EBA WASTECHNOLOGIES
Engineers & Environmental Consultants

November 21, 1997

3688

Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Health Care Services
Environmental Health Services
Environmental Protection (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: SUBSURFACE INVESTIGATION
FORMER WESTERN STUCCO PRODUCTS
5115 EAST EIGHTH STREET, OAKLAND, CALIFORNIA
EBA PROJECT No. 94-484

Dear Mr. Chan:

Enclosed please find the Subsurface Investigation Report prepared by EBA WASTECHNOLOGIES (EBA) for the above referenced site. This report documents the results of EBA's investigation to determine the extent of petroleum hydrocarbon impact to groundwater.

If you have any questions regarding this report, please contact EBA at (707) 544-0784.

Sincerely,
EBA WASTECHNOLOGIES

Christine Scheib for

Pierre Lescure
Environmental Specialist

PL/mc

Attachment: Subsurface Investigation Report

cc: Mr. Lewis Winchell, Sacramento Stucco
SFB-RWQCB

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825 Sonoma Avenue, Suite C Santa Rosa, California 95404 (707) 544-0784 FAX (707) 544-0866
225 W. Hospitality Lane, Suite 200 San Bernardino, CA 92408 (909) 890-0432 FAX (909) 890-0422
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Prepared For

Mr. Lewis Winchell
Sacramento Stucco Company, Inc.
P.O. Box 1166
Sacramento, CA 95691

SUBSURFACE INVESTIGATION

FORMER WESTERN STUCCO PRODUCTS

5115 EAST EIGHTH STREET

OAKLAND, CALIFORNIA

December 1997

EBA Project Number 94-484

Prepared By

Christine Scheib for

Pierre Lescure
Environmental Specialist

Reviewed By

Christine Scheib

Christine Scheib, R.E.A. #06901
Senior Environmental Specialist

Reviewed By

Duane Butler

Duane Butler, P.E., C.E. #13357
President R.E.A. #01999

REGISTERED PROFESSIONAL ENGINEER
DUANE W. BUTLER
No. 13357
Exp 3/31/01
CIVIL
State of California

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1.0 INTRODUCTION

It is EBA's understanding that two 8,000-gallon underground storage tanks (USTs) were removed from the subject property in March 1991. Analytical results of soil and groundwater samples collected from the two UST excavations indicated petroleum hydrocarbons as gasoline and diesel were present. The Alameda County Health Care Services (ACHCS) is requiring that further site characterization be conducted at the subject site.

1.1 Scope of Work

EBA originally proposed the installation of six soil borings for the purpose of collecting grab groundwater samples to determine the impact of petroleum hydrocarbons to areal groundwater. Based on field screening, the sixth boring was to be located approximately fifteen feet further downgradient of the boring that demonstrated the greatest petroleum hydrocarbon impact. After significant soil and groundwater impact was observed, the scope of work was increased to seven soil borings. Groundwater was encountered in only three of the seven borings, so soil samples were collected in addition to the grab groundwater samples. Samples were collected in compliance with ACHCS and San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) standards.

Soil and groundwater samples were picked up at the site by North State Environmental of South San Francisco, California, a California state-certified laboratory and transported to the laboratory under Chain of Custody protocols. The samples were analyzed in compliance with ACHCS and SFBRWQCB standards. A detailed description of the scope of work for this investigation is presented in the July 24, 1997, EBA Work Plan for Groundwater Investigation.

1.2 Site Location

The project site is located in the City of Oakland, between East Eighth Street to the east and the Southern Pacific Railroad tracks to the west, in Alameda County, California; please refer to Vicinity Map, Figure 1. An auto dismantling facility is adjacent to the project site to the north and a junk yard is across East Eighth Street to the east; neither of these two sites were observed to be practicing "good housekeeping practices". The site is at an approximate elevation of 10 feet above mean sea level (MSL). San Leandro Bay is located approximately 2,400 feet southwest of the subject site. Land use in this area is predominantly industrial and commercial.

1.3 Site History

The subject site was formerly a stucco products facility where the ingredients for stucco were stored and mixed. On March 26, 1991 two 8,000-gallon steel USTs were removed from the site under the supervision of Kaprealian Engineering, Inc. (KEI), of Benicia, California. One UST stored diesel fuel and the other UST stored unleaded gasoline. Each UST was removed from a separate excavation. Four holes with a maximum diameter of ½ inch were observed in the gasoline UST. Ms. Cynthia Chapman of the ACHCS was present during the USTs removal and following soil sampling.

Groundwater was encountered in the UST excavations at the time of removal at an approximate depth of nine feet below ground surface (bgs). Due to the groundwater in the UST excavations, samples from beneath the former USTs could not be collected. KEI collected four sidewall soil samples from the UST excavations approximately 6 inches above the groundwater level.

Approximately 4,000 gallons of groundwater was pumped from the UST excavations after the soil sampling was completed. On March 28, 1991 KEI collected a groundwater sample from the gasoline UST excavation. KEI returned to the site on March 29, 1991 and collected a groundwater sample from the diesel UST excavation. Ms. Cynthia Chapman with the ACHCS was present during the groundwater sampling.

The samples were analyzed by Sequoia Analytical Laboratory in Concord, California, for total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), benzene, toluene, ethyl benzene and xylenes (BTEX).

Analytical results of the two soil samples collected from the diesel UST excavation detected TPH-g at 120 parts per million (ppm) each and TPH-d at 100 and 21 ppm. The analytical results of the groundwater sample collected from the diesel UST excavation indicated TPH-g at 1,500 parts per billion (ppb), TPH-d at 34,000 ppb and benzene at 240 ppb. Analytical results of the two soil samples collected from the gasoline UST excavation were below laboratory detectable limits for all analytes except xylenesThe analytical results of the groundwater sample collected from the gasoline UST excavation indicated TPH-g at 800 parts per billion (ppb), TPH-d at 13,000 ppb and benzene at 1.8 ppb.

On April 4, 1997, EBA Wastechnologies (EBA) personnel visited the subject site and collected samples from the three onsite soil stockpilesThe samples were analyzed by Legend Analytical Services of Santa Rosa, California, for TPH-g, TPH-d and BTEX. The soil stockpile samples were below detectable levels for TPH-g and BTEX. TPH-d was detected in the soil stockpile samples at concentrations of 290 ppm, 92 ppm and 78 ppmOn May 19, 1997 Conti Material Services, Inc., of Stockton, California, transported and disposed of approximately 130 cubic yards of stockpiled soil at Forward Inc. Landfill in Stockton, California.

In a June 16, 1997 letter Mr. Barney Chan of Alameda County Environmental Health Services requested a work plan to perform additional site characterization at the subject site. In response to this request EBA prepared a groundwater investigation work plan, dated July 24, 1997. In the work plan, EBA proposed to advance six soil borings to 20 feet below grade surface for the collection of groundwater samples to aid in determining the impact of petroleum hydrocarbons to area groundwater. The Work Plan was accepted in a letter dated August 4, 1997, by Mr. Barney Chan.

2.0 SUBSURFACE INVESTIGATION

2.1 Boring Locations

The boring locations are shown on Figure 2, Appendix A. For this investigation borings EBA-1, EBA-2 and EBA-3 were installed in anticipated downgradient positions and borings EBA-4 and EBA-5 were installed in the anticipated upgradient positions of the former USTs. Boring EBA-6 was installed further downgradient of the former USTs to the southwest. A thin layer of free phase petroleum product, approximately 0.01 foot thick, was observed in the groundwater sample collected from boring EBA-3. Boring EBA-7 was installed approximately 25 feet northwest of boring EBA-3 towards the railroad right of way and additional petroleum hydrocarbon impacted soil was encountered in this boring.

2.2 Soil and Groundwater Sample Collection

On September 26, 1997, EBA supervised the drilling of seven soil borings (EBA-1 thru EBA-7) at the project site. Soil boring EBA-1 was advanced to 16 feet bgs with a truck-mounted hydraulic percussion rig provided by Gregg Drilling & Testing of Martinez, California. Boring EBA-1 was continuously sampled and soil samples were collected in 4 feet long clear acetate tubes, 1.75 inches in diameter. A soil sample from boring EBA-1 at 7.5 to 8.0 feet bgs was submitted for chemical analysis. Moist soil was encountered in EBA-1 but no wet or saturated soil was noted. The percussion rods were removed from boring EBA-1 and the boring was allowed to fill with groundwater. The remainder of the borings were advanced in the same manner as boring EBA-1. Boring EBA-2 was advanced to 20 feet bgs and did not produce any groundwater, the remaining borings were advanced to 16 feet bgs. ← either no GW or v. slow recharge

Soil samples were not initially collected from the borings, other than EBA-1. After it was realized that borings EBA-2 and EBA-5 were dry, soil samples were selected from the acetate tubes that were available without redrilling the borings. No soil samples were collected from soil boring EBA-4 initially. After it was apparent that soil boring EBA-4 was going to remain dry, the EBA-4 was redrilled 6-inches to one side and a 4-feet long acetate tube soil sample was collected. The bottom 6-inches of the tube was submitted for laboratory analysis. The shallow soil sample (3-3.5 feet) submitted for laboratory analysis from soil boring EBA-7 was based on petroleum hydrocarbon odor detected during drilling.

During the drilling process, EBA monitored the breathing zone and field screened soil samples with a Microtip MP-100 photoionization detector (PID) for volatile hydrocarbons. A boring log of the subsurface conditions encountered during drilling, classifying the soil using the Unified Soil Classification System, was recorded for soil boring EBA-1 and is included in Appendix B.

Soil samples were collected by cutting the acetate tubes at the desired depths, sealing the ends with teflon sheets and end caps, placement in plastic bags, and storage in an ice chest with temperature maintained at 4°C for pick up by the analytical laboratory under chain-of-custody procedures.

The soil borings were allowed to remain open for two to four hours. Ground water was only observed in borings EBA-1, EBA-3 and EBA-6. Grab groundwater samples were collected from the borings with a disposable, bottom-valve, plastic bailer. Groundwater samples were transferred directly into 40 ml glass vials and one liter amber bottles, placed in plastic bags, and stored in an ice chest with temperature maintained at 4°C for transport to the analytical laboratory under chain-of-custody procedures. A water level measurement to the nearest 0.1 foot was taken before sampling. Upon completion of grab groundwater sampling activities the soil borings were backfilled using a cement-bentonite slurry.

no casing?

The percussion rods, tools and sampling equipment were cleaned before drilling and prior to sampling each boring to minimize the possibility of cross-contamination. The equipment was cleaned with a trisodium phosphate solution, a potable water rinse, and deionized water rinse. Decontamination water from equipment clean-up is stored on-site in properly labeled 5-gallon metal buckets with lids.

2.3 Soil and Groundwater Sample Chemical Analysis

North State Environmental of South San Francisco, a California state-certified laboratory, analyzed the soil and groundwater samples using methods approved by the California Regional Water Quality Control Board (CRWQCB) and the Environmental Protection Agency (EPA). The laboratory analyzed the soil and groundwater samples for TPH-g, TPH-d, BETX and MTBE.

3.0 FINDINGS

3.1 Regional Hydrogeologic Setting

The subject site is mapped as being underlain by Holocene alluvium (U.S. Geologic Survey Professional Paper 943 "Flatland Deposits of the San Francisco Bay Region," California, 1979). The subject site is mapped as being situated at the approximate geologic contact of bay mud and fine grained alluvium. The fine-grained alluvium is defined as typically consisting of unconsolidated, moderately to poorly sorted silt and clay rich in organic material. These materials are assumed to overlie older alluvial fan and stream terrace deposits on the bay margin. The Bay Mud is described as typically consisting of unconsolidated, water-saturated plastic clay and silty clay rich in organic material, which locally contains lenses of well-sorted silt, sand and beds of peat.

3.2 Site Hydrogeology

Soils at the subject site encountered during UST removal activities appeared to consist primarily of silty clay to the excavated depth of nine feet bgs. Soils in boring EBA-1 generally consisted of a dark grey to black silt with varying amounts of sand from 1 to 11 feet bgs, clayey gravel to clayey sands from 11 to 13.5 feet bgs and clay with sand from 13.5 feet bgs to the total depth explored of 16 feet bgs. A Boring Log noting the subsurface conditions encountered during the drilling of boring EBA-1 is presented in Appendix B. : need all logs

3.3 Groundwater Flow Direction

Based on local topography, groundwater flow is believed to be in a southwesterly direction from the Oakland hills to the San Leandro Bay. Groundwater was encountered in borings EBA-1 and EBA-3 at the western edge of the former UST excavations suggesting the water may be trapped in unconsolidated backfill material. Approximately six inches of groundwater was encountered in boring EBA-6. Boring EBA-2 was installed to 20 feet bgs and remained dry.

3.4 Soil Sample Analytical Results

Since groundwater was not encountered in a majority of the borings, soil samples were collected instead. One soil sample was collected from each of the soil borings with the exception of soil boring EBA-3, however, a grab groundwater sample was collected from EBA-3. Two soil samples were collected from EBA-5 at depths of 4.0-4.5 feet bgs and 7.5-8.0 feet bgs. One soil sample and one grab groundwater sample were collected from soil borings EBA-1 and EBA-6. Soil samples collected during the drilling activities were analyzed by North State Environmental for TPH-d,TPH-g, BTEX and MTBE.

Analysis of the soil samples collected from soil borings EBA-1, EBA-2 and EBA-5 at 4.0- 4.4 feet bgs were below the laboratory detectable limits for TPHG, TPHD and BTEX. EBA-4, EBA-5, EBA-6 and EBA-7 contained detectable levels of TPHG. MTBE was not detected above the laboratory reporting limit in any of the soil samples analyzed. Soil sample analytical results are presented in Table 1 on the following page. The complete laboratory reports are included in Appendix C.

TABLE 1. SOIL SAMPLE ANALYTICAL RESULTS

SAMPLE ID	DEPTH	DATE	TPHD mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl Benzene mg/kg	Total Xylenes mg/kg	TPHG mg/kg	MTBE mg/kg
EBA-1	7.5-8.0'	9/26/97	ND	ND	ND	ND	ND	ND	ND
EBA-2	7.5-8.0'	9/26/97	ND	ND	ND	ND	ND	ND	ND
EBA-4	3.5-4.0'	9/26/97	ND	ND	ND	ND	**0.11**	**10**	**ND**
EBA-5	4.0-4.5'	9/26/97	ND	ND	ND	ND	ND	ND	ND
	7.5-8.0'	9/26/97	ND	ND	ND	ND	ND	**0.5**	ND
EBA-6	5.5-6.0'	9/26/97	ND	ND	ND	ND	**0.3**	**9.5**	**ND**
EBA-7	3.0-3.5'	9/26/97	ND	<0.25	**0.58**	**5.5**	**14**	**2,300**	**<0.25**
REPORTING LIMITS			1.0	0.005	0.005	0.005	0.010	0.5	0.005

Surface release

ND: Not detected above reporting limit

Soil samples of varying depths from the borings were placed in Zip-Lock bags and allowed to warm in the sun. After the bags had warmed, the bags were opened enough to insert the PID straw into the bag and a measurement was taken. PID measurements of EBA-1 were 10 ppm at 4 feet bgs, 8 ppm at 7 feet bgs, 48 ppm at 12 feet bgs and 250 ppm at 16 feet bgs. A PID measurement of EBA-2 at 4 feet bgs was 25 ppm. PID measurements of EBA-5, EBA-6 and EBA-7 at 8 feet bgs were 45, 8 and 600 ppm respectively.

3.5 Grab Groundwater Sample Analytical Results

Grab groundwater samples were collected from soil borings EBA-1, EBA-2 and EBA-6 during drilling activities on September 26, 1997. Soil boring EBA-6 had six inches of groundwater at the bottom of the boring, which was not enough to retieve a sample for diesel analysis. Three 40 mililiter vials were collected from EBA-6 for analysis as TPHG, BTEX and MTBEAll of the other borings were dry after remaining open for several hours. Soil boring EBA-2 was advanced to 20 feet bgs and still did not produce any groundwater. Groundwater samples were analyzed by North State Environmental for TPHD, TPHG, BTEX and MTBE.

Analysis of groundwater samples collected from soil borings EBA-1, EBA-3 and EBA-6 contained detectable levels of TPHG and BTEX. TPHD was detected in the groundwater samples collected from EBA-1 and EBA-3. MTBE was not detected above the laboratory reporting limit in any of the groundwater samples analyzed. Small droplets of free phase product were noted on the bailer during the grab ground-water sampling of EBA-3. From the analytical results it is evident that the free phase product is gasoline. Groundwater analytical results are presented in Table 2 on the following page. Complete laboratory reports and chain of custody documents are included in Appendix C.

TABLE 2. GROUNDWATER SAMPLE ANALYTICAL RESULTS

SAMPLE ID	DATE	TPHD mg/L	Benzene µg/L	Toluene µg/L	Ethyl Benzene µg/L	Total Xylenes µg/L	TPHG µg/L	MTBE µg/L
EBA-1	9/26/97	**2**	**9**	**9**	**11**	**30**	**2,000**	ND
EBA-3	**9/26/97**	**250**	**560**	**290**	**1,700**	**3,800**	**590,000**	**<25**
EBA-6	9/26/97	NS	ND	ND	ND	**32**	**1,300**	ND
REPORTING LIMIT		0.05	0.5	0.5	0.5	1.0	50	0.5

ND: Not detected above reporting limit
NS: Not sampled

4.0 CONCLUSIONS

Based on the findings of this subsurface investigation, soil and groundwater at the project site have been impacted by petroleum hydrocarbons as diesel, gasoline and BTEX to a depth of approximately eight feet bgs. Soil samples collected from soil borings EBA-1 and EBA-2 at 7.5 to 8.0 feet bgs, and EBA-5 at 4.0 to 4.5 feet bgs did not contain detectable concentrations of TPH-d, TPH-g, BTEX or MTBE. TPH-g, toluene, ethyl benzene and xylenes were detected in the soil samples collected from the remainder of the soil borings. Benzene was not detected in any of the soil samples collected during this investigationAll of the grab ground water samples were impacted with diesel and/or gasoline and BTEX.

5.0 RECOMMENDATIONS

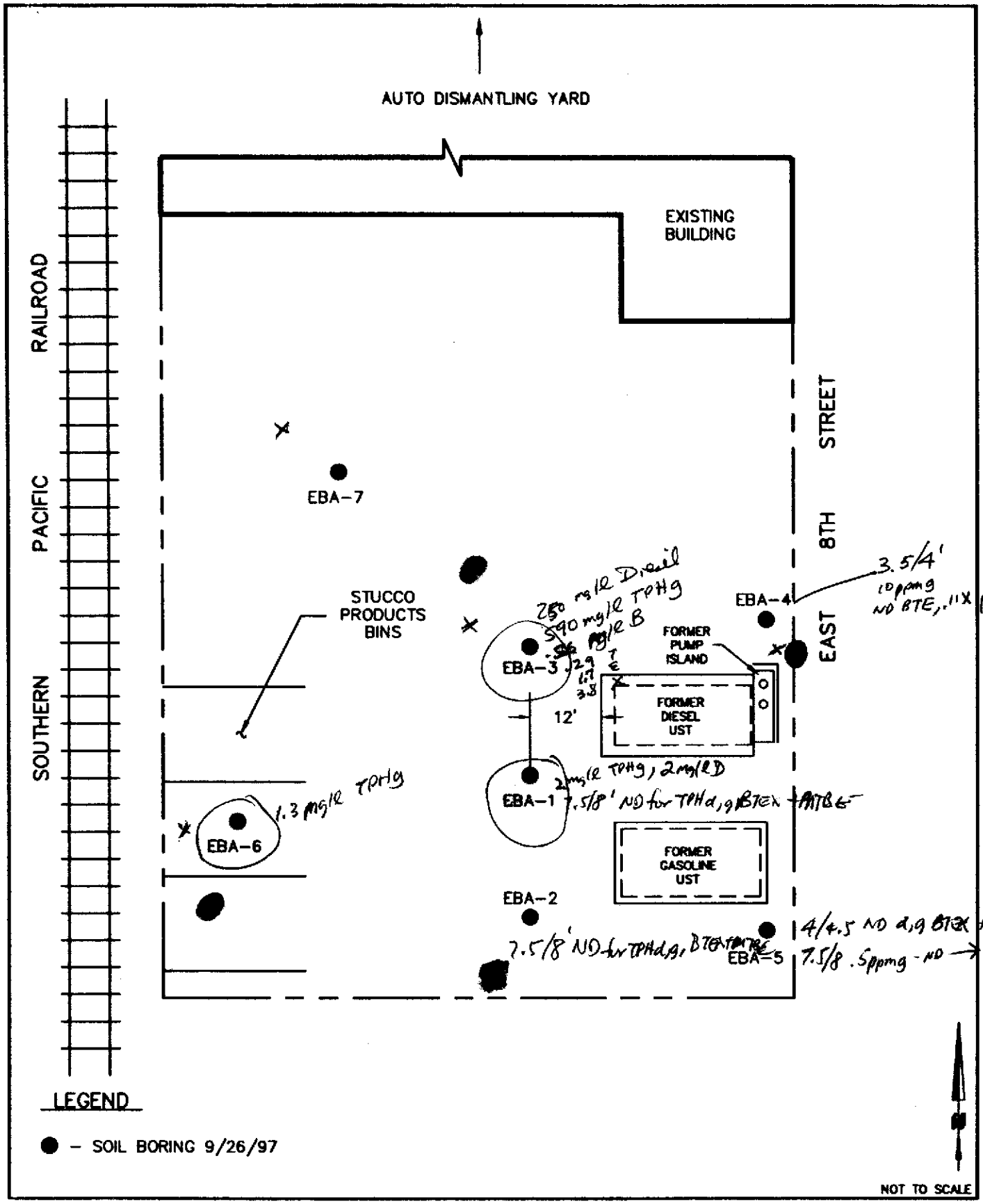
Based on the findings and field observations documented in this report, EBA recommends that three to four monitoring wells be installed at the perimeter of the subject site in the vicinity of the former USTs. The monitoring wells should be sampled on a quarterly basis for one hydrologic cycle. Groundwater samples should be analyzed for TPH-d, TPH-g, and BTEX. Water level measurements should be collected quarterly from all on-site monitoring wells in order to determine the groundwater flow direction and to determine the potential for an up gradient off-site source. Quarterly reports comprised of analytical results from the groundwater samples and groundwater flow direction data should be submitted to the ACHCS following each sampling event. After the completion of this one year groundwater sampling period, EBA will make recommendations for additional investigation or remediation work.

6.0 LIMITATIONS

The conclusions presented in this report are professional opinions based on the data presented in this report. They are intended only for the indicated purpose and project site. Conclusions and recommendations presented herein apply to site conditions existing at the time of our study. Changes in the conditions of the subject property can occur with time because of natural processes or the works of man on the project site or on adjacent properties. Changes in applicable standards can also occur as the result of legislation or from the broadening of knowledge. Accordingly the findings of this report may be invalidated, wholly or in part, by changes beyond our control.

APPENDIX A

FIGURES

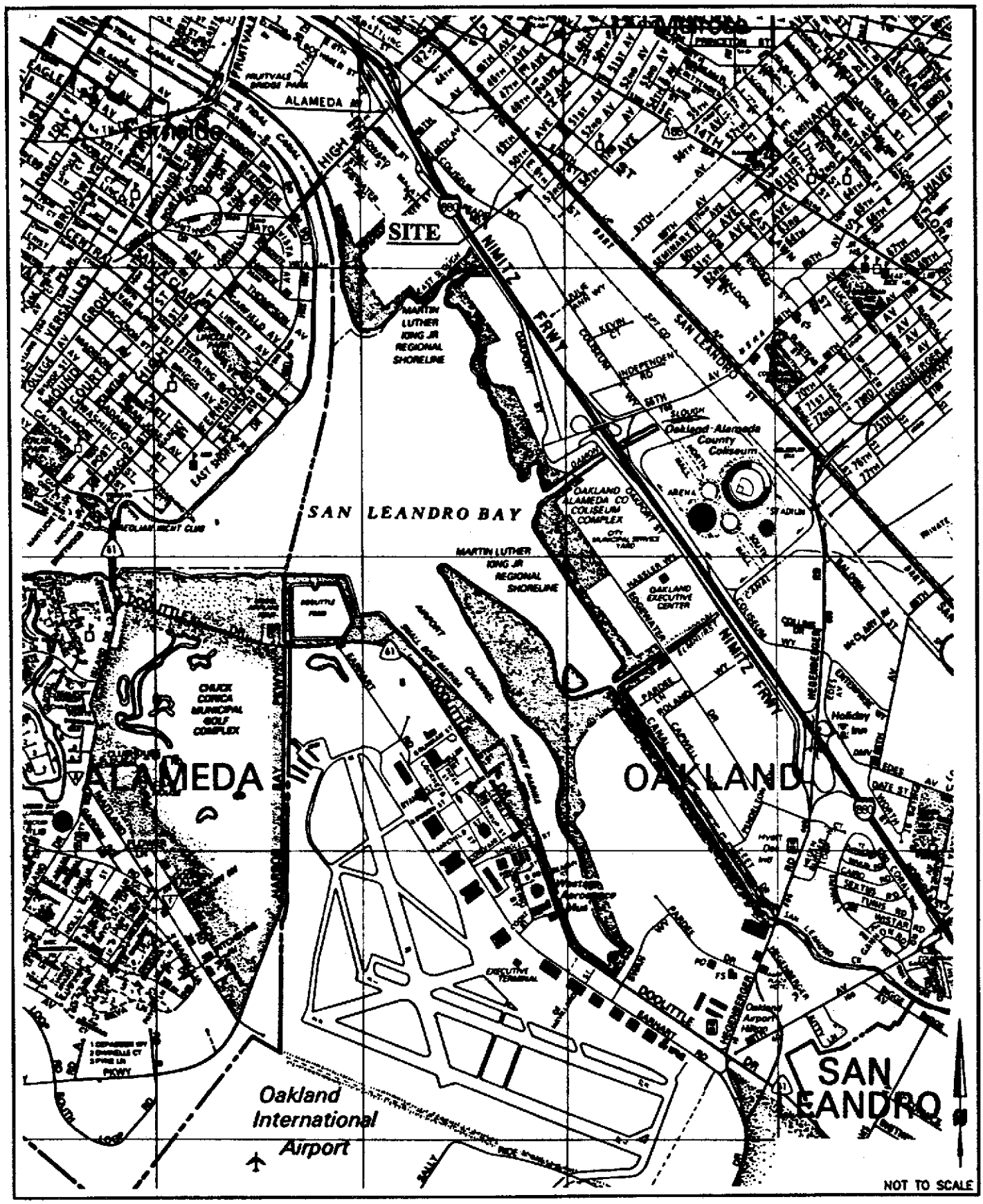


EBA

WESTERN STUCCO PRODUCTS
5115 EAST 8TH STREET
OAKLAND, CALIFORNIA

SITE PLAN

FIGURE
2
OCT 1997
484SP2.DWG



EBA

WESTERN STUCCO PRODUCTS
5115 EAST 8TH STREET
OAKLAND, CALIFORNIA

LOCATION MAP

FIGURE
1
JULY 1997
484LM.DWG

APPENDIX B

SOIL BORING LOGS

EBA — LOG OF EXPLORATORY BORING

PROJECT: FORMER WESTERN STUCCO, 5116 EAST 8TH STREET, OAKLAND, CALIFORNIA
JOB NUMBER: 94-484
SHEET 1 OF 1
BORING: EBA - 1
DATE: 9/26/97

FIELD LOCATION OF BORING: N

BENTONITE
CEMENT-BENTONITE GROUT
SAND
CONCRETE

LOGGED BY: PIERRE LESCURE DRILLER: GREGG'S
WELL CASING ELEVATION: N/A
EQUIPMENT AND SPECIFICATIONS:
GEO-PROBE
4' SAMPLE TUBES - CONTINUOUSLY

WATER DEPTH	6.2	
TIME	10:50	
DATE	9/26/97	

RECOVERY	SAMPLE COND.	SAMPLER TYPE	DRILLING RATE (ft./min.)	BLOWS/6 in.	SIEVE SAMPLE	CHEMICAL ANALYSIS	STATIC WATER	INITIAL WATER	PID (ppm)	DEPTH	SOIL GROUP USCS	DESCRIPTION	CASING CONSTRUCTION
												0 - 6" CONCRETE GRAVEL BASE	
										1	SM	SILTY SAND (SM) Dark gray, medium dense, damp, 40% Silt, 60% fine to medium Sand, moderate est K. Blue green mottles, pockets of 1/2" angular Gravels - Fill.	
										2			
										3	ML	SILT (ML) Black, medium stiff, damp, 10% Clay, 90% Silt, low est K.	
										4			
										5			
							▼			6			
									8	7			
						☒				8	SM	SANDY SILT (SM) Olive gray, stiff, moist, 10% Clay, 60% Silt, 30% very fine Sand, low est K, minor coarse Sands.	
										9			
									10	10		15% Clay, greenish gray	
										11	GC	CLAYEY GRAVEL with SAND (GC) Light gray, loose, very moist, 20% Clay, 10% Silt, 30% Sand, 40% well rounded Gravel to 1/2", moderate est K.	
									48	12			
										13	SC	CLAYEY SAND (SC) Blue green, soft, very moist, 15% Clay, 10% Silt, 75% well graded Sand, high est K, strong hydrocarbon odor - possibly solvent odor	
										14			
										15	CL	CLAY with SAND (CL) Blue gray, very stiff, moist, 80% Clay, 20% very fine Sand, low est K.	
									250	16		Light brown mottling below 15'	
										17		Bottom of Bore = 16.0'	
										18			
										19			
										20			
										21			
										22			
										23			
										24			

next of boring logs?

5868L01.DWG

APPENDIX C

LABORATORY ANALYTICAL REPORTS

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

CERTIFICATE OF ANALYSIS

Lab Number: 97-957
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco T33

Date Reported: 10/10/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-957-01	Client ID: EBA-1			09/26/97	WATER
Gasoline	8015M	2000	ug/L		10/06/97
Benzene	8020	9	ug/L		
Ethylbenzene	8020	11	ug/L		
MTBE	8020	ND			
Toluene	8020	9	ug/L		
Xylenes	8020	30	ug/L		
Diesel	8015M	2	mg/L		10/04/97
Sample: 97-957-02	Client ID: EBA-3			09/26/97	WATER
Gasoline	8015M	590000	ug/L		10/06/97
Benzene	8020	560	ug/L		
Ethylbenzene	8020	1700	ug/L		
MTBE	8020	ND<25	ug/L		
Toluene	8020	290	ug/L		
Xylenes	8020	3800	ug/L		
Diesel	8015M	250	mg/L		10/06/97

P.O.Box 5624 • South San Francisco, California 94083 • 415-588-2838 FAX 588-1950

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 97-957
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported: 10/10/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-957-03	Client ID: EBA-6			09/26/97	WATER
Gasoline	8015M	1300	ug/L		10/10/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	32	ug/L		

P.O.Box 5624 • South San Francisco, California 94083 • 415-588-2838 FAX 588-1950

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number: 97-957
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported:10/10/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
Diesel	8015M	0.05	mg/L	ND	98	6
Gasoline	8015M	50	ug/L	ND	144	8
Benzene	8020	0.5	ug/L	ND	113	12
Ethylbenzene	8020	0.5	ug/L	ND	102	8
Toluene	8020	0.5	ug/L	ND	111	6
Xylenes	8020	1.0	ug/L	ND	92	23
MTBE	8020	0.5	ug/L	ND	91	15

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy,Laboratory Director

P.O.Box 5624 • South San Francisco, California 94083 • 415-588-2838 FAX 588-1950

97-957

North State Environmental Analytical Laboratory

Phone: (415) 588-9652 Fax: (415) 588-1950

Chain of Custody / Request for Analysis

Lab Job No.: _____ Page ___ of ___

Client: EBA WASTECHNOLOGIES	Report to: PIERRE LESCURE	Phone: 707 544-0784	Turnaround Time: NORMAL
Mailing Address: 825 SONOMA AVE., STE C SANTA ROSA, CA. 95404	Billing to: SAME ←	Fax: 707 544-0844	Date: 9/26/97
		PO# / Billing Reference: 94-484	Sampler: P. LESCURE

Project / Site Address: WESTERN STUCCO

Analysis Requested

	Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	G/BTEX	DIESEL						Comments / Hazards
1-	EBA-1	W	1 1L 3 VOA	NONE HCl	9/26/97 11:00	✓	✓						
2-	EBA-3	W	1 1L 3 VOA	NONE HCl	12:15	✓	✓						CAUTION FREE PRODUCT
3-	EBA-6	W	2 VOA	HCl	14:45	✓							

Relinquished by: [signature]	Date: 15:05	Time: 9/26/95	Received by: [signature] NSE LABS	Lab Comments
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 97-956
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported: 10/07/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-956-01	Client ID: EBA-1 7.5-8'			09/26/97	SOIL
Gasoline	8015M	ND			10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			10/06/97
Sample: 97-956-02	Client ID: EBA-2 7.5-8'			09/26/97	SOIL
Gasoline	8015M	ND			10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			10/06/97

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North State Environmental
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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 97-956
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported: 10/07/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-956-03	Client ID: EBA-4 3.5-4'			09/26/97	SOIL
Gasoline	8015M	10	mg/Kg		10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	0.11	mg/Kg		
Diesel	8015M	ND			10/06/97
Sample: 97-956-04	Client ID: EBA-5 4-4.5'			09/26/97	SOIL
Gasoline	8015M	ND			10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			10/06/97

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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 97-956
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported: 10/07/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-956-05 Client ID: EBA-5 7.5-8.0'				09/26/97	SOIL
Gasoline	8015M	0.5	mg/Kg		10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			10/06/97
Sample: 97-956-06 Client ID: EBA-6 5.5-6'				09/26/97	SOIL
Gasoline	8015M	9.5	mg/Kg		10/06/97
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	0.3	mg/Kg		
Diesel	8015M	ND			10/06/97

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C E R T I F I C A T E O F A N A L Y S I S

Lab Number: 97-956
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported: 10/07/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 97-956-07	Client ID: EBA-7 3-3.5'			09/26/97	SOIL
Gasoline	8015M	2300	mg/Kg		10/06/97
Benzene	8020	ND<0.25	mg/Kg		
Ethylbenzene	8020	5.5	mg/Kg		
MTBE	8020	ND<0.25	mg/Kg		
Toluene	8020	0.58	mg/Kg		
Xylenes	8020	14	mg/Kg		
Diesel	8015M	ND			10/06/97

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CERTIFICATE OF ANALYSIS

Quality Control/Quality Assurance

Lab Number: 97-956
Client: EBA Wastechnologies
Project: #94-484 / Western Stucco

Date Reported:10/07/97

Gasoline and BTEX by Methods 8015M and 8020
Diesel Range Hydrocarbons by Method 8015 M

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
Gasoline	8015M	0.5	mg/Kg	ND	93	18
Benzene	8020	.005	mg/Kg	ND	123	40
Ethylbenzene	8020	.005	mg/Kg	ND	97	23
Toluene	8020	.005	mg/Kg	ND	114	33
Xylenes	8020	.010	mg/Kg	ND	95	19
MTBE	8020	.005	mg/Kg	ND	56	53
Diesel	8015M	1.0	mg/Kg	ND	72	2

ELAP Certificate NO:1753
Reviewed and Approved

John A.Murphy,Laboratory Director

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97-956

North State Environmental Analytical Laboratory

Phone: (415) 588-9652 Fax: (415) 588-1950

Chain of Custody / Request for Analysis

Lab Job No.: _____ Page ___ of ___

Client: EBA WASTECHNOLOGIES	Report to: PIERRE LESCURE	Phone: 707 544-0784	Turnaround Time: NORMAL
Mailing Address: 825 SONOMA AVE., STE C, SANTA ROSA, CA 95404	Billing to: SAME ←	Fax: 707 544-0844	Date: 9/26/97
		PO# / Billing Reference: 94-484	Sampler: P. LESCURE

Project / Site Address: WESTERN STUCCO

	Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Analysis Requested: G/BTEX	Diesel	Comments / Hazards
1-	EBA-1 7.5-8'	Soil	1 3/4" Acetate	None	9/26/97 8:35	✓	✓	
2-	EBA-2 7.5-8'				9:20	✓	✓	
3-	EBA-4 3.5-4'				14:21	✓	✓	
4-	EBA-5 4-4.5'				11:40	✓	✓	
5-	EBA-5 7.5-8.0'				11:50	✓	✓	
6-	EBA-6 5.5-6'				12:32	✓	✓	
7-	EBA-7 3-3.5'				13:06	✓	✓	

Relinquished by: Pierre Lescure	Date: 9/26/95	Time: 15:05	Received by: NSE LABS	Lab Comments
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	