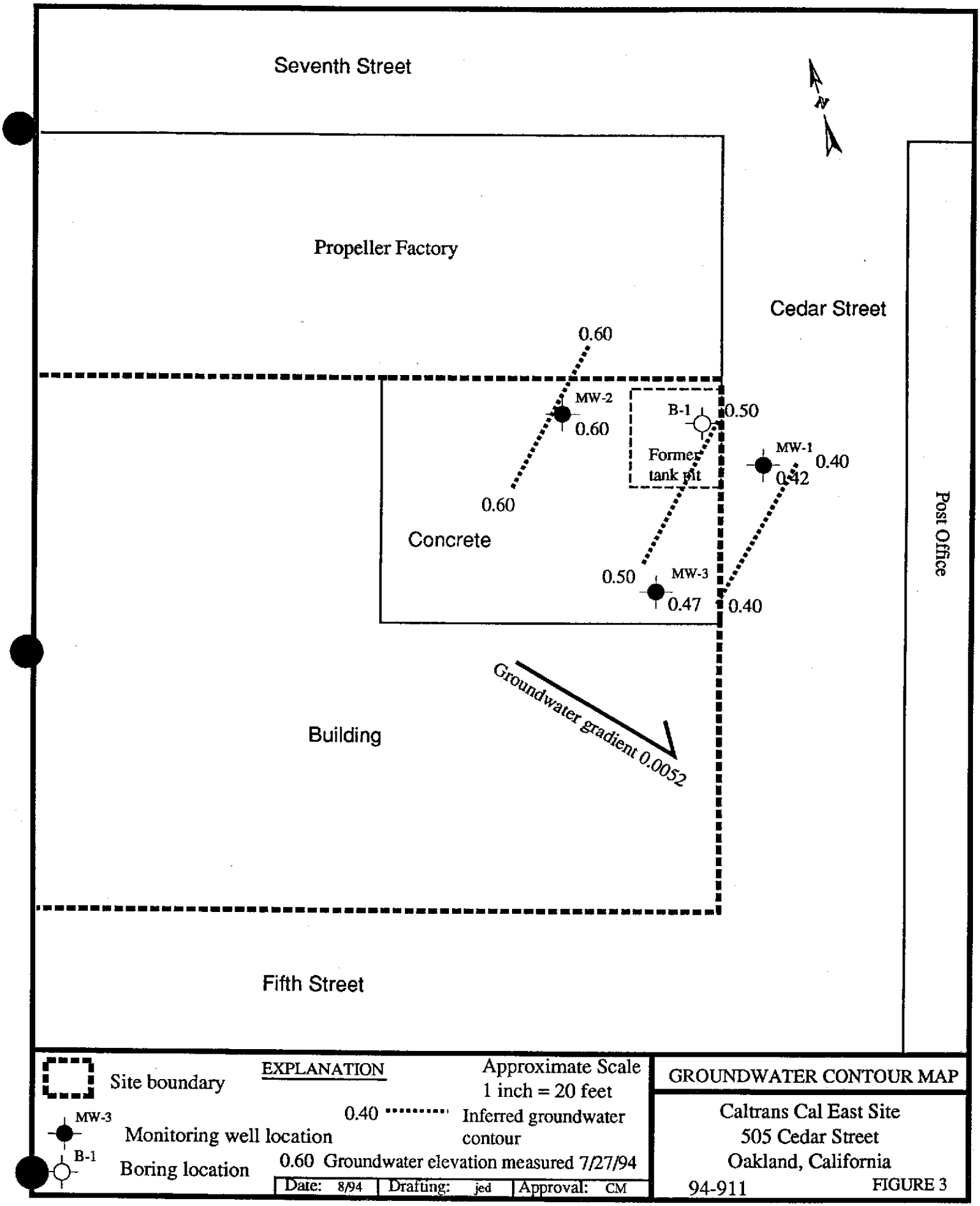
Approximate Scale
1 inch = 20 feet

Date: 8/94	Drafting: jed	Approval: CM

SITE LOCATION MAP

Caltrans Cal East Site
505 Cedar Street
Oakland, California

94-911 FIGURE 2



EXPLANATION

Site boundary

MW-3 Monitoring well location

B-1 Boring location

0.40 ····· Inferred groundwater contour

0.60 Groundwater elevation measured 7/27/94

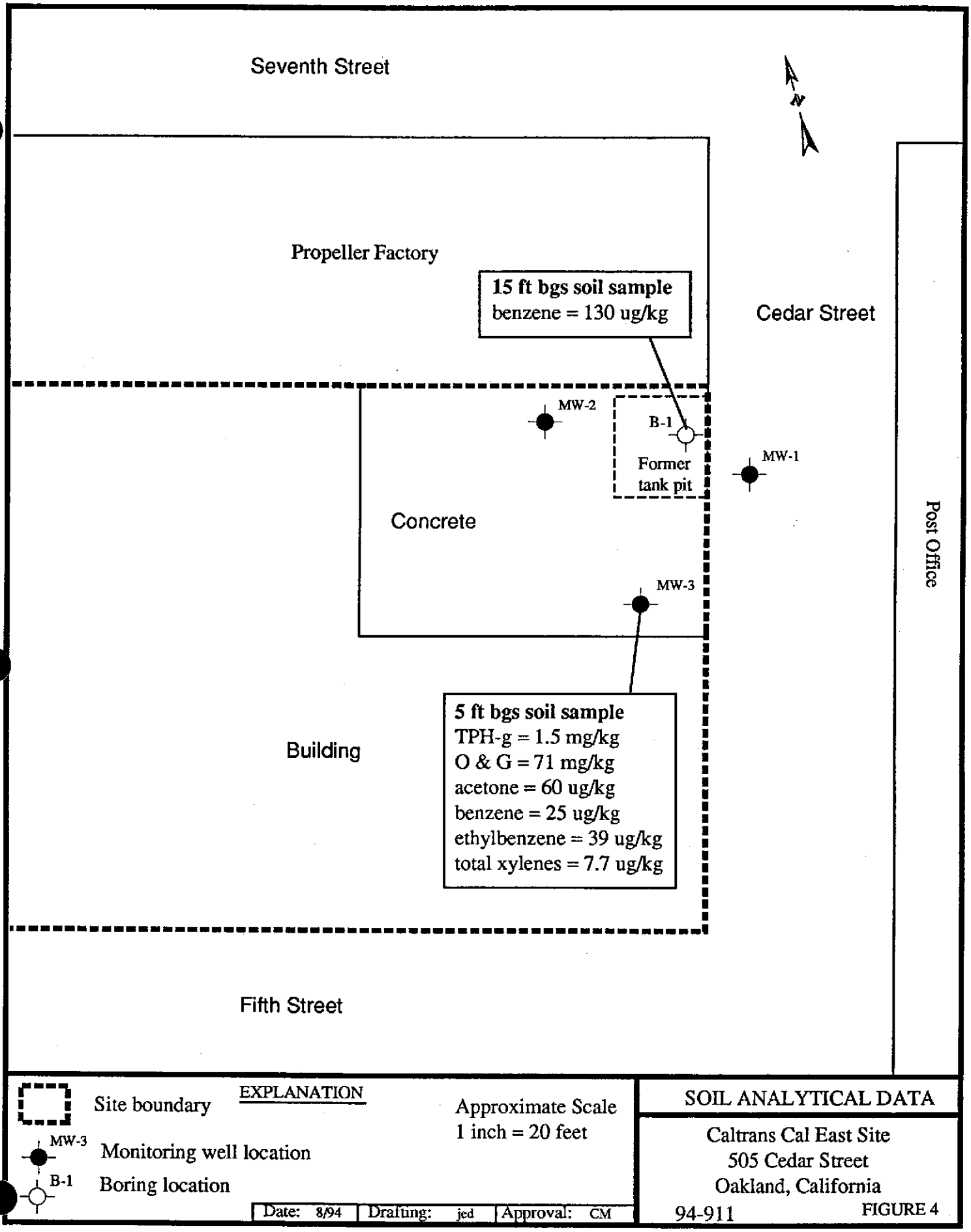
Approximate Scale
1 inch = 20 feet

Date: 8/94	Drafting: jed	Approval: CM

GROUNDWATER CONTOUR MAP

Caltrans Cal East Site
505 Cedar Street
Oakland, California

94-911 FIGURE 3

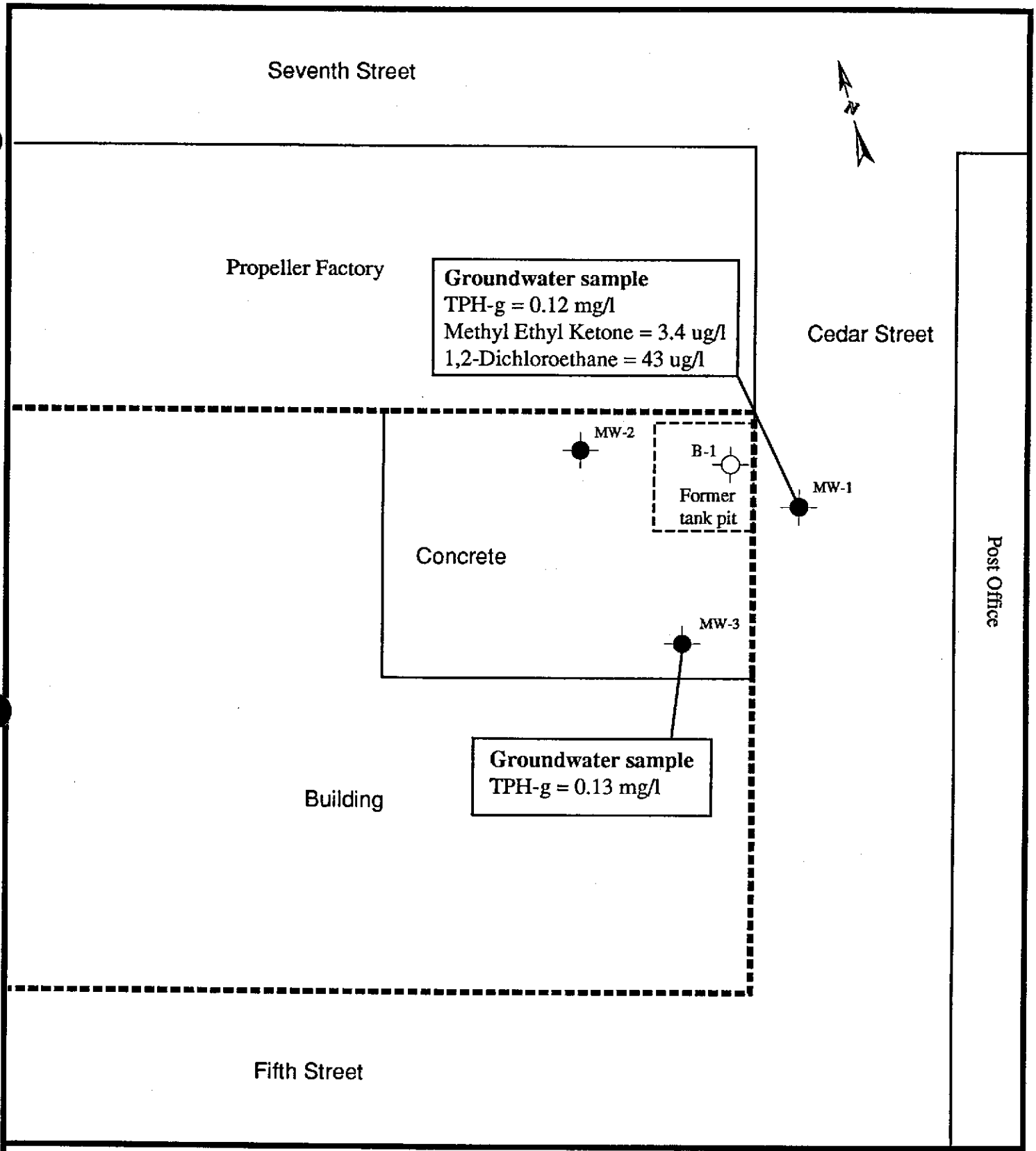


SOIL ANALYTICAL DATA

Caltrans Cal East Site
505 Cedar Street
Oakland, California

94-911

FIGURE 4



EXPLANATION

Site boundary

MW-3 Monitoring well location

B-1 Boring location

Approximate Scale
1 inch = 20 feet

Date: 8/94 | Drafting: jed | Approval: CM

GROUNDWATER ANALYTICAL DATA

Caltrans Cal East Site
505 Cedar Street
Oakland, California

94-911 FIGURE 5

APPENDIX A

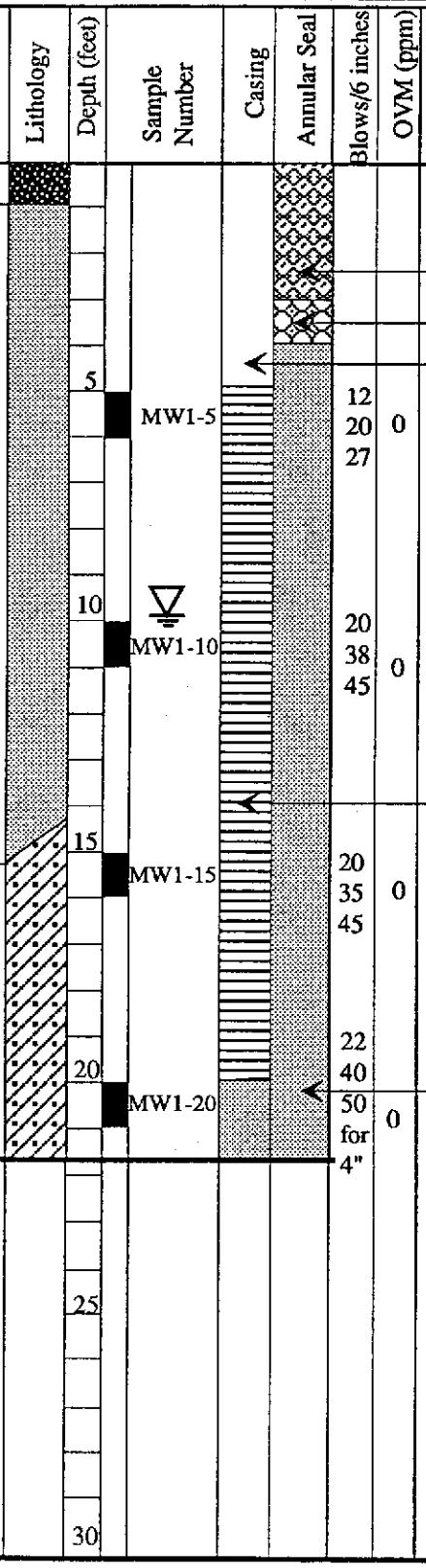
BORING LOGS

Project Name:	CALTRANS-Cal East	**Date:**	4/4/94	**Boring Number:**	B-1
Project No:	94-911	Borehole Depth:	30 Feet	Surface Completion:	Grout
Drilling Co:	West Hazmat Drilling	Well Depth:	N/A	Surface Elevation:	N/A
Drilling Equip:	Mobile B-61	Water Elev.:	N/A	Logged By:	JED
Sampler Type:	Cal modified split spoon	Casing Elevation:	N/A	Checked By:	CMM

Description	Depth (feet)	Sample Number	Blows/6 inches	OVM (ppm)	Remarks
Dark yellowish brown (10YR 4/2), SAND (SP) (0% clay 0% silt, 100% sand, 0% gravel) fine to medium grained, poorly graded, loose, moist (fill).	5	B-1-5	3 2 2	0	Constituent percentages are visual field estimates only.
Grades wet.	10	B-1-10	5 12 26	0	FIRST WATER
	15	B-1-15	11 27 36	8	
	20	B-1-20	17 36 50	1	
Moderate yellowish brown 10YR 5/4 clayey SAND (SC) (25,0,75,0) medium dense, saturated.	25	B-1-25	N/A	0	
	30	B-1-30	9 21 50 for 3"	0	Bottom at 30 feet

ENVIRONMENTAL SOLUTIONS, INC. | Figure No. A-1

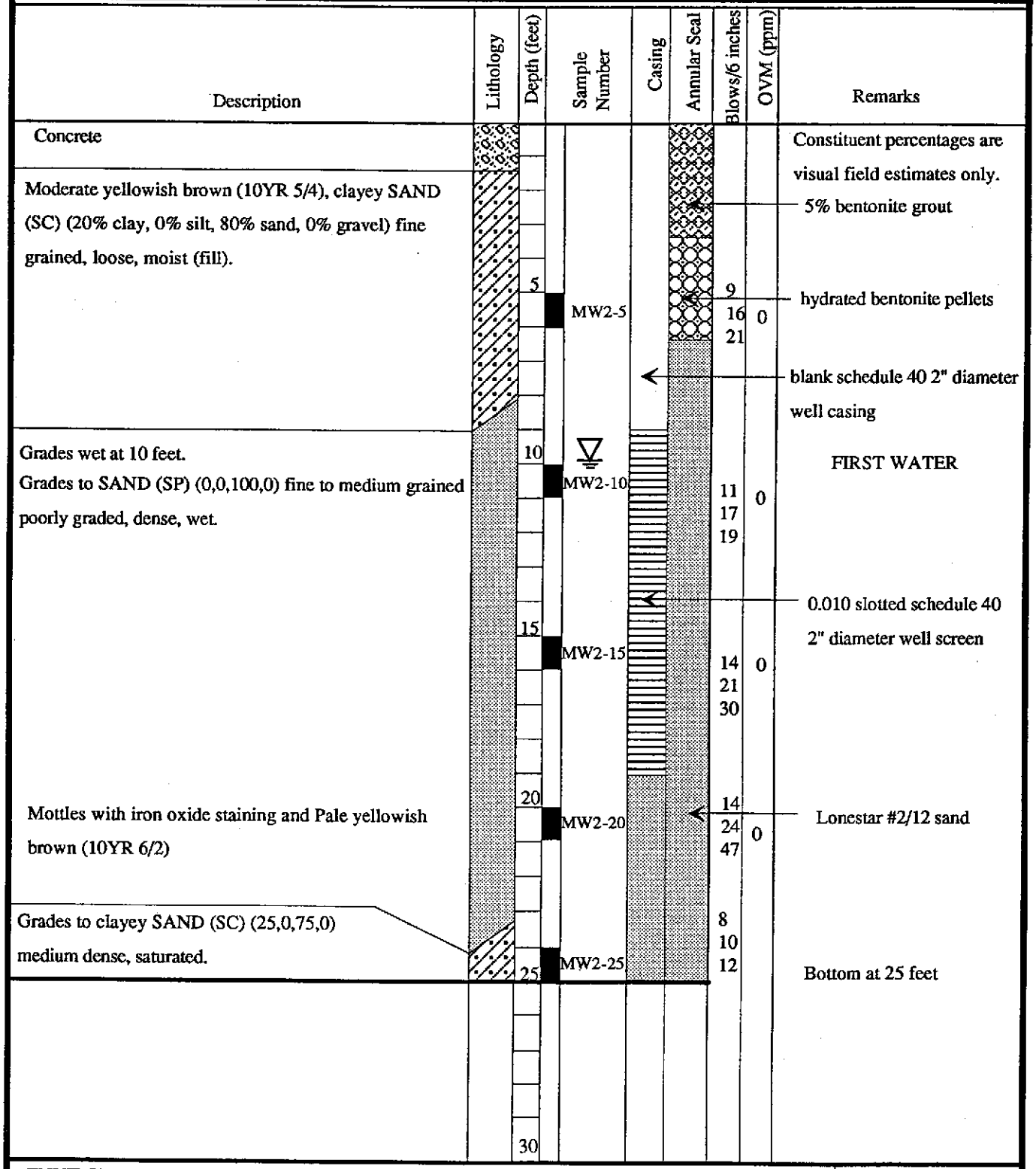
Project Name:	CALTRANS-Cal East	**Date:**	7/21/94	**Boring Number:**	MW-1
Project No:	94-911	Borehole Depth:	21.5 Feet	Surface Completion:	Chrisy box
Drilling Co:	West Hazmat Drilling	Well Depth:	20'	Surface Elevation:	9.42'
Drilling Equip:	Mobile B-61	Water Elev.:	0.42'	Logged By:	JED
Sampler Type:	Cal modified split spoon	Casing Elevation:	9.25'	Checked By:	CMM



Description	Remarks
Asphalt and baserock	Constituent percentages are visual field estimates only.
Moderate yellowish brown (10YR 5/4), SAND (SP) (0% clay, 0% silt, 100% sand, 0% gravel) fine to medium grained, poorly graded, medium dense, dry (fill).	5% bentonite grout hydrated bentonite pellets blank schedule 40, 4" diameter well casing.
Grades wet at 10.5 feet.	FIRST WATER
	0.010 slotted schedule 40 4" diameter well screen
Grades to clayey SAND (SC) (25,0,75,0) fine grained sand, dense, wet.	
Mottles with medium dark gray (N4).	Lonestar #2/12 sand Bottom at 21.5 feet

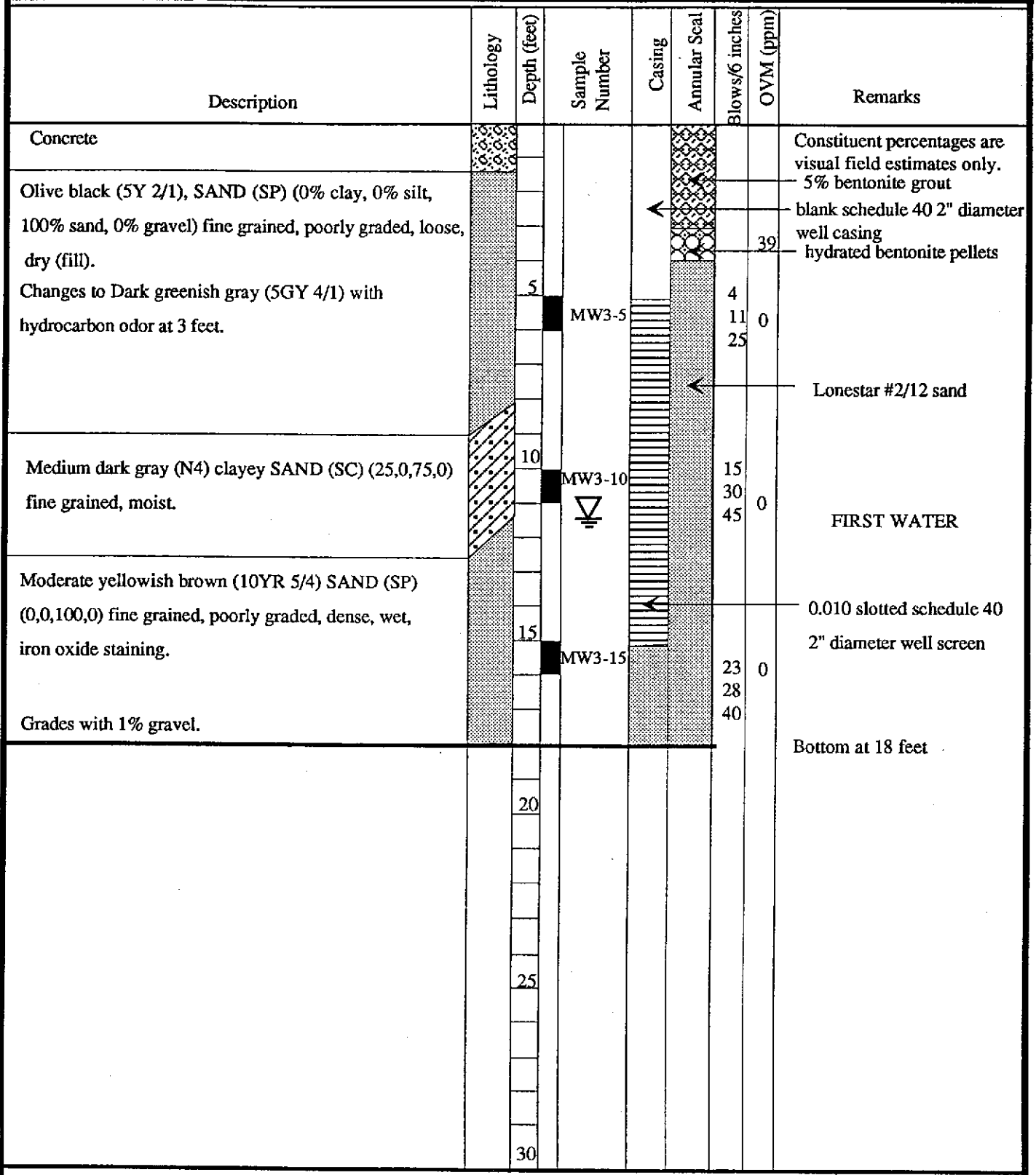
ENVIRONMENTAL SOLUTIONS, INC. | Figure No. A-2

Project Name:	CALTRANS-Cal East	**Date:**	4/4/94	**Boring Number:**	MW-2
Project No:	94-911	Borehole Depth:	25 Feet	Surface Completion:	Christy box
Drilling Co:	West Hazmat Drilling	Well Depth:	19'	Surface Elevation:	10.18'
Drilling Equip:	Mobile B-61	Water Elev.:	0.60'	Logged By:	JED
Sampler Type:	Cal modified split spoon	Casing Elevation:	9.84'	Checked By:	CMM



ENVIRONMENTAL SOLUTIONS, INC. | Figure No. A-3

Project Name:	CALTRANS-Cal East	Date: 7/21/94	Boring Number: MW-3
Project No:	94-911	Borehole Depth: 18 Feet	Surface Completion: Christy box
Drilling Co:	West Hazmat Drilling	Well Depth: 15'	Surface Elevation: 9.81'
Drilling Equip:	CME 55	Water Elev.: 0.47'	Logged By: JED
Sampler Type:	Cal modified split spoon	Casing Elevation: 9.41'	Checked By: CMM



ENVIRONMENTAL SOLUTIONS, INC. | Figure No. A-4

APPENDIX B

CHAIN OF CUSTODY DOCUMENTATION
ANALYTICAL DATA SHEETS

CHROMALAB, INC.

Environmental Services (SDB)

April 6, 1994

ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.

Atten: Jed Douglas

Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994

re: 3 samples for Gasoline analysis.

Matrix: SOIL
Sampled on: April 4, 1994 *Analyzed on:* April 5, 1994
Method: EPA 5030/8015 *Run#:* 2597

LAB #	CLIENT SAMPLE ID	GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
48080	B-1-15	N.D.	1.0	N.D.	98
48082	B-2-5	N.D.	1.0	N.D.	98
48083	B-2-10	N.D.	1.0	N.D.	98

ChromaLab, Inc.

Jack Kelly
Chemist

Eric Tam
Laboratory Director

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

LIMS

2

CHROMALAB, INC.

Environmental Services (SDB)

April 7, 1994 ChromaLab File No.: 9404027

TRC ENV. CONSULTANTS, INC.

Attn: Jed Douglas

RE: Five soil samples for Oil & Grease analysis

Project Name: CALTRANS-CAL EAST
Project Number: 15217-012
Date Sampled: April 4, 1994 Date Submitted: April 4, 1994
Date Analyzed: April 5, 1994

RESULTS:

Sample I.D.	Oil & Grease (mg/Kg)
B-1-15	N.D.
B-1-25	N.D.
B-2-5	N.D.
B-2-10	N.D.
B-2-15	N.D.
BLANK	N.D.
DETECTION LIMIT	50
METHOD OF ANALYSIS	STD METHOD 5520 E & F

ChromaLab, Inc.

Carolyn M. House
Analyst

Eric Tam
Laboratory Director

cc

2239 Omega Road, #1 • San Ramon, California 94583
510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 7, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.

Atten: Jed Douglas

Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994

re: 2 samples for Gasoline and BTEX analysis.

Matrix: SOIL
Sampled on: April 4, 1994 *Analyzed on:* April 6, 1994
Method: EPA 5030/8015/8020 *Run#:* 2606

Lab # SAMPLE ID	Gasoline (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
48081 B-1-25	N.D.	N.D.	N.D.	N.D.	N.D.
48084 B-2-15	N.D.	N.D.	N.D.	N.D.	N.D.
DETECTION LIMITS	1.0	5.0	5.0	5.0	5.0
BLANK	N.D.	N.D.	N.D.	N.D.	N.D.
BLANK SPIKE RECOVERY(%)	113	92	107	108	109

ChromaLab, Inc.

Billy Thach
Chemist

Eric Tam
Laboratory Director

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 11, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.
Atten: Jed Douglas
Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample: **B-1-15** *Matrix:* SOIL
Lab #: 48080-2632 *Sampled:* April 4, 1994 *Analyzed:* April 8, 1994
Method: EPA 8240

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	130	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
BROMOMETHANE	N.D.	5	N.D.	--
2-BUTANONE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
CHLOROMETHANE	N.D.	5	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	95
1,2-DICHLOROETHENE (CIS)	N.D.	5	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5	N.D.	--
ETHYL BENZENE	N.D.	5	N.D.	--
2-HEXANONE	N.D.	5	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5	N.D.	--
STYRENE	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	82
TETRACHLOROETHENE	N.D.	5	N.D.	93
TOLUENE	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	85
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
VINYL ACETATE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
XYLENES (TOTAL)	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 11, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.
Atten: Jed Douglas
Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample: **B-2-5** *Matrix:* SOIL
Lab #: 48082-2632 *Sampled:* April 4, 1994 *Analyzed:* April 8, 1994
Method: EPA 8240

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
BROMOMETHANE	N.D.	5	N.D.	--
2-BUTANONE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
CHLOROMETHANE	N.D.	5	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	95
1,2-DICHLOROETHENE (CIS)	N.D.	5	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5	N.D.	--
ETHYL BENZENE	N.D.	5	N.D.	--
2-HEXANONE	N.D.	5	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5	N.D.	--
STYRENE	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	82
TETRACHLOROETHENE	N.D.	5	N.D.	93
TOLUENE	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	85
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
VINYL ACETATE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
XYLENES (TOTAL)	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

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Federal ID #68-0140157

12

CHROMALAB, INC.

Environmental Services (SDB)

April 11, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.
Atten: Jed Douglas
Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample: **B-2-10** *Matrix:* SOIL
Lab #: 48083-2632 *Sampled:* April 4, 1994 *Analyzed:* April 8, 1994
Method: EPA 8240

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5	N.D.	--
BROMODICHLOROMETHANE	N.D.	5	N.D.	--
BROMOFORM	N.D.	5	N.D.	--
BROMOMETHANE	N.D.	5	N.D.	--
2-BUTANONE	N.D.	5	N.D.	--
CARBON TETRACHLORIDE	N.D.	5	N.D.	--
CHLOROBENZENE	N.D.	5	N.D.	--
CHLOROETHANE	N.D.	5	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5	N.D.	--
CHLOROFORM	N.D.	5	N.D.	--
CHLOROMETHANE	N.D.	5	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHANE	N.D.	5	N.D.	--
1,2-DICHLOROETHANE	N.D.	5	N.D.	--
1,1-DICHLOROETHENE	N.D.	5	N.D.	95
1,2-DICHLOROETHENE (CIS)	N.D.	5	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5	N.D.	--
ETHYL BENZENE	N.D.	5	N.D.	--
2-HEXANONE	N.D.	5	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5	N.D.	--
STYRENE	N.D.	5	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5	N.D.	82
TETRACHLOROETHENE	N.D.	5	N.D.	93
TOLUENE	N.D.	5	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	5	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5	N.D.	--
TRICHLOROETHENE	N.D.	5	N.D.	85
TRICHLOROFLUOROMETHANE	N.D.	5	N.D.	--
VINYL ACETATE	N.D.	5	N.D.	--
VINYL CHLORIDE	N.D.	5	N.D.	--
XYLENES (TOTAL)	N.D.	5	N.D.	--

ChromaLab, Inc.

Analyst

Eric Tam, Lab Director

LIMS

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 11, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.

Atten: Jed Douglas

Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994

re: One sample for CAM 17 Metals analysis.

Sample: **B-2-10** *Matrix:* SOIL
Lab #: 48083-2625 *Sampled:* April 4, 1994 *Analyzed:* April 8, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	1.0	N.D.	112
ARSENIC	N.D.	0.25	N.D.	99
BARIUM	55	0.25	N.D.	116
BERYLLIUM	N.D.	0.05	N.D.	111
CADMIUM	0.60	0.05	N.D.	119
CHROMIUM	30	0.5	N.D.	118
COBALT	6.2	0.5	N.D.	113
COPPER	7.9	0.25	N.D.	110
LEAD	1.2	0.5	N.D.	100
MOLYBDENUM	1.6	0.25	N.D.	--
NICKEL	37	0.5	N.D.	115
SELENIUM	N.D.	0.5	N.D.	115
SILVER	0.95	0.25	N.D.	104
THALLIUM	N.D.	2.0	N.D.	114
VANADIUM	27	0.5	N.D.	--
ZINC	21	0.25	N.D.	107
MERCURY	N.D.	0.05	N.D.	82

ChromaLab, Inc.

Charles Woolley
Chemist

Refaat Mankarious
Inorganics Supervisor

LIMS

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510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Laboratory (1094)

5 DAYS TURNAROUND

April 11, 1994 ChromaLab File No.: 9404027

TRC ENV. CONSULTANTS, INC.

Attn: Jed Douglas

RE: One soil sample for reactivity, corrosivity, and ignitability (RCI) analyses.

Project Name: CALTRANS-CAL EAST
Project Number: 15217-012
Date Sampled: April 4, 1994 Date Submitted: April 4, 1994
Date Analyzed: April 11, 1994

RESULTS:

Sample I.D.	Reactivity	Corrosivity	Ignitability
B-2-10	No	pH 7.7	No
BLANK	No	pH 7.0	No
METHOD OF ANALYSIS	CA Title SEC.66261.23(1-4)	CA Title SEC.66261.22	CA Title SEC.66261.21

ChromaLab, Inc.

Carolyn M. House
Analyst

Eric Tam
Laboratory Director

cc

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

April 15, 1994 ChromaLab File#: 9404027

TRC ENV. CONSULTANTS, INC.

Atten: Jed Douglas

Project: CALTRANS-CAL EAST **Project#:** 15217-012
Received: April 4, 1994

re: 4 samples for Lead analysis.

Matrix: SOIL *Extracted:* April 8, 1994
Sampled on: April 4, 1994 *Analyzed on:* April 9, 1994
Method: EPA 3050/6010 *Run#:* 2625

LAB #	CLIENT SAMPLE ID	LEAD (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
48080	B-1-15	4.3	2.50	N.D.	100
48081	B-1-25	6.3	2.50	N.D.	100
48082	B-2-5	5.8	0.50	N.D.	100
48084	B-2-15	13	0.50	N.D.	100

ChromaLab, Inc.

Charles Woolley
Chemist

Refaat Mankarious
Inorganics Supervisor

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510/831-1788 • Facsimile 510/831-8798
Federal ID #68-0140157

TRC Environmental Consultants, Inc.

CHAIN OF [redacted] #: 9404027
CLIENT: TRC
DUE: 04/11/94
REF: 15823

027/48084 48084
order 15823

PROJECT NO.	PROJECT NAME
15217-012	CalTrans - Cal East

SAMPLERS: (Signature) (Printed) Jed Douglas

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH Gas	8240	5520	8020	Cam 17 (6010)	Lead	RCI	REMARKS
B-1-15	4/4	0900		X	B-1	1	X	X	X		X			Standard TAT
B-1-25	"	0910		X	"	1	X		X	X	X			
B-2-5	"	1015		X	MW-2	1	X	X	X		X			
B-2-10	"	1020		X	"	1	X	X	X	X		X		
B-2-15	"	1025		X	"	1	X		X	X	X			

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed)	4/4/94 1535	(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
(Printed)		(Printed)		matrix: soil

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

CHROMALAB, INC.

Environmental Services (SDB)

RECEIVED

AUG - 6 1994

July 27, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: 7 samples for Gasoline analysis.

Matrix: SOIL
Sampled: July 21, 1994 *Lab Run#:* 3504 *Analyzed:* July 25, 1994
Method: EPA 5030/8015M

Spl #	CLIENT SMPL ID	GASOLINE (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
58511	MW3-5	1.5	1.0	N.D.	112
58512	MW3-10	N.D.	1.0	N.D.	112
58513	MW1-5	N.D.	1.0	N.D.	112
58514	MW3-16.5	N.D.	1.0	N.D.	112
58515	MW1-10	N.D.	1.0	N.D.	112
58516	MW1-15	N.D.	1.0	N.D.	112
58517	MW1-20	N.D.	1.0	N.D.	112

ChromaLab, Inc.

Jack Kelly
Chemist

Ali Kharrazi
Organic Manager

QCAPP JACK 13:59:33

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 29, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: 7 samples for Oil & Grease analysis

Matrix: SOIL
Sampled: July 21, 1994 *Analyzed:* July 28, 1994
Method: STD Method 5520 E & F

Sample #	Client Sample I.D.	Oil & Grease (mg/Kg)
58511	MW3-5	71
58512	MW3-10	N.D.
58513	MW3-16.5	N.D.
58514	MW1-5	N.D.
58515	MW1-10	N.D.
58516	MW1-15	N.D.
58517	MW1-20	N.D.
Blank		N.D.
Spike Recovery		86%
Dup Spike Recovery		83%
Reporting Limit		50

ChromaLab, Inc.

Carolyn M. House
Analyst

Ali Kharrazi
Organic Manager

gg

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW3-10** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58512 *Run:* 3572 *Analyzed:* July 28, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	115
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	158
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	114
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

QCAPP AARON 17:31:24

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW1-5** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58513 *Run:* 3572 *Analyzed:* July 28, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	115
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	158
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	114
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW3-16.5** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58514 *Run:* 3572 *Analyzed:* July 28, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	115
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	158
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	114
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

QCAPP AARON 17:31:24

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Federal ID #68-0140157

12

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW1-10** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58515 *Run:* 3572 *Analyzed:* July 28, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	115
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	158
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	114
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW1-15** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:* 58516 *Run:* 3591 *Analyzed:* July 29, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	116
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	146
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	113
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

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4

CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW1-20** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58517 *Run:* 3591 *Analyzed:* July 29, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	25	N.D.	--
BENZENE	N.D.	5.0	N.D.	116
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	146
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	N.D.	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	113
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	110
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	N.D.	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

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CHROMALAB, INC.

Environmental Services (SDB)

July 31, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA
Atten: JED DOUGLAS
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **MW3-5** *Matrix:* SOIL
Sampled: July 21, 1994 *Spl #:*58511 *Run:* 3596 *Analyzed:* July 31, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/Kg)	REPORTING LIMIT (ug/Kg)	BLANK RESULT (ug/Kg)	BLANK SPIKE RESULT (%)
ACETONE	60	25	N.D.	--
BENZENE	25	5.0	N.D.	114
BROMODICHLOROMETHANE	N.D.	5.0	N.D.	--
BROMOFORM	N.D.	5.0	N.D.	--
BROMOMETHANE	N.D.	5.0	N.D.	--
2-BUTANONE	N.D.	5.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	5.0	N.D.	--
CHLOROBENZENE	N.D.	5.0	N.D.	121
CHLOROETHANE	N.D.	5.0	N.D.	--
2-CHLOROETHYLVINYLETHER	N.D.	5.0	N.D.	--
CHLOROFORM	N.D.	5.0	N.D.	--
CHLOROMETHANE	N.D.	5.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	5.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	5.0	N.D.	145
1,2-DICHLOROETHENE (CIS)	N.D.	5.0	N.D.	--
1,2-DICHLOROETHENE (TRANS)	N.D.	5.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (CIS)	N.D.	5.0	N.D.	--
1,3-DICHLOROPROPENE (TRANS)	N.D.	5.0	N.D.	--
ETHYL BENZENE	39	5.0	N.D.	--
2-HEXANONE	N.D.	5.0	N.D.	--
METHYLENE CHLORIDE	N.D.	25	N.D.	--
4-METHYL-2-PENTANONE	N.D.	5.0	N.D.	--
STYRENE	N.D.	5.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	5.0	N.D.	--
TETRACHLOROETHENE	N.D.	5.0	N.D.	--
TOLUENE	N.D.	5.0	N.D.	112
1,1,1-TRICHLOROETHANE	N.D.	5.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	5.0	N.D.	--
TRICHLOROETHENE	N.D.	5.0	N.D.	113
TRICHLOROFLUOROMETHANE	N.D.	5.0	N.D.	--
VINYL ACETATE	N.D.	5.0	N.D.	--
VINYL CHLORIDE	N.D.	5.0	N.D.	--
XYLENES (TOTAL)	7.7	5.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

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Organic Manager

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CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW1-20** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:*58517 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	1.7	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	47	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	54	0.5	N.D.	109
COBALT	5.1	0.5	N.D.	96
COPPER	5.7	0.25	N.D.	94
LEAD	3.4	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	32	0.5	N.D.	102
SELENIUM	N.D.	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	21	0.5	N.D.	99
ZINC	26	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

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CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW1-15** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:* 58516 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	55	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	58	0.5	N.D.	109
COBALT	6.6	0.5	N.D.	96
COPPER	5.3	0.25	N.D.	94
LEAD	4.0	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	36	0.5	N.D.	102
SELENIUM	N.D.	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	21	0.5	N.D.	99
ZINC	26	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

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CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW1-10** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:* 58515 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	1.4	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	58	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	54	0.5	N.D.	109
COBALT	5.7	0.5	N.D.	96
COPPER	6.9	0.25	N.D.	94
LEAD	5.7	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	36	0.5	N.D.	102
SELENIUM	N.D.	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	26	0.5	N.D.	99
ZINC	26	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW3-16.5** *Matrix:* SOIL *Extracted:* July 26, 1994
Sampled: July 21, 1994 *Spl #:* 58514 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	1.9	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	50	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	47	0.5	N.D.	109
COBALT	4.6	0.5	N.D.	96
COPPER	4.6	0.25	N.D.	94
LEAD	4.4	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	29	0.5	N.D.	102
SELENIUM	8.1	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	19	0.5	N.D.	99
ZINC	21	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
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Laboratory Director

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50

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW1-5** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:* 58513 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	3.5	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	63	0.25	N.D.	103
BERYLLIUM	0.14	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	74	0.5	N.D.	109
COBALT	5.7	0.5	N.D.	96
COPPER	7.7	0.25	N.D.	94
LEAD	5.9	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	42	0.5	N.D.	102
SELENIUM	24	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	38	0.5	N.D.	99
ZINC	31	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

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Federal ID #68-0140157

51

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW3-10** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:* 58512 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	62	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	53	0.5	N.D.	109
COBALT	6.4	0.5	N.D.	96
COPPER	7.6	0.25	N.D.	94
LEAD	9.1	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	38	0.5	N.D.	102
SELENIUM	N.D.	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	25	0.5	N.D.	99
ZINC	26	0.25	N.D.	100
MERCURY	N.D.	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407249

ENV. SOLUTIONS - PETALUMA

Atten: JED DOUGLAS

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 22, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **MW3-5** *Matrix:* SOIL *Extracted:* July 27, 1994
Sampled: July 21, 1994 *Spl #:* 58511 *Run:* 3543 *Analyzed:* July 29, 1994
Method: EPA 3050/6010/7471

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	1.0	N.D.	95
ARSENIC	N.D.	0.25	N.D.	90
BARIUM	44	0.25	N.D.	103
BERYLLIUM	N.D.	0.05	N.D.	97
CADMIUM	N.D.	0.05	N.D.	103
CHROMIUM	42	0.5	N.D.	109
COBALT	6.1	0.5	N.D.	96
COPPER	18	0.25	N.D.	94
LEAD	27	0.5	N.D.	99
MOLYBDENUM	N.D.	0.25	N.D.	--
NICKEL	15	0.5	N.D.	102
SELENIUM	N.D.	0.5	N.D.	86
SILVER	N.D.	0.25	N.D.	91
THALLIUM	N.D.	2.0	N.D.	91
VANADIUM	22	0.5	N.D.	99
ZINC	69	0.25	N.D.	100
MERCURY	0.18	0.05	N.D.	98

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

QCAPP DOINA 08:31:27

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

TRC Environmental Consultants, Inc.

CHAIN OF CUSTODY RECORD 2419/5815 11-58517

No 10211

PROJECT NO.	PROJECT NAME
94-911	CalTrans - Cal East

SAMPLERS: (Signature) [signature] (Printed) Jed Douglas

PARAMETERS

17356

SUBM #: 9407249
CLIENT: ENVSOL-PET
DUE: 07/29/94
REF #:17356

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH Gas	Oil + Grease	8240	6010	
MW3-5	7/21	0840		X	MW-3	1	X	X	X	X	Conforms to record
MW3-10	11	0845		X	11	1	X	X	X	X	Rec'd in good cond.
MW3-16.5	11	0850		X	11	1	X	X	X	X	Rec'd @ 4°C
MW-1-5	11	0940		X	MW-1	1	X	X	X	X	
MW-1-10	11	0945		X	11	1	X	X	X	X	
MW-1-15	11	0955		X	11	1	X	X	X	X	
MW-1-20	11	1000		X	11	1	X	X	X	X	

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed)	7/22/94 1010	Jim Evans (Printed) Jim Evans	Jim Evans (Printed) Jim Evans	7-22-94 11:41	(Printed)
Relinquished by: (Signature)	**Date / Time**	**Received for Laboratory by: (Signature)**	**Date / Time**	**Remarks**	
(Printed)	7/22/94 10:10	Chris Lowley (Printed) Chris Rodley	7/22/94 11:40	Standard TAT	

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994

RECEIVED
AUG 17 1994

Submission #: 9407322

ENV. SOLUTIONS - PETALUMA
Atten: Jed Douglas
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **W-1** *Matrix:* WATER
Sampled: July 27, 1994 *Spl #:*59105 *Run:* 3615 *Analyzed:* July 31, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	5.0	N.D.	--
BENZENE	N.D.	2.0	N.D.	114
BROMODICHLOROMETHANE	N.D.	2.0	N.D.	--
BROMOFORM	N.D.	2.0	N.D.	--
BROMOMETHANE	N.D.	2.0	N.D.	--
METHYL ETHYL KETONE	3.4	2.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	2.0	N.D.	--
CHLOROBENZENE	N.D.	2.0	N.D.	121
CHLOROETHANE	N.D.	2.0	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	2.0	N.D.	--
CHLOROFORM	N.D.	2.0	N.D.	--
CHLOROMETHANE	N.D.	2.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	2.0	N.D.	--
1,2-DICHLOROETHANE	43	2.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	2.0	N.D.	145
CIS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	2.0	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
ETHYLBENZENE	N.D.	2.0	N.D.	--
2-HEXANONE	N.D.	2.0	N.D.	--
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--
METHYL ISOBUTYL KETONE	N.D.	2.0	N.D.	--
STYRENE	N.D.	2.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	2.0	N.D.	--
TETRACHLOROETHENE	N.D.	2.0	N.D.	--
TOLUENE	N.D.	2.0	N.D.	112
1,1,1-TRICHLOROETHANE	N.D.	2.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	2.0	N.D.	--
TRICHLOROETHENE	N.D.	2.0	N.D.	113
TRICHLOROFLUOROMETHANE	N.D.	2.0	N.D.	--
VINYL ACETATE	N.D.	2.0	N.D.	--
VINYL CHLORIDE	N.D.	2.0	N.D.	--
XYLENES	N.D.	2.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

QCAPP AARON 13:23:49

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA
Atten: Jed Douglas
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **W-2** *Matrix:* WATER
Sampled: July 27, 1994 *Spl #:*59106 *Run:* 3615 *Analyzed:* July 31, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	5.0	N.D.	--
BENZENE	N.D.	2.0	N.D.	114
BROMODICHLOROMETHANE	N.D.	2.0	N.D.	--
BROMOFORM	N.D.	2.0	N.D.	--
BROMOMETHANE	N.D.	2.0	N.D.	--
METHYL ETHYL KETONE	N.D.	2.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	2.0	N.D.	--
CHLOROBENZENE	N.D.	2.0	N.D.	121
CHLOROETHANE	N.D.	2.0	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	2.0	N.D.	--
CHLOROFORM	N.D.	2.0	N.D.	--
CHLOROMETHANE	N.D.	2.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	2.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	2.0	N.D.	145
CIS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	2.0	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
ETHYLBENZENE	N.D.	2.0	N.D.	--
2-HEXANONE	N.D.	2.0	N.D.	--
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--
METHYL ISOBUTYL KETONE	N.D.	2.0	N.D.	--
STYRENE	N.D.	2.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	2.0	N.D.	--
TETRACHLOROETHENE	N.D.	2.0	N.D.	--
TOLUENE	N.D.	2.0	N.D.	112
1,1,1-TRICHLOROETHANE	N.D.	2.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	2.0	N.D.	--
TRICHLOROETHENE	N.D.	2.0	N.D.	113
TRICHLOROFLUOROMETHANE	N.D.	2.0	N.D.	--
VINYL ACETATE	N.D.	2.0	N.D.	--
VINYL CHLORIDE	N.D.	2.0	N.D.	--
XYLENES	N.D.	2.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

QCAPP AARON 13:23:49

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

56

CHROMALAB, INC.

Environmental Services (SDB)

August 1, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA
Atten: Jed Douglas
Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994
re: One sample for Volatile Organic Compounds analysis.

Sample ID: **W-3** *Matrix:* WATER
Sampled: July 27, 1994 *Spl #:*59107 *Run:* 3615 *Analyzed:* July 31, 1994
Method: EPA 8240/8260

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	N.D.	5.0	N.D.	--
BENZENE	N.D.	2.0	N.D.	114
BROMODICHLOROMETHANE	N.D.	2.0	N.D.	--
BROMOFORM	N.D.	2.0	N.D.	--
BROMOMETHANE	N.D.	2.0	N.D.	--
METHYL ETHYL KETONE	N.D.	2.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	2.0	N.D.	--
CHLOROBENZENE	N.D.	2.0	N.D.	121
CHLOROETHANE	N.D.	2.0	N.D.	--
2-CHLOROETHYLVINYL ETHER	N.D.	2.0	N.D.	--
CHLOROFORM	N.D.	2.0	N.D.	--
CHLOROMETHANE	N.D.	2.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHANE	N.D.	2.0	N.D.	--
1,2-DICHLOROETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	2.0	N.D.	145
CIS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	2.0	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
ETHYLBENZENE	N.D.	2.0	N.D.	--
2-HEXANONE	N.D.	2.0	N.D.	--
METHYLENE CHLORIDE	N.D.	5.0	N.D.	--
METHYL ISOBUTYL KETONE	N.D.	2.0	N.D.	--
STYRENE	N.D.	2.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	2.0	N.D.	--
TETRACHLOROETHENE	N.D.	2.0	N.D.	--
TOLUENE	N.D.	2.0	N.D.	112
1,1,1-TRICHLOROETHANE	N.D.	2.0	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	2.0	N.D.	--
TRICHLOROETHENE	N.D.	2.0	N.D.	113
TRICHLOROFLUOROMETHANE	N.D.	2.0	N.D.	--
VINYL ACETATE	N.D.	2.0	N.D.	--
VINYL CHLORIDE	N.D.	2.0	N.D.	--
XYLENES	N.D.	2.0	N.D.	--

ChromaLab, Inc.

Aaron McMichael
Chemist

Ali Kharrazi
Organic Manager

QCAPP AARON 13:23:49

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

3.7

CHROMALAB, INC.

Environmental Services (SDB)

August 3, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994

re: 3 samples for Oil & Grease analysis

Matrix: WATER
Sampled: July 27, 1994 *Analyzed:* August 1, 1994
Method: STD Method 5520 B & F

Sample #	Client Sample ID	Oil & Grease (mg/L)
59105	W-1	N.D.
59106	W-2	N.D.
59107	W-3	N.D.
Blank		N.D.
Spike Recovery		114%
Dup Spike Recovery		109%
Reporting Limit		1.0

ChromaLab, Inc.

Alex Tam
Analytical Chemist

Ali Kharrazi
Organic Manager

gg

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 3, 1994 — *Submission #:* 9407322 (Revised 8/8/94)

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST — *Project #:* 94-911
Received: July 28, 1994

re: 3 samples for Diesel analysis

Matrix: WATER
Sampled: July 27, 1994 — *Analyzed:* August 3, 1994
Method: EPA 3510/8015

Sample #	Client Sample ID	Diesel (µg/L)
59105	W-1	N.D.
59106	W-2	N.D.
59107	W-3	N.D.[a]

a - Unknown Hydrocarbon in gasoline/kerosene range was observed in sample. If quantified as kerosene, concentration would be 62 µg/L.

Blank	N.D.
Spike Recovery	92%
Dup Spike Recovery	103%
Reporting Limit	50

ChromaLab, Inc.

Sirirat Chullakorn
Analytical Chemist

Ali Kharrazi
Organic Manager

gg

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 4, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994

re: 3 samples for Gasoline analysis.

Matrix: WATER
Sampled: July 27, 1994 *Lab Run#:* 3619 *Analyzed:* August 2, 1994
Method: EPA 5030/8015M

Spl # CLIENT SMPL ID	GASOLINE (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE RESULT (%)
59105 W-1	0.12	0.05	N.D.	109
59106 W-2	N.D.	0.05	N.D.	109
59107 W-3	0.13	0.05	N.D.	109

ChromaLab, Inc.

Billy Thach
Chemist

Ali Kharrazi
Organic Manager

QCAPP BILLY 15:46:31

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(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 8, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **W-1** *Matrix:* WATER *Extracted:* August 8, 1994
Sampled: July 27, 1994 *Spl #:* 59105 *Run:* 3628 *Analyzed:* August 8, 1994
Method: EPA 3010/6010/7470

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	0.02	N.D.	91
ARSENIC	N.D.	0.005	N.D.	82
BARIUM	0.069	0.005	N.D.	93
BERYLLIUM	N.D.	0.001	N.D.	97
CADMIUM	N.D.	0.001	N.D.	93
CHROMIUM	0.011	0.01	N.D.	97
COBALT	N.D.	0.01	N.D.	92
COPPER	N.D.	0.005	N.D.	91
LEAD	N.D.	0.01	N.D.	94
MOLYBDENUM	0.0059	0.005	0.0083	--
NICKEL	N.D.	0.02	N.D.	94
SELENIUM	N.D.	0.01	0.011	83
SILVER	N.D.	0.005	N.D.	88
THALLIUM	0.040	0.01	0.021	83
VANADIUM	N.D.	0.01	N.D.	95
ZINC	0.38	0.01	N.D.	94
MERCURY	N.D.	0.001	N.D.	107

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

QCAPP DOINA 10:16:37

2239 Omega Road, #1 • San Ramon, California 94583
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Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 8, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994

re: One sample for CAM 17 Metals analysis.

Sample ID: **W-2** *Matrix:* WATER *Extracted:* August 8, 1994
Sampled: July 27, 1994 *Spl #:*59106 *Run:* 3628 *Analyzed:* August 8, 1994
Method: EPA 3010/6010/7470

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	0.02	N.D.	91
ARSENIC	N.D.	0.005	N.D.	82
BARIUM	0.11	0.005	N.D.	93
BERYLLIUM	N.D.	0.001	N.D.	97
CADMIUM	N.D.	0.001	N.D.	93
CHROMIUM	N.D.	0.01	N.D.	97
COBALT	N.D.	0.01	N.D.	92
COPPER	N.D.	0.005	N.D.	91
LEAD	N.D.	0.01	N.D.	94
MOLYBDENUM	0.0066	0.005	0.0083	--
NICKEL	N.D.	0.02	N.D.	94
SELENIUM	N.D.	0.01	0.011	83
SILVER	N.D.	0.005	N.D.	88
THALLIUM	0.017	0.01	0.021	83
VANADIUM	N.D.	0.01	N.D.	95
ZINC	0.012	0.01	N.D.	94
MERCURY	N.D.	0.001	N.D.	107

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

QCAPP DOINA 16:11:13

2239 Omega Road,#1 • San Ramon, California 94583
(510) 831-1788 • Facsimile (510) 831-8798
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

August 8, 1994 *Submission #:* 9407322

ENV. SOLUTIONS - PETALUMA

Atten: Jed Douglas

Project: CALTRANS-CAL EAST *Project#:* 94-911
Received: July 28, 1994

re: One sample for CAM 17 Metals analysis.

*Sample ID:***W-3** *Matrix:* WATER *Extracted:* August 8, 1994
Sampled: July 27, 1994 *Spl #:*59107 *Run:* 3628 *Analyzed:* August 8, 1994
Method: EPA 3010/6010/7470

ANALYTE	RESULT (mg/L)	REPORTING LIMIT (mg/L)	BLANK RESULT (mg/L)	BLANK SPIKE RESULT (%)
ANTIMONY	N.D.	0.02	N.D.	91
ARSENIC	N.D.	0.005	N.D.	82
BARIUM	0.21	0.005	N.D.	93
BERYLLIUM	N.D.	0.001	N.D.	97
CADMIUM	N.D.	0.001	N.D.	93
CHROMIUM	N.D.	0.01	N.D.	97
COBALT	N.D.	0.01	N.D.	92
COPPER	N.D.	0.005	N.D.	91
LEAD	N.D.	0.01	N.D.	94
MOLYBDENUM	N.D.	0.005	0.0083	--
NICKEL	N.D.	0.02	N.D.	94
SELENIUM	N.D.	0.01	0.011	83
SILVER	N.D.	0.005	N.D.	88
THALLIUM	N.D.	0.01	0.021	83
VANADIUM	N.D.	0.01	N.D.	95
ZINC	0.17	0.01	N.D.	94
MERCURY	N.D.	0.001	N.D.	107

ChromaLab, Inc.

Doina Danet
Chemist

Eric Tam
Laboratory Director

QCAPP DOINA 18:11:19

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Federal ID #68-0140157

TRC Environmental Consultants, Inc.

ref# 17440

CHAIN OF CUSTODY RECORD

32/5900 3 - 5900 5 No 10212

PROJECT NO.	PROJECT NAME
94-911	CalTrans - Cal East

SAMPLERS: (Signature) Ted Douglas (Printed) Ted Douglas

PARAME
SUBM #: 9407322
CLIENT: ENVSOL-PET
DUE: 08/04/94
REF #:17440

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	TPH Gas	TPH Diesel	8240	Oil & Grease	6010				
MW-1	7/27	1215		X	MW-1	6	X	X	X	X	X				
MW-2	"	1230		X	MW-2	6	X	X	X	X	X				
MW-3	"	1245		X	MW-3	6	X	X	X	X	X				Standard TAT

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
(Printed) Ted Douglas	7/28/94 0800	(Printed)	(Printed)		(Printed)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
(Printed)		(Printed) B Mccune	7/28/94 1124	Filter & Preserve prior to running 6010	

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

received cold good cond 7-28-94 BM

DISTRIBUTION

Soil and Groundwater Investigation Report

Cal East

505 Cedar Street

Oakland, California

Caltrans Contract Number 53U495

Task Order Number 04-192211-05

Environmental Solutions, Inc. Project No. 94-911

September 27, 1994

California Department of Transportation (CALTRANS) — 5 Copies
Environmental Engineering Branch
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