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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 (TTL) 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-O 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.

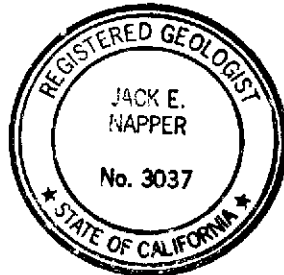
The analytical results, methods and depths for soil samples from the UST's removal and overexcavation efforts are tabulated in Table 1, Appendix F; their locations are depicted in Figures 3, 4 and 5.


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 IN FEET	SAMPLING COMPANY	LAB	TPH,G ppm	TPH,D ppm	BENZENE ppm	TOLUENE ppm	ETHYL BENZENE ppm	XYLENE ppm	TPHC LEAD ppm	STLC LEAD PPM	PMA's by M8270 ppm	VOL. ORGAN by 8240 ** ppm
P_L TRNCHPI-E	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	0.28	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	TTLIC 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-E08/19/94	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	0.06	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 PILE SP5	A-D 09/27/94	6'UP2' IN		WEGE	AEN	0.4	92	<.005	<.005	<.005	<.005	<0.1			
SPIL COMP1-2	& 1-208/19/94	6'UP2' IN		WEGE	AEN							0.3			
SPIL COMP1-3	& 2-208/19/94	6'UP2' IN		WEGE	AEN							0.1			
SPIL COMP2-3	& 2-408/19/94	6'UP2' IN		WEGE	AEN							0.1			
SPIL COMP3-1	& 3-208/19/94	6'UP2' IN		WEGE	AEN							0.1			
SPIL COMP3-3	& 3-408/19/94	6'UP2' IN		WEGE	AEN							0.3			

ppm= PARTS PER MILLION (mg/kg)

TPH= TOTAL FUEL HYDROCARBONS (GASOLINE)

TTLIC= TOTAL THRESHOLD LIMIT CONCENTRATION

EPA METHOD 5030 USED FOR TPH,GASOLINE

EPA METHOD 3550 FOR TPH,DIESEL

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

EPA METHOD 7420 USED FOR TTLIC (LEAD)

WEGE= WESTERN GEO-ENGINEERS

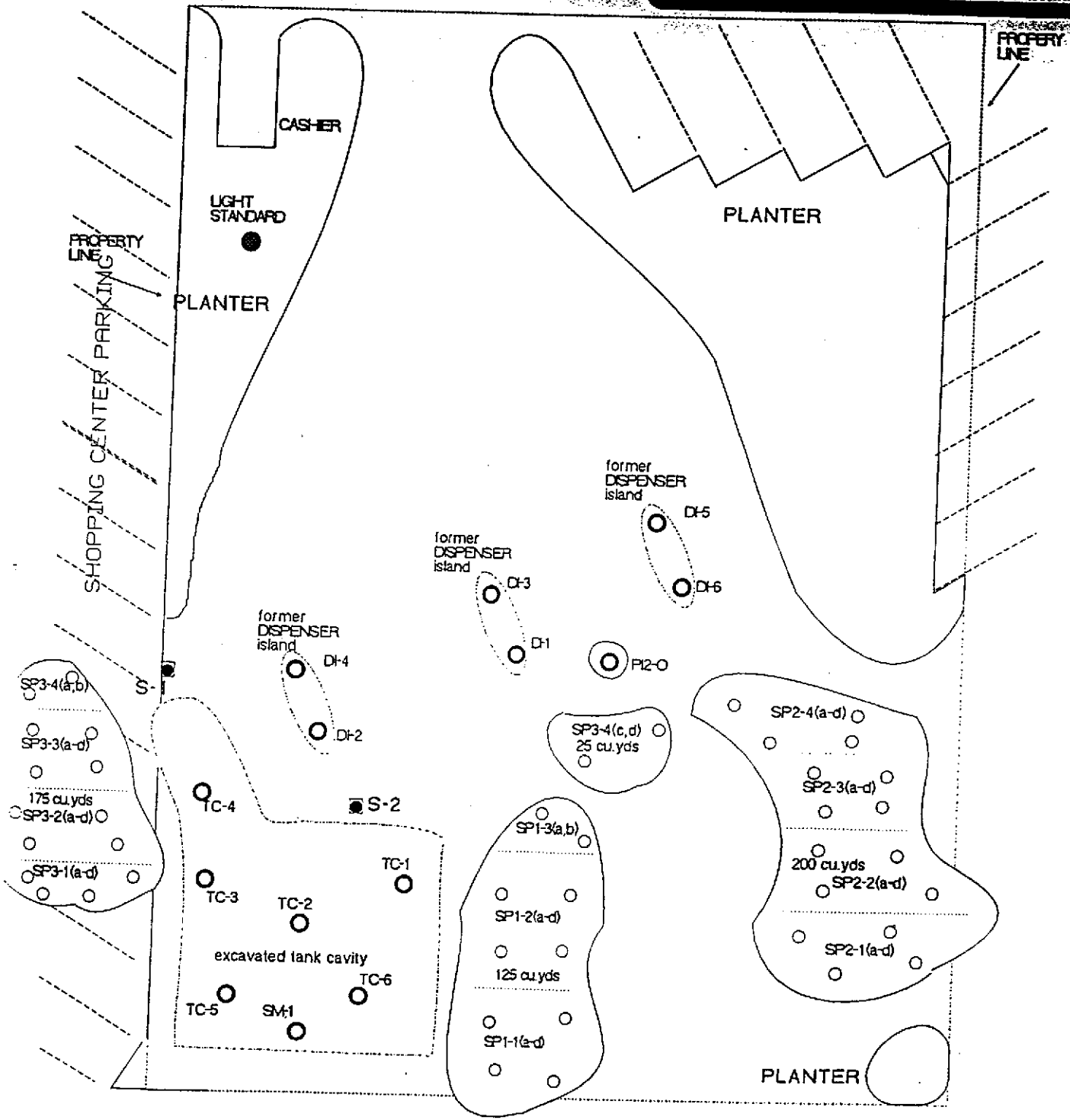
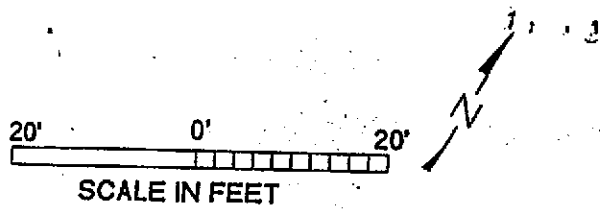
AEN= AMERICAN ENVIRONMENTAL NETWORK (DHS #1172)

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

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

USA GASOLINE CORPORATION  
 STATION #57  
 10700 MACARTHUR BLVD.,  
 OAKLAND, CA  
**SOIL SAMPLING, TANK CAVITY,  
 DISPENSER ISLANDS & STOCK-  
 PILED SOIL**

**FIGURE 4**  
 8/19/94

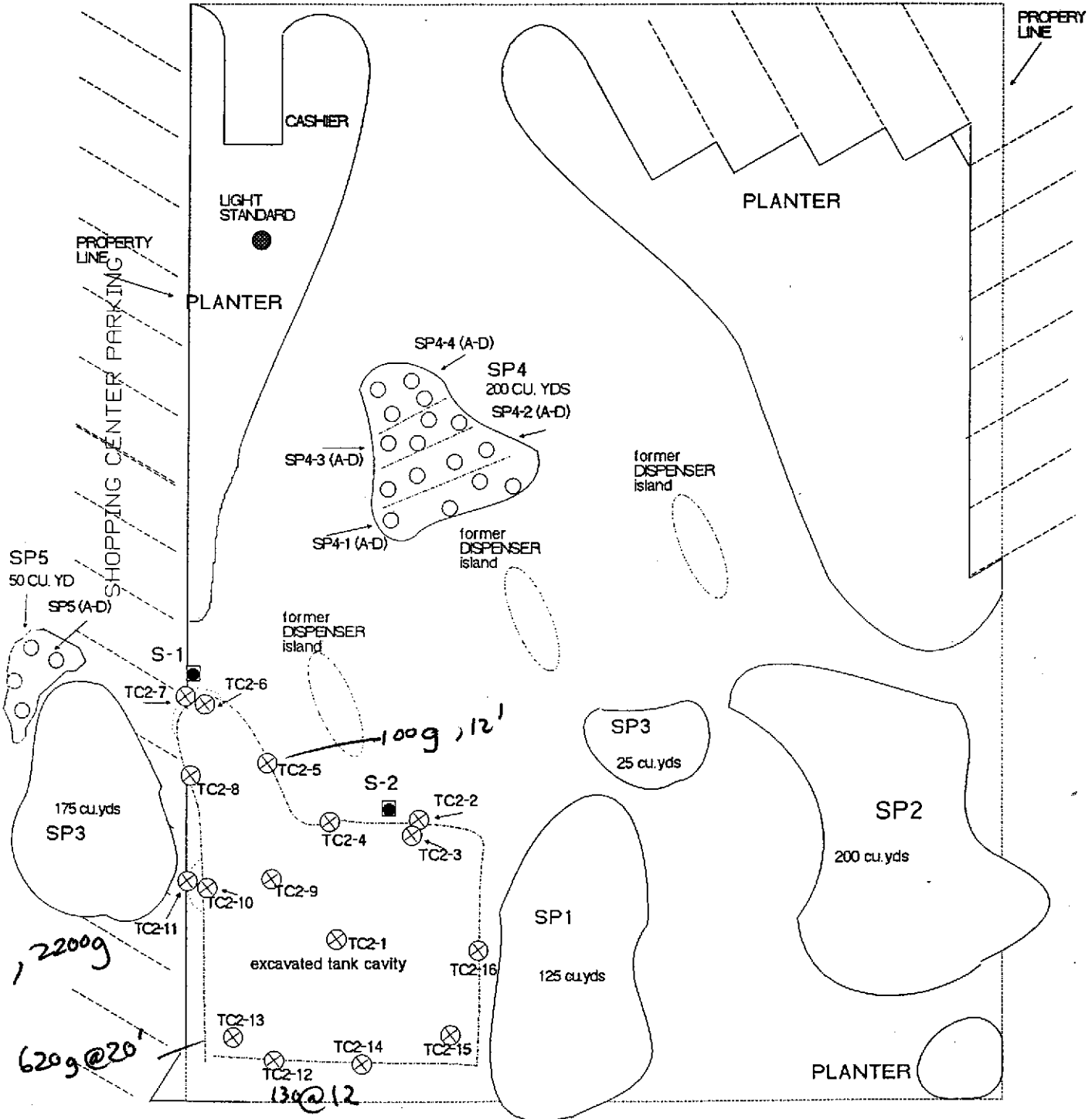
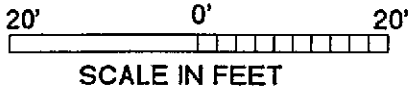




USA GASOLINE CORPORATION  
 STATION #57  
 10700 MACARTHUR BLVD.,  
 OAKLAND, CA

**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	