

# USA GASOLINE CORPORATION

10700 MACARTHUR BOULEVARD,  
OAKLAND, CALIFORNIA  
Proj. Sec. 24; T2S; R3W MDB&M

## UST'S REMOVAL SOIL SAMPLING and LIMITED OVEREXCAVATION

OCTOBER 6, 1994

BY  
-WEGE-  
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October 6, 1994

RE: UST's Removal Sampling on 7/19/94 and Limited Overexcavation Sampling on 8/19/94 and 9/27/94 at USA Station #57, 10700 MacArthur Blvd., Oakland, Alameda County, CA for USA Gasoline Corporation.

#### LOCATION

The site, USA Gasoline Corporation Station #57 is located at 10700 MacArthur Boulevard, Oakland, Alameda County, California and lies in projected Sec. 24; T2S; R3W; MDB&M at an elevation of approximately 65 feet above mean sea level. This site is no longer an active retail service station.

#### SOIL SAMPLING AND UST REMOVAL

On July 19, 1994 Pacific Excavator's (Joe Madison) removed four Underground Storage Tanks, three 12,000 gallon gasoline UST's and one 8000 gallon diesel UST. Western Geo-Engineers collected twelve soil samples, seven in native soil beneath the tanks and five in native soil beneath the product line trench (see Field Notes, page 12). The samples were collected by Vern Bennett of Western Geo-Engineers under the direction of Ms. Eva Chu (Hazardous Materials Specialist), Alameda County Health Agency.

The soil samples were delivered with accompanying chain-of-custody documentation to American Environmental Network (AEN), a California State certified laboratory (DHS #1172). The soil samples were analyzed by AEN for concentrations of Total Petroleum Hydrocarbons as gasoline and diesel (TPH-G&D) using EPA methods 5030 and 3550; for Benzene, Toluene, Ethylbenzene and xylenes using EPA Method 8020 and for Total Threshold Limit Concentration (TTLIC) Lead. TPH G&D, BTEX and Total Pb were run on the five product line soil samples (PI-E 3.5 and PI-2 thru PI-5) from beneath the product line trench; the five soil samples

collected beneath the UST's that stored gasoline (TP3 thru TP7) were analyzed for TPH-G and BTEX and Total Pb. The soil samples collected beneath the diesel UST (TP1 and TP2) were analyzed for TPH-D, BTEX and Total Pb; in addition, these two samples were analyzed for PNA's by EPA method 8270.

Petroleum Hydrocarbons were detected in concentrations above action levels in seven of the twelve samples collected. Of the five product line samples, PI-2 had elevated levels of TPH-G and BTEX above detection limits; of the seven soil samples from beneath the UST's, TP5 was the only sample that was below detection limit. In addition, Naphthalene was the only compound detected from M8270 analysis (probably from Tar wrapping of the Diesel UST).

Western Geo-Engineers questioned the lab on their 'elevated' detection limits for Volatile Organic Compounds (VOC's) from 8020 analysis on some of these soil samples; 'hydrocarbon interference' was noted by the laboratory for these raised detection limits. Soil samples TP2 and TP5 were analyzed on August 13, 1994 for Volatile Organics utilizing EPA method 8240, to identify 'target' compounds that may attribute to the increased detection limits of the 8020 analysis. All compounds from the 8240 analysis are 'non detect' other than VOC's, this analysis was for identification purposes only (holding time on samples had expired). Benzene and Toluene were not identified in M8240 suggesting that Benzene and Toluene in the 8020 results were probably 'Hydrocarbon Interference', the BTEX concentrations from the 8020 analysis should be used because of the 'holding time' constraints for either analysis.

Ms. Eva Chu requested of USA Gasoline Corp. that 2 soil samples each from the dispenser islands are still needed to complete the initial investigation from the UST and Product line sampling; this soil sampling occurred on August 19, 1994 and is addressed below in this text.

For a listing of the analytical results from the soil samples please see the enclosed worksheet (page 12), Table 1 and AEN laboratory report in Appendix B.

LIMITED OVEREXCAVATION, SOIL SAMPLING ON AUGUST 19, 1994

On August 18 and 19, 1994 Pacific Excavators (Joe Madison) overexcavated the UST tank cavity, to abate and/or remove entirely all of the contaminated soil from this site. This overexcavation was to implement the USA Gasoline Corporation Workplan prepared by Western Geo-Engineers dated August 11, 1994.

The overexcavation was accomplished by utilizing an excavator tractor with an excavation reach of 19-20 feet. Soil screening with the use of a hand held photo-ionizing detector (PID), visual (soil staining) and olfactory senses was used as the determining tool to guide the excavating.

The overexcavation partially completed the extent that the workplan outlined (ie. excavate the perimeter of the tank cavity 2 feet and the base to one foot of the local ground water). The tank cavity was excavated to roughly 16 feet (in the gasoline UST portion of excavation) and 14½ feet in the diesel UST portion of the tank cavity, see Field Notes in Appendix C. A localized 'perched water' in sand lenses at approximately 12 feet was removed, dry soil was present beneath these intervals.

A soil sample (SM-1) was collected from 19.5 feet on August 18, 1994, this sample was taken at the vertical extent of the excavator for two reasons, 1) determine whether hydrocarbon tainted soil exists at that depth, and 2) see if ground water can be encountered at the site (monitor wells S1 and S2 indicate a depth to ground water at approximately 17 feet).

The dispenser islands were removed for soil sampling (Alameda County Health request, 7/19/94) on August 19, 1994. The Dispenser Islands and the Tank Cavity were sampled by Western Geo-Engineers (Vern Bennett) under the direction of Ms. Eva Chu of Alameda County Health Agency on August 19, 1994. Fourteen soil samples were collected, six from native soil beneath the dispenser islands (2 samples each island) and seven samples of the tank cavity; one sample was taken after overexcavating the 'hot area, PI-2' Request by Alameda County Health (Appendix D) from the initial product line sampling. The overexcavation sample PI2-0 was collected at 9 feet after excavating an area of soil contamination; this area indicated a 'fill sand' interval from 3½ to 6 feet which was removed before sampling. The seven soil samples that were collected from the base of the tank cavity were taken at depths that indicated the lowest/least soil contamination (by field indicators, ie. PID, staining, etc.). These locations and depths and soil types are presented in the worksheets and map (Appendix C) and in Table 1.

The relatively undisturbed soil samples were collected from the bucket of the excavator in 2"X3" clean brass sleeves. Each sample was preserved by wrapping the sleeve ends with aluminum foil and then capping them with plastic caps which are secured to

the sleeve with duct tape. Each sleeve was labeled with the time, date, location number, depth, analyses to be run, site name and initials of the geologist. Each sample was then placed in a zip lock bag and deposited in an ice chest with enough ice to preserve the samples at 4° for chain-of-custody delivery to a California State Certified Laboratory.

The soil samples from the Tank cavity and Dispenser islands were delivered under chain-of custody to AEN laboratory and analyzed for concentrations of Total Petroleum Hydrocarbons as Gasoline and Volatile Aromatic Hydrocarbons, utilizing EPA methods 5030 and 8020, respectively. *no diesel ?*

The stockpiled soil from the UST removal and overexcavation efforts (525 cubic yards) were sampled on August 19, 1994. Eleven soil samples (Table 1, Worksheets in Appendix C and Lab results in Appendix E) were collected, one composite per 50 cubic yards of soil, this soil was analyzed by AEN laboratory for TPH,G and BTEX by EPA methods 5030 and 8020, respectively. In addition, TPH,D analysis was requested from USA Gasoline Corporation of the 4 soil pile samples SP3-1, SP3-2, SP3-3 and SP3-4 on September 1, 1994 (these results are also in Table 1 and Appendix E).

The excavation is secured by fencing, the excavated soil is placed on the asphalt paving of the station property and covered with visquine plastic.

#### LIMITED OVEREXCAVATION, SOIL SAMPLING ON SEPTEMBER 27, 1994

On September 21 and 22, 1994 Pacific Excavators (Joe Madison) overexcavated the UST tank cavity to abate and/or remove entirely contaminated soil from this site. This overexcavation was a continuation of the earlier excavation efforts and was to implement the USA Gasoline Corporation Workplan prepared by Western Geo-Engineers dated August 11, 1994.

On September 27, 1994 Western Geo-Engineers collected fourteen soil samples, four in native soil at the base of the tank cavity and ten in native soil from sidewalls of the tank cavity (see Field Notes, page 14). The samples were collected by Vern Bennett of Western Geo-Engineers under the direction of Ms. Eva Chu (Hazardous Materials Specialist), Alameda County Health Agency.

Soil samples were collected, prepared and stored per QA/QC procedures presented in the earlier section of this text.

The soil samples from the Tank cavity (see Worksheet on page 14) were delivered under chain-of custody to AEN laboratory and analyzed for concentrations of Total Petroleum Hydrocarbons as Gasoline and Volatile Aromatic Hydrocarbons, utilizing EPA methods 5030 and 8020, respectively. In addition selected samples (TC2-5, TC2-7 and TC2-8) had TPH, Diesel run; these samples were collected in the vicinity of the former Diesel UST.


The stockpiled soil from this overexcavation effort (250 cubic yards) were sampled on September 27, 1994. Five soil samples (Table 1 and Lab results in Appendix E) were collected, one composite per 50 cubic yards of soil. This soil was analyzed by AEN laboratory for TPH,G and BTEX by EPA methods 5030 and 8020, respectively. In addition, TPH,D analysis was run on the composite sample from SP4.

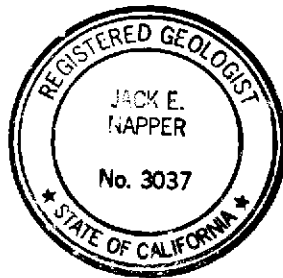
The analytical results, methods and depths for soil samples from the UST's removal and overexcavation efforts are tabulated in Table 1, Appendix F; their locations are depicted in Figures 3, 4 and 5.


The excavation is secured by fencing, the excavated soil is placed on the asphalt paving of the station property and covered with visquine plastic.

The services performed by Western Geo-Engineers, a corporation, under California Registered Geologist #3037 and/or Contractors License #513857, was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the State of California and the Oakland area. Our work and/or supervision of remediation and/or abatement operations, active or preliminary, at this site is in no way meant to imply that we are owners or operators of this site. Please note that known soil and/or ground water contamination must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

Sincerely,

  
Vern A. Bennett  
Project Geologist



  
Jack E. Napper  
Registered Geologist #3037

WEGE: TABLE 1

USA PETROLEUM CORPORATION  
 10700 MACARTHUR BLVD.,  
 OAKLAND, CALIFORNIA

SOIL SAMPLE LABORATORY RESULTS

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	DEPTH SAMPLED IN FEET	SAMPLING COMPANY	LAB	TPH,G ppm	TPH,D ppm	BENZENE ppm	TOLUENE ppm	ETHYL BENZENE ppm	XYLENE ppm	TTLIC LEAD ppm	STLC PPM	PNA's by M8270 ppm	VOL.ORGAN by 8240 ** ppm
P_L TRNCHPI-B	3.5	07/19/94	3.5	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	7			
P_L TRNCH	PI-2	07/19/94	3.5	WEGE	AEN	4500	<50	<1.0	6	60	440	4			
P_L TRNCH	PI-3	07/19/94	3.5	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	5			
P_L TRNCH	PI-4	07/19/94	4	WEGE	AEN	<0.2	<1.0	<.005	<.005	<.005	<.005	6			
P_L TRNCH	PI-5	07/19/94	3.5	WEGE	AEN	<1.0	<1.0	<.005	<.005	<.005	<.005	7			
TNK FIELD	TP1	07/19/94	12.5	WEGE	AEN		60	<.005	0.015	0.007	0.008			<0.2	
TNK FIELD	TP2	07/19/94	12.5	WEGE	AEN		230	<1.0	0.79	2.2	0.7			* 0.77	ND
TNK FIELD	TP3	07/19/94	13	WEGE	AEN	94		0.18	0.25	1	5.9	3			
TNK FIELD	TP4	07/19/94	13	WEGE	AEN	1400		1.9	3.5	12	150	4			
TNK FIELD	TP5	07/19/94	13	WEGE	AEN	300		<.5	0.74	4.8	20	3			ND
TNK FIELD	TP6	07/19/94	13	WEGE	AEN	0.7		<.005	<.005	0.006	<.005	3			
TNK FIELD	TP7	07/19/94	13	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005	3			
TNK CAVTY	TC-1	08/19/94	16	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	TC-2	08/19/94	16	WEGE	AEN	93		<0.01	0.29	0.63	3.1				
TNK CAVTY	TC-3	08/19/94	17.5	WEGE	AEN	2.4	1	0.008	0.02	0.02	0.11				
TNK CAVTY	TC-4	08/19/94	15.5	WEGE	AEN	0.7	2	<.005	<.005	<.005	<.005				
TNK CAVTY	TC-5	08/19/94	17	WEGE	AEN	190		0.17	0.38	0.99	7.9				
TNK CAVTY	TC-6	08/19/94	18	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	SM-1	08/18/94	19.5	WEGE	AEN	0.4		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-1	09/27/94	17	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-2	09/27/94	13	WEGE	AEN	13		0.06	0.019	0.026	<.005				
TNK CAVTY	TC2-3	09/27/94	16	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-4	09/27/94	13	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-5	09/27/94	12	WEGE	AEN	100	200	0.13	0.12	0.1	0.25				
TNK CAVTY	TC2-7	09/27/94	13	WEGE	AEN	6.3	37	<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-8	09/27/94	13	WEGE	AEN	<1.0	16	<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-9	09/27/94	19	WEGE	AEN	0.4		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-11	09/27/94	13	WEGE	AEN	2200		9.6	21	40	260				
TNK CAVTY	TC2-12	09/27/94	12	WEGE	AEN	130		0.33	0.29	0.66	7.9				
TNK CAVTY	TC2-13	09/27/94	20	WEGE	AEN	620		1.1	4.9	6.4	66				
TNK CAVTY	TC2-14	09/27/94	11	WEGE	AEN	92		0.096	0.1	0.17	1.7				
TNK CAVTY	TC2-15	09/27/94	17	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
TNK CAVTY	TC2-16	09/27/94	14	WEGE	AEN	<1.0		<.005	<.005	<.005	<.005				
DISP ISL	DI-1	08/19/94	3.5	WEGE	AEN	720		0.19	2	9	53				
DISP ISL	DI-2	08/19/94	3.5	WEGE	AEN	280		0.12	0.8	4.6	33				
DISP ISL	DI-3	08/19/94	3	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				

WEGE: TABLE 1

USA PETROLEUM CORPORATION  
10700 MACARTHUR BLVD.,  
OAKLAND, CALIFORNIA

SOIL SAMPLE LABORATORY RESULTS

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	DEPTH SAMPLED IN FEET	SAMPLING COMPANY	LAB	TPH,G ppm	TPH,D ppm	BENZENE ppm	TOLUENE ppm	ETHYL BENZENE ppm	XYLENE ppm	TTLC LEAD ppm	STLC LEAD PPM	PNA's by M8270 ppm	VOL.ORGAN by 8240 ** ppm
DISP ISL	DI-4	08/19/94	3	WEGE	AEN	590		0.7	2.5	13	81				
DISP ISL	DI-5	08/19/94	3.5	WEGE	AEN	570		0.1	1.5	2.7	17				
DISP ISL	DI-6	08/19/94	3.5	WEGE	AEN	1800		0.72	5.2	31	180				
PROD TRNC	PT2-0	08/19/94	9	WEGE	AEN	15		0.02	0.04	0.07	0.19				
SOIL PILESP1-1	A-D08/19/94		6'UP2' IN	WEGE	AEN	31		<.005	0.053	<.005	1.2				
SOIL PILESP1-2	A-D08/19/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
SOIL PILESP1-3	A-B08/19/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005				
SOIL PILESP2-1	A-D08/19/94		5'UP1.5IN	WEGE	AEN	22		<.01	0.029	<.01	0.075				
SOIL PILESP2-2	A-D08/19/94		5'UP1.5IN	WEGE	AEN	66		0.02	0.11	0.065	0.25				
SOIL PILESP2-3	A-D08/19/94		5'UP1.5IN	WEGE	AEN	51		<.01	0.07	<.01	0.32				
SOIL PILESP2-4	A-D08/19/94		5'UP1.5IN	WEGE	AEN	210		0.04	0.76	0.48	3.1				
SOIL PILESP3-1	A-D08/19/94		6'UP2' IN	WEGE	AEN	360	460	<.05	1.7	3.3	28				
SOIL PILESP3-2	A-D08/19/94		6'UP2' IN	WEGE	AEN	<40	750	<.01	<.01	<.01	<.04				
SOIL PILESP3-3	A-D08/19/94		6'UP2' IN	WEGE	AEN	<20	180	<.01	0.02	0.01	0.05				
SOIL PILESP3-4	A-D08/19/94		6'UP2' IN	WEGE	AEN	73	400	<.02	0.03	0.08	1.3				
SOIL PILESP4-1	A-D09/27/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005		0.2		
SOIL PILESP4-2	A-D09/27/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005		<0.1		
SOIL PILESP4-3	A-D09/27/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005		<0.1		
SOIL PILESP4-4	A-D09/27/94		6'UP2' IN	WEGE	AEN	<0.2		<.005	<.005	<.005	<.005		<0.1		
SOIL FILE SP5	A-D 09/27/94		6'UP2' IN	WEGE	AEN	0.4	92	<.005	<.005	<.005	<.005		<0.1		
SPIL COM1-2 &	1-208/19/94		6'UP2' IN	WEGE	AEN								0.3		
SPIL COM1-3 &	2-208/19/94		6'UP2' IN	WEGE	AEN								0.1		
SPIL COM2-3 &	2-408/19/94		6'UP2' IN	WEGE	AEN								0.1		
SPIL COM3-1 &	3-208/19/94		6'UP2' IN	WEGE	AEN								0.1		
SPIL COM3-3 &	3-408/19/94		6'UP2' IN	WEGE	AEN								0.3		

ppm= PARTS PER MILLION (mg/kg)

WEGE= WESTERN GEO-ENGINEERS

TPH= TOTAL FUEL HYDROCARBONS (GASOLINE)

AEN= AMERICAN ENVIRONMENTAL NETWORK (DHS #1172)

TTLC= TOTAL THRESHOLD LIMIT CONCENTRATION

\* PNA'S by M8270, note Naphthaline is only PNA above detection limit.

EPA METHOD 5030 USED FOR TPH,GASOLINE

BLANK &/or " ", sample not taken or analyzed.

EPA METHOD 3550 FOR TPH,DIESEL

EPA METHOD 8020 USED FOR (BTEX); BENZENE, TOLUENE, ETHYL BENZENE, XYLENE

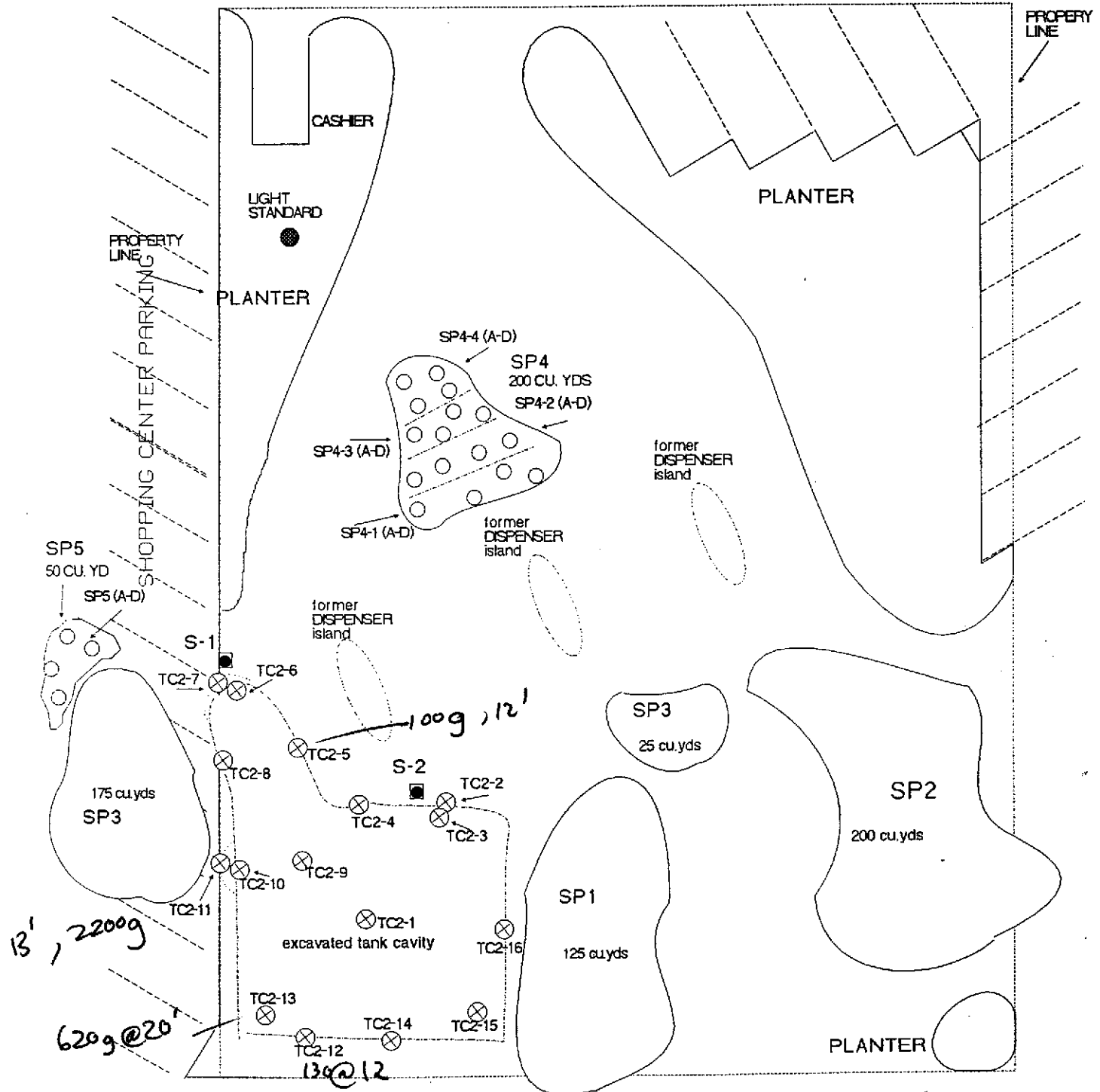
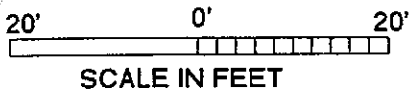
EPA METHOD 7420 USED FOR TTLC (LEAD)



USA GASOLINE CORPORATION  
 STATION #57  
 10700 MACARTHUR BLVD.,  
 OAKLAND, CA

**FIGURE 5**  
 9/27/94

**SOIL SAMPLING, TANK CAVITY,  
 STOCK-PILED SOIL  
 (2nd EPISODE OF TNK CAV. SMPL)**



SAMPLES TAKEN FROM BASE OF TANK CAVITY	TC2-1	TC2-2	TC2-8	SAMPLES TAKEN FROM SIDEWALLS OF TANK CAVITY	SIDEWALL UNDERCUT - SAMPLES TAKEN
	TC2-9	TC2-3	TC2-11		
	TC2-13	TC2-4	TC2-12		
	TC2-15	TC2-5	TC2-14		
	TC2-7	TC2-16		TC2-6 AND TC2-10 TAKEN BUT NOT ANALYZED	

WBGE: TABLE 1

USA PETROLEUM CORPORATION  
10700 MACARTHUR BLVD.,  
OAKLAND, CALIFORNIA

SOIL SAMPLE LABORATORY RESULTS

SAMPLE LOCATION	SAMPLE ID	DATE SAMPLED	DEPTH SAMPLED IN FEET	SAMPLING COMPANY	LAB	TPH,G ppm	TPH,D ppm	BENZENE ppm	TOLUENE ppm	ETHYL BENZENE ppm	XYLENE ppm	TTLIC LEAD ppm	STLC LEAD PPM	PNA's by M8270 ppm	VOL.ORGAN by 8240 ** ppm
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EPA METHOD 8270 FOR PNA'S

SAMPLE LOCATION & ID-SPIL COMP- SOIL FILE FILE OF PREVIOUS SAMPLES  
TO 100 CUBIC YARDS - Pb LEAD ANALYSIS

\*\* SOIL SAMPLES TP2 & TP5 ANALYZED ON 8/13/94, ANALYSIS WAS RAN TO IDENTIFY 'TARGET' COMPOUNDS OF VOLATILE ORGANICS FROM EPA M8240; QUESTIONS WERE RAISED FROM WBGE TO THE LAB BECAUSE OF HIGH DETECTION LIMITS FROM 8020 ANALYSIS ALL COMPOUNDS OF M8240 ARE 'NON-DETECT' FOR COMPOUNDS OTHER THAN VOC'S, M8020 WILL BE USED FOR LEVELS ON COMPOUNDS M8240 WAS WAS IDENTIFICATION PURPOSES ONLY-HOLDING TIME ON SAMPLES HAD EXPIRED, BENZENE & TOLUENE WERE NOT IDENTIFIED IN M8240, SUGESTING THAT B & T IN THE 8020 RESULTS WAS PROBABLY 'HYDROCARBON INTERFERENCE'.

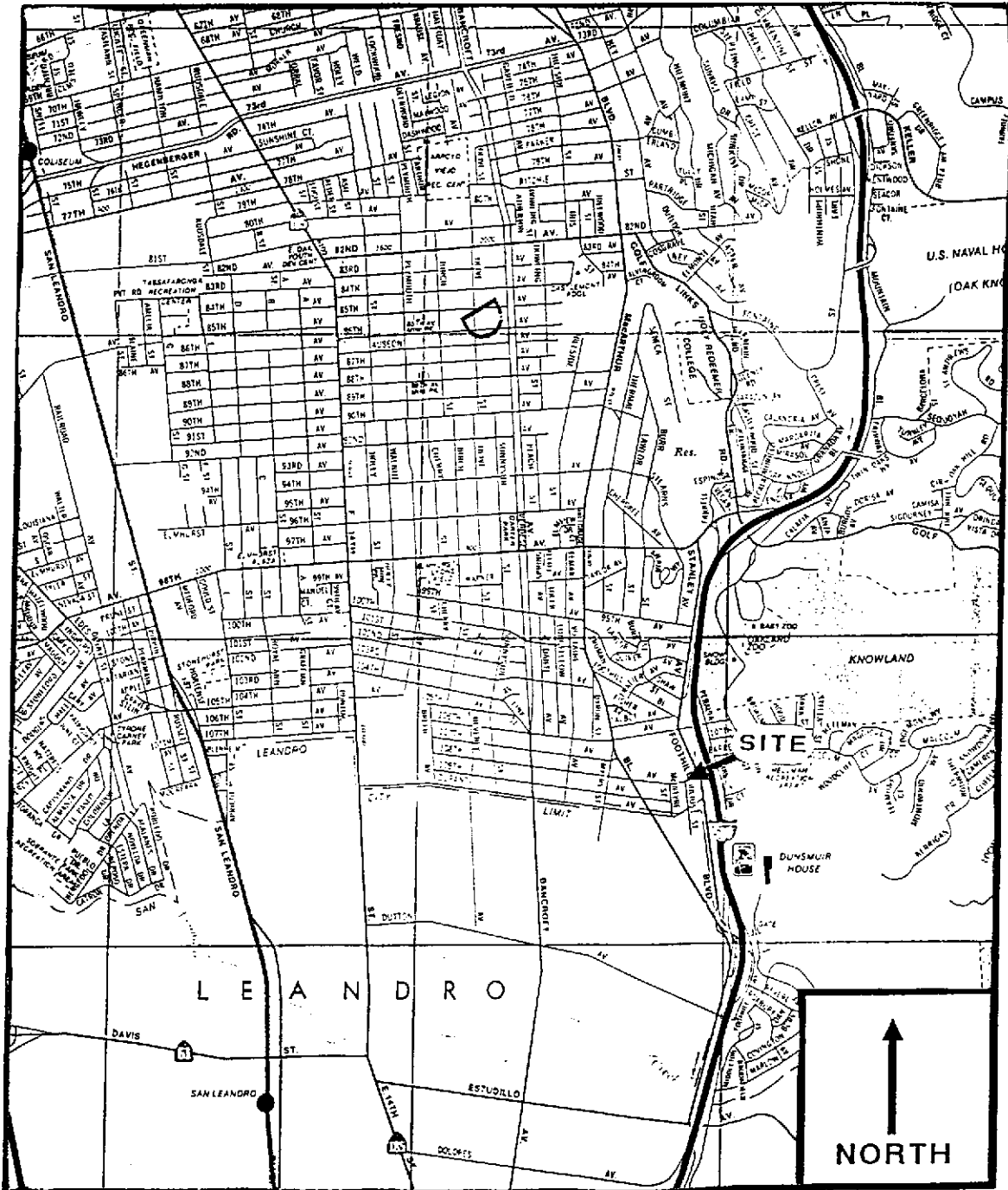


FIGURE 1. AAA, SITE LOCATION MAP

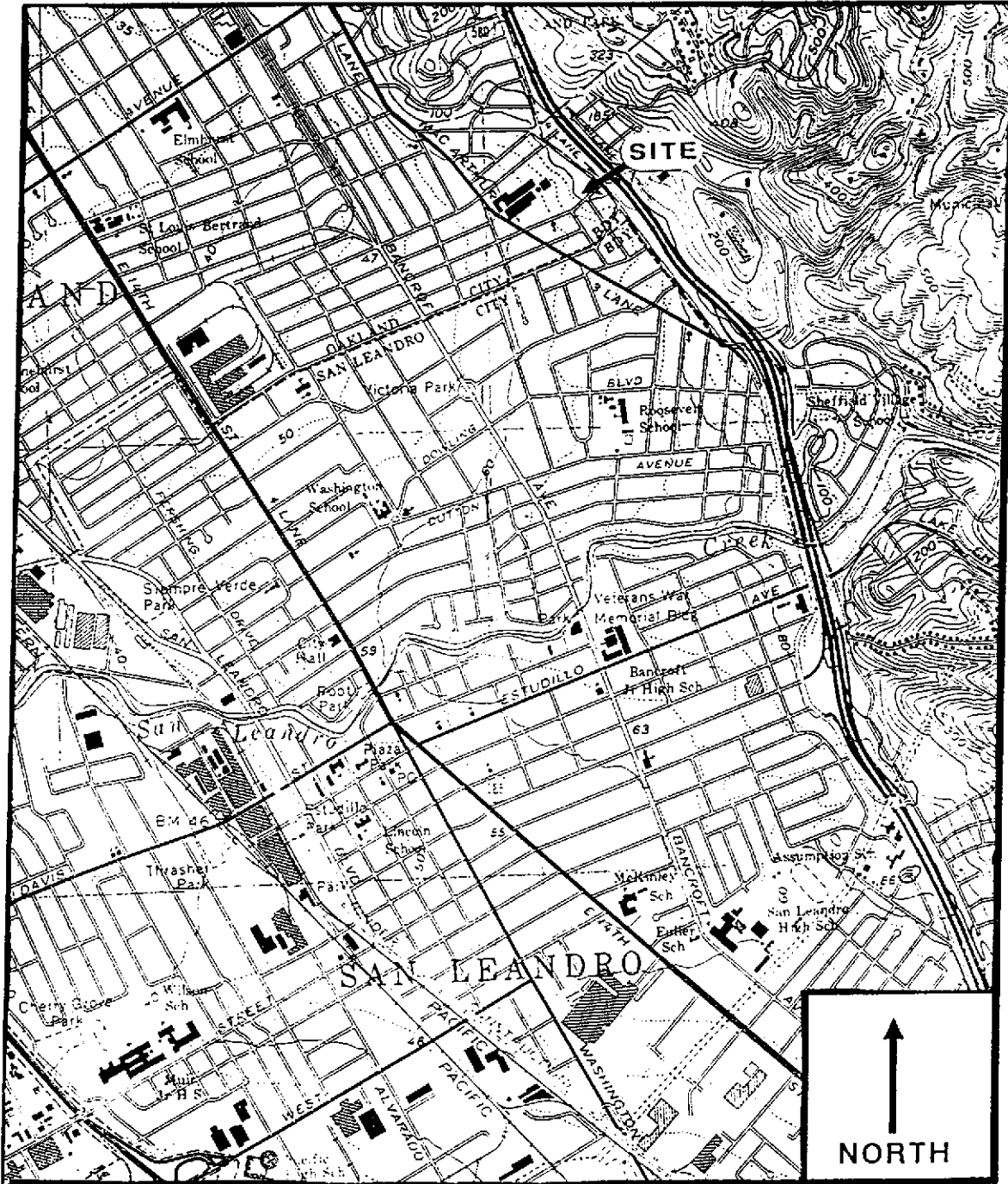
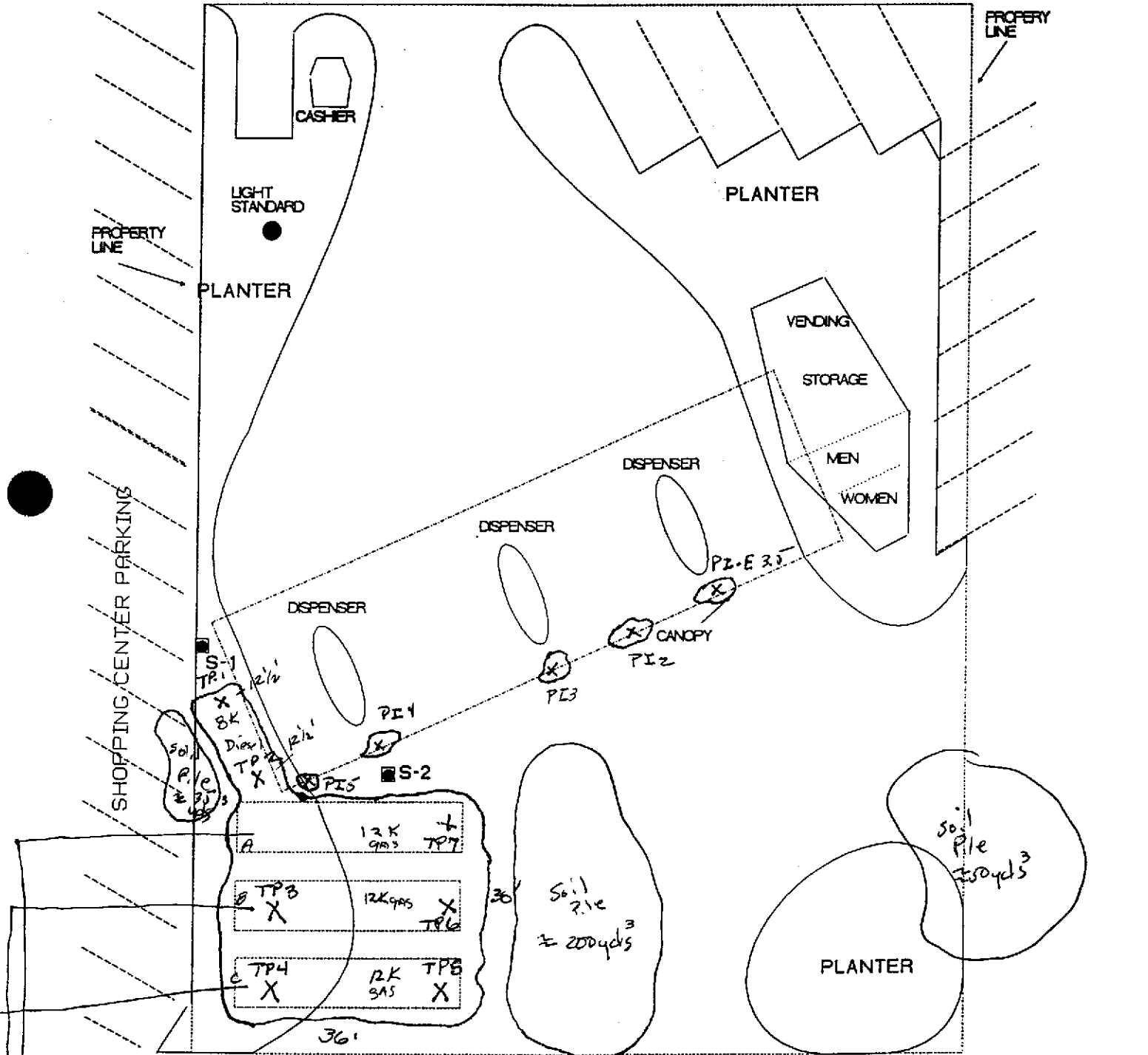
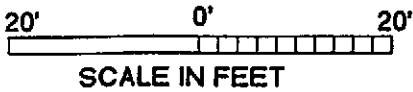


FIGURE 2. USGS TOPO SHEET SITE LOCATION MAP

USTA AND PRODUCT LINE  
SOIL SAMPLING

USA GASOLINE CORPORATION  
STATION #57  
10700 MACARTHUR BLVD.,  
OAKLAND, CA  
SITE BASE MAP

FIGURE 3  
7/19/94



A pulled, clean intact - no holes  
 pulled, 1/8" hole (fill side bottom) - leaking water  
 C pulled, no holes intact

used H+H LEL/O2 meter to pull tanks  
 perched water on site ~ 10% GW S1-16', S2-17'

Analysis direction  
 by Alameda Co.  
 Mrs. Eva Chu

TP1, TP2 TPA, D - BTRX B220 PNA'S  
 TP3-TP7 TPHG/BTEX PB  
 PI1-PI5

**WEGE** EASTERN  
**GEO-ENGINEERS**  
 1386 EAST BEAMER  
 WOODLAND, CALIFORNIA 95695  
 (916) 668-5300, FAX (916) 662-0273

proj.

SEC. 24; T 25; R 3W; MDB&M  
 JOB DESCRIPTION Tank Pull  
 + Product Line Soil Sampling  
 LOCATION USA Gasoline Corp. Sta. #57  
 ADDRESS 10700 MacArthur Blvd.  
 CITY Oakland STATE CA  
 COUNTY Alameda  
 CLIENT USA Gasoline Corp.  
 ADDRESS 30101 Agoura Court, Ste. 200  
 CITY Agoura STATE CA ZIP 91301  
 PHONE (818) 865-9200 FAX (818) 865-0092  
 CLIENT REP. Srikanth Dasappa  
 WORK PERFORMED BY Vern Bennett  
 DATE 7/19/97  
 LEAVE OFFICE 9:30 AM (1/2 hr off time)  
 ARRIVE SITE 11:00 AM  
 MILEAGE 90 mi.  
 LEAVE SITE 6:30  
 ARRIVE OFFICE mob to another site  
 MILEAGE mob to another site  
 #SOIL SAMP. 12  
 #WATER SAMP. N/A  
 LABORATORY AEN  
 WEGE TO PAY LAB (YES) (NO)

SITE MAP  
 see Figure 3  
 APPROX. SCALE

GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
Alameda Co	Ms. Eva Chu	1131 Harbor Bay Parkway	(510) 337-9335	(510) 337-2864
Environ. Health		Alameda, CA 94502	(510) 567-6700	(510) 337-9335

SITE ACTIVITY LOG	NOTES:
9:30 - 11:00	Mob to site
11:00 - 12:00	Recon site w/ Srikanth D, map excavation
12:00 - 12:30	Lunch w/ USA
12:30 - 1:30	H+H vacuum tanks Don Madison - contractor - Dry Ice Tanks
1:30 - 2:45	1100 Alameda Co - Eva Chu arrives - Sample pump Island
2:45 - 5:30	Pop owners - env. consultant - take duplicates of soil samples Pull Tanks / H+H test O <sub>2</sub> meter - Fire Dept. oversees pull 1 BK Diesel UST, 3 12K Gasoline UST Take soil samples of Tank Field by direction of Alameda Co. Rep. - Ms. Eva Chu Pulled middle Gas. UST 1/8" hole bottom of fill side All other USTs - appear tight intact some water in excavation <sup>2/10"</sup> Purged for recharge by H+H GW in MW's S <sub>1</sub> + S <sub>2</sub> @ 16-18' BGS - water in pit, perched
5:30 - 6:00	sample RES

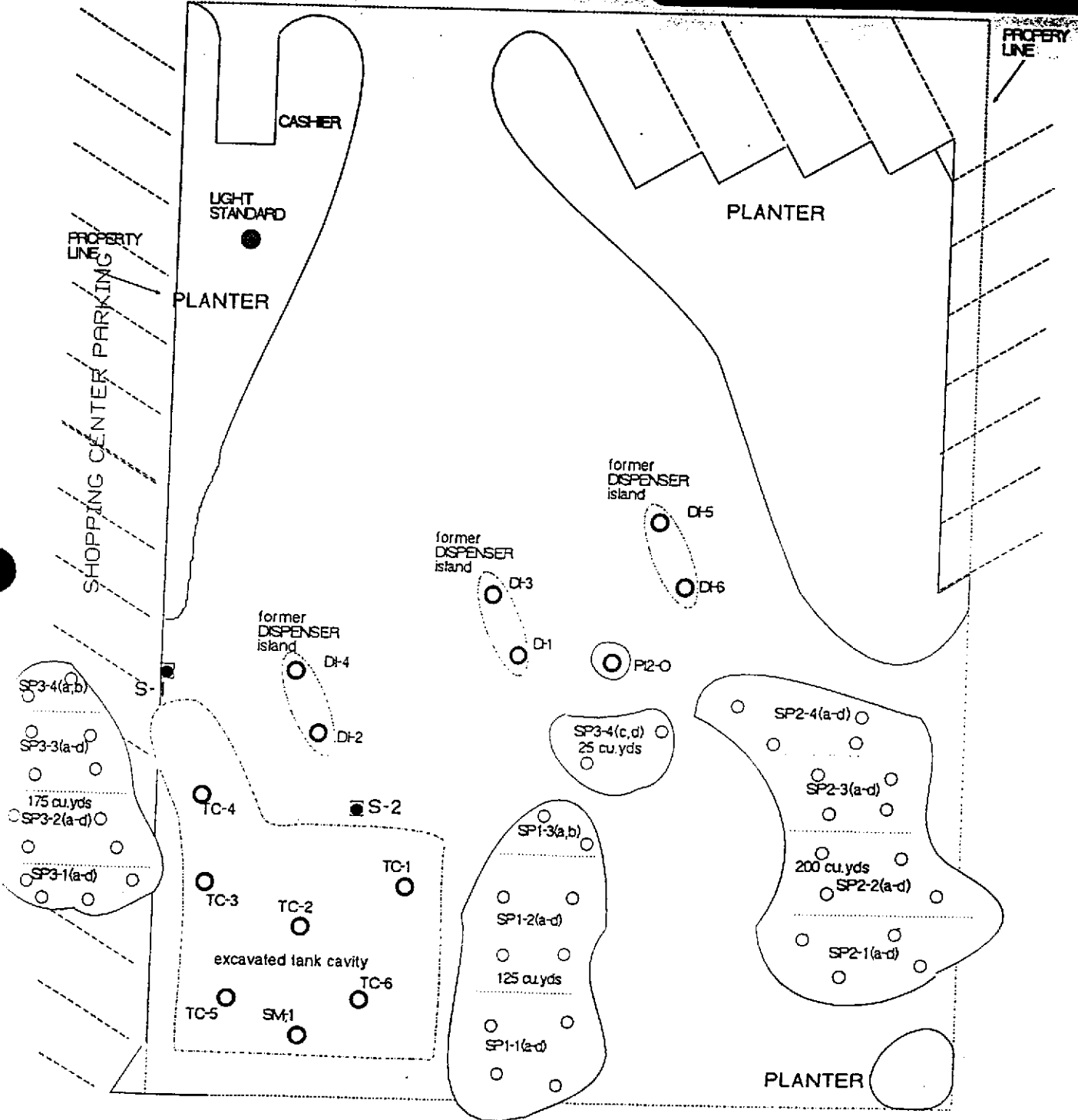
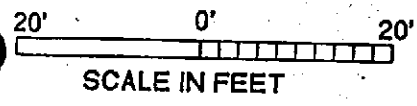
SAMPLE DATA						LABORATORY RESULTS			
ID	LOCATION	DEPTH	TYPE	TIME	TIP	see table 1 + soil results			
PI-1	E Island	3.5'	SILT	1:30	0PPM				
PI-2	mid of mid Is <sub>1</sub>	3.5'	SILT/S	1:45	300ppm				
PI-3	middle Is <sub>1</sub>	3.5'	SILT	2:15	0PPM				
PI-4	West Is <sub>1</sub>	4.0'	CLAYEN	2:35	0PPM				
PI-5	West of West Is <sub>1</sub>	3.5'	"	5:45	0PPM				
TP-1	Diesel Tank N	12.5'	Sdy SILT	3:15	0PPM				
TP-2	Diesel Tank S	12.5'	CLAYEN	3:25	0PPM				
TP-3	mid Gas Tank W	13'	CLAYSD	4:45	16ppm				
TP-4	S-Gas Tank W	13'	CLAYEN	4:50	360ppm				
TP-5	S-Gas Tank E	13'	SILT	5:00	126ppm				
TP-6	M-Gas Tank E	13'	SILT	5:10	0				
TP-7	N-Gas Tank E	13'	SILT/S	5:15	0				

Product Line Trench  
 Tank Field

USA GASOLINE CORPORATION  
STATION #57  
10700 MACARTHUR BLVD.,  
OAKLAND, CA

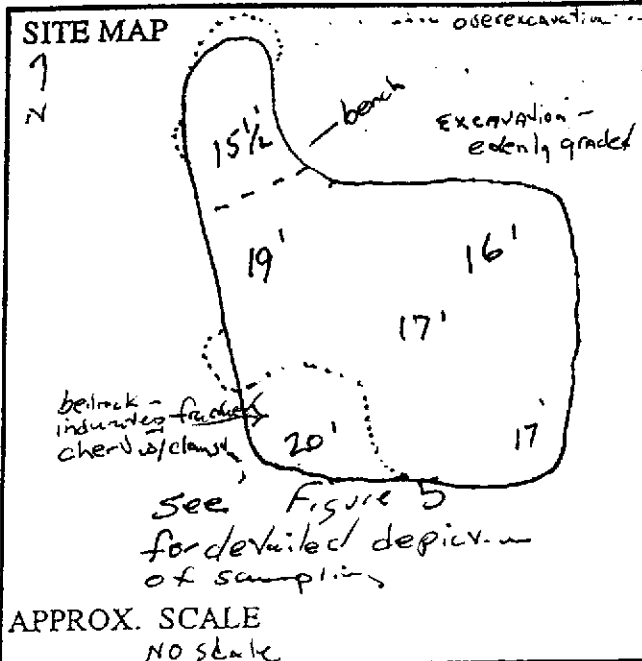
FIGURE 4  
8/19/94

SOIL SAMPLING, TANK CAVITY,  
DISPENSER ISLANDS & STOCK-  
PILED SOIL



**WEGE** WESTERN  
GEO-ENGINEERS

1386 EAST BEAMER  
WOODLAND, CALIFORNIA 95695  
(916) 668-5300, FAX (916) 662-0273



SEC. 24; T 25; R 3W; nd B&M  
JOB DESCRIPTION *overexcavation*

*Soil Sampling*  
LOCATION *USA Gasoline Corp, Site #517*  
ADDRESS *10200 MacArthur Blvd.*  
CITY *OAKLAND STATE CA*  
COUNTY *Alameda*  
CLIENT *USA Gasoline Corp*  
ADDRESS *30101 Agoura Court Ste 200*  
CITY *Agoura STATE CA ZIP 91301*  
PHONE *(818) 865-9200 FAX (818) 865-0092*  
CLIENT REP. *Se. Keith Dasappa*

WORK PERFORMED BY *Vern Bennett*  
DATE *9/27/94*  
LEAVE OFFICE *9:00 AM*  
ARRIVE SITE *11:00 AM*  
MILEAGE *90 mi*  
LEAVE SITE *5:45 PM*  
ARRIVE OFFICE *8:15 PM*  
MILEAGE *90 mi*  
#SOIL SAMP. *10 21*  
#WATER SAMP. *N/A*  
LABORATORY *AEN*  
WEGE TO PAY LAB (YES) (NO)

GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
<i>Alameda Co. Environ. Health</i>	<i>Ms. Eva Cho</i>	<i>1131 Harbor Bay Parkway Alameda, CA 94502</i>	<i>(510) 562-6200</i>	<i>(510) 337-9335</i>

SITE ACTIVITY LOG	NOTES:
<i>11:00 - 11:30</i>	<i>Recon site w/ Joe Madison - prepare to sample</i>
<i>11:30 - 11:45</i>	<i>Alameda County (Ms. Eva Cho) arrived, go over site and plans for sampling</i>
<i>11:45 - 2:30</i>	<i>sample under direction of IRA cho Tank cavity and sidewalls of overexcavation - Tank cavity was evenly overexcavation - all sidewalls - except NE wall of main cavity was taken back 1'-2', the base was excavated &amp; evenly graded as shown above &amp; 4 soil samples of base &amp; 10 samples of sidewalls were taken - minor overexcavation of sidewalls were done</i>
<i>2:30 - 2:45</i>	<i>Co. leaves</i>
<i>2:45 - 5:45</i>	<i>Secure site w/ Joe Madison - Joe leaves</i>
	<i>Sample soil pile ± 350 cubic yards</i>
	<i>725 cubic yards of soil generated from Tank Pull &amp; 2 overexc. episodes</i>

SAMPLE DATA						LABORATORY RESULTS			
ID	LOCATION	DEPTH	TYPE	TIME	TIP	<i>for soil repairs see Table 1</i>			
<i>TC2-1</i>	<i>Takcav base</i>	<i>17'</i>	<i>silt clay</i>	<i>11:45</i>	<i>0 PPM</i>				
<i>TC2-2</i>	<i>Takcav SW</i>	<i>13'</i>	<i>silt clay</i>	<i>12:00</i>	<i>25 PPM</i>				
<i>TC2-3</i>	<i>Takcav SW</i>	<i>16'</i>	<i>silt clay</i>	<i>12:30</i>	<i>0 PPM</i>				
<i>TC2-4</i>	<i>Takcav SW</i>	<i>13'</i>	<i>silt clay</i>	<i>12:45</i>	<i>0 PPM</i>				
<i>TC2-5</i>	<i>Takcav SW</i>	<i>12'</i>	<i>silt clay</i>	<i>1:00</i>	<i>7 PPM</i>				
<i>TC2-7</i>	<i>Takcav SW</i>	<i>13'</i>	<i>silt clay</i>	<i>1:25</i>	<i>20 PPM</i>				
<i>TC2-8</i>	<i>Takcav SW</i>	<i>13'</i>	<i>silt clay</i>	<i>1:30</i>	<i>6 PPM</i>				
<i>TC2-9</i>	<i>Takcav base</i>	<i>19'</i>	<i>silt clay</i>	<i>1:40</i>	<i>20 PPM</i>				
<i>TC2-11</i>	<i>Takcav SW</i>	<i>13'</i>	<i>silt clay</i>	<i>2:00</i>	<i>150 PPM</i>				
<i>TC2-12</i>	<i>Takcav SW</i>	<i>12'</i>	<i>silt clay</i>	<i>2:10</i>	<i>20 PPM</i>				
<i>TC2-13</i>	<i>Takcav base</i>	<i>20'</i>	<i>silt clay</i>	<i>2:15</i>	<i>40 PPM</i>				
<i>TC2-14</i>	<i>Takcav SW</i>	<i>11'</i>	<i>clay</i>	<i>2:30</i>	<i>100 PPM</i>				

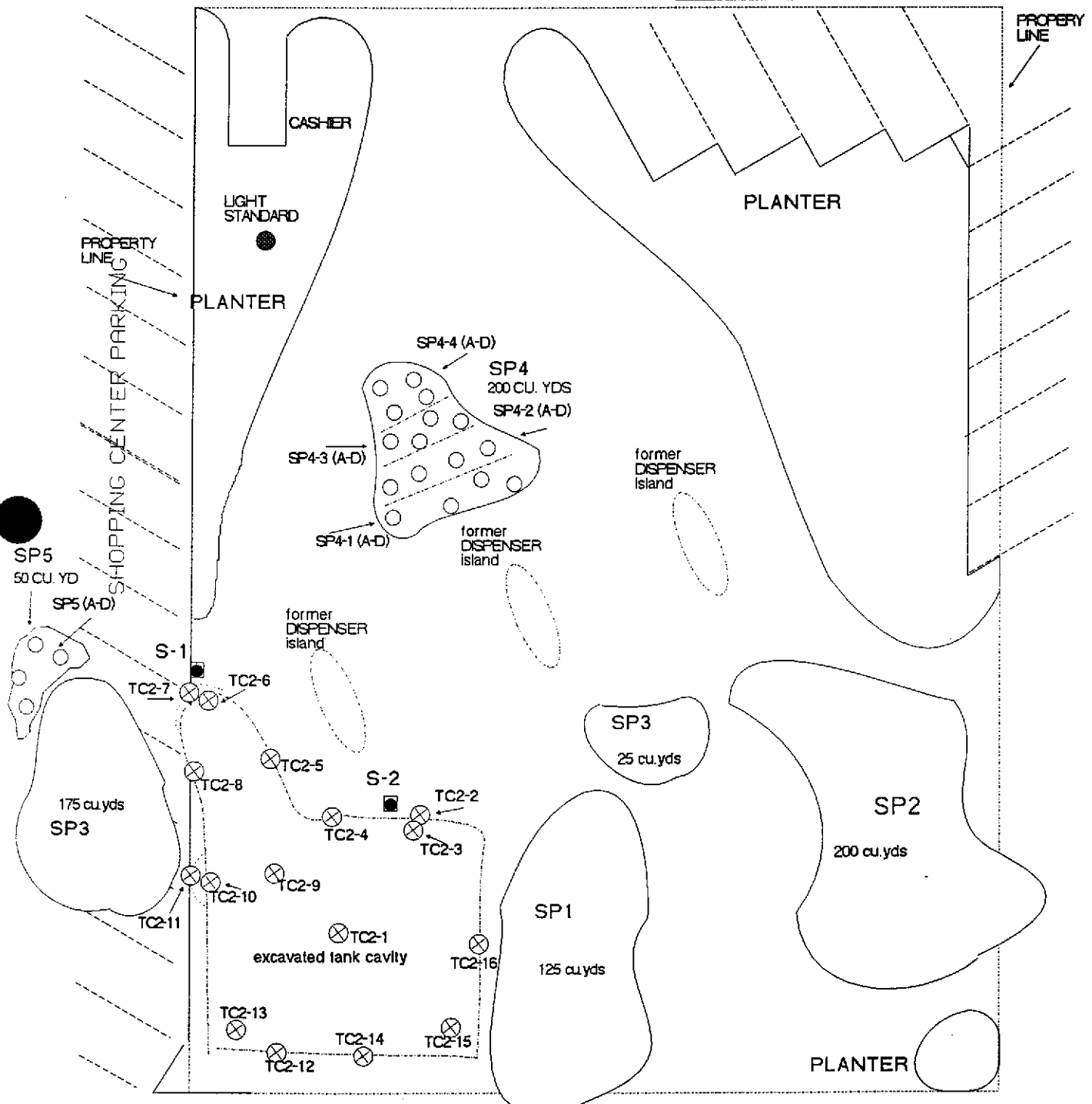
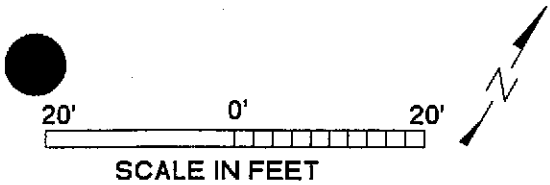




USA GASOLINE CORPORATION  
 STATION #57  
 10700 MACARTHUR BLVD.,  
 OAKLAND, CA

**FIGURE 5**  
 9/27/94

**SOIL SAMPLING, TANK CAVITY,  
 STOCK-PILED SOIL  
 (2nd EPISODE OF TNK CAV. SMPL)**



SAMPLES TAKEN FROM BASE OF TANK CAVITY	TC2-1	TC2-2	TC2-8	SAMPLES TAKEN FROM SIDEWALLS OF TANK CAVITY	SIDEWALL UNDERCUT - SAMPLES TAKEN
	TC2-9	TC2-3	TC2-11		
	TC2-13	TC2-4	TC2-12		
	TC2-15	TC2-5	TC2-14		
	TC2-7	TC2-16	TC2-15		
TC2-6 AND TC2-10 TAKEN BUT NOT ANALYZED					

**APPENDIX A**

**ALAMEDA COUNTY  
DEPT. OF ENVIRONMENTAL HEALTH**

**TANK REMOVAL NOTES**

**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200  
Oakland, CA 94621  
(415) 271-4320

## Hazardous Materials Division Inspection Form

Site ID# \_\_\_\_\_ Site Name USA Feb beam Today's Date 2/19/94

Site Address 10700 N. Alameda EPA ID# \_\_\_\_\_

City Oakland Zip 94605 Phone \_\_\_\_\_

MAX Amt. Stored > 500lbs/55g/200cf?  Y  N  
Hazardous Waste generated per month? \_\_\_\_\_

**Inspection Categories:**

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks General

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

**I.A. GENERATOR (Title 22)**

- |                   |  |         |
|-------------------|--|---------|
| Manifest          | <input type="checkbox"/> 1. Waste ID                 | 66471   |
|                   | <input type="checkbox"/> 2. EPA ID                   | 66472   |
|                   | <input type="checkbox"/> 3. > 90 days                | 66508   |
|                   | <input type="checkbox"/> 4. Label dates              | 66508   |
|                   | <input type="checkbox"/> 5. Biennial                 | 66493   |
| Manifest          | <input type="checkbox"/> 6. Records                  | 66492   |
|                   | <input type="checkbox"/> 7. Correct                  | 66484   |
|                   | <input type="checkbox"/> 8. Copy sent                | 66492   |
|                   | <input type="checkbox"/> 9. Exception                | 66484   |
|                   | <input type="checkbox"/> 10. Copies Rec'd            | 66492   |
| Prevention        | <input type="checkbox"/> 11. Treatment               | 66371   |
|                   | <input type="checkbox"/> 12. On-site Disp. (H.S.&C.) | 26189.5 |
|                   | <input type="checkbox"/> 13. Ex Haz. Waste           | 66570   |
| Prevention        | <input type="checkbox"/> 14. Communications          | 67121   |
|                   | <input type="checkbox"/> 15. Aisle Space             | 67124   |
|                   | <input type="checkbox"/> 16. Local Authority         | 67126   |
|                   | <input type="checkbox"/> 17. Maintenance             | 67120   |
|                   | <input type="checkbox"/> 18. Training                | 67105   |
| Contingency       | <input type="checkbox"/> 19. Prepared                | 67140   |
|                   | <input type="checkbox"/> 20. Name List               | 67141   |
|                   | <input type="checkbox"/> 21. Copies                  | 67141   |
|                   | <input type="checkbox"/> 22. Emg. Coord. Trng.       | 67144   |
| Containers, Tanks | <input type="checkbox"/> 23. Condition               | 67241   |
|                   | <input type="checkbox"/> 24. Compatibility           | 67242   |
|                   | <input type="checkbox"/> 25. Maintenance             | 67243   |
|                   | <input type="checkbox"/> 26. Inspection              | 67244   |
|                   | <input type="checkbox"/> 27. Buffer Zone             | 67246   |
|                   | <input type="checkbox"/> 28. Tank Inspection         | 67259   |
|                   | <input type="checkbox"/> 29. Containment             | 67245   |
|                   | <input type="checkbox"/> 30. Safe Storage            | 67261   |
|                   | <input type="checkbox"/> 31. Freeboard               | 67257   |

**Comments:**

*[Handwritten notes in the comments section, including "Tanks to be inspected with next inspection" and "Apply for permit for storage of hazardous materials"]*

**I.B. TRANSPORTER (Title 22)**

- |          |  |       |
|----------|--|-------|
| Manifest | <input type="checkbox"/> 32. Applic./Insurance     | 66428 |
|          | <input type="checkbox"/> 33. Comp. Cert./CHP Insp. | 66448 |
|          | <input type="checkbox"/> 34. Containers            | 66465 |
| Manifest | <input type="checkbox"/> 35. Vehicles              | 66465 |
|          | <input type="checkbox"/> 36. EPA ID #s             | 66531 |
|          | <input type="checkbox"/> 37. Correct               | 66541 |
|          | <input type="checkbox"/> 38. HW Delivery           | 66543 |
|          | <input type="checkbox"/> 39. Records               | 66544 |
| Cont's   | <input type="checkbox"/> 40. Name/ Covers          | 66545 |
|          | <input type="checkbox"/> 41. Recyclables           | 66800 |

Contact: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Inspector: [Signature]

Signature: \_\_\_\_\_

# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200  
Oakland, CA 94621  
(415) 271-4320

## Hazardous Materials Division Inspection Form

Site ID# \_\_\_\_\_ Site Name USA Dry Clean Today's Date 2/19/94

Site Address 15700 N. Bayview EPA ID# \_\_\_\_\_

City San Leandro Zip 94605 Phone \_\_\_\_\_

MAX Amt. Stored > 500lbs/55g/200cf?  Y  N  
Hazardous Waste generated per month? \_\_\_\_\_

**Inspection Categories:**

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- II. Business Plans, Acute Hazardous Materials
- III. Underground Tanks

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

**I.A. GENERATOR (Title 22)**

- |                   |  |         |
|-------------------|--|---------|
| Manifest          | <input type="checkbox"/> 1. Waste ID                 | * 66471 |
|                   | <input type="checkbox"/> 2. EPA ID                   | 66472   |
|                   | <input type="checkbox"/> 3. > 90 days                | 66508   |
|                   | <input type="checkbox"/> 4. Label dates              | 66508   |
|                   | <input type="checkbox"/> 5. Biennial                 | 66493   |
| Manifest          | <input type="checkbox"/> 6. Records                  | 66492   |
|                   | <input type="checkbox"/> 7. Correct                  | 66484   |
|                   | <input type="checkbox"/> 8. Copy sent                | 66492   |
|                   | <input type="checkbox"/> 9. Exception                | 66484   |
|                   | <input type="checkbox"/> 10. Copies Rec'd            | 66492   |
| M.C.              | <input type="checkbox"/> 11. Treatment               | 66371   |
|                   | <input type="checkbox"/> 12. On-site Disp. (H.S.&C.) | 26189.5 |
|                   | <input type="checkbox"/> 13. Ex Haz. Waste           | 66570   |
| Prevention        | <input type="checkbox"/> 14. Communications          | 67121   |
|                   | <input type="checkbox"/> 15. Alse Space              | 67124   |
|                   | <input type="checkbox"/> 16. Local Authority         | 67126   |
|                   | <input type="checkbox"/> 17. Maintenance             | 67120   |
|                   | <input type="checkbox"/> 18. Training                | 67105   |
| Cont'n. Agency    | <input type="checkbox"/> 19. Prepared                | 67140   |
|                   | <input type="checkbox"/> 20. Name List               | 67141   |
|                   | <input type="checkbox"/> 21. Copies                  | 67141   |
|                   | <input type="checkbox"/> 22. Emg. Coord. Trng.       | 67144   |
| Containers, Tanks | <input type="checkbox"/> 23. Condition               | 67241   |
|                   | <input type="checkbox"/> 24. Compatibility           | 67242   |
|                   | <input type="checkbox"/> 25. Maintenance             | 67243   |
|                   | <input type="checkbox"/> 26. Inspection              | 67244   |
|                   | <input type="checkbox"/> 27. Buffer Zone             | 67246   |
|                   | <input type="checkbox"/> 28. Tank Inspection         | 67259   |
|                   | <input type="checkbox"/> 29. Containment             | 67245   |
|                   | <input type="checkbox"/> 30. Safe Storage            | 67261   |
|                   | <input type="checkbox"/> 31. Freeboard               | 67257   |

**Comments:**

*[Handwritten notes and signatures in the comments section]*

**I.B. TRANSPORTER (Title 22)**

- |          |  |       |
|----------|--|-------|
| Manifest | <input type="checkbox"/> 32. Applic./Insurance     | 66428 |
|          | <input type="checkbox"/> 33. Comp. Cert./CHP Insp. | 66448 |
|          | <input type="checkbox"/> 34. Containers            | 66465 |
| Manifest | <input type="checkbox"/> 35. Vehicles              | 66465 |
|          | <input type="checkbox"/> 36. EPA ID #s             | 66531 |
|          | <input type="checkbox"/> 37. Correct               | 66541 |
|          | <input type="checkbox"/> 38. HW Delivery           | 66543 |
|          | <input type="checkbox"/> 39. Records               | 66544 |
| Cont'n's | <input type="checkbox"/> 40. Name/ Covers          | 66545 |
|          | <input type="checkbox"/> 41. Recyclables           | 66800 |

Contact: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Inspector: \_\_\_\_\_

Signature: \_\_\_\_\_

# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200  
Oakland, CA 94621  
(415) 271-4320

## Hazardous Materials Division Inspection Form

Site ID# \_\_\_\_\_ Site Name W.A. Johnson Today's Date 7/18/84  
 Site Address 2000 ... EPA ID# \_\_\_\_\_  
 City San Francisco Zip 94115 Phone \_\_\_\_\_

MAX Amt. Stored > 500lbs/55g/200cf?  Y  N  
 Hazardous Waste generated per month? \_\_\_\_\_

- Inspection Categories:**
- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
  - II. Business Plans, Acute Hazardous Materials
  - III. Underground Tanks

The marked items represent violations of the Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>I.A. GENERATOR (Title 22)</b>   |                                     |
| <input type="checkbox"/>           | 1. Waste ID # 66471                 |
| <input type="checkbox"/>           | 2. EPA ID 66472                     |
| <input type="checkbox"/>           | 3. > 90 days 66508                  |
| <input type="checkbox"/>           | 4. Label dates 66508                |
| <input type="checkbox"/>           | 5. Biennial 66493                   |
| <b>Manifest</b>                    |                                     |
| <input type="checkbox"/>           | 6. Records 66492                    |
| <input type="checkbox"/>           | 7. Correct 66484                    |
| <input type="checkbox"/>           | 8. Copy sent 66492                  |
| <input type="checkbox"/>           | 9. Exception 66484                  |
| <input type="checkbox"/>           | 10. Copies Rec'd 66492              |
| <input type="checkbox"/>           | 11. Treatment 66371                 |
| <input type="checkbox"/>           | 12. On-site Disp. (H.S.&C.) 26189.5 |
| <input type="checkbox"/>           | 13. Ex Haz. Waste 66570             |
| <b>Prevention</b>                  |                                     |
| <input type="checkbox"/>           | 14. Communications 67121            |
| <input type="checkbox"/>           | 15. Aisle Space 67124               |
| <input type="checkbox"/>           | 16. Local Authority 67126           |
| <input type="checkbox"/>           | 17. Maintenance 67120               |
| <input type="checkbox"/>           | 18. Training 67105                  |
| <b>Contin. gency</b>               |                                     |
| <input type="checkbox"/>           | 19. Prepared 67140                  |
| <input type="checkbox"/>           | 20. Name List 67141                 |
| <input type="checkbox"/>           | 21. Copies 67141                    |
| <input type="checkbox"/>           | 22. Emg. Coord. Tmg. 67144          |
| <b>Containers, Tanks</b>           |                                     |
| <input type="checkbox"/>           | 23. Condition 67241                 |
| <input type="checkbox"/>           | 24. Compatibility 67242             |
| <input type="checkbox"/>           | 25. Maintenance 67243               |
| <input type="checkbox"/>           | 26. Inspection 67244                |
| <input type="checkbox"/>           | 27. Buffer Zone 67246               |
| <input type="checkbox"/>           | 28. Tank Inspection 67259           |
| <input type="checkbox"/>           | 29. Containment 67245               |
| <input type="checkbox"/>           | 30. Safe Storage 67261              |
| <input type="checkbox"/>           | 31. Freeboard 67257                 |
| <b>I.B. TRANSPORTER (Title 22)</b> |                                     |
| <input type="checkbox"/>           | 32. Applic./Insurance 66428         |
| <input type="checkbox"/>           | 33. Comp. Cert./CHP Insp. 66448     |
| <input type="checkbox"/>           | 34. Containers 66465                |
| <b>Manifest</b>                    |                                     |
| <input type="checkbox"/>           | 35. Vehicles 66465                  |
| <input type="checkbox"/>           | 36. EPA ID #s 66531                 |
| <input type="checkbox"/>           | 37. Correct 66541                   |
| <input type="checkbox"/>           | 38. HW Delivery 66543               |
| <input type="checkbox"/>           | 39. Records 66544                   |
| <b>Cont'rs</b>                     |                                     |
| <input type="checkbox"/>           | 40. Name/ Covers 66545              |
| <input type="checkbox"/>           | 41. Recyclables 66800               |

**Comments:**

*[Handwritten notes and signatures in the comments section]*

Contact: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Signature: \_\_\_\_\_

Inspector: [Signature]  
 Signature: \_\_\_\_\_

B1

white -env.health  
yellow -facility  
pink -files

# ALAMEDA COUNTY, DEPARTMENT OF ENVIRONMENTAL HEALTH

80 Swan Way, #200  
Oakland, CA 94621  
(415) 271-4320

## Hazardous Materials Inspection Form

II, III

Site ID # \_\_\_\_\_ Site Name USA Pad-VUM Today's Date 9/27/94

### II.A BUSINESS PLANS (Title 19)

- \_\_\_ 1. Immediate Reporting 2703
- \_\_\_ 2. Bus. Plan Stds. 25503(b)
- \_\_\_ 3. RR Cars > 30 days 25503.7
- \_\_\_ 4. Inventory Information 25504(a)
- \_\_\_ 5. Inventory Complete 2730
- \_\_\_ 6. Emergency Response 25504(b)
- \_\_\_ 7. Training 25504(c)
- \_\_\_ 8. Deficiency 25505(a)
- \_\_\_ 9. Modification 25505(b)

Site Address 15700 MacArthur  
City Oakland Zip 94 Phone \_\_\_\_\_

\_\_\_ MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

### Inspection Categories:

- \_\_\_ I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- \_\_\_ II. Business Plans, Acute Hazardous Materials
- \_\_\_ III. Underground Tanks overexposed

\* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

### II.B ACUTELY HAZ. MATLS

- \_\_\_ 10. Registration Form Filed 25533(a)
- \_\_\_ 11. Form Complete 25533(b)
- \_\_\_ 12. RMPP Contents 25534(c)
- \_\_\_ 13. Implement Sch. Req'd? (Y/N)
- \_\_\_ 14. OffSite Conseq. Assess. 25524(c)
- \_\_\_ 15. Probable Risk Assessment 25534(d)
- \_\_\_ 16. Persons Responsible 25534(g)
- \_\_\_ 17. Certification 25534(f)
- \_\_\_ 18. Exemption Request? (Y/N) 25536(b)
- \_\_\_ 19. Trade Secret Requested? 25538

### III. UNDERGROUND TANKS (Title 23)

- \_\_\_ 1. Permit Application 25284 (H&S)
- \_\_\_ 2. Pipeline Leak Detection 25292 (H&S)
- \_\_\_ 3. Records Maintenance 2712
- \_\_\_ 4. Release Report 2651
- \_\_\_ 5. Closure Plans 2670

- \_\_\_ 6. Method
  - 1) Monthly Test
  - 2) Daily Vadose
  - Semi-annual groundwater
  - One time soil
  - 3) Daily Vadose
  - One time soil
  - Annual tank test
  - 4) Monthly Gndwater
  - One time soil
  - 5) Daily Inventory
  - Annual tank testing
  - Cont pipe leak det
  - Vadose/gndwater mon.
  - 6) Daily Inventory
  - Annual tank testing
  - Cont pipe leak det
  - 7) Weekly Tank Gauge
  - Annual tank teting
  - 8) Annual Tank Testing
  - Daily Inventory
  - 9) Other \_\_\_\_\_

- \_\_\_ 7. Precis Tank Test 2643
- Date: \_\_\_\_\_
- \_\_\_ 8. Inventory Rec. 2644
- \_\_\_ 9. Soil Testing . 2646
- \_\_\_ 10. Ground Water. 2647

- \_\_\_ 11. Monitor Plan 2632
- \_\_\_ 12. Access. Secure 2634
- \_\_\_ 13. Plans Submit 2711
- Date: \_\_\_\_\_
- \_\_\_ 14. As Built 2635
- Date: \_\_\_\_\_

**Comments:**

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36' →

① 1" diam 17' diameter steel tank located 15' from curb

② soil well at 13.5' depth. No odor or staining

③ soil well 11' deep at 16' - no odor or staining

④ soil well at 13' brown silty clay - no odor

⑤ soil well at 12' stained - stained odor

⑥ 1" diam well at 17' stained - strong diesel odor

⑦ soil well 2' in front of ① at 12' stained & stained odor

⑧ soil well at 12' stained. st. odor

Rev 6/88

Contact: \_\_\_\_\_

Title: Asst. Mgr.

Signature: [Signature]

Inspector: E. Smith

Signature: [Signature]

II, III





**APPENDIX B**

**AMERICAN ENVIRONMENTAL NETWORK  
(AEN)**

**TANK REMOVAL AND PRODUCT LINE  
SOIL RESULTS  
7/19/94**

**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

REPORT DATE: 08/23/94

DATE(S) SAMPLED: 07/19/94

DATE RECEIVED: 07/21/94

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

AEN WORK ORDER: 9407233

P.O. NUMBER: USA #57

### PROJECT SUMMARY:

On July 21, 1994, this laboratory received 12 soil sample(s).

Client requested samples be analyzed for inorganic and organic parameters. Per client request, additional organic analysis was added to 2 samples. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

Revision of report dated 08/19/94

## WESTERN GEO-ENGINEERING

SAMPLE ID: PI-E 3.5  
 AEN LAB NO: 9407233-01  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/27/94
Toluene	108-88-3	ND	5	ug/kg	07/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	07/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	07/27/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	ND	1	mg/kg	07/29/94
Lead	EPA 7420	7 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: PI-2  
 AEN LAB NO: 9407233-02  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	1000	ug/kg	07/28/94
Toluene	108-88-3	6,000 *	200	ug/kg	07/28/94
Ethylbenzene	100-41-4	60,000 *	200	ug/kg	07/28/94
Xylenes, Total	1330-20-7	440,000 *	200	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	4,500 *	8	mg/kg	07/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	ND	50	mg/kg	07/29/94
Lead	EPA 7420	4 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

Reporting limits elevated for Benzene by EPA Method 8020 and Diesel by EPA Method 3550 due to hydrocarbon interference.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: PI-3  
 AEN LAB NO: 9407233-03  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/27/94
Toluene	108-88-3	ND	5	ug/kg	07/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	07/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	07/27/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	ND	1	mg/kg	07/29/94
Lead	EPA 7420	5 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: PI-4  
 AEN LAB NO: 9407233-04  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/27/94
Toluene	108-88-3	ND	5	ug/kg	07/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	07/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	07/27/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	ND	1	mg/kg	07/29/94
Lead	EPA 7420	6 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: PI-5  
 AEN LAB NO: 9407233-05  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/28/94
Toluene	108-88-3	ND	5	ug/kg	07/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	07/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	1	mg/kg	07/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	ND	1	mg/kg	07/29/94
Lead	EPA 7420	7 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

Reporting limit elevated for Gasoline by EPA Method 5030 due to matrix effects.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP1  
 AEN LAB NO: 9407233-06  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/29/94
Toluene	108-88-3	15 *	5	ug/kg	07/29/94
Ethylbenzene	100-41-4	7 *	5	ug/kg	07/29/94
Xylenes, Total	1330-20-7	8 *	5	ug/kg	07/29/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	60 *	1	mg/kg	07/29/94
#Extraction for PNAs	EPA 3550	-		Extrn Date	07/27/94
PNAs by EPA 8270	EPA 8270				
Acenaphthene	83-32-9	ND	200	ug/kg	07/27/94
Acenaphthylene	208-96-8	ND	200	ug/kg	07/27/94
Anthracene	120-12-7	ND	200	ug/kg	07/27/94
Benzo(a)anthracene	56-55-3	ND	200	ug/kg	07/27/94
Benzo(b)fluoranthene	205-99-2	ND	200	ug/kg	07/27/94
Benzo(k)fluoranthene	207-08-9	ND	200	ug/kg	07/27/94
Benzo(g,h,i)perylene	191-24-2	ND	200	ug/kg	07/27/94
Benzo(a)pyrene	50-32-8	ND	200	ug/kg	07/27/94
Chrysene	218-01-9	ND	200	ug/kg	07/27/94
Dibenzo(a,h)anthracene	53-70-3	ND	200	ug/kg	07/27/94
Fluoranthene	206-44-0	ND	200	ug/kg	07/27/94
Fluorene	86-73-7	ND	200	ug/kg	07/27/94
Indeno(1,2,3-cd)pyrene	193-39-5	ND	200	ug/kg	07/27/94
Naphthalene	91-20-3	ND	200	ug/kg	07/27/94
Phenanthrene	85-01-8	ND	200	ug/kg	07/27/94
Pyrene	129-00-0	ND	200	ug/kg	07/27/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit



## WESTERN GEO-ENGINEERING

SAMPLE ID: TP2  
 AEN LAB NO: 9407233-07  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	1000	ug/kg	07/28/94
Toluene	108-88-3	790 *	200	ug/kg	07/28/94
Ethylbenzene	100-41-4	2,200 *	200	ug/kg	07/28/94
Xylenes, Total	1330-20-7	700 *	200	ug/kg	07/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	07/27/94
TPH as Diesel	GC-FID	230 *	1	mg/kg	07/29/94
VOCs in Soil by 8240	EPA 8240				
Acetone	67-64-1	ND	500	ug/kg	08/11/94
Benzene	71-43-2	ND	30	ug/kg	08/11/94
Bromodichloromethane	75-27-4	ND	30	ug/kg	08/11/94
Bromoform	75-25-2	ND	30	ug/kg	08/11/94
Bromomethane	74-83-9	ND	50	ug/kg	08/11/94
2-Butanone	78-93-3	ND	500	ug/kg	08/11/94
Carbon Disulfide	75-15-0	ND	50	ug/kg	08/11/94
Carbon Tetrachloride	56-23-5	ND	30	ug/kg	08/11/94
Chlorobenzene	108-90-7	ND	30	ug/kg	08/11/94
Chloroethane	75-00-3	ND	50	ug/kg	08/11/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	50	ug/kg	08/11/94
Chloroform	67-66-3	ND	30	ug/kg	08/11/94
Chloromethane	74-87-3	ND	50	ug/kg	08/11/94
Dibromochloromethane	124-48-1	ND	30	ug/kg	08/11/94
1,1-Dichloroethane	75-43-3	ND	30	ug/kg	08/11/94
1,2-Dichloroethane	107-06-2	ND	30	ug/kg	08/11/94
1,1-Dichloroethene	75-35-4	ND	30	ug/kg	08/11/94
cis-1,2-Dichloroethene	156-59-2	ND	30	ug/kg	08/11/94
trans-1,2-Dichloroethene	156-60-5	ND	30	ug/kg	08/11/94
1,2-Dichloropropane	78-87-5	ND	30	ug/kg	08/11/94
cis-1,3-Dichloropropene	10061-01-5	ND	30	ug/kg	08/11/94
trans-1,3-Dichloropropene	10061-02-6	ND	30	ug/kg	08/11/94
Ethylbenzene	100-41-4	460 *	10	ug/kg	08/11/94
2-Hexanone	591-78-6	ND	300	ug/kg	08/11/94
Methylene Chloride	75-09-2	ND	30	ug/kg	08/11/94
4-Methyl-2-pentanone	108-10-1	ND	300	ug/kg	08/11/94
Styrene	100-42-5	ND	30	ug/kg	08/11/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	30	ug/kg	08/11/94
Tetrachloroethene	127-18-4	ND	30	ug/kg	08/11/94
Toluene	108-88-3	ND	30	ug/kg	08/11/94
1,1,1-Trichloroethane	71-55-6	ND	30	ug/kg	08/11/94

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP2  
 AEN LAB NO: 9407233-07  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
1,1,2-Trichloroethane	79-00-5	ND	30	ug/kg	08/11/94
Trichloroethene	79-01-6	ND	30	ug/kg	08/11/94
Vinyl Acetate	108-05-4	ND	300	ug/kg	08/11/94
Vinyl Chloride	75-01-4	ND	50	ug/kg	08/11/94
Xylenes Total	1330-20-7	220 *	20	ug/kg	08/11/94
#Extraction for PNAs	EPA 3550	-		Extrn Date	07/27/94
PNAs by EPA 8270	EPA 8270				
Acenaphthene	83-32-9	ND	200	ug/kg	07/27/94
Acenaphthylene	208-96-8	ND	200	ug/kg	07/27/94
Anthracene	120-12-7	ND	200	ug/kg	07/27/94
Benzo(a)anthracene	56-55-3	ND	200	ug/kg	07/27/94
Benzo(b)fluoranthene	205-99-2	ND	200	ug/kg	07/27/94
Benzo(k)fluoranthene	207-08-9	ND	200	ug/kg	07/27/94
Benzo(g,h,i)perylene	191-24-2	ND	200	ug/kg	07/27/94
Benzo(a)pyrene	50-32-8	ND	200	ug/kg	07/27/94
Chrysene	218-01-9	ND	200	ug/kg	07/27/94
Dibenzo(a,h)anthracene	53-70-3	ND	200	ug/kg	07/27/94
Fluoranthene	206-44-0	ND	200	ug/kg	07/27/94
Fluorene	86-73-7	ND	200	ug/kg	07/27/94
Indeno(1,2,3-cd)pyrene	193-39-5	ND	200	ug/kg	07/27/94
Naphthalene	91-20-3	770 *	200	ug/kg	07/27/94
Phenanthrene	85-01-8	ND	200	ug/kg	07/27/94
Pyrene	129-00-0	ND	200	ug/kg	07/27/94

Reporting limit elevated for Benzene by EPA Method 8020 due to hydrocarbon interference. Reporting limits for 8240 compounds = MDL x Dilution factor.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP3  
 AEN LAB NO: 9407233-08  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	180 *	5	ug/kg	07/28/94
Toluene	108-88-3	250 *	5	ug/kg	07/28/94
Ethylbenzene	100-41-4	1,000 *	5	ug/kg	07/28/94
Xylenes, Total	1330-20-7	5,900 *	5	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	94 *	0.2	mg/kg	07/28/94
Lead	EPA 7420	3 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TP4  
 AEN LAB NO: 9407233-09  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1,900 *	5	ug/kg	07/28/94
Toluene	108-88-3	3,500 *	5	ug/kg	07/28/94
Ethylbenzene	100-41-4	12,000 *	5	ug/kg	07/28/94
Xylenes, Total	1330-20-7	150,000 *	5	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	1,400 *	0.2	mg/kg	07/28/94
Lead	EPA 7420	4 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP5  
 AEN LAB NO: 9407233-10  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>	<b>EPA 8020</b>				
Benzene	71-43-2	ND	500	ug/kg	07/28/94
Toluene	108-88-3	740 *	100	ug/kg	07/28/94
Ethylbenzene	100-41-4	4,800 *	100	ug/kg	07/28/94
Xylenes, Total	1330-20-7	20,000 *	100	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	300 *	4	mg/kg	07/28/94
<b>Lead</b>	<b>EPA 7420</b>	<b>3 *</b>	<b>3</b>	<b>mg/kg</b>	<b>07/27/94</b>
<b>#Digestion, Metals AA/ICP</b>	<b>EPA 3050</b>	<b>-</b>		<b>Prep Date</b>	<b>07/24/94</b>
<b>VOCs in Soil by 8240</b>	<b>EPA 8240</b>				
Acetone	67-64-1	ND	1000	ug/kg	08/13/94
Benzene	71-43-2	ND	50	ug/kg	08/13/94
Bromodichloromethane	75-27-4	ND	50	ug/kg	08/13/94
Bromoform	75-25-2	ND	50	ug/kg	08/13/94
Bromomethane	74-83-9	ND	100	ug/kg	08/13/94
2-Butanone	78-93-3	ND	1000	ug/kg	08/13/94
Carbon Disulfide	75-15-0	ND	100	ug/kg	08/13/94
Carbon Tetrachloride	56-23-5	ND	50	ug/kg	08/13/94
Chlorobenzene	108-90-7	ND	50	ug/kg	08/13/94
Chloroethane	75-00-3	ND	100	ug/kg	08/13/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	100	ug/kg	08/13/94
Chloroform	67-66-3	ND	50	ug/kg	08/13/94
Chloromethane	74-87-3	ND	100	ug/kg	08/13/94
Dibromochloromethane	124-48-1	ND	50	ug/kg	08/13/94
1,1-Dichloroethane	75-43-3	ND	50	ug/kg	08/13/94
1,2-Dichloroethane	107-06-2	ND	50	ug/kg	08/13/94
1,1-Dichloroethene	75-35-4	ND	50	ug/kg	08/13/94
cis-1,2-Dichloroethene	156-59-2	ND	50	ug/kg	08/13/94
trans-1,2-Dichloroethene	156-60-5	ND	50	ug/kg	08/13/94
1,2-Dichloropropane	78-87-5	ND	50	ug/kg	08/13/94
cis-1,3-Dichloropropene	10061-01-5	ND	50	ug/kg	08/13/94
trans-1,3-Dichloropropene	10061-02-6	ND	50	ug/kg	08/13/94
Ethylbenzene	100-41-4	5,800 *	100	ug/kg	08/13/94
2-Hexanone	591-78-6	ND	500	ug/kg	08/13/94
Methylene Chloride	75-09-2	ND	50	ug/kg	08/13/94
4-Methyl-2-pentanone	108-10-1	ND	500	ug/kg	08/13/94
Styrene	100-42-5	ND	50	ug/kg	08/13/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	50	ug/kg	08/13/94
Tetrachloroethene	127-18-4	ND	50	ug/kg	08/13/94
Toluene	108-88-3	ND	50	ug/kg	08/13/94

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP5  
AEN LAB NO: 9407233-10  
AEN WORK ORDER: 9407233  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
DATE RECEIVED: 07/21/94  
REPORT DATE: 08/23/94

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
1,1,1-Trichloroethane	71-55-6	ND	50	ug/kg	08/13/94
1,1,2-Trichloroethane	79-00-5	ND	50	ug/kg	08/13/94
Trichloroethene	79-01-6	ND	50	ug/kg	08/13/94
Vinyl Acetate	108-05-4	ND	500	ug/kg	08/13/94
Vinyl Chloride	75-01-4	ND	100	ug/kg	08/13/94
Xylenes Total	1330-20-7	19,000 *	200	ug/kg	08/13/94

Reporting limit elevated for Benzene by EPA Method 8020 due to hydrocarbon interference. Reporting limits for 8240 compounds = MDL x Dilution factor.

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP6  
 AEN LAB NO: 9407233-11  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/28/94
Toluene	108-88-3	ND	5	ug/kg	07/28/94
Ethylbenzene	100-41-4	6 *	5	ug/kg	07/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	0.7 *	0.2	mg/kg	07/28/94
Lead	EPA 7420	3 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TP7  
 AEN LAB NO: 9407233-12  
 AEN WORK ORDER: 9407233  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 07/19/94  
 DATE RECEIVED: 07/21/94  
 REPORT DATE: 08/23/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	07/28/94
Toluene	108-88-3	ND	5	ug/kg	07/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	07/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	07/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	07/28/94
Lead	EPA 7420	3 *	3	mg/kg	07/27/94
#Digestion, Metals AA/ICP	EPA 3050	-		Prep Date	07/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit



AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9407233

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

Sample PI-2 (9407233-02) showed surrogate recovery outside QC limits due to matrix interference for EPA Method 3550 GCFID.

All other laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 DATE EXTRACTED: 07/27/94  
 INSTRUMENT: C  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 3550 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
07/29/94	PI-E 3.5	01	65
07/29/94	PI-2	02	*
07/29/94	PI-3	03	61
07/29/94	PI-4	04	70
07/29/94	PI-5	05	64
07/29/94	TP1	06	56
07/29/94	TP2	07	104

\* Surrogate recovery outside of QC limits due to matrix interference

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
n-Pentacosane	45-120

## QUALITY CONTROL DATA

AEN JOB NO: 9407233  
DATE EXTRACTED: 07/26/94  
DATE ANALYZED: 07/26/94  
SAMPLE SPIKED: 9407272-03  
INSTRUMENT: C  
MATRIX: SOIL

Matrix Spike Recovery Summary  
Method: EPA 3550 GCFID

Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	41.7	82	2	44-108	13

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 INSTRUMENT: H,F  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
07/27/94	PI-E 3.5	01	100
07/28/94	PI-2	02	84
07/27/94	PI-3	03	100
07/27/94	PI-4	04	100
07/28/94	PI-5	05	100
07/29/94	TP1	06	101
07/28/94	TP2	07	96
07/28/94	TP3	08	99
07/28/94	TP4	09	95
07/28/94	TP5	10	96
07/28/94	TP6	11	98
07/28/94	TP7	12	99

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
Fluorobenzene	78-114

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 DATE ANALYZED: 07/27/94  
 SAMPLE SPIKED: LCS  
 INSTRUMENT: H  
 MATRIX: SOIL

Laboratory Control Sample  
 Method: EPA 8020, 5030 GCFID

Analyte	Spike Added (ug/kg)	Percent Recovery
Benzene	19.6	89
Toluene	72.9	90
Hydrocarbons as Gasoline	1000	90

Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>
Benzene	65-122
Toluene	67-124
Gasoline	60-125

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 INSTRUMENT: 12  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 8240

Date Analyzed	Client Id.	Lab Id.	Percent Recovery		
			1,2-Dichloroethane-d <sub>4</sub>	Toluene-d <sub>8</sub>	p-Bromofluorobenzene
08/11/94	TP2	07	82	110	103
08/13/94	TP5	10	107	113	108

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
1,2-Dichloroethane-d4	68-141
Toluene-d8	89-119
p-Bromofluorobenzene	85-112

## QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 DATE ANALYZED: 08/09/94  
 SAMPLE SPIKED: 9407298-10  
 INSTRUMENT: 12  
 MATRIX: SOIL

Matrix Spike Recovery Summary  
 Method: EPA 8240

Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	140	3
Trichloroethene	50.0	102	6
Benzene	50.0	105	6
Toluene	50.0	97	<1
Chlorobenzene	50.0	98	6

## Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
1,1-Dichloroethene	66-143	15
Trichloroethene	60-127	12
Benzene	88-117	10
Toluene	70-126	14
Chlorobenzene	89-111	13

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 DATE EXTRACTED: 07/27/94  
 INSTRUMENT: 11  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 8270

Date Analyzed	Client Id.	Lab Id.	Percent Recovery					
			Nitro-benzene-d <sub>5</sub>	2-Fluoro-biphenyl	Terphenyl-d <sub>14</sub>	Phenol-d <sub>5</sub>	2-Fluoro-phenol	2,4,6-Tribromo-phenol
07/27/94	TP1	06	61	78	76	62	64	78
07/27/94	TP2	07	73	93	87	71	76	104

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
Nitrobenzene-d <sub>5</sub>	23-120
2-Fluorobiphenyl	30-115
Terphenyl-d <sub>14</sub>	18-137
Phenol-d <sub>5</sub>	24-113
2-Fluorophenol	25-121
2,4,6-Tribromophenol	19-122



## QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 DATE EXTRACTED: 07/22/94  
 DATE ANALYZED: 07/26/94  
 SAMPLE SPIKED: 9407256-03  
 INSTRUMENT: 11  
 MATRIX: SOIL

Matrix Spike Recovery Summary  
 Method: EPA 8270

Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD
Phenol	3330	62	20
2-Chlorophenol	3330	47	25
1,4-Dichlorobenzene	3400	55	2
N-Nitroso-di-n-propylamine	3320	60	16
1,2,4-Trichlorobenzene	3330	58	10
4-Chloro-3-methylphenol	3270	76	3
Acenaphthene	3330	72	<1
4-Nitrophenol	3300	56	5
2,4-Dinitrotoluene	3330	58	3
Pentachlorophenol	3380	68	9
Pyrene	3320	79	<1

## Current QC Limits

Analyte	Percent Recovery	RPD
Phenol	26- 90	35
2-Chlorophenol	25-102	50
1,4-Dichlorobenzene	28-104	27
4-Nitroso-di-n-propylamine	41-126	38
1,2,4-Trichlorobenzene	38-107	23
4-Chloro-3-methylphenol	26-103	33
Acenaphthene	31-137	19
4-Nitrophenol	11-114	50
2,4-Dinitrotoluene	28- 89	47
Pentachlorophenol	17-109	47
Pyrene	35-142	36

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9407233  
 SAMPLE SPIKED: SAND  
 DATE ANALYZED: 07/27/94  
 MATRIX: SOIL

Method Spike Recovery Summary

Analyte	Inst./ Method	Spike Added (mg/kg)	Average Percent Recovery	RPD	QC Limits	
					% Rec. Limit	RPD Limit
Pb, Lead	V22/7420	50	98	2	75-125	20

Daily method blanks for all associated runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*

Reporting Information

R-4, S-6

1. Client: USA Gasoline Corp  
 Address: 30101 Agoura Ct Ste 200  
Agoura Hills, CA 91301  
 Contact: SRIKANTH DASAPPA  
 Alt. Contact:

American Environmental Network  
 3440 Vincent Road, Pleasant Hill, CA 94523  
 Phone (510) 930-9090  
 FAX (510) 930-0256

AEN

940 7233

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: USA #57  
 Lab Destination:  
 Date Samples Shipped:  
 Lab Contact: Robin Byars  
 Date Results Required: 7/29/94  
 Date Report Required: 7/31/94  
 Client Phone No.: (916) 668-5300  
 Client FAX No.: (916) 667-0273

Address Report To:

2. Western Geo-Engineers  
13816 E. Beamer St.  
Woodland, CA 95726  
 Attn: Vern Bennett

Send Invoice To:

3. SAME AS #1

Send Report To: 1 or (2) (Circle one)

Client P.O. No.: USA #57 Client Project I.D. No.: USA #57

Sample Team Member (s) Vern Bennett

Lab Number	Client Sample Identification	Air Volume	Date/Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS							Comments / Hazards				
								TPHG BTEX	TPHD	BTEX	Pb	7420	8220-PNAs	8240					
01A	PI-E 3.5		7/19/94 1:13	8.56.1		1	Brass	X	X	X									
02A	PI-2		1:45					X	X	X									Please FAX
03A	PI-3		2:15					X	X	X									Normal TAT
04A	PI-4		2:35					X	X	X									
05A	PI-5		5:45					X	X	X									
06A	TP1		3:15					X	X	X									
07A	TP2		3:25					X	X	X	X								
08A	TP3		4:45					X	X	X									
09A	TP4		4:50					X	X	X									
10A	TP5		5:00					X	X	X									
11A	TP6		5:10					X	X	X									
12A	TP7		5:15					X	X	X									

Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>7/21/94</u>	TIME <u>1200</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>7/21/94</u>	TIME <u>1200</u>
Relinquished by: (Signature) <u>[Signature]</u>	DATE <u>7/21/94</u>	TIME <u>1200</u>	Received by: (Signature) <u>[Signature]</u>	DATE <u>7-21-94</u>	TIME <u>1200</u>
Relinquished by: (Signature) <u>[Signature]</u>	DATE	TIME	Received by: (Signature)	DATE	TIME
Method of Shipment	Lab Comments				

\*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter  
 4) PVC filter, diam. \_\_\_\_\_ pore size \_\_\_\_\_ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample  
 10) Other \_\_\_\_\_ 11) Other \_\_\_\_\_

**APPENDIX C**

**LIMITED OVEREXCAVATION**

**FIELD NOTES AND SITE MAP  
8/19/94**

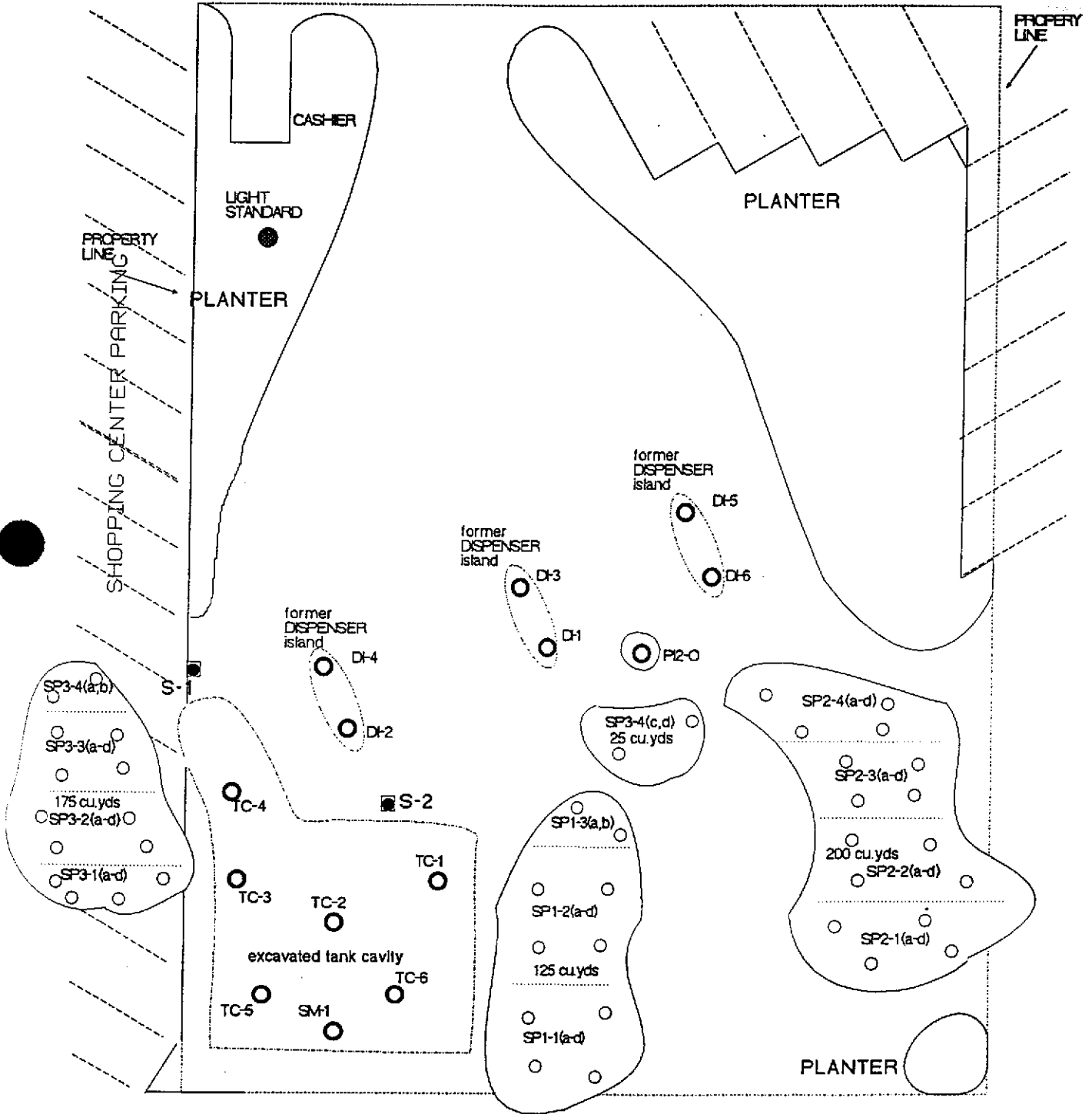
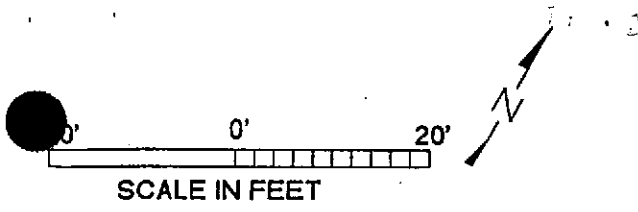
**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

USA GASOLINE CORPORATION  
STATION #57  
10700 MACARTHUR BLVD.,  
OAKLAND, CA

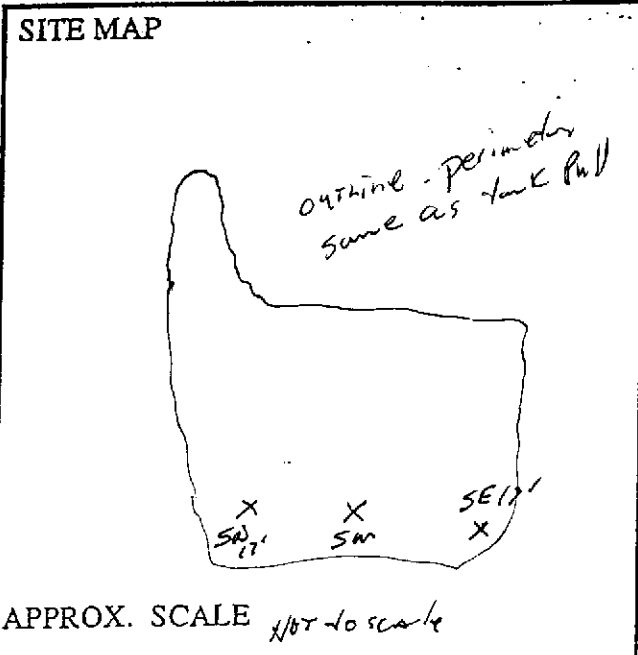
**FIGURE 3**  
8/19/94

**SOIL SAMPLING, TANK CAVITY,  
DISPENSER ISLANDS & STOCK-  
PILED SOIL**



**WEGE** EASTERN  
**GEO-ENGINEERS**  
 1386 EAST BEAMER  
 WOODLAND, CALIFORNIA 95695  
 (916) 668-5300, FAX (916) 662-0273

SEC. ;T ;R ; B&M
JOB DESCRIPTION <i>Overexcavated</i>
LOCATION <i>USA #57</i>
ADDRESS <i>10700 MacArthur Blvd</i>
CITY <i>Dakota</i> STATE <i>CA</i>
COUNTY <i>Alameda</i>
CLIENT <i>USA Gasoline Corp</i>
ADDRESS <i>30100 Agoura Ct, Ste 4</i>
CITY <i>Agoura</i> STATE <i>CA</i> ZIP
PHONE (P.L.) <i>805-920</i> FAX (P.L.) <i>805-0092</i>
CLIENT REP. <i>SRI Kanth Dasappa</i>
WORK PERFORMED BY <i>V. Bennett</i>
DATE <i>8/14/94</i>
LEAVE OFFICE <i>11:45</i>
ARRIVE SITE <i>2:00</i>
MILEAGE
LEAVE SITE <i>5:30</i>
ARRIVE OFFICE <i>6:00</i>
MILEAGE
#SOIL SAMP.
#WATER SAMP.
LABORATORY <i>AEN</i>
VEGE TO PAY LAB (YES) (NO)



GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
	<i>N/A</i>			

SITE ACTIVITY LOG	NOTES:
<i>2:00 - 3:00</i>	<i>Assess site, make phone call - USA</i>
<i>3:00 - 4:30</i>	<i>Tank cavity, South end - 2 places 1/2 end of T.F. cleaned to 16'</i>
<i>3:00 - 4:00</i>	<i>Exam. to find 6W - depth reached 19.5' 1st stand</i>
<i>4:00 - 4:30</i>	<i>Partial excav. secured site for dry, PE back to eve</i>
<i>4:30 - 5:30</i>	<i>logged tank cavity, search wells of 6W</i>
	<i>to 1' - check field readings + observ. P.T.B.</i>
<i>2x 1st 19.5' hole SM-1</i>	<i>SE corner - 17' base silty clay, 300 ppm dry</i>
<i>stand over a. 4y</i>	<i>SM - 17' base silt 200 ppm dry</i>
<i>-to check for</i>	<i>SM corner - 17' base silty silt 500 ppm moist</i>
<i>water</i>	<i>SM - 18' base 900 ppm - moist silty clay 200 ppm - moist</i>
<i>empty</i>	<i>SM - 18.5' blue grey clay 500 ppm dry</i>
	<i>SM - 19' silt clay 200 ppm dry</i>
	<i>SM - 19.5' tan clay w/ some silt 500 ppm dry</i>

SAMPLE DATA						LABORATORY RESULTS			
ID	LOCATION	DEPTH	TYPE	TIME	TIP				
<i>SM-1</i>	<i>Southend - Middle</i>	<i>19.5</i>	<i>lean clay</i>	<i>4:05</i>	<i>1000</i>				

*Tank Cavity*

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WOODLAND, CALIFORNIA 95695  
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SITE MAP

See Figure encl.

APPROX. SCALE

SEC. ; T ; R ; B&M
JOB DESCRIPTION <i>continued investigation</i>
<i>soil pile sampling</i>
LOCATION
ADDRESS
CITY STATE
COUNTY
CLIENT
ADDRESS
CITY STATE ZIP
PHONE FAX
CLIENT REP.
WORK PERFORMED BY <i>Ken Bennett</i>
DATE <i>8/19/84</i>
LEAVE OFFICE
ARRIVE SITE
MILEAGE
LEAVE SITE
ARRIVE OFFICE
MILEAGE
#SOIL SAMP.
#WATER SAMP.
LABORATORY
WEGE TO PAY LAB (YES) (NO)

GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
<i>N/A</i>				

SITE ACTIVITY LOG	NOTES:
<i>6:00 - 8:30</i>	<i>~525 cubic yards of stockpiled soil.</i>
	<i>3 soil piles ; SP1, SP2 + SP3</i>
	<i>125 yds<sup>3</sup> 200 yds<sup>3</sup> 200 yds<sup>3</sup></i>
	<i>excavated soil sampled per BAAQ recommendations, 1 composite per 50 cubic yards</i>
	<i>Analysis was for TPH, G - BTEX</i>

	SAMPLE DATA					LABORATORY RESULTS		
	ID	LOCATION	DEPTH	TYPE	TIME	TIP	TPH, G	BTEX
<i>SP1-1</i>	<i>A-D</i>	<i>SP1</i>	<i>6' up 2' in</i>	<i>-</i>	<i>7:30</i>			
<i>SP1-2</i>	<i>A-D</i>	<i>SP1</i>	<i> </i>	<i>-</i>	<i>7:35</i>			
<i>SP1-3</i>	<i>A-B</i>	<i>SP1</i>	<i> </i>	<i>-</i>	<i>7:40</i>			
<i>SP2-1</i>	<i>A-D</i>	<i>SP2</i>	<i>5' up 1 1/2' in</i>	<i>-</i>	<i>6:20</i>			
<i>SP2-2</i>	<i>A-D</i>	<i>SP2</i>	<i> </i>	<i>-</i>	<i>6:35</i>			
<i>SP2-3</i>	<i>A-D</i>	<i>SP2</i>	<i> </i>	<i>-</i>	<i>6:40</i>			
<i>SP2-4</i>	<i>A-D</i>	<i>SP2</i>	<i> </i>	<i>-</i>	<i>6:45</i>			
<i>SP3-1</i>	<i>A-D</i>	<i>SP3</i>	<i>6' up 2' in</i>	<i>-</i>	<i>8:00</i>			
<i>SP3-2</i>	<i>A-D</i>	<i>SP3</i>	<i> </i>	<i>-</i>	<i>8:05</i>			
<i>SP3-3</i>	<i>A-D</i>	<i>SP3</i>	<i> </i>	<i>-</i>	<i>8:10</i>			
<i>SP3-4</i>	<i>A-D</i>	<i>SP3</i>	<i> </i>	<i>-</i>	<i>8:15</i>			

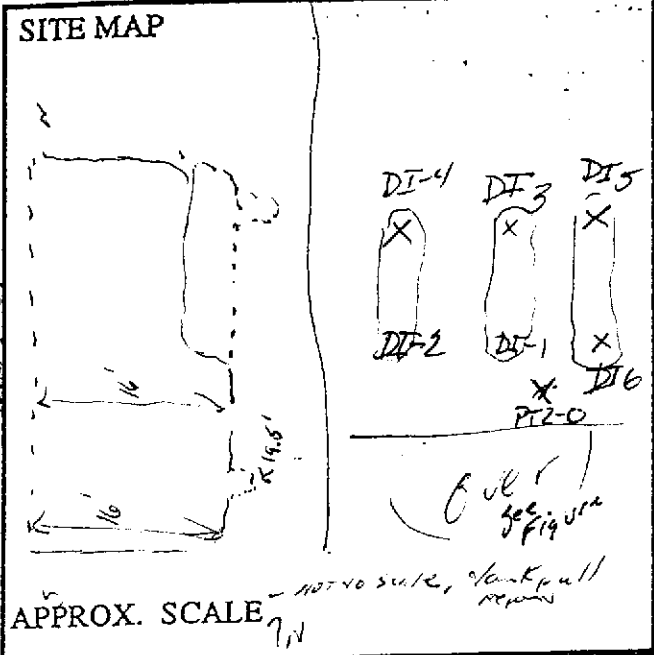
**WEGE WESTERN  
GEO-ENGINEERS**

1386 EAST BEAMER  
WOODLAND, CALIFORNIA 95695  
(916) 668-5300, FAX (916) 662-0273

SEC. : T : R : B&M  
JOB DESCRIPTION *overexcavation*

LOCATION *USA #57*  
ADDRESS *10700 MacArthur Blvd*  
CITY *Woodland Hills* STATE *CA*  
COUNTY *Alameda*  
CLIENT: *USA Gasoline Corp*  
ADDRESS *30102 Agoura Blvd, Ste*  
CITY *Agoura Hills* STATE *CA* ZIP  
PHONE *(818) 465-1111* FAX *(818) 465-0092*  
CLIENT REP. *9200*

WORK PERFORMED BY *SK Karsh Dasegpa*  
DATE *8/19/91*  
LEAVE OFFICE *6:45 AM*  
ARRIVE SITE *7:00 AM*  
MILEAGE  
LEAVE SITE *8:30 PM*  
ARRIVE OFFICE *10:00 PM*  
MILEAGE  
#SOIL SAMP. *25*  
#WATER SAMP.  
LABORATORY *AEN*  
VEGE TO PAY LAB (YES) (NO)



GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
Alameda Co Env. Health	Ms. Eva Chu	1131 Harbor Bay Parkway Alameda, CA 94502	(510) 562-6200	(510) 337-9335

SITE ACTIVITY LOG	NOTES:
6:45 - 7:00	Map to site from note
7:00 - 12:30	excavate to 16', North Half of Tank cavity
12:30 - 1:00	Lunch
1:00 - 2:00	Finish excavation, Tank Cavity (Disc) UST portion of tank cavity
2:00 - 3:00	Excavate out, Dispenser Islands Alameda Co. ar
3:00 - 5:30	sample Tank Cavity + Dispenser Islands & under Ms. Eva Chu's direction
5:30 - 6:00	Fence & secure site
6:00 - 8:30	sample 525 cubic yds of stock piled soil - 3 separate stock piles, 11 composite samples
	* (local perched water in soil lenses was excavated out @ approx 12' white excavating)
	Tank Cavity, 7 samples; Dispenser Islands 6 samples
	1 on B/18 + 6 on B/19; Soil pile samples, 11 samples, composite
	Analysis per Alameda Co. recommend; TC 3 + TC 4 - TPH, G, D BTEX all other samples - TPH, G, BTEX

TC 3-4  
TPH, G, D  
BTEX  
All Res  
TPH, G  
BTEX

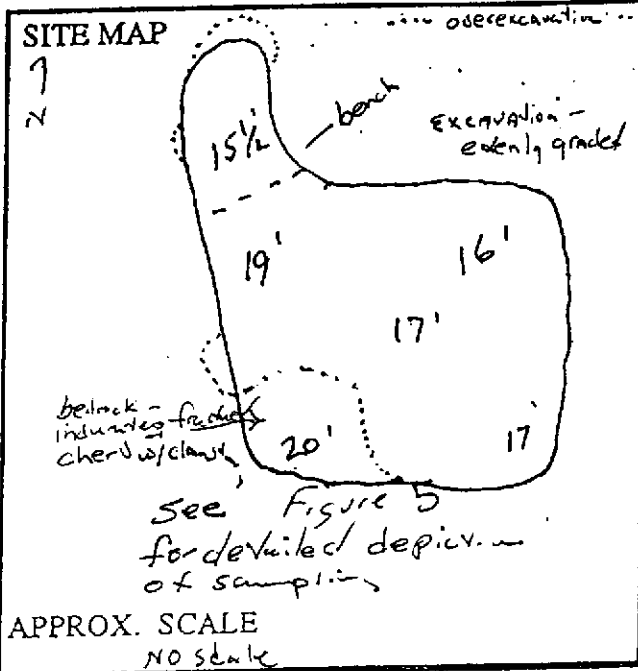
SAMPLE DATA						LABORATORY RESULTS			
ID	LOCATION	DEPTH	TYPE	TIME	TP				
TC-1	center	16'	Clay	3:05	325				
TC-2	NE corner	16'	silt/clay	3:15	5ppm				
TC-3	NW corner	17 1/2'	silt/clay	3:20	325ppm				
TC-4	mid dies	15 1/2'	silt/clay	3:50	20ppm				
TC-5	SW corner	17'	clay	4:10	130ppm				
TC-6	SE corner	18'	clay	4:20	0ppm				
DI-1	Midl-south	3.5'	silt	4:40	20ppm				
DI-2	West-south	3.5'	silt/clay	4:45	120ppm				
DI-3	Midl-north	3'	silt	4:50	-				
DI-4	West-north	3'	silt/clay	4:55	-				
DI-5	East-south	3.5'	clay	4:56	10ppm				
DI-6	East-north	3.5'	silt	5:30	120ppm				
PTZ-0	over x PTZ	9'	clay	7'	TPH				

Dispenser Islands  
7d hanging fill  
BTEX



**WEGE** EASTERN  
**GEO-ENGINEERS**  
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 WOODLAND, CALIFORNIA 95695  
 (916) 668-5300, FAX (916) 662-0273

SEC. 24, T. 25, R. 3W; nDB&M  
 JOB DESCRIPTION *overexcavation*  
*Soil Sampling*  
 LOCATION USA Gasoline Corp, Sk #57  
 ADDRESS 10200 MacArthur Blvd.,  
 CITY OAKLAND STATE CA  
 COUNTY Alameda  
 CLIENT USA Gasoline Corp  
 ADDRESS 3010 Ascom Court Ste 200  
 CITY Fremont STATE CA ZIP 91301  
 PHONE (818) 865-9200 FAX (818) 865-0092  
 CLIENT REP. Sr. Keith Dasappa



WORK PERFORMED BY Vern Bennett  
 DATE 9/27/94  
 LEAVE OFFICE 9:00 AM  
 ARRIVE SITE 11:00 AM  
 MILEAGE 90 mi.  
 LEAVE SITE 5:45 PM  
 ARRIVE OFFICE 8:15 PM  
 MILEAGE 90 mi.  
 #SOIL SAMP. 19 + 21  
 #WATER SAMP. N/A  
 LABORATORY AEN  
 WEGE TO PAY LAB (YES) (NO)

GOV. AGENCY	REP. NAME	ADDRESS	PHONE	FAX
Alameda Co. Environ. Health	Ms. Eva Cho	1131 Harbor Bay Parkway Alameda, CA 94502	(510) 562-6740	(510) 337-9330

SITE ACTIVITY LOG	NOTES:
11:00 - 11:30	Recon site w/ Joe Madison - prepare to sample
11:30 - 11:45	Alameda County (Ms. Eva Cho) arrives, go over site and plans for sampling
11:45 - 2:30	sample under direction of Eva Cho Tank CAving and sidewalls of overexcavation - Tank cavity was evenly overexcavation - all sidewalls - except 1/2 wall of main cavity was taken back 1'-2', the base was excavated & evenly graded as shown above 4 soil samples of base + 10 samples of sidewalls were taken - minor overexcavation of sidewalls were done
2:30 - 2:45	Secure site w/ Joe Madison - Joe leaves
2:45 - 5:45	Sample soil pile to 250 cubic yards
	775 cubic yards of soil generated from Tank Pull + 2 overexc. episodes

SAMPLE DATA						LABORATORY RESULTS			
ID	LOCATION	DEPTH	TYPE	TIME	TP	for soil results see Table 1			
TC2-1	Tank cav base	17'	side wall	11:45	OPP				
TC2-2	Tank cav SW	13'	side wall	12:00	35PPM				
TC2-3	Tank cav SW	16'	side wall	12:30	0 PPM				
TC2-4	Tank cav SW	13'	side wall	12:45	0 PPM				
TC2-5	Tank cav SW	12'	side wall	1:00	7 PPM				
TC2-7	Tank cav SW	13'	side wall	1:25	20 PPM				
TC2-8	Tank cav SW	13'	side wall	1:30	6 PPM				
TC2-9	Tank cav base	19'	side wall	1:40	20 PPM				
TC2-11	Tank cav SW	13'	side wall	2:00	150 PPM				
TC2-12	Tank cav SW	12'	side wall	2:10	20 PPM				
TC2-13	Tank cav base	20'	side wall	2:15	40 PPM				



**APPENDIX D**

**REGULATORY RESPONSE LETTER**

**8/19/94**

**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

StID 4490

August 16, 1994

Mr. Vern Bennett  
Western Geo-Engineers  
1386 East Beamer St  
Woodland, CA 95776-6003

RE: Workplan Approval for 10700 MacArthur Blvd, Oakland 94605

Dear Mr. Bennett:

I have completed review of Western Geo-Engineers' August 1994 Limited Overexcavation proposal for the above referenced site. The proposal to overexcavate and sample the perimeter and base of the tank pit, and to collect soil samples from the dispenser islands is acceptable. Field work should commence by October 5, 1994.

Soil analysis of PI-2, along the product line, exhibited elevated levels of petroleum hydrocarbons (4,500 ppm TPH-G, and 440 ppm xylenes). This area should also be overexcavated at that time.

Please notify this office at least 72 hours prior to the start of field work. A representative from this office must be present to witness the sampling. If you have any questions, I can be reached at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

cc: Srikanth Dasappa, USA Gasoline, 30101 Agoura Ct, Suite 200,  
Agoura Hills, CA 91301  
Jay Phares Corp, 10700 MacArthur, Suite 200, Oakland 94605  
files

**APPENDIX E**

**AMERICAN ENVIRONMENTAL NETWORK  
(AEN)**

**OVEREXCAVATION  
AND  
DISPENSER ISLAND  
SOIL RESULTS  
8/19/94**

**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

REPORT DATE: 09/06/94

DATE(S) SAMPLED: 08/18/94-08/19/94

DATE RECEIVED: 08/22/94

AEN WORK ORDER: 9408283

### PROJECT SUMMARY:

On August 22, 1994, this laboratory received 7 soil sample(s).

Client requested samples be analyzed for organic parameters. Sample identifications, methodologies, results and dates analyzed are summarized on the following pages.

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

## WESTERN GEO-ENGINEERING

SAMPLE ID: SM-1  
AEN LAB NO: 9408283-01  
AEN WORK ORDER: 9408283  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/18/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/06/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/22/94
Toluene	108-88-3	ND	5	ug/kg	08/22/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/22/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/22/94
Purgeable HCs as Gasoline	5030/GCFID	0.4 *	0.2	mg/kg	08/22/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC-1  
AEN LAB NO: 9408283-02  
AEN WORK ORDER: 9408283  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/06/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/22/94
Toluene	108-88-3	ND	5	ug/kg	08/22/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/22/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/22/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/22/94

---

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit



WESTERN GEO-ENGINEERING

SAMPLE ID: TC-2  
 AEN LAB NO: 9408283-03  
 AEN WORK ORDER: 9408283  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	08/23/94
Toluene	108-88-3	280 *	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	630 *	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	3,100 *	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	93 *	0.2	mg/kg	08/23/94

Reporting limit elevated for benzene due to high levels of target compounds.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC-3  
 AEN LAB NO: 9408283-04  
 AEN WORK ORDER: 9408283  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	8 *	5	ug/kg	08/22/94
Toluene	108-88-3	20 *	5	ug/kg	08/22/94
Ethylbenzene	100-41-4	20 *	5	ug/kg	08/22/94
Xylenes, Total	1330-20-7	110 *	5	ug/kg	08/22/94
Purgeable HCs as Gasoline	5030/GCFID	2.4 *	0.2	mg/kg	08/22/94
#Extraction for TPH	EPA 3550	-		Extrn Date	08/22/94
TPH as Diesel	GC-FID	1 *	1	mg/kg	08/23/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC-4  
 AEN LAB NO: 9408283-05  
 AEN WORK ORDER: 9408283  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/23/94
Toluene	108-88-3	ND	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	0.7 *	0.2	mg/kg	08/23/94
#Extraction for TPH	EPA 3550	-		Extrn Date	08/22/94
TPH as Diesel	GC-FID	2 *	1	mg/kg	08/23/94

Gasoline result may include hydrocarbons in the diesel/kerosene range.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC-5  
 AEN LAB NO: 9408283-06  
 AEN WORK ORDER: 9408283  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	170 *	20	ug/kg	08/23/94
Toluene	108-88-3	380 *	20	ug/kg	08/23/94
Ethylbenzene	100-41-4	990 *	20	ug/kg	08/23/94
Xylenes, Total	1330-20-7	7,900 *	20	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	190 *	0.8	mg/kg	08/23/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC-6  
AEN LAB NO: 9408283-07  
AEN WORK ORDER: 9408283  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/06/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/23/94
Toluene	108-88-3	ND	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/23/94

---

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9408283

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9408283  
 INSTRUMENT: E,H  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
			Fluorobenzene
08/22/94	SM-1	01	103
08/22/94	TC-1	02	104
08/23/94	TC-2	03	105
08/22/94	TC-3	04	102
08/23/94	TC-4	05	105
08/23/94	TC-5	06	99
08/23/94	TC-6	07	105

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
Fluorobenzene	78-114

## QUALITY CONTROL DATA

AEN JOB NO: 9408283  
DATE ANALYZED: 08/23/94  
SAMPLE SPIKED: LCS  
INSTRUMENT: E  
MATRIX: SOIL

Laboratory Control Sample  
Method: EPA 8020, 5030 GCFID

---

Analyte	Spike Added (ug/kg)	Percent Recovery
Benzene	17.2	93
Toluene	62.8	91
Hydrocarbons as Gasoline	1000	102

---

## Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>
Benzene	65-122
Toluene	67-124
Gasoline	60-125

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.



QUALITY CONTROL DATA

AEN JOB NO: 9408283  
DATE EXTRACTED: 08/22/94  
INSTRUMENT: C  
MATRIX: SOIL

Surrogate Standard Recovery Summary  
Method: EPA 3550 GCFID

---

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/23/94	TC-3	04	90
08/23/94	TC-4	05	71

---

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
n-Pentacosane	45-120

QUALITY CONTROL DATA

AEN JOB NO: 9408283  
 DATE EXTRACTED: 08/22/94  
 DATE ANALYZED: 08/25/94  
 SAMPLE SPIKED: 9407303-02  
 INSTRUMENT: C  
 MATRIX: SOIL

Matrix Spike Recovery Summary  
 Method: EPA 3550 GCFID

Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD
Diesel	40.1	79	<1

Current QC Limits

Analyte	Percent Recovery	RPD
Diesel	44-108	13

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

REPORT DATE: 09/06/94

DATE(S) SAMPLED: 08/19/94

DATE RECEIVED: 08/22/94

AEN WORK ORDER: 9408284

### PROJECT SUMMARY:

On August 22, 1994, this laboratory received 7 soil sample(s).

Client requested samples be analyzed for organic parameters. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

## WESTERN GEO-ENGINEERING

SAMPLE ID: DI-1  
AEN LAB NO: 9408284-01  
AEN WORK ORDER: 9408284  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/06/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	190 *	100	ug/kg	08/26/94
Toluene	108-88-3	2,000 *	100	ug/kg	08/26/94
Ethylbenzene	100-41-4	9,000 *	100	ug/kg	08/26/94
Xylenes, Total	1330-20-7	53,000 *	400	ug/kg	08/26/94
Purgeable HCs as Gasoline	5030/GCFID	720 *	5	mg/kg	08/26/94

---

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: DI-2  
 AEN LAB NO: 9408284-02  
 AEN WORK ORDER: 9408284  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	120 *	100	ug/kg	08/26/94
Toluene	108-88-3	800 *	100	ug/kg	08/26/94
Ethylbenzene	100-41-4	4,600 *	100	ug/kg	08/26/94
Xylenes, Total	1330-20-7	33,000 *	400	ug/kg	08/26/94
Purgeable HCs as Gasoline	5030/GCFID	280 *	5	mg/kg	08/26/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: DI-3  
AEN LAB NO: 9408284.03  
AEN WORK ORDER: 9408284  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/06/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/23/94
Toluene	108-88-3	ND	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/23/94

---

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: DI-4  
 AEN LAB NO: 9408284-04  
 AEN WORK ORDER: 9408284  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	700 *	100	ug/kg	08/27/94
Toluene	108-88-3	2,500 *	100	ug/kg	08/27/94
Ethylbenzene	100-41-4	13,000 *	100	ug/kg	08/27/94
Xylenes, Total	1330-20-7	81,000 *	400	ug/kg	08/27/94
Purgeable HCs as Gasoline	5030/GCFID	590 *	5	mg/kg	08/27/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit



WESTERN GEO-ENGINEERING

SAMPLE ID: DI-5  
 AEN LAB NO: 9408284-05  
 AEN WORK ORDER: 9408284  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	100 *	50	ug/kg	08/30/94
Toluene	108-88-3	1,500 *	50	ug/kg	08/30/94
Ethylbenzene	100-41-4	2,700 *	50	ug/kg	08/30/94
Xylenes, Total	1330-20-7	17,000 *	200	ug/kg	08/30/94
Purgeable HCs as Gasoline	5030/GCFID	570 *	3	mg/kg	08/31/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: DI-6  
 AEN LAB NO: 9408284-06  
 AEN WORK ORDER: 9408284  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	720 *	100	ug/kg	08/27/94
Toluene	108-88-3	5,200 *	100	ug/kg	08/27/94
Ethylbenzene	100-41-4	31,000 *	100	ug/kg	08/27/94
Xylenes, Total	1330-20-7	180,000 *	400	ug/kg	08/27/94
Purgeable HCs as Gasoline	5030/GCFID	1,800 *	5	mg/kg	08/30/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: PT2-0  
 AEN LAB NO: 9408284-07  
 AEN WORK ORDER: 9408284  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/06/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	20 *	10	ug/kg	08/30/94
Toluene	108-88-3	40 *	10	ug/kg	08/30/94
Ethylbenzene	100-41-4	70 *	10	ug/kg	08/30/94
Xylenes, Total	1330-20-7	190 *	40	ug/kg	08/30/94
Purgeable HCs as Gasoline	5030/GCFID	15 *	0.4	mg/kg	08/30/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9408284

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

AEN JOB NO: 9408284  
INSTRUMENT: H  
MATRIX: SOIL

Surrogate Standard Recovery Summary  
Method: EPA 8020, 5030 GCFID

---

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
			Fluorobenzene
08/26/94	DI-1	01	98
08/26/94	DI-2	02	99
08/23/94	DI-3	03	99
08/27/94	DI-4	04	107
08/30/94	DI-5	05	95
08/27/94	DI-6	06	85
08/30/94	PT2-0	07	102

---

## Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
Fluorobenzene	78-114

QUALITY CONTROL DATA

AEN JOB NO: 9408284  
 DATE ANALYZED: 08/26/94  
 SAMPLE SPIKED: 9408284-02  
 INSTRUMENT: H  
 MATRIX: SOIL

Matrix Spike Recovery Summary  
 Method: EPA 8020, 5030 GCFID

Analyte	Spike Added (ug/kg)	Average Percent Recovery	RPD
Benzene	1.960	104	5
Toluene	7.290	106	8
Hydrocarbons as Gasoline	100.000	95	11

Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>	<u>RPD</u>
Benzene	81-122	27
Toluene	70-129	30
Gasoline	74-117	34

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

REPORT DATE: 09/09/94

DATE(S) SAMPLED: 08/19/94

DATE RECEIVED: 08/22/94

AEN WORK ORDER: 9408285

### PROJECT SUMMARY:

On August 22, 1994, this laboratory received 11 soil sample(s).

Client requested samples be analyzed for organic parameters. On September 1, 1994, client requested additional analysis on four samples. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

Revision of report dated 09/06/94 to include additional analyses.



## WESTERN GEO-ENGINEERING

SAMPLE ID: SP1-1(A-D)  
AEN LAB NO: 9408285-01  
AEN WORK ORDER: 9408285  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/23/94
Toluene	108-88-3	53 *	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	1,200 *	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	31 *	2	mg/kg	08/24/94

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: SP1-2(A-D)  
 AEN LAB NO: 9408285-02  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/24/94
Toluene	108-88-3	ND	5	ug/kg	08/24/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/24/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/24/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/24/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP1-3(A-D)  
AEN LAB NO: 9408285-03  
AEN WORK ORDER: 9408285  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/09/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	08/23/94
Toluene	108-88-3	ND	5	ug/kg	08/23/94
Ethylbenzene	100-41-4	ND	5	ug/kg	08/23/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	08/23/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	08/23/94

---

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP2-1(A,B)  
AEN LAB NO: 9408285-04  
AEN WORK ORDER: 9408285  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/09/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	08/24/94
Toluene	108-88-3	29 *	10	ug/kg	08/24/94
Ethylbenzene	100-41-4	ND	10	ug/kg	08/24/94
Xylenes, Total	1330-20-7	75 *	10	ug/kg	08/24/94
Purgeable HCs as Gasoline	5030/GCFID	22 *	2	mg/kg	08/24/94

---

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP2-2(A-D)  
AEN LAB NO: 9408285-05  
AEN WORK ORDER: 9408285  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
DATE RECEIVED: 08/22/94  
REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	20	ug/kg	08/24/94
Toluene	108-88-3	110 *	20	ug/kg	08/24/94
Ethylbenzene	100-41-4	65 *	20	ug/kg	08/24/94
Xylenes, Total	1330-20-7	250 *	20	ug/kg	08/24/94
Purgeable HCs as Gasoline	5030/GCFID	66 *	4	mg/kg	08/24/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: SP2-3(A-D)  
 AEN LAB NO: 9408285-06  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	08/24/94
Toluene	108-88-3	70 *	10	ug/kg	08/24/94
Ethylbenzene	100-41-4	ND	10	ug/kg	08/24/94
Xylenes, Total	1330-20-7	320 *	10	ug/kg	08/24/94
Purgeable HCs as Gasoline	5030/GCFID	51 *	2	mg/kg	08/24/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP2-4(A-D)  
 AEN LAB NO: 9408285-07  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	44 *	30	ug/kg	08/29/94
Toluene	108-88-3	760 *	30	ug/kg	08/29/94
Ethylbenzene	100-41-4	480 *	30	ug/kg	08/29/94
Xylenes, Total	1330-20-7	3,100 *	100	ug/kg	08/29/94
Purgeable HCs as Gasoline	5030/GCFID	210 *	1	mg/kg	08/29/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP3-1(A-D)  
 AEN LAB NO: 9408285-08  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	50	ug/kg	08/30/94
Toluene	108-88-3	1,700 *	50	ug/kg	08/30/94
Ethylbenzene	100-41-4	3,300 *	50	ug/kg	08/30/94
Xylenes, Total	1330-20-7	28,000 *	200	ug/kg	08/30/94
Purgeable HCs as Gasoline	5030/GCFID	360 *	3	mg/kg	08/30/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/02/94
TPH as Diesel	GC-FID	460 *	5	mg/kg	09/03/94

Reporting limits elevated due to high levels of target compounds. Samples run at dilution.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit



## WESTERN GEO-ENGINEERING

SAMPLE ID: SP3-2(A-D)  
 AEN LAB NO: 9408285-09  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	08/31/94
Toluene	108-88-3	ND	10	ug/kg	08/31/94
Ethylbenzene	100-41-4	ND	10	ug/kg	08/31/94
Xylenes, Total	1330-20-7	ND	40	ug/kg	08/31/94
Purgeable HCs as Gasoline	5030/GCFID	ND	40	mg/kg	08/31/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/02/94
TPH as Diesel	GC-FID	750 *	5	mg/kg	09/03/94

Reporting limits elevated due to high levels of non-target compounds. RL for gasoline elevated due to hydrocarbon interference in the diesel/kerosene range.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP3-3(A-D)  
 AEN LAB NO: 9408285-10  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	10	ug/kg	08/31/94
Toluene	108-88-3	20 *	10	ug/kg	08/31/94
Ethylbenzene	100-41-4	10 *	10	ug/kg	08/31/94
Xylenes, Total	1330-20-7	50 *	40	ug/kg	08/31/94
Purgeable HCs as Gasoline	5030/GCFID	ND	20	mg/kg	08/31/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/02/94
TPH as Diesel	GC-FID	180 *	1	mg/kg	09/03/94

Reporting limits elevated due to high levels of non-target compounds. RL for gasoline elevated due to hydrocarbon interference in the diesel/kerosene range.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: SP3-4(A-D)  
 AEN LAB NO: 9408285-11  
 AEN WORK ORDER: 9408285  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 08/19/94  
 DATE RECEIVED: 08/22/94  
 REPORT DATE: 09/09/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	20	ug/kg	08/31/94
Toluene	108-88-3	30 *	20	ug/kg	08/31/94
Ethylbenzene	100-41-4	80 *	20	ug/kg	08/31/94
Xylenes, Total	1330-20-7	1,300 *	80	ug/kg	08/31/94
Purgeable HCs as Gasoline	5030/GCFID	73 *	4	mg/kg	08/31/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/02/94
TPH as Diesel	GC-FID	400 *	5	mg/kg	09/03/94

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9408285

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

Surrogate recovery for EPA 3550 for sample SP3-4 was outside of established limits due to matrix interference.

All other laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration that can reliably be determined during routine laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix and method dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9408285  
 INSTRUMENT: H  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
			Fluorobenzene
08/23/94	SP1-1(A-D)	01	100
08/24/94	SP1-2(A-D)	02	101
08/23/94	SP1-3(A-D)	03	101
08/24/94	SP2-1(A-B)	04	100
08/24/94	SP2-2(A-D)	05	101
08/24/94	SP2-3(A-D)	06	101
08/29/94	SP2-4(A-D)	07	102
08/30/94	SP3-1(A-D)	08	100
08/31/94	SP3-2(A-D)	09	100
08/31/94	SP3-3(A-D)	10	100
08/31/94	SP3-4(A-D)	11	99

Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>
Fluorobenzene	78-114

## QUALITY CONTROL DATA

AEN JOB NO: 9408285  
DATE ANALYZED: 08/24/94  
SAMPLE SPIKED: LCS  
INSTRUMENT: H  
MATRIX: SOIL

Laboratory Control Sample  
Method: EPA 8020, 5030 GCFID

---

Analyte	Spike Added (ug/kg)	Percent Recovery
Benzene	19.6	81
Toluene	72.9	83
Hydrocarbons as Gasoline	1000	82

---

## Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>
Benzene	65-122
Toluene	67-124
Gasoline	60-125

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

AEN JOB NO: 9408285  
 DATE EXTRACTED: 09/02/94  
 INSTRUMENT: C  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 3550 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
			n-Pentacosane
09/03/94	SP3-1(A-D)	08	92
09/03/94	SP3-2(A-D)	09	89
09/03/94	SP3-3(A-D)	10	78
09/03/94	SP3-4(A-D)	11	I

I: Outside of established limits due to matrix interference

Current QC Limits

<u>Analyte</u>	<u>Percent Recovery</u>
n-Pentacosane	45-120

QUALITY CONTROL DATA

AEN JOB NO: 9408285  
 DATE EXTRACTED: 09/01/94  
 DATE ANALYZED: 09/02/94  
 SAMPLE SPIKED: 9408385-18  
 INSTRUMENT: C  
 MATRIX: SOIL

Matrix Spike Recovery Summary  
 Method: EPA 3550 GCFID

Analyte	Spike Added (mg/kg)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	40.1	56	12	44-108	13

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



**APPENDIX F**

**AMERICAN ENVIRONMENTAL NETWORK  
(AEN)**

**OVEREXCAVATION  
and  
SOIL PILE**

**SOIL RESULTS  
9/27/94**

**USA GASOLINE CORPORATION  
STATION #57**

**10700 MACARTHUR BLVD.,  
OAKLAND, CA.**

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

REPORT DATE: 10/03/94

DATE(S) SAMPLED: 09/27/94

DATE RECEIVED: 09/27/94

AEN WORK ORDER: 9409378

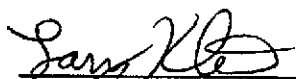
### PROJECT SUMMARY:

On September 27, 1994, this laboratory received 14 soil sample(s).

Client requested sample(s) be analyzed for organic parameters. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-1  
 AEN LAB NO: 9409378-01  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/27/94
Toluene	108-88-3	ND	5	ug/kg	09/27/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/27/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/27/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	09/27/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-2  
 AEN LAB NO: 9409378-02  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	60 *	5	ug/kg	09/28/94
Toluene	108-88-3	19 *	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	26 *	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	13 *	0.2	mg/kg	09/28/94

Gasoline result includes diesel range organics.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-3  
AEN LAB NO: 9409378-03  
AEN WORK ORDER: 9409378  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
DATE RECEIVED: 09/27/94  
REPORT DATE: 10/03/94

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ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	09/28/94

---

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-4  
 AEN LAB NO: 9409378-04  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	09/28/94

Reporting limits elevated for gasoline/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-5  
 AEN LAB NO: 9409378-05  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	130 *	50	ug/kg	09/28/94
Toluene	108-88-3	120 *	50	ug/kg	09/28/94
Ethylbenzene	100-41-4	100 *	50	ug/kg	09/28/94
Xylenes, Total	1330-20-7	250 *	50	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	100 *	2	mg/kg	09/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/27/94
TPH as Diesel	GC-FID	220 *	1	mg/kg	09/28/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-7  
 AEN LAB NO: 9409378-06  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	6.3 *	0.2	mg/kg	09/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/27/94
TPH as Diesel	GC-FID	37 *	1	mg/kg	09/28/94

Gasoline result includes diesel range organics.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit



WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-8  
 AEN LAB NO: 9409378-07  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	1	mg/kg	09/28/94
#Extraction for TPH	EPA 3550	-		Extrn Date	09/27/94
TPH as Diesel	GC-FID	16 *	1	mg/kg	09/28/94

Reporting limits elevated for gasoline/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-9  
AEN LAB NO: 9409378-08  
AEN WORK ORDER: 9409378  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
DATE RECEIVED: 09/27/94  
REPORT DATE: 10/03/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	0.4 *	0.2	mg/kg	09/28/94

---

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-11  
AEN LAB NO: 9409378-09  
AEN WORK ORDER: 9409378  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
DATE RECEIVED: 09/27/94  
REPORT DATE: 10/03/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	9,600 *	1000	ug/kg	09/28/94
Toluene	108-88-3	21,000 *	1000	ug/kg	09/28/94
Ethylbenzene	100-41-4	40,000 *	1000	ug/kg	09/28/94
Xylenes, Total	1330-20-7	260,000 *	1000	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	2,200 *	40	mg/kg	09/28/94

---

Reporting limits elevated for gasoline/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-12  
 AEN LAB NO: 9409378-10  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	330 *	50	ug/kg	09/28/94
Toluene	108-88-3	290 *	50	ug/kg	09/28/94
Ethylbenzene	100-41-4	660 *	50	ug/kg	09/28/94
Xylenes, Total	1330-20-7	7,900 *	50	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	130 *	2	mg/kg	09/28/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-13  
 AEN LAB NO: 9409378-11  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1,100 *	1000	ug/kg	09/28/94
Toluene	108-88-3	4,900 *	1000	ug/kg	09/28/94
Ethylbenzene	100-41-4	6,400 *	1000	ug/kg	09/28/94
Xylenes, Total	1330-20-7	66,000 *	1000	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	620 *	40	mg/kg	09/28/94

Reporting limits elevated for gasoline/BTEX due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-14  
AEN LAB NO: 9409378-12  
AEN WORK ORDER: 9409378  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
DATE RECEIVED: 09/27/94  
REPORT DATE: 10/03/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	96 *	5	ug/kg	09/28/94
Toluene	108-88-3	100 *	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	170 *	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	1,700 *	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	92 *	0.2	mg/kg	09/28/94

---

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-15  
AEN LAB NO: 9409378-13  
AEN WORK ORDER: 9409378  
CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
DATE RECEIVED: 09/27/94  
REPORT DATE: 10/03/94

---

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	09/28/94

---

ND = Not detected at or above the reporting limit  
\* = Value above reporting limit

WESTERN GEO-ENGINEERING

SAMPLE ID: TC2-16  
 AEN LAB NO: 9409378-14  
 AEN WORK ORDER: 9409378  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/03/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	09/28/94
Toluene	108-88-3	ND	5	ug/kg	09/28/94
Ethylbenzene	100-41-4	ND	5	ug/kg	09/28/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	09/28/94
Purgeable HCs as Gasoline	5030/GCFID	ND	1	mg/kg	09/28/94

Reporting limits elevated for gasoline/BTEX due to matrix interference.

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit



AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9409378

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9409378  
 DATE EXTRACTED: 09/27/94  
 INSTRUMENT: C  
 MATRIX: SOIL

Surrogate Standard Recovery Summary  
 Method: EPA 3550 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
09/28/94	TC2-5	05	73
09/28/94	TC2-7	06	63
09/28/94	TC2-8	07	69

Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
n-Pentacosane	45-120

QUALITY CONTROL DATA

AEN JOB NO: 9409378  
 DATE EXTRACTED: 09/29/94  
 DATE ANALYZED: 09/30/94  
 SAMPLE SPIKED: LCS  
 INSTRUMENT: D  
 MATRIX: SOIL

Laboratory Control Sample  
 Method: EPA 3550 GCFID

Analyte	Spike Added (mg/kg)	Percent Recovery	QC Limits
			Percent Recovery
Diesel	40	73	53-103

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

## QUALITY CONTROL DATA

AEN JOB NO: 9409378  
INSTRUMENT: E,F  
MATRIX: SOIL

Surrogate Standard Recovery Summary  
Method: EPA 8020, 5030 GCFID

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
09/27/94	TC2-1	01	108
09/28/94	TC2-2	02	110
09/28/94	TC2-3	03	108
09/28/94	TC2-4	04	109
09/28/94	TC2-5	05	98
09/28/94	TC2-7	06	102
09/28/94	TC2-8	07	110
09/28/94	TC2-9	08	107
09/28/94	TC2-11	09	98
09/28/94	TC2-12	10	94
09/28/94	TC2-13	11	108
09/28/94	TC2-14	12	96
09/28/94	TC2-15	13	108
09/28/94	TC2-16	14	107

## Current QC Limits

<u>Surrogate</u>	<u>Percent Recovery</u>
Fluorobenzene	84-117

## QUALITY CONTROL DATA

AEN JOB NO: 9409378  
DATE ANALYZED: 09/27/94  
SAMPLE SPIKED: LCS  
INSTRUMENT: E  
MATRIX: SOIL

Laboratory Control Sample  
Method: EPA 8020, 5030 GCFID

Analyte	Spike Added (ug/kg)	Percent Recovery	QC Limits
			Percent Recovery
Benzene	34.2	101	69-108
Toluene	93.4	98	70-106
Hydrocarbons as Gasoline	1000	94	69-110

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

\*\*\* END OF REPORT \*\*\*



R-5, S-D

9401379

# Chain of Custody and Analysis Request

page 1 of 7

## Section I

Consultant Western Geo-Engineers  
 Address 1386 East Beamer Str  
Woodland, CA 95776  
 Phone No. (916) 668-5300 Fax No. (916) 662-0273  
 Project Manager Vern Bennett  
 Alternate Contact Ray Butler  
 Project No. USA #52 P.O. No. \_\_\_\_\_

Turn Around Time  
 (circle one)  
 Same Day 72 Hrs  
 24 Hrs 748 Hrs  
Normal 8 Day



**Superior Precision Analytical, Inc.**  
 P.O. Box 1545  
 Martinez, California 94553  
 Martinez 1 (510) 229-1512 Martinez 2 (510) 229-0166  
 San Francisco (415) 647-2081

Sampler: Vern Bennett  
 Regulatory Agency: Alameda County

## Section II: Analysis Request

Laboratory Sample Identification	S = Soil A = Air W = Water Matrix	mod 8015 - Geo	mod 8015 - BTEX	mod 8015 - Diesel	8010	8240	CAM17	TCLP Metals:	Metals: <u>Pb, Stl, C</u>	418.1 - TPH by IR	O & G	PCBs	Date Sampled	Time Sampled	Number of Containers	Preservative (yes or no)	Sampling Remarks	
																	<input type="checkbox"/> Bio-remediation	<input type="checkbox"/> Underground storage tank
1 SP4(A-B)	S	✓	X						X				9/27/94	3:20	4	N	<input type="checkbox"/>	Normal TRET OIA
2 SP4-2(A-D)	S	✓	X						X					3:30			<input type="checkbox"/>	0.1A
3 SP4-3(A-D)	S	✓	X						X					3:35			<input type="checkbox"/>	0.3A
4 SP4-4(A-D)	S	✓	X						X					3:45	4		<input type="checkbox"/>	0.4A
5																	<input type="checkbox"/>	
6 SP5(A-D)	S	✓	X	X					X				9/27/94	4:00	4		<input type="checkbox"/>	Bill - USA 0.5A Report to WEGA
7																	<input type="checkbox"/>	
8																	<input type="checkbox"/>	
9																	<input type="checkbox"/>	
10																	<input type="checkbox"/>	Please FAX
11																	<input type="checkbox"/>	10/06/94 HSD Per Vern Bennett
12																	<input type="checkbox"/>	pls. add TPH-gas analysis to all samples. JPS

Relinquished by \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Relinquished by Vern Bennett  
 Organization Western Geo-Engineers  
 Relinquished by \_\_\_\_\_

Date/Time \_\_\_\_\_ Received by \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Date/Time 9/27/94 1845 Received by \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Date/Time \_\_\_\_\_ Received by Vern Bennett for  
AEN

Date/Time \_\_\_\_\_  
 Date/Time \_\_\_\_\_  
 Date/Time \_\_\_\_\_  
 Date/Time 9/27/94 1845  
 Lab please initial the following:  
 Samples Stored in Ice Yes  
 Appropriate Containers Yes  
 Samples Preserved N/A  
 VOCs without Headspace N/A  
 Comments \_\_\_\_\_

P. 08/08. FAX NO. 5109300256 AEN CALIFORNIA OCT-07-94 THU 12:30

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP4-1(A-D)  
 AEN LAB NO: 9409379.01  
 AEN WORK ORDER: 9409379  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/07/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-			Extrn Date 09/30/94
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	10/04/94
Toluene	108-88-3	ND	5	ug/kg	10/04/94
Ethylbenzene	100-41-4	ND	5	ug/kg	10/04/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	10/04/94
TPH as Gas in Soil	5030 GC-FID	ND	0.2	mg/kg	10/04/94
Lead in WET Extract	EPA 7420	0.2 *	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit



## WESTERN GEO-ENGINEERING

SAMPLE ID: SP4-2(A-D)  
 AEN LAB NO: 9409379-02  
 AEN WORK ORDER: 9409379  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/07/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-			Extrn Date 09/30/94
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	10/04/94
Toluene	108-88-3	ND	5	ug/kg	10/04/94
Ethylbenzene	100-41-4	ND	5	ug/kg	10/04/94
Xylenes. Total	1330-20-7	ND	5	ug/kg	10/04/94
TPH as Gas in Soil	5030 GC-FID	ND	0.2	mg/kg	10/04/94
Lead in WET Extract	EPA 7420	ND	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP4-3(A-D)  
 AEN LAB NO: 9409379-03  
 AEN WORK ORDER: 9409379  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/07/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-		Extrn Date	09/30/94
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	10/04/94
Toluene	108-88-3	ND	5	ug/kg	10/04/94
Ethylbenzene	100-41-4	ND	5	ug/kg	10/04/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	10/04/94
TPH as Gas in Soil	5030 GC-FID	ND	0.2	mg/kg	10/04/94
Lead in WET Extract	EPA 7420	ND	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit  
 \* = Value above reporting limit.

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP4-4(A-D)  
 AEN LAB NO: 9409379-04  
 AEN WORK ORDER: 9409379  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/07/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-			Extrn Date 09/30/94
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	10/04/94
Toluene	108-88-3	ND	5	ug/kg	10/04/94
Ethylbenzene	100-41-4	ND	5	ug/kg	10/04/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	10/04/94
TPH as Gas in Soil	5030 GC-FID	ND	0.2	mg/kg	10/04/94
Lead in WET Extract	EPA 7420	ND	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

## WESTERN GEO-ENGINEERING

SAMPLE ID: SP5(A-D)  
 AEN LAB NO: 9409379-05  
 AEN WORK ORDER: 9409379  
 CLIENT PROJ. ID: USA #57

DATE SAMPLED: 09/27/94  
 DATE RECEIVED: 09/27/94  
 REPORT DATE: 10/07/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#CA Waste Extraction	CA Title 22	-			Extrn Date 09/30/94
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	10/04/94
Toluene	108-88-3	ND	5	ug/kg	10/04/94
Ethylbenzene	100-41-4	ND	5	ug/kg	10/04/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	10/04/94
TPH as Gas in Soil	5030 GC-FID	0.4 *	0.2	mg/kg	10/04/94
#Extraction for TPH	EPA 3550	-			Extrn Date 09/30/94
TPH as Diesel	GC-FID	92 *	1	mg/kg	10/03/94
Lead in WET Extract	EPA 7420	ND	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

PAGE 1

WESTERN GEO-ENGINEERING  
1386 E. BEAMER STREET  
WOODLAND, CA 95776

ATTN: VERN BENNETT  
CLIENT PROJ. ID: USA #57

REPORT DATE: 10/05/94

DATE(S) SAMPLED: 08/19/94

DATE RECEIVED: 08/22/94

AEN WORK ORDER: 9409339

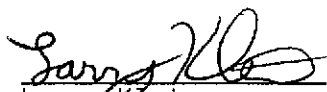
### PROJECT SUMMARY:

On August 22, 1994, this laboratory received 5 soil sample(s).

On September 22, 1994, client requested samples be analyzed for inorganic parameters. Results of analysis are summarized on the following page(s).

Please see quality control report for a summary of QC data pertaining to this project.

If you have any questions, please contact Client Services at (510) 930-9090.

  
Larry Klein  
Laboratory Director

REPORT DATE: 10/05/94

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## WESTERN GEO-ENGINEERING

SAMPLE ID	AEN LAB #	ANALYTE	METHOD	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
SP1-1(A-D),SP1-2(A-D)	9409339-01B	Lead in WET Extract	EPA 7420	0.3 *	0.1	mg/L	10/03/94
SP1-3(AB),SP2-2(A-D)	9409339-02B	Lead in WET Extract	EPA 7420	0.1 *	0.1	mg/L	10/03/94
SP2-3(A-D),SP2-4(A-D)	9409339-03B	Lead in WET Extract	EPA 7420	0.1 *	0.1	mg/L	10/03/94
SP3-1(A-D),SP3-2(A-D)	9409339-04B	Lead in WET Extract	EPA 7420	0.1 *	0.1	mg/L	10/03/94
SP3-3(A-D),SP3-4(A-D)	9409339-05B	Lead in WET Extract	EPA 7420	0.3 *	0.1	mg/L	10/03/94

ND = Not detected at or above the reporting limit

\* = Value above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9409339

CLIENT PROJECT ID: USA #57

Quality Control and Project Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

AEN JOB NO: 9409339  
DATE EXTRACTED: 09/30/94  
DATE ANALYZED: 10/03/94

Method Blank Results for Waste Extraction Test

Analyte	Inst./ Method	Concentration (mg/L)	STLC (mg/L)	Reporting Limit (mg/L)
Pb, Lead	V22/7420	ND	5.0	0.1



STLC = Soluble Threshold Limit Concentration

\*\*\* END OF REPORT \*\*\*



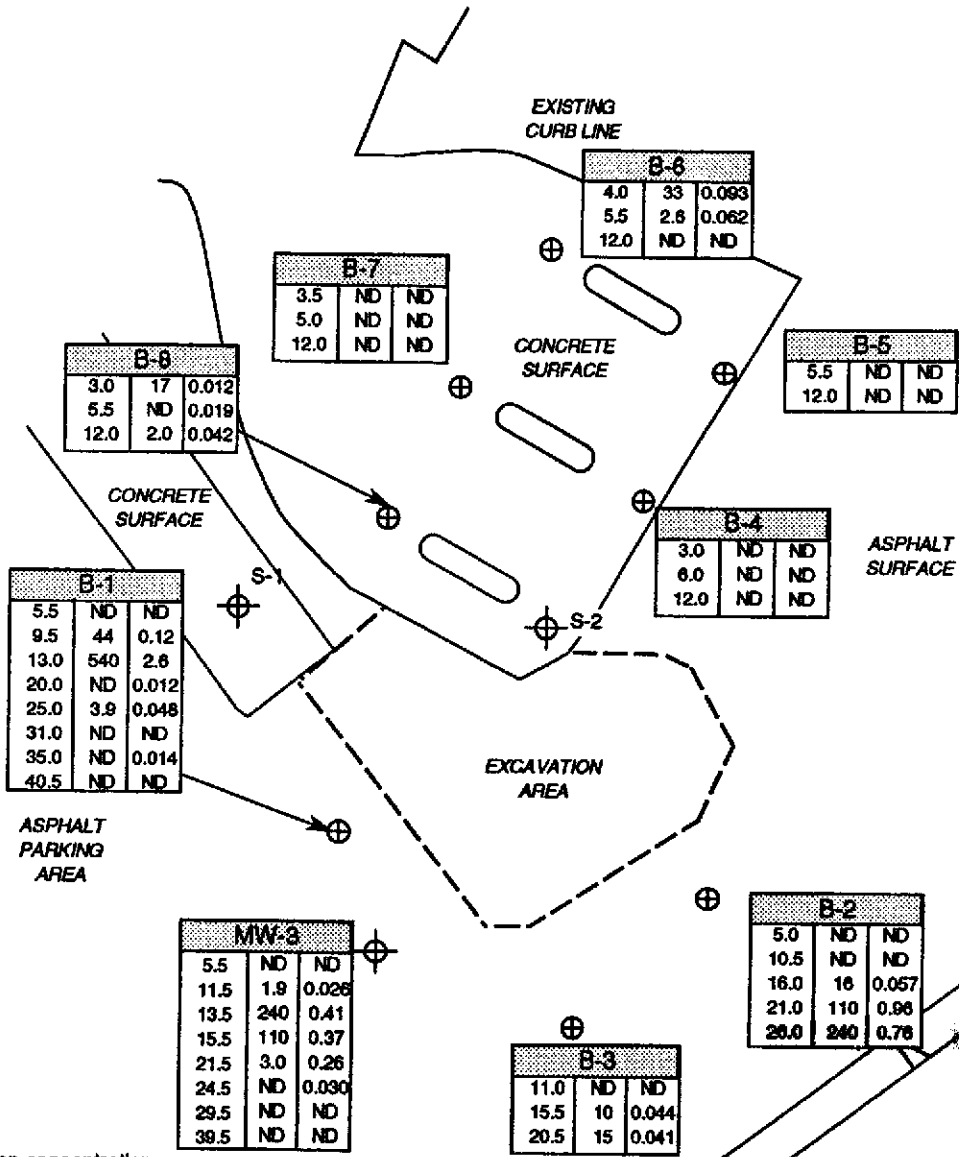


**LEGEND**

-  MW-3 Groundwater monitoring well
-  B-8 Soil boring

MW-10		
Depth	TPH-G	B

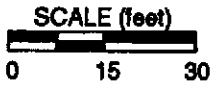
Hydrocarbon concentrations in soil (ppm). Depth in feet.



**NOTES:**  
 Hydrocarbon concentrations are based on results of laboratory analysis of soil samples collected February 28 through March 2, 1995. ND = not detected at detection limits stated in official laboratory reports. TPH-G = total petroleum hydrocarbons as gasoline; B = benzene; ppm = parts per million.

**HYDROCARBON CONCENTRATIONS IN SOIL**  
 February 28 through March 2, 1995

Former USA Gas #57  
 10700 MacArthur Boulevard  
 Oakland, California



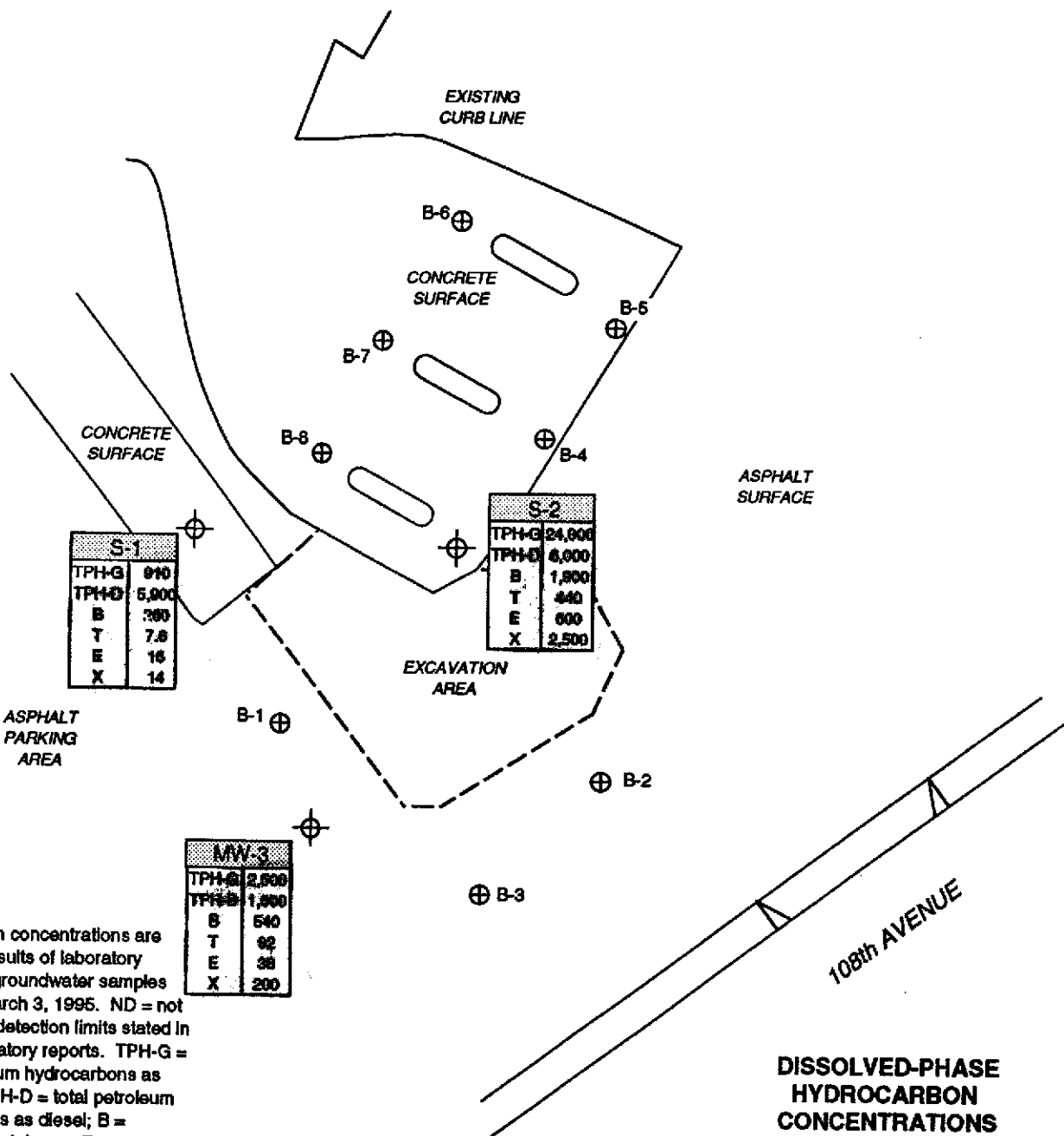
**FIGURE 5**

**LEGEND**

⊕ MW-3 Groundwater monitoring well

⊕ B-8 Soil boring

**MW-10**  
 TPH-G  
 TPH-D  
 B  
 T  
 E  
 X  
 Dissolved-phase hydrocarbon concentrations (ppb)



S-1	
TPH-G	810
TPH-D	5,900
B	380
T	7.6
E	16
X	14

S-2	
TPH-G	24,900
TPH-D	6,000
B	1,900
T	440
E	600
X	2,500

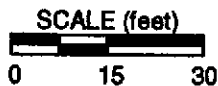
MW-3	
TPH-G	2,500
TPH-D	1,900
B	540
T	92
E	38
X	200

**NOTES:**

Hydrocarbon concentrations are based on results of laboratory analysis of groundwater samples collected March 3, 1995. ND = not detected at detection limits stated in official laboratory reports. TPH-G = total petroleum hydrocarbons as gasoline; TPH-D = total petroleum hydrocarbons as diesel; B = benzene; T = toluene; E = ethylbenzene; X = total xylenes; ppb = parts per billion. \* = well not sampled.



**ALTON  
 GEOSCIENCE**  
 Livermore, California



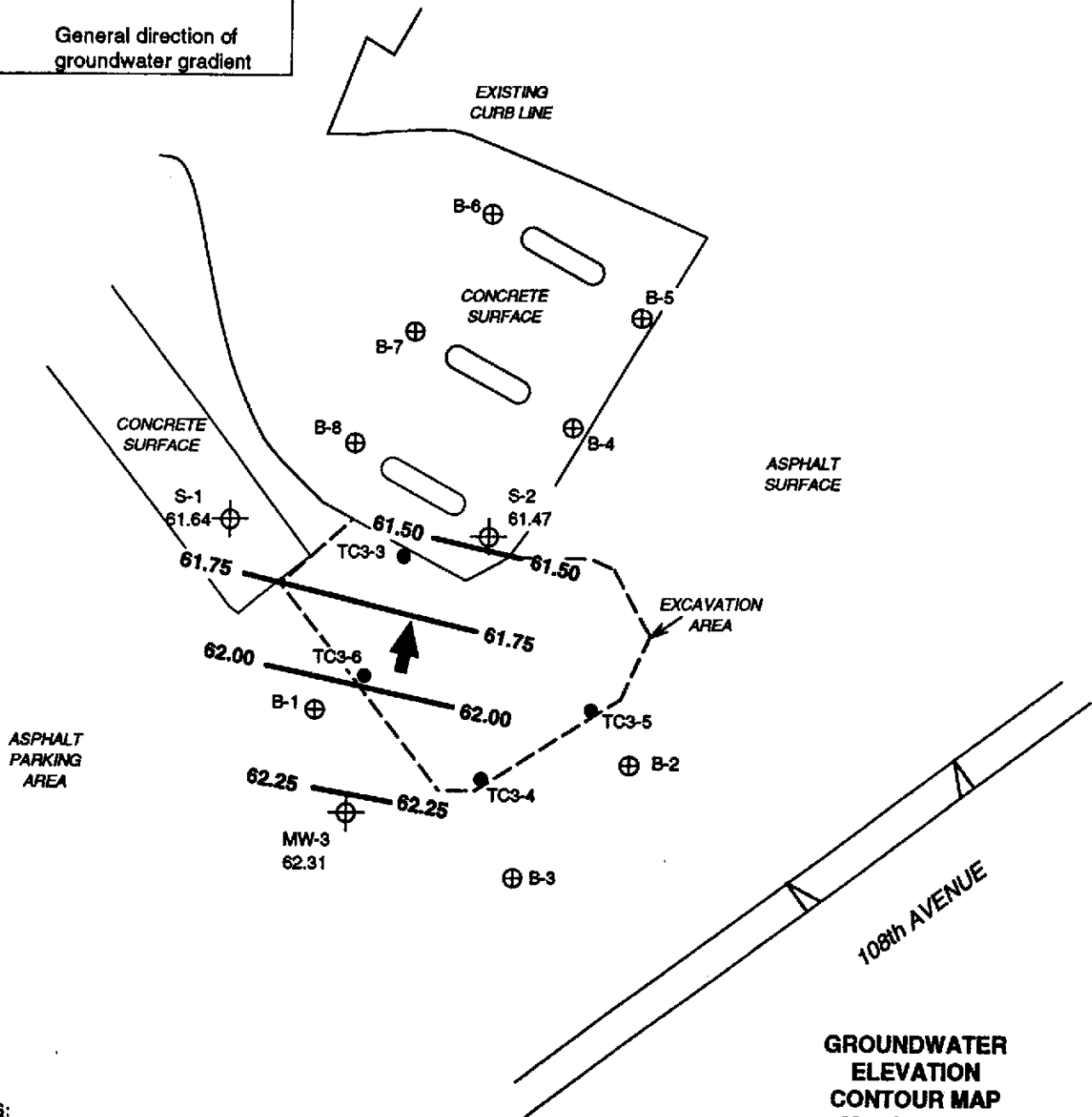
**DISSOLVED-PHASE  
 HYDROCARBON  
 CONCENTRATIONS**  
 March 3, 1995

Former USA Gas #57  
 10700 MacArthur Boulevard  
 Oakland, California

**FIGURE 6**

**LEGEND**

- MW-3 ⊕ Monitoring well
- B-8 ⊕ Soil boring
- TC3-6 ● Soil sample location
- 62.31 Groundwater elevation  
(feet relative to mean  
sea level [NGVD-1929])
- Groundwater elevation  
contour line
- ↗ General direction of  
groundwater gradient



**NOTES:**  
Contour lines are interpretive based on fluid level measurements collected March 3, 1995. Contour interval = 0.25 foot.

**GROUNDWATER  
ELEVATION  
CONTOUR MAP  
March 3, 1995**

Former USA Gas #57  
10700 MacArthur Boulevard  
Oakland, California



**FIGURE 7**

Table 1

## Summary of Soil Sample Analysis

Former USA Gas #57

Sample ID	Date	Depth (feet)	TPH-G (ppm)	TPH-D (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl- benzene (ppm)	Total Xylenes (ppm)
B-1	2/28/95	5.5	ND	—	ND	ND	ND	ND
		9.5	44	—	0.12	ND	0.14	0.40
		13.0	540	55	2.6	10	7.5	48
		20.0	ND	—	0.012	0.016	ND	0.029
		25.0	3.9	—	0.048	0.14	0.062	0.37
		31.0	ND	—	ND	0.011	0.0057	0.045
		35.0	ND	—	0.014	0.018	0.012	0.079
		40.5	ND	ND	ND	ND	ND	ND
B-2	3/1/95	5.0	ND	—	ND	ND	ND	ND
		10.5	ND	—	ND	ND	ND	ND
		16.0	16	—	0.057	0.028	0.029	1.2
		21.0	110	—	0.96	0.41	0.33	1.5
		26.0	240	22	0.76	1.4	0.85	1.9
B-3	3/1/95	11.0	ND	—	ND	ND	ND	ND
		15.5	10	—	0.044	0.11	0.079	0.63
		20.5	15	1.3	0.041	0.37	0.15	1.1
B-4	3/2/95	3.0	ND	—	ND	ND	ND	ND
		6.0	ND	—	ND	ND	ND	ND
		12.0	ND	ND	ND	ND	ND	ND
B-5	3/2/95	5.5	ND	—	ND	ND	ND	ND
		12.0	ND	ND	ND	ND	ND	ND

Table 1

## Summary of Soil Sample Analysis

Former USA Gas #57

Sample ID	Date	Depth (feet)	TPH-G (ppm)	TPH-D (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl- benzene (ppm)	Total Xylenes (ppm)
B-6	3/2/95	4.0	33	5.3	0.093	0.065	0.33	2.0
		5.5	2.6	—	0.062	ND	0.030	0.047
		12.0	ND	—	ND	ND	ND	0.022
B-7	3/2/95	3.5	ND	ND	ND	ND	ND	ND
		5.0	ND	—	ND	ND	ND	ND
		12.0	ND	—	ND	ND	ND	ND
B-8	3/2/95	3.0	17	—	0.012	0.021	0.12	0.16
		5.5	ND	ND	0.019	ND	0.050	ND
		12.0	2.0	—	0.042	ND	ND	0.016
MW-3	2/28/95	5.5	ND	—	ND	ND	ND	ND
		11.5	1.9	—	0.026	0.011	0.0061	0.019
		13.5	240	12	0.41	0.64	2.0	5.4
		15.5	110	—	0.37	3.8	1.5	10
		21.5	3.0	—	0.26	0.24	0.059	0.50
		24.5	ND	—	0.030	0.0069	0.0056	0.016
		29.5	ND	—	ND	0.0054	ND	0.0092
		39.5	ND	—	ND	ND	ND	ND

NOTES: ppm= parts per million  
 TPH-G = total petroleum hydrocarbons as gasoline  
 TPH-D = total petroleum hydrocarbons as diesel  
 ND = not detected at or above method detection limit  
 — = not measured/not analyzed

Table 2

Summary of Groundwater Monitoring and Analysis

Former USA Gas #57

Well ID	Date	Top of Casing Elevation (feet)	Depth to Water (feet)	Groundwater Elevation (feet)	TPH-G (ppb)	TPH-D (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)
S-1	3/3/95	74.74	13.10	61.64	910	5,900	260	7.6	16	14
S-2	3/3/95	76.86	15.39	61.47	24,000	6,000	1,900	440	600	2,500
MW-3	3/3/95	76.30	13.99	62.31	2,500	1,600	540	92	36	200

NOTES:    ppb =            parts per billion  
           TPH-G =        total petroleum hydrocarbons as gasoline  
           TPH-D =        total petroleum hydrocarbons as diesel

**APPENDIX A**

**GENERAL FIELD PROCEDURES, BORING LOGS,  
AND WELL CONSTRUCTION DETAILS**



## GENERAL FIELD PROCEDURES

A description of the general field procedures used during site investigation and monitoring activities is presented below. For an overview of protocol, refer to the appropriate section(s).

### DRILLING AND SOIL SAMPLING

Soil borings are drilled using continuous-flight, hollow-stem augers. Borings that are not completed as monitoring wells are grouted to within 5 feet of the ground surface with a cement/bentonite slurry. The remaining 5 feet is filled with concrete.

Soil samples are obtained for soil description, field hydrocarbon vapor screening, and possible laboratory analysis. Soil samples are retrieved from the borings by one of two methods: 1) continuously, using a 5-foot-long, continuous-core barrel sampler advanced into the soil with the lead auger; sample tubes are driven into the core with a mallet, or 2) at 2.5- or 5-foot intervals, using a standard split-spoon sampler lined with four 1.5-inch-diameter stainless steel or brass sample inserts. The split-spoon sampler is driven approximately 18 inches beyond the lead auger with a 140-pound hammer dropped from a height of 30 inches.

For hand auger borings and hand-held, power-driven auger borings, soil samples are retrieved using a hand-driven slide hammer lined with a 1.5-inch-diameter stainless steel sample tube.

During drilling activities, soil adjacent to the laboratory sample is screened for combustible vapors using a combustible gas indicator (CGI) or equivalent field instrument. For each hydrocarbon vapor screening event, a 6-inch-long by 2.5-inch-diameter sample insert is filled approximately 1/3 full with the soil sample, capped at both ends, and shaken. The probe is then inserted through a small opening in the cap, and a reading is taken after approximately 15 seconds and recorded on the boring log. The remaining soil recovered is removed from the sample insert or sampler, and described in accordance with the Unified Soil Classification System. For each sampling interval, field estimates of soil type, density/consistency, moisture, color, and grading are recorded on the boring logs.

### SOIL SAMPLE HANDLING

Soil sample handling follows the same basic protocol for both drilling and excavation activities. Upon retrieval, soil samples are immediately removed from the sampler, sealed with Teflon sheeting and polyurethane caps, and wrapped with tape. Each sample is labeled with the project number, boring/well number, sample depth, geologist's initials, and date of collection. After the samples have been labeled and documented in the chain of custody record, they are placed in a cooler with ice at approximately 4 degrees Celsius ( $^{\circ}\text{C}$ ) prior to and during transport to a state-certified laboratory for analysis. Samples not selected for immediate analysis may be transported in a cooler with ice and archived in a frostless refrigerator at approximately  $4^{\circ}\text{C}$  for possible future testing.