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Mr. John Rutherford
Desert Petroleum
P.O. Box 1601
Oxnard, California 93032
(805) 644-6784
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March 20, 1997

Dear Mr. Rutherford:

The following report documents the First Quarter 1997 collection and certified laboratory analysis of groundwater samples from five monitoring wells and three water recovery wells associated with former Desert Petroleum Station #793.

SITE LOCATION AND DESCRIPTION

Former Desert Petroleum #793 is a non-active service station, located on the northwest corner of the intersection of Park Blvd. and Hampel Street at [redacted] Park Blvd., Oakland, California (Figure 1). The site is located in projected section 32; T1S; R3W; MDB&M at an approximate elevation of 210 feet above mean sea level (Figure 2).

LOCAL GEOLOGY

Geomorphology

The site is located on the western slope of the Berkeley Hills. The Berkeley Hills are a northwest-southeast trending range within the Coastal Range Province of California. Erosion of the Coastal Ranges has filled the valleys within and bordering the Coastal Range with sequences of gravels, silts, sands, and clays.

Stratigraphy

The native soil from surface to 13 feet below ground surface (bgs) consists of dark brown silty clay. The dark brown clay is underlain by a light brown stiff clay that includes subrounded to rounded metavolcanic gravel. This clay extends to approximately 23 feet bgs at the northwest corner of the site. The gravel and clay is underlain by a fine to medium sand, clayey sand, and silty sand.

COLLECTION AND ANALYSIS OF GROUNDWATER SAMPLES, 2/21/97

WEGE and Lawrence Tank Testing personnel conducted a quarterly groundwater monitoring round at the site on February 21, 1997. Water samples were collected from monitor wells MW1, RS-2, RS-5, and RS-6 located on-site and RS-7 located in the center of Brighton Avenue to the northeast of the site (Figure 3). Water samples were also collected from the three on-site water recovery wells (R1-R3). See Appendix A for QA/QC, details, methods, procedures, abbreviations, and acronyms used in sampling and analysis.

Depth to Water Measurements

Depth to water was measured at all monitor wells and the three on-site water recovery wells (R1-R3). The depth to water measurements were made using a product/water interface probe. Measurements were made from the surveyed elevation at of the top of casing at each well. Table 1 shows the elevation of groundwater with respect to mean sea level for all monitor wells on December 11, 1996.

Purging of Monitor Wells

The monitor wells were purged of 3 volumes of water by Lawrence Tank Testing using a truck mounted vacuum lift pump and one inch diameter PVC tubing. The specific volume of water removed from each well is recorded on the well sampling data sheets (Appendix A).

Collection and Certified Analysis of Groundwater Samples

After purging, the wells were allowed to recover to at least 80% of their original well volumes. A groundwater sample was then collected from each well with a disposable polyethylene bailer and decanted with no headspace into two 40 ml VOA vials containing 0.5 ml HCL acid as a preservative.

North State Environmental Laboratories analyzed all water samples for concentrations of TPH-G, BTEX, and MTBE using EPA methods 5030/8015M/8020 (Appendix B). The presence of MTBE was varified with EPA Method 8260.

Disposition of Waste Water

The waste water generated from the purging of the monitor wells during sampling was contained on-site in labeled 55 gallon DOT approved drums. The drummed wastewater was removed from the site and transported to a recycling facility by Evergreen Environmental Services on February 3, 1997.

RESULTS OF QUARTERLY GROUNDWATER MONITORING

Groundwater Gradient and Flow Direction

Figure 4 shows the groundwater elevation gradients and flow direction that were derived from the depth to water measurements from on-site monitor wells on February 21, 1997. The groundwater elevation has increased by an average of approximately 2.0 feet in the monitor wells since the previous quarterly monitoring round on September 4, 1994 (Table 1).

The current flow direction is to northwest. The hydraulic gradient averages 0.13 feet/linear foot downgradient from the overexcavated area at the site (Figure 4).

The current flow direction and hydraulic gradient is consistent with previous gradient determinations by WEGE.

Results of Certified Analysis of Groundwater Samples

The results of the certified analyses of groundwater samples collected on February 21, 1997 are shown in Table 1 and Figure 3. Copies of the laboratory reports are included as Appendix B of this report.

TPH-G concentrations in water samples from the five monitor wells and three recovery wells ranged from a maximum of 100,000 ug/l at monitor well RS-5 to less than laboratory detection limits (50 ug/l) in monitor wells MW1 and RS-2.

Benzene concentrations ranged from a maximum of 31,000 ug/l in monitor well RS-7 to less than laboratory detection limits (0.5 ug/l) in monitor wells MW1 and RS-2.

MTBE was confirmed in recovery well R-2 at 3 ug/L all other wells showed less than laboratory detection limits of 0.5 ug/l.

Figure 3 shows the areal distribution of TPH-G, BTEX, and MTBE in groundwater in ug/l as determined from groundwater samples collected from the monitor wells on February 21, 1997. An overall increase in the groundwater concentrations in all of the wells indicates that the increase in groundwater elevation has come in contact with impacted soils above the normal groundwater level.

RECOMMENDATIONS

Starting with this report, Biannual sampling with Biannual reporting will commence, see Appendix C - March 4, 1997 letter from Alameda County.

LIMITATIONS

This report is based upon the following:

A. The observations of field personnel.
B. The results of laboratory analyses performed by a state certified laboratory.
C. Referenced documents.
D. Our understanding of the regulations of the State of California, Alameda County and the City of Oakland.

Changes in groundwater conditions can occur due to variations in rainfall, temperature, local and regional water use, and local construction practices. In addition, variations in the soil and groundwater conditions could exist beyond the points explored in this investigation.

State Certified Laboratory analytical results are included in this report. This laboratory follows EPA and State of California approved procedures; however, WEGE is not responsible for errors in these laboratory results.

The services performed by Western Geo-Engineers, a corporation, under California Registered Geologist #3037 and/or Contractors License #513857, have been 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 contamination of soil and/or groundwater must be reported to the appropriate agencies in a timely manner. No other warranty, expressed or implied, is made.

Sincerely,

George L. Converse
Geologist

Jack E. Napper
Ca. Reg. Geologist #3037

cc: Ms. Jennifer Eberie, HMS, Alameda County Health
(510)271-4530

TABLE 1

GROUND WATER ELEVATIONS AND CERTIFIED ANALYTICAL LABAORATAORY RESULTS FROM WATER SAMPLES

DESERT PETROLEUM, INC. SITE #793

4035 PARK BOULEVARD, OAKLAND, CALIFORNIA

(All concentrations in parts per billion [ug/L, ppb])

(AMSL = Above mean sea level)

WELL ID#	DATE SAMPLED	WELL CASING ELEVATION (FEET AMSL)	DEPTH TO GROUND WATER (FEET)	GROUND WATER ELEVATION (FEET AMSL)	TPH-G (UG/L)	BENZENE (UG/L)	TOLUENE (UG/L)	ETHYL-BENZENE (UG/L)	XYLENES (UG/L)	MTBE (UG/L)
RS-1	12/14/89	240	24.25	215.75	19000	2600	2700	200	1200	
RS-1	12/90				15000	3500	330	170	760	
RS-1	2/91				6900	910	200	39	540	
RS-1	6/91				1600	56	180.000	12	26	
RS-1	9/91				4100	730	7.6	5.1	24	
RS-1	12/91				8300	950	160	71	190	
RS-1	11/09/92	100.18	17.05	83.13	1700	730	9.6	16	14	
RS-1	04/07/94	100.18	13	87.18	860	84	12	16	110	
RS-1	06/19/94	228.15	13.37	214.78	1400	150	12	52	87	
RS-1	09/17/94	228.15	16.33	211.82	310	30	1.8	2.8	3.9	
RS-1	03/12/95	228.15	4.66	223.49	ND	ND	ND	ND	ND	
RS-1	DESTROYED BY OVER-EXCAVATION OF UST-DISPENSER AREAS (8/14/95									
RS-1	REPLACED WITH MW-1 9/5/95.									
MW-1	10/04/95	232.57	12.38	220.19	ND	ND	ND	ND	ND	
MW-1	12/21/95	232.57	13.4	219.17	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
MW-1	03/27/96	232.57	5.53	227.04	< 50	< 0.5	< 0.5	< 0.5	< 2	< 50
MW-1	06/11/96	232.57	9.02	223.55	< 50	< 0.5	< 0.5	< 0.5	< 2	< 50
MW-1	09/04/96	232.57	11.84	220.73	< 50	< 0.5	< 0.5	< 0.5	< 2	< 5
MW-1	12/11/96	232.57	12.98	219.59	< 50	< 0.5	0.9	< 0.5	< 1	< 0.5
MW-1	2/21/97	232.57	9.5	223.07	< 50	< 0.5	0.9	< 0.5	< 1	< 0.5*
RS-2	06/19/94	227.19	10.89	216.3	140	9.2	34	4.3	24.0	
RS-2	03/12/95	227.19	5.26	221.93	ND	ND	ND	ND	ND	
RS-2	10/04/95	230.43	15.05	215.38	ND	ND	ND	ND	ND	
RS-2	12/21/95	230.43	9.95	220.48	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
RS-2	03/27/96	230.43	6.28	224.15	< 50	< 0.5	< 0.5	< 0.5	< 2	< 50
RS-2	06/11/96	230.43	8.00	222.43	< 50	1.2	2.8	< 0.5	< 2	< 50
RS-2	09/04/96	230.43	9.89	220.54	< 50	< 0.5	< 0.5	< 0.5	< 2	< 5
RS-2	12/11/96	230.43	8.38	222.05	< 50	< 0.5	< 0.5	< 0.5	< 1	6
RS-2	2/21/97	230.43	6.96	223.47	< 50	< 0.5	< 0.5	< 0.5	< 1	< 0.5*
RS-5	12/14/89	241.26	25.97	215.29	57000	3100	4300	670	3400	
RS-5	2/91					FLOATING PRODUCT				
RS-5	6/91					FLOATING PRODUCT				
RS-5	9/91					FLOATING PRODUCT				
RS-5	12/91					FLOATING PRODUCT				
RS-5	11/09/92	98.99	20.73	78.26	50000	650	4800	1100	15000	
RS-5	04/07/94	98.99	18.16	80.83	27000	5000	8700	550	2800	

TABLE 1

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DESERT PETROLEUM, INC. SITE #793

4035 PARK BOULEVARD, OAKLAND, CALIFORNIA

(All concentrations in parts per billion [ug/L, ppb])

(AMSL = Above mean sea level)

WELL ID#	DATE SAMPLED	WELL CASING ELEVATION (FEET AMSL)	DEPTH TO GROUND WATER (FEET)	GROUND WATER ELEVATION (FEET AMSL)	TPH-G (UG/L)	BENZENE (UG/L)	TOLUENE (UG/L)	ETHYL-BENZENE (UG/L)	XYLENES (UG/L)	MTBE (UG/L)
RS-5	06/19/94	227.65	18.11	209.54	20000	2100	5300	470	2500	
RS-5	09/17/94	227.65	19.63	208.02	9300	230	340	110	700	
RS-5	03/12/95	227.65	14.54	213.11	93000	6400	2000	19000	10000	
RS-5	10/04/95	230.64	17.53	213.11	16000	420	2100	320	1800	
RS-5	12/21/95	230.64	17.47	213.17	48000	3500	9200	840	4800	56
RS-5	03/27/96	230.64	13.51	217.13	68000	4900	18000	1700	11000	< 3000
RS-5	06/11/96	230.64	14.25	216.39	66000	6300	20000	2100	12000	< 3000
RS-5	09/04/96	230.64	16.50	214.14	31000	2100	11000	1100	6800	400
RS-5	12/11/96	230.64	15.88	214.76	85000	7000	21000	1800	8900	570
RS-5	2/21/97	230.64	13.76	216.88	100000	5000	22000	1700	7300	<0.5*
RS-6	12/14/89	240.23	22.52	217.71	11000	1400	1700	160	860	
RS-6	2/91					FLOATING PRODUCT				
RS-6	6/91				95000	4200	4200	650	3700	
RS-6	9/91					FLOATING PRODUCT				
RS-6	12/91				64000	3700	2300	730	4100	
RS-6	11/09/92	99.27	19.43	79.84	19000	1600	710	500	1600	
RS-6	04/07/94	99.27	14.42	84.85	16000	1200	1300	290	1100	
RS-6	06/19/94	227.22	14.45	212.77	23000	1300	2200	590	2200	
RS-6	09/17/94	227.22	19.52	207.7	24000	630	790	250	1100	
RS-6	03/12/95	227.22	8.9	218.32	3200	450	13	82	230	
RS-6	10/04/95	230.22	17.78	212.44	3700	170	250	38	290	
RS-6	12/21/95	230.22	14.98	215.24	3100	120	30	16	150	58
RS-6	03/27/96	230.22	10.00	220.22	6900	180	440	79	360	< 300
RS-6	06/11/96	230.22	12.00	218.22	7400	220	150	30	100	<1000
RS-6	09/04/96	230.22	15.00	215.22	1400	68	2.6	7.7	9.2	14
RS-6	12/11/96	230.22	12.36	217.86	1800	39	16	10	18	< 0.5
RS-6	2/21/97	230.22	10.00	220.22	2100	71	85	25	40	< 0.5*
RS-7	7/90				5600000	24000	210000	50000	740000	
RS-7	2/91					FLOATING PRODUCT				
RS-7	6/91					FLOATING PRODUCT				
RS-7	9/91					FLOATING PRODUCT				
RS-7	12/91				270000	11000	22000	2000	13000	
RS-7	11/09/92	67.88	4.62	63.26	81000	12000	16000	1900	13000	
RS-7	04/07/94	67.88	4.03	63.85	74000	16000	16000	1400	8500	
RS-7	06/19/94	195.92	4.07	191.85	83000	22000	19000	1500	9500	
RS-7	09/17/94	195.92	4.05	191.87	270000	13000	15000	2100	1100	
RS-7	03/12/95	195.92	3.72	192.2	35000	5100	560	6300	3600	
RS-7	10/04/95	199.35	4.03	195.32	96000	14000	14000	1300	7000	

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4035 PARK BOULEVARD, OAKLAND, CALIFORNIA

(All concentrations in parts per billion [ug/L, ppb])

(AMSL = Above mean sea level)

WELL ID#	DATE SAMPLED	WELL CASING ELEVATION (FEET AMSL)	DEPTH TO GROUND WATER (FEET)	GROUND WATER ELEVATION (FEET AMSL)	:	TPH-G (UG/L)	BENZENE (UG/L)	TOLUENE (UG/L)	ETHYL-BENZENE (UG/L)	XYLENES (UG/L)	MTBE (UG/L)
RS-7	12/21/95	199.35	3.95	195.4	:	70000	9300	12000	860	5600	210
RS-7	03/27/96	199.35	3.80	195.55	:	64000	8900	14000	1100	8300	< 3000
RS-7	06/11/96	199.35	3.79	195.56	:	65000	12000	17000	1600	9700	<5000
RS-7	09/04/96	199.35	3.99	195.36	:	20000	4900	2100	670	4400	100
RS-7	12/11/96	199.35	3.78	195.57	:	17000	4400	7500	570	4600	180
RS-7	3/31/97	199.35	3.82	195.53	:	93000	31000	47000	3800	22000	<0.5*
RECOVERY 1	09/04/96	230.73	15.00	215.73	:	1800	1100	3	29	< 10	< 30
RECOVERY 1	12/11/96	230.73	10.30	220.43	:	<50	<0.5	< 0.5	< 0.5	< 1	4
[illegible]	[illegible]	[illegible]	11.00	218.88	:	2500	670	9	3	13	<0.5*
RECOVERY 2	09/04/96	230.68	13.44	217.24	:	14000	7600	<10	170	190	<100
RECOVERY 2	12/11/96	230.68	12.42	218.26	:	488	300	1	< 0.5	30	16
RECOVERY 2	3/31/97	[illegible]	[illegible]	220.18	:	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
RECOVERY 3	09/04/96	230.32	9.90	220.42	:	<50	<0.5	<0.5	<0.5	<2	<5
RECOVERY 3	12/11/96	230.32	8.18	222.14	:	<50	<0.5	<0.5	<0.5	<1	5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	:	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

ND BELOW LABORATORY DETECTION LIMITS

TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

* MTBE results confirmed by EPA Method 8260 (GC/MS)

DESERT STATION #793
4035 Park Blvd.
Oakland, California

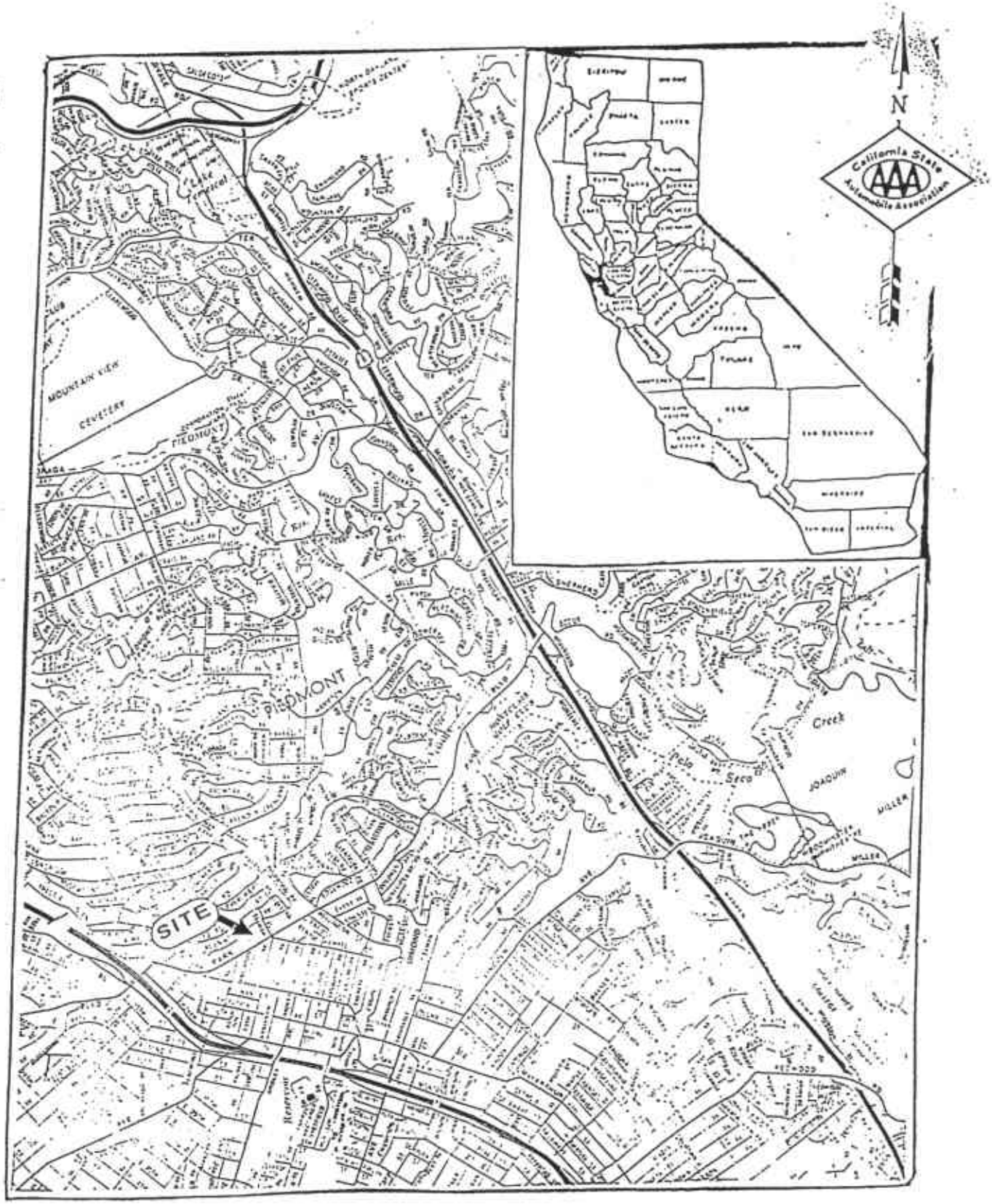

FIGURE 1

Location (AAA Map)

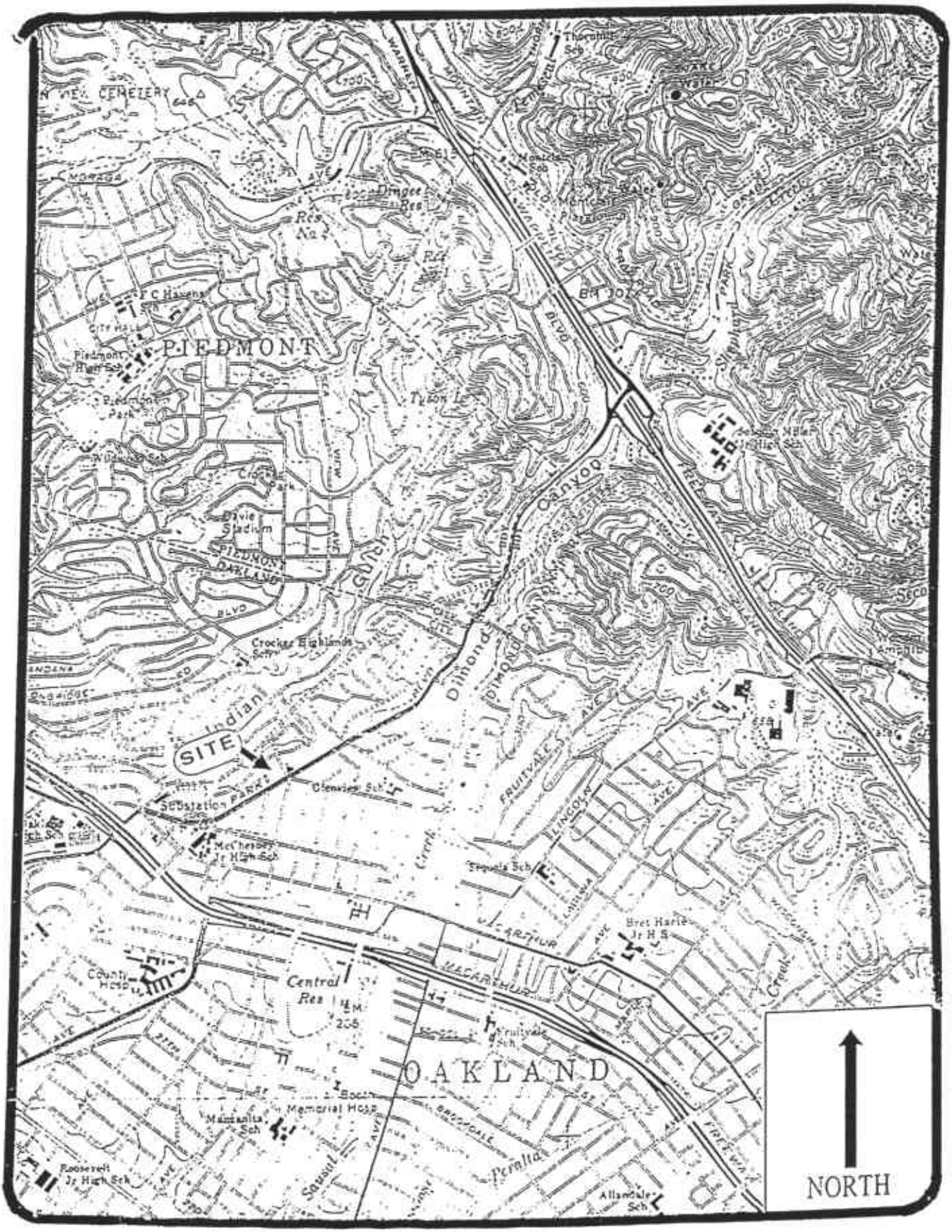

FIGURE 2., USGS TOPOGRAPHIC MAP

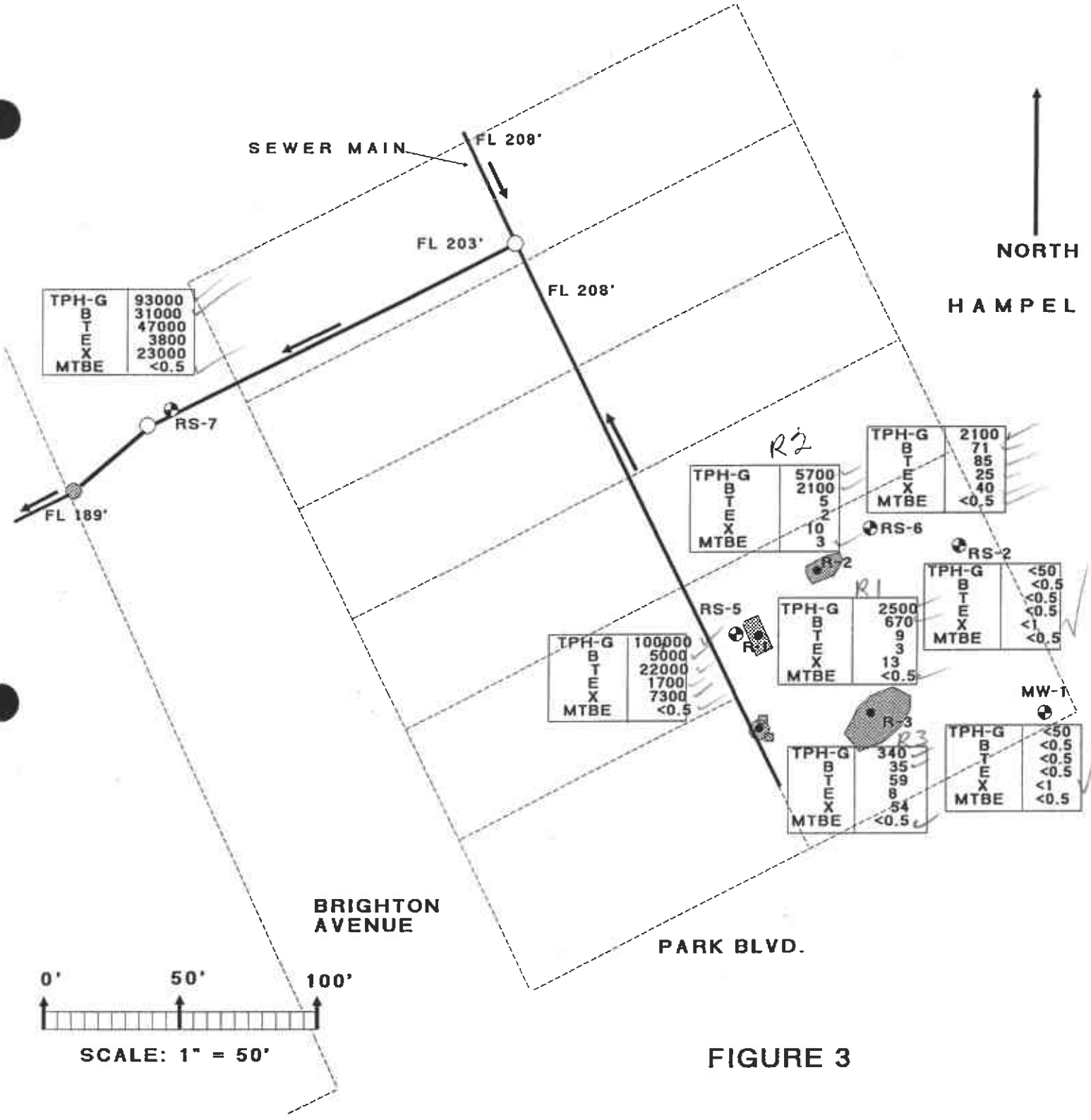

FIGURE 3

EXPLANATION

MW-1 ● MONITOR WELL LOCATION WITH ID# AND GROUNDWATER ANALYTICAL RESULTS. ALL CONCENTRATIONS IN UG/L.

TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
B = BENZENE
T = TOLUENE
E = ETHYLBENZENE
X = XYLENES
MTBE = METHYL tertiary-BUTYL ETHER

R1 INJECTION/RECOVERY TRENCHES AND RECOVERY WELLS

ANALTICAL RESULTS FROM GROUND WATER SAMPLES COLLECTED FROM MONITOR WELLS ON 2/21/97

DESERT PETROLEUM STATION #793
4035 PARK BLVD.
OAKLAND, CALIFORNIA

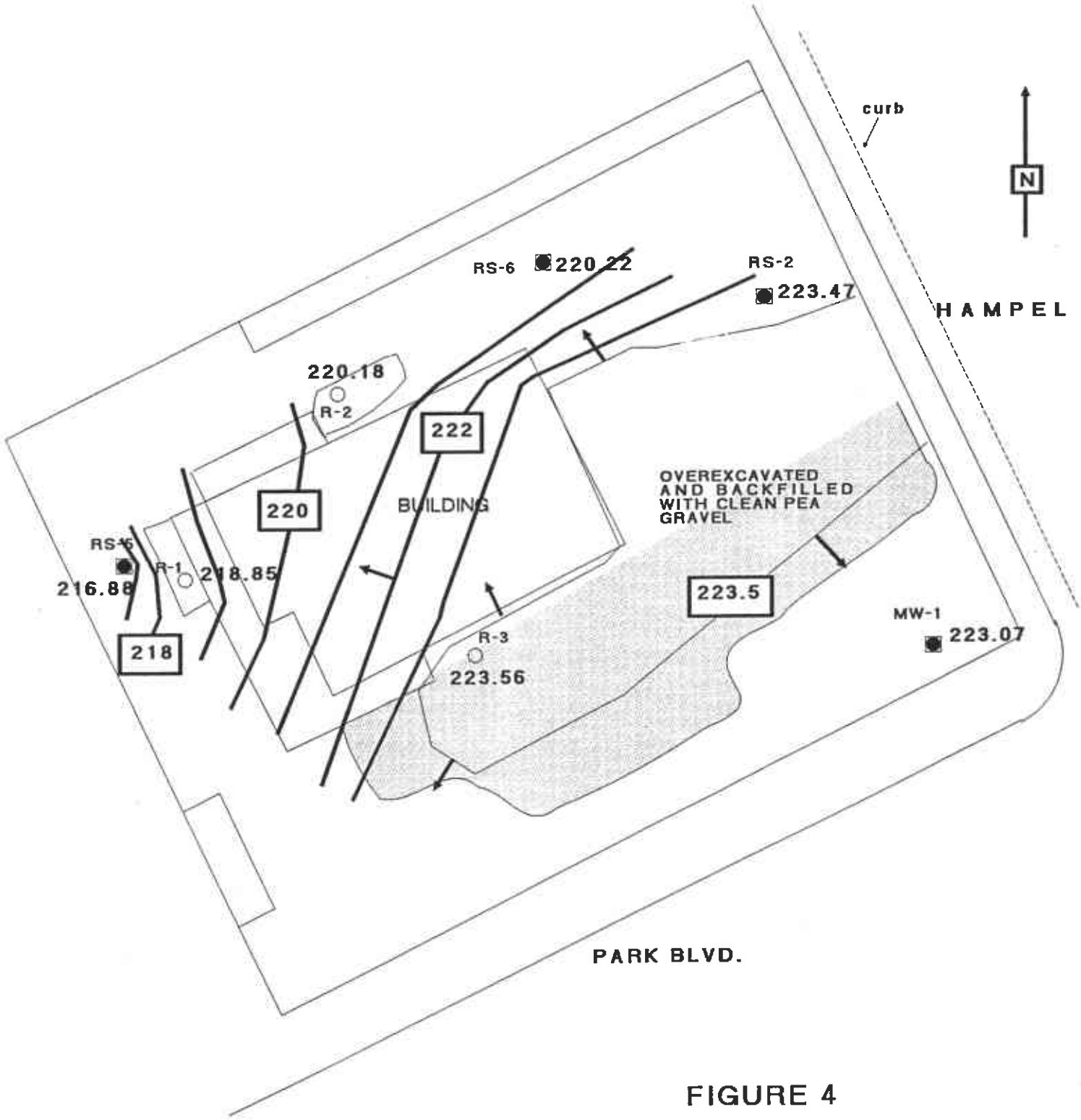

FIGURE 4

GROUNDWATER ELEVATION CONTOUR INTERVAL EQUALS ONE FOOT. ELEVATIONS ARE MEASURED IN FEET AMSL

0' 20' 40'

SCALE: 1" = 20'.

GROUNDWATER ELEVATION GRADIENTS AND FLOW DIRECTION FOR 2/21/97

DESERT PETROLEUM STATION #793
4035 PARK BLVD..
OAKLAND, CALIFORNIA 94602

APPENDIX A
QA/QC
METHODS
PROCEDURES
&
FIELD NOTES

APPENDIX A

METHODS AND PROCEDURES, QA/QC

This Appendix documents the specific methods, procedures, and materials used to collect and analyze groundwater samples.

Gauging and Measuring Monitor Wells

Prior to sampling a well, WEGE personnel obtain three measurements: 1) the depth to groundwater (DTW); 2) the product thickness using a battery powered depth to water-product interface probe and or by using a specially designed bailer; and 3) the total depth of casing, to calculate the total water head in the well. The DTW-product interface probe is lowered into the well casing until the instrument signals when the top of free phase floating product (if present) and/or the top of water is reached. The distance from the top of free phase floating product and/or water to the top of casing is read from the tape that is attached to the probe. The probe is then lowered to the bottom of the well and the tape is read again. The tape is calibrated in 0.01 foot intervals for accuracy to 0.01 foot. The measured distance is subtracted from the established elevation at the top of casing to determine the elevation of groundwater with respect to mean sea level and the difference between the top of groundwater and the base of the well is noted to establish water head in the well. The probe and tape is washed with TSP (Tri Sodium Phosphate) and rinsed in distilled water before each measurement. WEGE has designed and built bailers that will collect a sample of the contents of a well to show the exact thickness of any floating product. Some of the abbreviations used in water sampling and or measuring or monitoring are: DTW, Depth to Water (from surface reference ie usually TOC); TOC, Top of Casing; MSL, Mean Sea Level; AMSL and BMSL, Above and Below MSL; BS, Below Surface; TOW, Top of Water; TSP, Tri Sodium Phosphate.

Purging Standing Water from Monitor Wells

If no product is present, WEGE personnel purge the well by removing groundwater until the water quality parameters (temperature, pH, and conductivity) stabilize, or until the well is emptied of water. Periodic measurements of groundwater temperature, pH, and conductivity are taken with a Hydac Monitor or other meter and recorded along with the volume of groundwater removed from the well. Purging is done by one or more methods singularly or in combination. Bailers, pneumatic or electric sample pumps, or vacuum pump tanks or trucks may be used. The usual amount of water removed is three borehole volumes.

$$BV = (7.48\pi/4) \times (CD^2 + P(BD^2 - CD)^2) \times (WD - GW)$$

BV borehole volume (gallons)
BD borehole diameter (feet)

CD casing diameter (feet)
WD well depth (feet)
GW depth to groundwater (feet)
P porosity of the gravel pack, 25%

Table of Selected Boring and Casing Diameters

Boring diameter inches	Casing diameter inches	Volume gallons foot	3 Volumes X (WD-GW) gallons
4	1	0.042	
6	1	0.082	
6	2	0.173	
8	2	0.277	
8	4	0.671	
10	2	0.572	
10	4	0.844	

For a 8 inch boring with 2 inch casing: 0.277 x (WD-GW) x 3 for three volumes of water in gallons.

The water collected during purging is either safely stored on-site in 55 gallon DOT 17H drums for later disposition, transported to an approved on-site off-site treatment or sewer discharge system.

Collection of Water Sample for Analysis

The well is allowed to recover, to at least 80% if practical, after purging and a groundwater sample is collected.

$$\text{Percent Recovery} = \left(1 - \frac{\text{Residual drawdown}}{\text{Maximum drawdown}}\right) \times 100.$$

A fresh bailer is used to collect enough water for the requirements of the laboratory for the analyses needed or required. The water samples are decanted from the bailer into the appropriate number and size containers. These containers are furnished pre-cleaned to exact EPA protocols, with and without preservatives added, by the analytical laboratory or a chemical supply company. The bottles are filled, with no headspace, and then capped with plastic caps with teflon liners.

The vials or bottles containing the groundwater samples are labeled with site name, station, date, time, sampler, and analyses to be performed, and documented on a chain of custody form. They were placed in ziplock bags and stored in a chest cooled to 4°C with ice. The preserved samples are chain of custody delivered to the chosen laboratory.

Analytical Results

TPH is the abbreviations used for Total Petroleum Hydrocarbons used by the laboratories for water and soil analyses. The letter following TPH indicates a particular distinction or grouping for the results. The letters "g", "d", "k", or "o" indicate gasoline, diesel, kerosene, or oil, respectively, ie TPH-d for diesel range TPH.

BTEX or MTBE are acronyms or abbreviations used for Benzene, Toluene, Ethylbenzene and all of the Xylenes (BTEX) and Methyl Tertiary Butyl Ether (MTBE), respectively.

MBTEX is the designation for the combination of the above five compounds.

Laboratory lower detection limits unless otherwise noted, due to matrix interference or elevated concentrations of target compounds, are as follows:

TPHg	50 ug/L	MTBE	0.5 ug/L
Benzene	0.5 ug/L	Toluene	0.5 ug/L
Ethyl Benzene	0.5 ug/L	Total Xylenes	1.0 ug/L

The less than symbol, <, used with a "parts per value" indicates the lower detection limit for a given analytical result and the level, if present, of that particular analyte is below or less than that lower detection limit.

Other abbreviations commonly used are ppm, ppb, mg/Kg, ug/Kg, ml/l and ul/l are parts per million, parts per billion, milligrams per kilogram, micrograms per kilogram, milliliters per liter, microliters per liter, respectivily.

Chain of Custody Documentation

All water samples that are collected by WEGE and transported to a certified analytical laboratory are accompanied by chain-of-custody (COC) documentation. This documentation is used to record the movement and custody of a sample from collection in the field to final analysis and storage. Samples to be analyzed at the certified laboratory were logged on the COC sheet provided by the laboratory. The same information provided on the sample labels (site name, sample location, date, time, and analysis to be performed) are also noted on the COC form. Each person relinquishing custody of the sample set signs the COC form indicating the date and time of the transfer to the recipient. A copy of the COC follows the samples or their extracts throughout the laboratory to aid the analyst in identifying the samples and to assure analysis within holding times.

Copies of the COC documentation are included with the laboratory results in Appendix B of the sampling report.

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WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 8:09
WELL mw-1	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER	DTW: 9.50 DTB: 18.32	
FLUID ELEVATION	223.07	
BAILER TYPE	disposable bailer	
PUMP	QED LTT	

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
8:08	1st bailer	57.9	7.95	.47 X1000
8:10	4	60.0	7.94	.39
8:12		61.1	8.11	.37
8:13		61.5	7.95	.37
8:14		61.4	7.96	.37
		Sample col		

FINAL VOLUME PURGED 5 1/4 gal
TIME SAMPLED 8:15
SAMPLE ID. mw-1
SAMPLE CONTAINERS 2 voas
ANALYSIS TO BE RUN TPHg/BTEX MTBE /
LABORATORY NES
NOTES: 1st bailer clear No odor

WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 8:19
WELL RS-2	SAMPLED BY. mp	

WELL ELEVATION	
PRODUCT THICKNESS	
DEPTH TO WATER	DTW: 6.96 DTB: 18.40
FLUID ELEVATION	223.47
BAILER TYPE	disposable bailer
PUMP	QED LTT

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
8:21	1st bailer	55.8	7.73	1.57 X1000
8:29	19	56.5	7.95	1.68
8:31		58.6	7.93	1.72
8:32		60.2	7.92	1.74
8:33		61.0	7.92	1.75
8:35		61.0	7.92	1.74

FINAL VOLUME PURGED	20 1/2 gal
TIME SAMPLED	8:36
SAMPLE ID.	RS-2
SAMPLE CONTAINERS	2 VOAs
ANALYSIS TO BE RUN	TPHg/BTEX MTBE /
LABORATORY	NES
NOTES:	1st bailer Mugy looking No odor

WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 9:35
WELL RS-5	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER	DTW: 13.26 DTB: 39.22	
FLUID ELEVATION	216.88	
BAILER TYPE	disposable bailer	
PUMP	QED LTT	

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
9:37	1st bailer	57.2	8.23	.67 X1000
9:56	50	65.7	8.46	.48
9:57		65.0	8.23	.48
9:59		65.2	8.32	.48
10:00		65.0	8.28	.40
			Sample	

FINAL VOLUME PURGED 51 1/4 gal
TIME SAMPLED 10:01
SAMPLE ID. RS-5
SAMPLE CONTAINERS 2 VOAs
ANALYSIS TO BE RUN TPHg/BTEX MTBE / TEPH
LABORATORY NES
NOTES: 1st bailer clear No odor

Last Bailer light sheen

WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 8:40
WELL RS-6	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER DTW: 10.0 DTB: 34.02		
FLUID ELEVATION 220.22		
BAILER TYPE disposable bailer		
PUMP air LIFT		

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
9:42	1st bailer	57.6	9.00	.66 X1000
8:46	30	59.3	7.90	.81
8:47		60.6	7.93	.80
9:04	12	58.2	8.17	.77
9:07		60.4	8.13	.78
		Sampled		

FINAL VOLUME PURGED 43½ gal
TIME SAMPLED 9:08
SAMPLE ID. RS-6
SAMPLE CONTAINERS 2 VOAs
ANALYSIS TO BE RUN TPHg/BTEX MTBE /
LABORATORY NES
NOTES: 1st bailer clear no odor

WESTERN GEO-ENGINEERS
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WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 10:46
WELL RS-7	SAMPLED BY. mp	
WELL ELEVATION		
PRODUCT THICKNESS		
DEPTH TO WATER	DTW: 3.82 DTB: 7.0	
FLUID ELEVATION	195.53	
BAILER TYPE	disposable bailer	
PUMP	QED LTT	

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
10:47	1st bailer	66.9	8.08	.81 X1000
10:50	12	64.6	8.10	.77
10:51		62.8	7.88	.74
10:52		63.2	7.92	.76
10:53		63.8	7.86	.77
10:54		63.6	7.80	.76
10:55		63.6	7.88	.76
		Sampled		

FINAL VOLUME PURGED	13 3/4 gal
TIME SAMPLED	10:56
SAMPLE ID.	RS-7
SAMPLE CONTAINERS	2 voas
ANALYSIS TO BE RUN	TPHg/BTEX MTBE /
LABORATORY	NES
NOTES:	1st bailer clear No odor

WESTERN GEO-ENGINEERS

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WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 9:42
WELL R-1	SAMPLED BY. mp	

WELL ELEVATION
PRODUCT THICKNESS
DEPTH TO WATER DTW: 11.88 DTB: 16.92
FLUID ELEVATION 218.85
BAILER TYPE disposable bailer
PUMP aw LTT

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
9:45	1st bailer	61.9	8.49	.22 X1000
10:04	22	63.2	8.41	.31
10:05		62.7	8.42	.29
10:06		62.8	8.38	.28
10:08		62.6	8.40	.28
10:09		62.9	8.42	.29
		Sampled		

FINAL VOLUME PURGED 23 1/2 gal
TIME SAMPLED 10:10
SAMPLE ID. R-1
SAMPLE CONTAINERS 2 voas
ANALYSIS TO BE RUN TPHg/BTEX MTBE /
LABORATORY NES
NOTES: 1st bailer clear No odor

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WESTERN GEO-ENGINEERS

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

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 9:15
WELL R-2	SAMPLED BY. mp	

WELL ELEVATION	
PRODUCT THICKNESS	
DEPTH TO WATER	DTW: 10.50 DTB: 16.82
FLUID ELEVATION	220.18
BAILER TYPE	disposable bailer
PUMP	QED LTT

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
9:16	1st bailer	56.4	8.31	.84 X1000
9:22	27	56.1	8.14	.84
9:24		57.1	7.92	.85
9:25		58.1	8.02	.85
9:26		57.9	8.04	.85
		Sampled		

FINAL VOLUME PURGED	28 1/4 gal
TIME SAMPLED	9:27
SAMPLE ID.	R-2
SAMPLE CONTAINERS	2 voas
ANALYSIS TO BE RUN	TPHg/BTEX MTBE /
LABORATORY	NES
NOTES:	1st bailer clear No oder

WESTERN GEO-ENGINEERS
1386 EAST BEAMER
WOODLAND, CALIFORNIA
(916) 668-5300, FAX (916)

WELL SAMPLING DATA SHEET

SITE DP-793	DATE 2-21-97	TIME 10:15
WELL R-3	SAMPLED BY. mp	

WELL ELEVATION	
PRODUCT THICKNESS	
DEPTH TO WATER	DTW: 6.76 DTB: 11.75
FLUID ELEVATION	223.56
BAILER TYPE	disposable bailer
PUMP	QED LTT

WELL PURGING RECORD

TIME	VOLUME REMOVED	TEMP.	pH	COND.
10:16	1st bailer	66.2	8.40	.99 X1000
10:21	25	65.5	8.41	.96
10:22		65.0	8.33	.99
10:23		65.0	8.11	.89
10:25		65.2	8.22	.79
			Sampled	

FINAL VOLUME PURGED	26 1/4 gal
TIME SAMPLED	10:26
SAMPLE ID.	R-3
SAMPLE CONTAINERS	2 VOAs
ANALYSIS TO BE RUN	TPHg/BTEX MTBE /
LABORATORY	NES
NOTES:	1st bailer clear No odor

Lawrence Tank Testing

D.L. Lawrence
Owner

P.O. Box 407 Downieville, California 95936 (916) 289-3109

CUSTOMER NAME AND ADDRESS: WESTERN GEO ENGINEERS

DATE 2-21-97

INVOICE NO. 974954

SITE ADDRESS: 4035 PARK OAKLAND # 793

PHONE NO.

TECHNICIAN'S NAME DAVID

DESCRIPTION OF WORK PERFORMED	LABOR CHARGES TIME HRS MIN	MILES	AMOUNT	MATERIAL CHARGES MATERIALS USED	QTY.	PRICE	TOTAL
MW1 DTW 9.50 DTB 18.32 (4 GAL							
RS2 " 6.96 " 18.40 (9 "							
RS6 " 10.00 " 34.0 (42 "							
R2 " 10.50 " 16.84 27 "							
RS5 " 13.76 " 39.22 (50"							
R1 " 11.88 " 16.92 (22"							
RS1 " 6.76 " 11.75 (25"							
RS7 " 3.92 " 7.00 (12"							
TRAVEL TIME: SEQBY TO OAKLAND	3 30		157.50	LABOR			
MILEAGE:	1 15		56.25				
		51	20.40				
TOTAL TIME		TOTAL LABOR CHARGES	234.15				

RATES:

LABOR AT ~~$45~~ PER HOUR

TRAVEL TIME AT ~~$45~~ PER HOUR

MILEAGE AT .40 PER MILE

ARRIVAL TIME HRS	MIN	DEPART TIME HRS	MIN
7	45	11	15

TOTAL MATERIALS

SALES TAX

LABOR CHARGES 234.15

TOTAL 234.15

North State Environmental Analytical Laboratory

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

Chain of Custody / Request for Analysis

Lab Job No.: _____ Page 1 of 1

Client: LP 793	Report to: Western Geo Engineers	Phone: (510) 662-5300	Turnaround Time: 5 day
Mailing Address: 1386 E. Beamer St. Woodland CA.	Billing to: same as ←	Fax: (510) 662-0373	
		PO# / Billing Reference: LP 793	Date: 2-21-97
			Sampler: Matt Ponich

Project / Site Address: 4035 East 14th Blvd

Analysis Requested

Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	TPH/BTEX	MTBE						Comments/Hazards
MW-1	H_2O	- VOA	HCL	2-21-97 9:15	✓	✓						Modified MTBE 8020 Method
RS-2	"	"	"	"	✓	✓						
RS-5	"	"	"	"	✓	✓						
RS-6	"	"	"	"	✓	✓						
RS-7	"	"	"	"	✓	✓						
R-1	"	"	"	"	✓	✓						
R-2	"	"	"	"	✓	✓						
R-3	"	"	"	"	✓	✓						

Relinquished by: Matt Ponich	Date: 2-21-97	Time: 2:05	Received by:	Lab Comments
Relinquished by:	Date:	Time:	Received by:	
Relinquished by:	Date:	Time:	Received by:	

APPENDIX B
LABORATORY RESULTS

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

CERTIFICATE OF ANALYSIS

Lab No:	97-156	Date Sampled:	02-21-97
Client:	Western Geo-Engineers	Date Analyzed:	02-28-97
Project:	DP 793 / 4035 Park Blvd	Date Reported:	03-04-97
		Date Revised:	03-11-97

MTBE, Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8020
Gasoline Range Hydrocarbons by EPA Method 8015M

SAMPLE NO	CLIENT ID	ANALYTE	METHOD	RESULT
97-156-01	MW-1	MTBE	8020	*ND
	WATER	Benzene	8020	ND
		Toluene	8020	ND
		Ethylbenzene	8020	ND
		Xylenes	8020	ND
		Gasoline	8015M	ND
97-156-02	RS-2	MTBE	8020	*ND
	WATER	Benzene	8020	ND
		Toluene	8020	ND
		Ethylbenzene	8020	ND
		Xylenes	8020	ND
		Gasoline	8015M	ND
97-156-03	RS-5	MTBE	8020	*ND
	WATER	Benzene	8020	5000 ug/L
		Toluene	8020	22000 ug/L
		Ethylbenzene	8020	1700 ug/L
		Xylenes	8020	7300 ug/L
		Gasoline	8015M	100000 ug/L
97-156-04	RS-6	MTBE	8020	*ND
	WATER	Benzene	8020	71 ug/L
		Toluene	8020	85 ug/L
		Ethylbenzene	8020	25 ug/L
		Xylenes	8020	40 ug/L
		Gasoline	8015M	2100 ug/L

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

North State Environmental
Chemical Waste Disposal · Trucking · Consulting

CERTIFICATE OF ANALYSIS

Lab No:	97-156	Date Sampled:	02-21-97
Client:	Western Geo-Engineers	Date Analyzed:	02-28-97
Project:	DP 793 / 4035 Park Blvd	Date Reported:	03-04-97
		Date Revised:	03-11-97

MTBE, Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8020
Gasoline Range Hydrocarbons by EPA Method 8015M

SAMPLE NO	CLIENT ID	ANALYTE	METHOD	RESULT
97-156-05	RS-7	MTBE	8020	*ND
	WATER	Benzene	8020	31000 ug/L
		Toluene	8020	47000 ug/L
		Ethylbenzene	8020	3800 ug/L
		Xylenes	8020	23000 ug/L
		Gasoline	8015M	93000 ug/L
97-156-06	R-1	MTBE	8020	*ND
	WATER	Benzene	8020	670 ug/L
		Toluene	8020	9 ug/L
		Ethylbenzene	8020	3 ug/L
		Xylenes	8020	13 ug/L
		Gasoline	8015M	2500 ug/L
97-156-07	R-2	MTBE	8020	*3 ug/L
	WATER	Benzene	8020	2100 ug/L
		Toluene	8020	5 ug/L
		Ethylbenzene	8020	2 ug/L
		Xylenes	8020	10 ug/L
		Gasoline	8015M	5700 ug/L
97-156-08	R-3	MTBE	8020	*ND
	WATER	Benzene	8020	35 ug/L
		Toluene	8020	59 ug/L
		Ethylbenzene	8020	8 ug/L
		Xylenes	8020	54 ug/L
		Gasoline	8015M	340 ug/L

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CERTIFICATE OF ANALYSIS

Lab No:	97-156	Date Sampled:	02-21-97
Client:	Western Geo-Engineers	Date Analyzed:	02-28-97
Project:	DP 793 / 4035 Park Blvd	Date Reported:	03-04-97
		Date Revised:	03-11-97

MTBE, Benzene, Toluene, Ethylbenzene and Xylenes by EPA Method 8020
Gasoline Range Hydrocarbons by EPA Method 8015M

Quality Control/Quality Assurance Summary-Water

Analyte	Method	Reporting Limit		Blank	MS/MSD Recovery	RPD
MTBE	8020	0.5	ug/L	ND	84	3
Benzene	8020	0.5	ug/L	ND	93	4
Toluene	8020	0.5	ug/L	ND	104	8
Ethylbenzene	8020	0.5	ug/L	ND	105	9
Xylenes	8020	1.0	ug/L	ND	103	7
Gasoline	8015M	50	ug/L	ND	84	9

* Result confirmed by EPA Method 8260 (GC/MS)

ELAP Certificate NO: 1753

Reviewed and Approved:

Edward C. Lunat for
John A. Murphy, Laboratory Director

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

North State Environmental Analytical Laboratory

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

Chain of Custody / Request for Analysis

Lab Job No.: 97156 Page 1 of 1

Client: DP 793	Report to: Western Geo Engineers	Phone: (916) 668-5300	Turnaround Time: 5 day
Mailing Address: 1386 E. Beamer St. Woodland CA.	Billing to: Same as ←	Fax: (916) 662-0273	Date: 2-21-97
		PO# / Billing Reference: DP 793	Sampler: Matt Penich
Project / Site Address: 4035 Park Blvd			

	Sample ID	Sample Type	Container No. / Type	Pres.	Sampling Date / Time	Analysis Requested: TPHG/BTEX	MTBE	Comments/Hazards
1	MW-1	H_2O	2 VOAS	HCL	2-21-97 8:15	✓	✓	Highest MTBE to qualify 8260 Method
2	RS-2				8:36	✓	✓	
3	RS-5				10:01	✓	✓	
4	RS-6				9:08	✓	✓	
5	RS-7				10:56	✓	✓	
6	R-1				10:10	✓	✓	
7	R-2				9:27	✓	✓	
8	R-3				10:26	✓	✓	

Relinquished by: Matt Penich	Date: 2-21-97	Time: 2:05	Received by:	Lab Comments
Relinquished by:	Date: 2/21/97	Time: 4:00	Received by: Edward Lucas	
Relinquished by:	Date:	Time:	Received by:	

APPENDIX C

MARCH 4, 1997 LETTER FROM ALAMEDA CO.

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

March 4, 1997
STID 1248

John Rutherford
Desert Petroleum Inc.
PO Box 1601
Oxnard CA 93032

RE: Desert Petroleum site #793, 4035 Park Blvd., Oakland CA 94602

Dear Mr. Rutherford,

Since my last letter to you, dated 10/24/96, the following documents have been received in this office:

1) "Third Quarter 1996" quarterly report, prepared by Western Geo-Engineers (WEGE), dated 12/20/96; and

2) "Fourth Quarter 1996" quarterly report, prepared by Western Geo-Engineers (WEGE), dated 2/13/97.

There have been up to 16 rounds of groundwater sampling conducted on the groundwater monitoring wells. Groundwater has been sampled on a quarterly basis consistently since 1994. **Biannual sampling would be acceptable at this point.** It should be conducted in the first and third quarters. Biannual reporting would also be acceptable.

I understand that additional borings were installed in January 1997; the report should be forthcoming.

If you have any questions or comments, please contact me directly at 510-567-6761.

Sincerely,

Jennifer Eberle
Hazardous Materials Specialist

cc: George Converse, WEGE, 1386 E. Beamer St., Woodland CA 95776
Michael Gabriel, Glenview Neighborhood Association, 4200 Park Blvd., Box 111, Oakland CA 94602
Attn: Shawn Stark, Councilmember Dick Spees' office, City of Oakland, One City Hall Plaza, 2nd Floor, Oakland CA 94612
Attn: Nicole Brown, Councilmember John Russo's office, City of Oakland, One City Hall Plaza, 2nd Floor, Oakland CA 94612
Leroy Griffin, Oakland Fire Dept., OES, Haz Mat Mgmt Program, 1605 Martin Luther King Jr Dr., Oakland CA 94612
Joseph Cotton, City of Oakland, Environmental Services, 1333 Broadway, Suite 330A, Oakland CA 94612
Jennifer Eberle/file

je.1248-F