

October 31, 1994

Ms. Susan Hugo
Alameda County Department of
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Quarterly Status Report
Greyhound Terminal (Location No. 8934)
Oakland, California

RECEIVED
HAZMAT
OCT 19 1994
PM 3:24

Dear Ms. Hugo:

On behalf of Greyhound Lines, Inc. (Greyhound), Engineering-Science, Inc. is pleased to present the October Quarterly Status Report for the Greyhound terminal in Oakland, California. The Quarterly Status Report provides the information specified in "Appendix A" of the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" (August 1990). Greyhound has reviewed and approved the enclosed report, and agrees with the conclusions and recommendations provided in the report. The report also serves as the October 1994 monthly monitoring report.

Nine groundwater samples were collected at the Oakland facility on October 6, 1994, and analyzed for BTEX compounds (EPA Method 8020), total petroleum hydrocarbons as diesel (TPH-D, Modified EPA Method 8015), and total petroleum hydrocarbons as gasoline (TPH-G, Modified EPA Method 8015). Monitoring well locations are shown in Figure 1 of the Quarterly Status Report. Analytical results are summarized in Table 2.

The next groundwater sampling event will be conducted during January 1995. The Alameda County Department of Environmental Health (ACDEH) will be notified at least 1 week prior to the sampling event so that a representative from ACDEH may be on-site when the samples are collected. The next quarterly status report will be prepared and submitted to your department on or before February 18, 1995.

ENGINEERING-SCIENCE, INC.

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If you have any questions or require additional information, please call us at (315) 451-9560.

Sincerely,


ENGINEERING-SCIENCE, INC.



Martin N. Miller
Environmental Technician



David A. Nickerson
Project Manager



David L. Chaffin, R.G.
California Registered Geologist
(No. 4885)

MNM/DAN/DLC/lml

cc: T. Portele, GLI, Dallas, TX
Richard Hiatt, Regional Water Quality Control Board

OCTOBER 1994
QUARTERLY STATUS REPORT
GREYHOUND TERMINAL
OAKLAND, CALIFORNIA

• **Site Background:**

A preliminary site investigation was completed by Engineering-Science, Inc. (ES) in January 1992. Five monitoring wells (ES-1 through ES-5 in Figure 1) were installed on-site and sampled during the investigation. The Preliminary Site Investigation report was submitted to the Alameda County Department of Environmental Health (ACDEH) on January 27, 1992.

Based on the results of the preliminary investigation, a groundwater monitoring program was initiated by Greyhound in June 1992 to assess the impact of former UST operations on groundwater. The program includes monthly groundwater level measurements, quarterly groundwater sampling, and reporting.

Based on the presence of measurable thicknesses of free product discovered in four on-site monitoring wells, Greyhound subsequently proposed the installation of an automated free product recovery system. Upon ACDEH approval in October 1992, Greyhound obtained the required permits and installed a recovery system on-site during the week of November 9, 1992. A report detailing recovery system installation was submitted to ACDEH on December 18, 1992. The recovery system was placed in operation during the week of January 4, 1993 after discharge permit conditions were finalized with the East Bay Municipal Utility District (EBMUD).

In a letter to Greyhound dated October 23, 1992, ACDEH requested that Greyhound provide documentation regarding the underground fuel storage tank system (UST) removal, including disposal documentation. Greyhound subsequently prepared a Tank Closure Documentation Report for the facility. The report was submitted to ACDEH on December 15, 1992.

In July 1993, Greyhound implemented a Supplemental Site Assessment at the facility to define the full extent of contamination both on and off-site. Six monitoring wells (ES-6 through ES-11 in Figure 1) were installed and sampled during the investigation. Results of the Supplemental Site Assessment indicated that the residual soil and groundwater contamination is limited to the former tank pit area on-site. Greyhound presented these results to ACDEH in a meeting on September 1, 1993. At that time, ACDEH indicated that a risk assessment could be prepared to support "alternative points of compliance" or site-specific cleanup levels for this site. Greyhound submitted a Preliminary Risk Evaluation Report to ACDEH in October 1993. A Supplemental Site Assessment Report was submitted in November 1993.

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- **Water Level Measurements from most recent sampling event:**

Monitoring well data obtained on October 6, 1994 are presented in Table 1. Groundwater elevations determined from the water level measurements are shown in Figure 2. The elevations indicate that the groundwater flow direction across the site is generally southward. Groundwater elevation contours were not drawn because of significant drawdown in the area of the recovery wells.

- **Water Level Measurements from previous monitoring visits:**

Monitoring well data obtained during prior site visits are presented in Table 5. Free product thicknesses have been eliminated or significantly reduced in the four on-site recovery wells (ES-1, ES-2, ES-5, and BC-1) since the product recovery system was activated in January 1993.

- **Analytical results from most recent sampling event:**

Results from the groundwater samples collected on October 6, 1994 are summarized in Table 2. Nine of the 16 monitoring wells located on or near the site were sampled. The samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA Method 8020; for total petroleum hydrocarbons as diesel (TPH-D) by Modified EPA Method 8015; and for total petroleum hydrocarbons as gasoline (TPH-G) by Modified EPA Method 8015. Monitoring wells ES-1, ES-2, ES-5, and BC-1 were not sampled because free product or hydrocarbon sheens were observed in these wells. BC-2 was not sampled because the well was dry at the time of sample collection. The laboratory results from the most recent groundwater sampling event, including chain-of-custody documentation, are included in Appendix A.

BTEX compounds were only detected in one of the samples. Benzene (18.0 $\mu\text{g/l}$), ethylbenzene (2.0 $\mu\text{g/l}$), and xylenes (3.0 $\mu\text{g/l}$) were detected in sample ES-4. Toluene was not detected in the sample.

TPH-D was not detected in any of the monitoring wells with the exception of BC-3 in which a TPH-D concentration of 0.82 mg/l was detected. TPH-G was detected in one sample: ES-4 (0.10 mg/l).

- **Analytical results from previous sampling events:**

A summary of the analytical results from previous groundwater sampling events is presented in Table 3. Table 4 is a summary of the analytical data from previously collected soil samples.

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QUARTERLY STATUS REPORT (CONTINUED)

- **Site map delineating contamination contours for soil and groundwater based on recent data:**

Figure 3 shows the analytical results from the most recent groundwater sampling event. The figure indicates the extent of groundwater contamination.

Figure 4 shows the analytical results from soil samples collected during the preliminary site investigation (November 1991) and the supplemental site assessment (October 1993). The figure indicates that soil contamination is limited to the area near sample locations ES-1, ES-2, and ES-5.

- **Estimates of the quantity of contamination remaining in soil and groundwater, and time for completing remediation:**

Greyhound has not prepared an estimate of the remaining volume of residual soil contamination, based on the recommendation presented in the Supplemental Site Assessment Report that no soil remediation be conducted at the site.

- **Method of cleanup proposed or implemented to date:**

In October 1992, Greyhound proposed a free product recovery system to remove free product discovered in four on-site wells. A hydrocarbon recovery system was installed in November 1992 after receiving approval from Ms. Susan Hugo (ACDEH). The recovery system was activated during the week of January 4, 1993.

- **Times and dates equipment was not operating, cause of shutdown, and a corrective action plan to insure similar shutdowns do not reoccur:**

With the exception of a brief shutdown between October 6 and October 21, 1993 due to an air compressor problem, the product recovery system has been active since startup. The system is inspected daily by on-site personnel and monthly during monitoring visits by ES personnel.

- **Method and location of disposal of the released hazardous substance and any contaminated soil, groundwater, or surface water:**

To date, approximately 1,015 gallons of free product and contaminated groundwater have been recovered and properly disposed off-site by Safety Clean, Inc. and Evergreen Vacuum Services, State of California-certified waste haulers. In addition,

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74,150 gallons of carbon-treated groundwater have been processed through the recovery system on-site and discharged to the sanitary sewer under a permit issued by EBMUD.

- **Manifest required for transport of hazardous substances:**

Previously received disposal/transport manifests for diesel fuel and contaminated groundwater recovered from the site were included in Appendix A of the January 1993 Quarterly Status Report. Future manifests will be included in future quarterly status reports.

- **Proposed continuing or next phase of investigation:**

In November 1993, based on the results of the Supplemental Site Assessment and Preliminary Risk Evaluation, Greyhound proposed: (1) to continue free product recovery at the site; (2) to continue the groundwater monitoring program, including monthly water level measurements, quarterly groundwater sampling and analysis, and reporting; and (3) that site-specific cleanup levels be established for the site. Greyhound awaits ACDEH review of the Supplemental Site Assessment and Preliminary Risk Evaluation reports, and ACDEH approval of recommendations.

The next quarterly status report will be prepared and submitted to ACDEH on or before February 18, 1995.

- **Time schedules for the completion of the investigation of the site and remediation:**

Greyhound anticipates that the groundwater monitoring program will continue until free product has been removed from the groundwater. After the free product has been removed, a long-term groundwater monitoring program will be proposed to ensure that residual contaminants do not migrate off-site.

- **Tank owner commitment letter:**

The cover letter submitted with this report is intended to tsserve as the tank owner commitment letter.

TABLE 1
 MONITORING WELL DATA SUMMARY
 GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
 October 6, 1994

Location	Elevation of T.O.C. ¹ (Ft.)	Depth to Groundwater (Ft.)	Groundwater Elevation ² (Ft.)	Product Layer Thickness (Ft.)
ES-1 ³	96.64	18.43	78.21	0.04
ES-2 ³	96.44	18.86	77.58	0
ES-3	96.96	19.24	77.72	0
ES-4	95.70	18.25	77.45	0
ES-5 ³	95.85	18.23	77.62	0
ES-6	97.84	21.58	76.26	0
ES-7	96.40	19.73	76.67	0
ES-8	96.64	18.76	77.88	0
ES-9	95.78	17.46	78.32	0
ES-10	95.24	16.96	78.28	0
ES-11	95.92	18.55	77.37	0
BC-1 ³	96.16	18.58	77.58	0
BC-2 ⁴	96.32	NR	NR	NR
BC-3 ⁴	96.20	18.58	77.62	0

¹ Elevations of top of PVC casing measured with respect to on-site datum (97.50 feet, measured on steel grate for storm sewer near wash rack).

² Groundwater elevation (Elevation of T.O.C. - depth to groundwater).

³ Recovery Wells.

⁴ Approximate elevation - well casings not vertical.

NR = Water level not recorded; well dry at time of monitoring.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
OCTOBER 6, 1994

Location	Date Collected	Parameter	Result	Detection Limit
ES-3	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
ES-4	10/6	Benzene ¹	18.0	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	2.0	1.0 ug/L
		Xylenes (total) ¹	3.0	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	0.10	0.1 mg/L
ES-6	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
ES-7	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
ES-8	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
ES-9	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L

**TABLE 2
(Continued)
GROUNDWATER ANALYTICAL RESULTS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
OCTOBER 6, 1994**

Location	Date Collected	Parameter	Result	Detection Limit
ES-10	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
ES-11	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	ND	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L
BC-3	10/6	Benzene ¹	ND	1.0 ug/L
		Toluene ¹	ND	1.0 ug/L
		Ethylbenzene ¹	ND	1.0 ug/L
		Xylenes (total) ¹	ND	1.0 ug/L
		TPH-D ²	0.82	0.1 mg/L
		TPH-G ³	ND	0.1 mg/L

Notes:

¹ Analyzed by EPA Method 8020. Concentrations in ug/l.

² Analyzed by DHS/LUFT Method Modified EPA 8015 for Diesel. Concentrations in mg/l.

³ Analyzed by DHS/LUFT Method Modified EPA 8015 for Gasoline. Concentrations in mg/l.

Wells ES-1, 2, 5, and BC-1 were not sampled due to the presence of free product or hydrocarbon sheens. Well BC-2 was not sampled because it was dry at time of sample collection.

ND -- Not detected above the analytical method detection limit.

NA -- Sample not analyzed due to sample bottle breakage.

TABLE 3

SUMMARY OF ANALYTICAL DATA
GROUNDWATER ANALYSIS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

Sampling Date	Location	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene ug/l	Total BTEX ug/l	TPH-D(*) mg/l	TPH-G(*) mg/l
07/08/92	ES-3	54	21	48	34	157	1.3	NA
	ES-4	31	5.6	ND	2.8	39.4	ND	NA
	BC-2	ND	ND	ND	8.4	8.4	2.1	NA
	BC-3	ND	2.5	ND	6.1	8.6	3.9	NA
10/06/92	ES-3	93	18	ND	11	122	ND	NA
	ES-4	100	8.2	ND	7.6	115.8	ND	NA
	BC-2	ND	1.1	0.9	7.2	9.2	ND	NA
	BC-3	ND	1.9	0.5	1.8	4.2	0.8	NA
01/07/93	ES-3	52	49	100	250	451	ND	NA
	ES-4	30	6.7	7.7	16	60.4	ND	NA
	BC-2	ND	1.1	1.5	9.5	12.1	ND	NA
	BC-3	ND	ND	ND	ND	ND	ND	NA
04/06/93	ES-3	53	ND	67	78	198	0.51	4.5
	ES-4	33	2.3	1.9	4.7	41.9	ND	0.36
	BC-2	ND	ND	ND	ND	ND	0.13	ND
	BC-3	ND	ND	ND	ND	ND	0.12	ND

TABLE 3
(Continued)
SUMMARY OF ANALYTICAL DATA
GROUNDWATER ANALYSIS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

Sampling Date	Location	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene ug/l	Total BTEX ug/l	TPH-D(*) mg/l	TPH-G(*) mg/l
07/23/93	ES-3	28.0	5.9	4.6	4.6	43.1	0.6	1.5
	ES-4	24.0	1.1	0.7	8.3	34.1	ND	ND
	ES-6	ND	ND	ND	ND	ND	ND	ND
	ES-7	ND	ND	ND	ND	ND	ND	ND
	ES-8	ND	ND	ND	ND	ND	ND	ND
	ES-9	ND	ND	ND	ND	ND	ND	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	0.7	ND	1.2	1.9	ND	ND
	BC-2	1.0	2.4	1.8	7.9	13.1	0.5	ND
	BC-3	2.7	3.6	3.6	7.9	17.8	NA	ND
10/07/93	ES-3	2.0	1.0	ND	2.0	5.0	ND	NA
	ES-4	8.0	ND	ND	2.0	10.0	ND	NA
	ES-6	1.0	ND	ND	ND	ND	ND	NA
	ES-7	ND	ND	ND	ND	ND	ND	NA
	ES-8	ND	ND	ND	ND	ND	ND	NA
	ES-9	ND	ND	ND	ND	ND	ND	NA
	ES-10	ND	ND	ND	ND	ND	ND	NA
	ES-11	ND	ND	ND	ND	ND	ND	NA
	BC-2	ND	ND	ND	ND	ND	1.4	NA
	BC-3	ND	ND	1.0	2.0	3.0	1.4	NA

TABLE 3
(Continued)
SUMMARY OF ANALYTICAL DATA
GROUNDWATER ANALYSIS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

Sampling Date	Location	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene ug/l	Total BTEX ug/l	TPH-D(*) mg/l	TPH-G(*) mg/l
1/05/94	ES-3	13	2.0	7.0	5.0	27	NA	0.53
	ES-4	15	0.6	0.4	3.0	19	ND	0.13
	ES-6	ND	ND	ND	ND	ND	ND	ND
	ES-7	ND	ND	ND	ND	ND	ND	ND
	ES-8	ND	ND	ND	ND	ND	ND	ND
	ES-9	ND	ND	ND	ND	ND	ND	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	ND	ND	ND	ND	ND	ND
	BC-2	NA	NA	NA	NA	NA	NA	NA
	BC-3	ND	ND	ND	1.6	1.6	1.8	ND
04/07/94	ES-3	10	9	26	34	79	0.91	0.85
	ES-4	11	ND	ND	ND	11	ND	0.17
	ES-6	ND	ND	ND	ND	ND	ND	0.16
	ES-7	ND	ND	ND	ND	ND	0.10	0.11
	ES-8	ND	ND	ND	ND	ND	ND	ND
	ES-9	ND	ND	ND	ND	ND	ND	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	ND	ND	ND	ND	0.35	ND
	BC-2	NA	NA	NA	NA	NA	NA	NA
	BC-3	ND	ND	ND	ND	ND	0.85	ND

TABLE 3
(Continued)
SUMMARY OF ANALYTICAL DATA
GROUNDWATER ANALYSIS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

Sampling Date	Location	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene ug/l	Total BTEX ug/l	TPH-D(*) mg/l	TPH-G(*) mg/l
07/13/94	ES-3	2.0	0.9	0.8	3.0	6.7	0.28	0.37
	ES-4	9.0	ND	ND	0.7	9.7	ND	0.13
	ES-6	ND	ND	ND	ND	ND	ND	ND
	ES-7	ND	ND	ND	ND	ND	ND	ND
	ES-8	ND	ND	ND	ND	ND	NA	ND
	ES-9	ND	ND	ND	ND	ND	ND	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	ND	ND	ND	ND	ND	ND
	BC-2	NA	NA	NA	NA	NA	NA	NA
BC-3	ND	ND	ND	ND	ND	0.20	ND	
10/06/94	ES-3	ND	ND	ND	ND	ND	ND	ND
	ES-4	18.0	ND	2.0	3.0	23.0	ND	0.10
	ES-6	ND	ND	ND	ND	ND	ND	ND
	ES-7	ND	ND	ND	ND	ND	ND	ND
	ES-8	ND	ND	ND	ND	ND	ND	ND
	ES-9	ND	ND	ND	ND	ND	ND	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	ND	ND	ND	ND	ND	ND
	BC-2	NA	NA	NA	NA	NA	NA	NA
BC-3	ND	ND	ND	ND	ND	0.82	ND	

ND – Parameter analyzed for but not detected above method detection limit.

NA – Parameter not analyzed.

(*) – Total petroleum hydrocarbons diesel (TPH-D) and total petroleum hydrocarbons as gasoline (TPH-G) were analyzed by GC/FID by the DHS/LUFT method (modified EPA method 8015/solution preparation method 3510).

TABLE 4
SOIL ANALYTICAL DATA SUMMARY
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

Location Sample Depth	Date	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	Xylenes ug/kg	Total BTEX ¹ ug/kg	TPH--D ² mg/kg	TPH--G ³ mg/kg
ES-1 (16-18)	11/91	ND	3,000	3,400	22,000	28,400	ND	NA
ES-2 (16-18)	11/91	ND	27,000	28,000	150,000	205,000	ND	NA
ES-3 (18-19)	11/91	ND	ND	ND	ND	ND	ND	NA
ES-4 (16-16.5)	11/91	ND	ND	ND	ND	ND	ND	NA
ES-5 (15-17)	11/91	ND	80	65	330	475	160	NA
ES-6 (15-16.5)	7/93	ND	ND	ND	ND	ND	ND	ND
ES-7 (20-21.5)	7/93	ND	ND	ND	ND	ND	ND	ND
ES-8 (20-21.5)	7/93	ND	ND	ND	ND	ND	ND	ND
ES-9 (15-16.5)	7/93	ND	ND	ND	ND	ND	ND	ND
ES-10 (20-21.5)	7/93	ND	ND	ND	ND	ND	ND	ND
ES-11 (20-21.5)	7/93	ND	ND	ND	ND	ND	ND	ND

NA= Not analyzed.

ND= Non-detect; sample analyzed but did not exceed Method Detection Limit.

1 Total BTEX= analyzed by EPA Method 8020. Results reported in ug/kg.

Refer to analytical laboratory reports for method detection limit.

2 TPH--Diesel= Total Petroleum Hydrocarbons (TPH) for diesel by EPA Method 3510/8015.

Results reported in mg/kg. Refer to analytical laboratory reports for method detection limits.

3 TPH--Gasoline= Total Petroleum Hydrocarbons (TPH) for Gasoline by EPA Method 3510/8015.

Results reported in mg/kg. Refer to analytical laboratory reports for method detection limits.

TABLE 5

**MONITORING WELL DATA SUMMARY
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA**

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
6/16/92	ES-1	20.18	23.78	3.60
	ES-2	18.63	18.64	.01
	ES-3	19.41	19.41	0
	ES-4	18.40	18.40	0
	ES-5	15.32	15.65	.33
	BC-1	20.64	20.84	.20
	BC-2	16.25	16.25	0
	BC-3	16.48	16.48	0
7/7/92	ES-1	18.60	18.60	0
	ES-2	20.02	19.62	.40
	ES-3	19.52	19.52	0
	ES-4	18.51	18.51	0
	ES-5	22.23	20.23	2.0
	BC-1	19.55	20.66	1.11
	BC-2	16.89	16.89	0
	BC-3	16.68	16.68	0
8/4/92	ES-1	18.80	18.81	.01
	ES-2	19.17	19.76	.59
	ES-3	19.68	19.68	0
	ES-4	18.66	18.66	0
	ES-5	18.16	20.43	2.27
	BC-1	18.47	20.90	2.43
	BC-2	18.46	18.46	0
	BC-3	19.24	19.24	0
9/31/92	ES-1	18.96	18.97	.01
	ES-2	19.29	19.90	.61
	ES-3	19.80	19.80	0
	ES-4	18.79	18.79	0
	ES-5	18.24	20.80	2.56
	BC-1	18.68	21.02	2.34
	BC-2	18.89	18.89	0
	BC-3	19.10	19.10	0

**TABLE 5
(Continued)
MONITORING WELL DATA SUMMARY**

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
10/6/92	ES-1	19.08	19.10	.02
	ES-2	19.41	20.00	.59
	ES-3	19.96	19.96	0
	ES-4	18.92	18.92	0
	ES-5	18.24	21.37	3.13
	BC-1	18.82	21.14	2.32
	BC-2	18.50	18.50	0
	BC-3	18.93	18.93	0
11/6/92	ES-1	18.52	18.53	.01
	ES-2	18.84	19.44	.60
	ES-3	18.84	19.84	0
	ES-4	18.94	18.94	0
	ES-5	17.60	20.92	3.32
	BC-1	18.24	20.69	2.45
	BC-2	15.98	15.98	0
	BC-3	16.81	16.81	0
12/12/92	ES-1	18.55	18.55	0
	ES-2	18.75	19.10	.35
	ES-3	19.10	19.10	0
	ES-4	18.51	18.51	0
	ES-5	17.50	20.35	2.85
	BC-1	18.25	20.75	2.50
	BC-2	12.17	12.17	0
	BC-3	17.84	17.84	0
01/07/93	ES-1	20.25	20.26	.01
	ES-2	20.05	20.40	.35
	ES-3	19.20	19.20	0
	ES-4	18.76	18.76	0
	ES-5	19.35	22.00	2.65
	BC-1	19.60	21.76	2.16
	BC-2	13.50	13.50	0
	BC-3	16.55	16.55	0

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY				
Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
02/04/93	ES-1	17.56	17.56	0
	ES-2	18.12	18.19	0.07
	ES-3	18.32	18.32	0
	ES-4	17.56	17.56	0
	ES-5	17.34	17.95	0.61
	BC-1	17.81	17.96	0.15
	BC-2	15.46	15.46	0
	BC-3	16.16	16.16	0
03/05/93	ES-1	17.95	17.95	0
	ES-2	18.25	18.31	0.06
	ES-3	17.98	17.98	0
	ES-4	17.32	17.32	0
	ES-5	17.40	17.99	0.59
	BC-1	18.05	18.06	0.01
	BC-2	14.58	14.58	0
	BC-3	15.50	15.50	0
04/06/93	ES-1	17.08	17.88	0
	ES-2	18.20	18.31	0.11
	ES-3	15.92	15.92	0
	ES-4	17.26	17.26	0
	ES-5	17.28	17.28	0
	BC-1	18.26	18.26	0
	BC-2	15.20	15.20	0
	BC-3	15.44	15.44	0
05/06/93	ES-1	18.36	18.36	0
	ES-2	18.95	18.96	0.01
	ES-3	18.64	18.64	0
	ES-4	18.80	18.80	0
	ES-5	18.20	18.21	0.01
	BC-1	18.61	18.71	0.10
	BC-2	16.89	16.89	0
	BC-3	16.34	16.34	0

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
06/10/93	ES-1	18.60	18.60	0
	ES-2	19.10	19.11	0.01
	ES-3	NR	NR	NR
	ES-4	17.93	17.93	0
	ES-5	18.31	18.36	0.05
	BC-1	18.85	18.91	0.06
	BC-2	16.58	16.58	0
	BC-3	16.71	16.71	0
07/03/93	ES-1	18.68	18.68	0
	ES-2	19.31	19.32	0.01
	ES-3	18.12	18.12	0
	ES-4	18.08	18.08	0
	ES-5	19.50	19.50	0
	BC-1	19.05	19.15	0.10
	BC-2	17.75	17.75	0
	BC-3	16.81	16.81	0
08/04/93	ES-1	18.85	18.85	0
	ES-2	19.15	19.18	0.03
	ES-3	19.18	19.18	0
	ES-4	18.16	18.16	0
	ES-5	18.61	18.61	0
	BC-1	19.30	19.40	0.10
	BC-2	18.10	18.10	0
	BC-3	18.82	18.82	0

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY				
Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
09/01/93	ES-1	18.90	18.90	0
	ES-2	19.50	19.59	0.09
	ES-3	19.36	19.36	0
	ES-4	18.46	18.46	0
	ES-5	18.79	18.80	0.01
	ES-6	21.94	21.94	0
	ES-7	19.71	19.71	0
	ES-8	18.88	18.88	0
	ES-9	19.74	19.74	0
	ES-10	18.04	18.04	0
	ES-11	18.74	18.74	0
	BC-1	19.23	19.32	0.09
	BC-2	18.48	18.48	0
	BC-3	18.40	18.40	0
10/07/93	ES-1	19.02	19.03	0.01
	ES-2	19.57	19.60	0.03
	ES-3	19.62	19.62	0
	ES-4	18.62	18.62	0
	ES-5	18.65	19.33	0.68
	ES-6	21.81	21.81	0
	ES-7	19.99	19.99	0
	ES-8	19.13	19.13	0
	ES-9	17.90	17.90	0
	ES-10	17.40	17.40	0
	ES-11	18.90	18.90	0
	BC-1	19.25	19.43	0.18
	BC-2	19.02	19.02	0
	BC-3	18.58	18.58	0

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY				
Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
11/02/93	ES-1	19.20	19.20	0
	ES-2	19.60	19.61	0.01
	ES-3	19.70	19.70	0
	ES-4	18.74	18.74	0
	ES-5	18.91	19.45	0.54
	ES-6	21.91	21.91	0
	ES-7	20.12	20.12	0
	ES-8	19.26	19.26	0
	ES-9	17.99	17.99	0
	ES-10	17.46	17.46	0
	ES-11	19.00	19.00	0
	BC-1	19.42	19.61	0.19
	BC-2	18.76	18.76	0
BC-3	18.53	18.53	0	
12/06/93	ES-1	19.15	19.15	0
	ES-2	19.71	19.74	0.03
	ES-3	19.68	19.68	0
	ES-4	18.72	18.72	0
	ES-5	18.78	19.25	0.47
	ES-6	21.90	21.90	0
	ES-7	20.15	20.15	0
	ES-8	19.24	19.24	0
	ES-9	18.00	18.00	0
	ES-10	17.44	17.44	0
	ES-11	19.02	19.02	0
	BC-1	19.31	19.53	0.22
	BC-2	18.87	18.87	0
BC-3	18.67	18.67	0	

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY				
Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
1/05/94	ES-1	18.96	18.96	0
	ES-2	19.57	19.61	0.04
	ES-3	19.52	19.52	0
	ES-4	18.55	18.55	0
	ES-5	18.42	19.75	1.33
	ES-6	21.76	21.76	0
	ES-7	19.90	19.90	0
	ES-8	19.10	19.10	0
	ES-9	17.80	17.80	0
	ES-10	17.27	17.27	0
	ES-11	18.86	18.86	0
	BC-1	19.25	19.42	0.17
	BC-2	16.76	16.76	0
	BC-3	17.51	17.51	0
02/02/94	ES-1	18.92	18.92	0
	ES-2	19.20	19.25	0.05
	ES-3	19.30	19.30	0
	ES-4	18.42	18.42	0
	ES-5	18.18	19.92	1.80
	ES-6	21.74	21.74	0
	ES-7	19.79	19.79	0
	ES-8	19.08	19.08	0
	ES-9	17.02	17.02	0
	ES-10	17.25	17.25	0
	ES-11	18.74	18.74	0
	BC-1	19.30	19.50	0.20
	BC-2	16.42	16.42	0
	BC-3	16.40	16.40	0

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
03/02/94	ES-1	17.91	18.08	0.17
	ES-2	19.00	19.05	0.05
	ES-3	18.68	18.68	0
	ES-4	17.86	17.86	0
	ES-5	18.07	18.30	0.23
	ES-6	21.10	21.10	0
	ES-7	19.14	19.14	0
	ES-8	18.28	18.28	0
	ES-9	17.12	17.12	0
	ES-10	16.61	16.61	0
	ES-11	18.14	18.14	0
	BC-1	18.40	18.40	0
	BC-2	NR	NR	NR
BC-3	15.00	15.00	0	
04/07/94	ES-1	18.50	18.68	0.18
	ES-2	19.10	19.19	0.09
	ES-3	19.00	19.00	0
	ES-4	18.80	18.80	0
	ES-5	18.37	18.38	0
	ES-6	21.30	21.30	0
	ES-7	19.44	19.44	0
	ES-8	18.44	18.44	0
	ES-9	17.24	17.24	0
	ES-10	16.74	16.74	0
	ES-11	18.38	18.38	0
	BC-1	18.10	18.20	0.10
	BC-2	NR	NR	NR
BC-3	17.70	17.70	0	

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
05/05/94	ES-1	17.88	18.02	0.14
	ES-2	18.77	18.79	0.02
	ES-3	18.78	18.78	0
	ES-4	17.86	17.86	0
	ES-5	18.24	18.26	0.02
	ES-6	21.16	21.16	0
	ES-7	19.30	19.30	0
	ES-8	18.26	18.26	0
	ES-9	17.04	17.04	0
	ES-10	16.55	16.55	0
	ES-11	18.15	18.15	0
	BC-1	18.65	18.84	0.19
	BC-2	17.30	17.30	0
BC-3	17.90	17.90	0	
06/07/94	ES-1	18.04	18.21	0.18
	ES-2	18.61	18.61	0
	ES-3	18.90	18.90	0
	ES-4	17.94	17.94	0
	ES-5	18.25	18.27	0.02
	ES-6	21.20	21.20	0
	ES-7	19.33	19.33	0
	ES-8	18.32	18.32	0
	ES-9	17.06	17.06	0
	ES-10	17.50	17.50	0
	ES-11	18.28	18.28	0
	BC-1	18.25	18.52	0.17
	BC-2	17.70	17.70	0
BC-3	17.34	17.34	0	

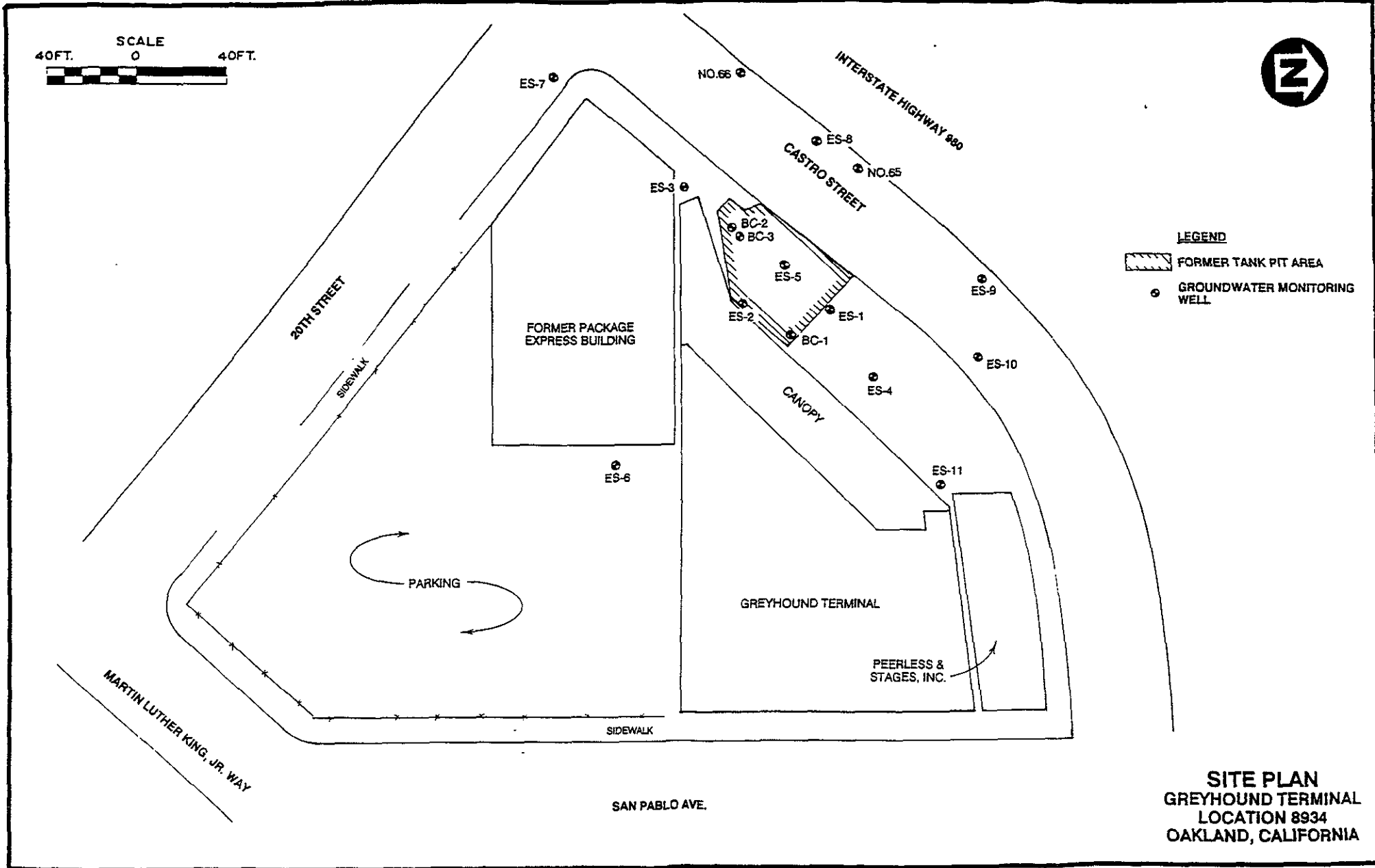
TABLE 5
(Continued)

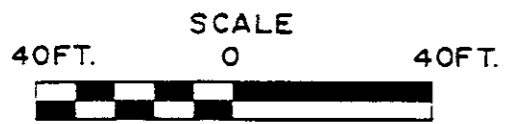
MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
07/13/94	ES-1	NR	18.08	NR
	ES-2	NR	18.78	NR
	ES-3	18.71	18.71	0
	ES-4	18.13	18.13	0
	ES-5	NR	18.30	NR
	ES-6	21.40	21.40	0
	ES-7	19.11	19.11	0
	ES-8	18.50	18.50	0
	ES-9	17.40	17.40	0
	ES-10	16.10	16.10	0
	ES-11	18.60	18.60	0
	BC-1	NR	18.70	NR
	BC-2	17.10	17.10	0
BC-3	18.10	18.10	0	
10/06/94	ES-1	18.39	18.43	0.04
	ES-2	18.86	18.86	0
	ES-3	19.24	19.24	0
	ES-4	18.25	18.25	0
	ES-5	18.23	18.23	0
	ES-6	21.58	21.58	0
	ES-7	19.73	19.73	0
	ES-8	18.76	18.76	0
	ES-9	17.46	17.46	0
	ES-10	16.96	16.96	0
	ES-11	18.55	18.55	0
	BC-1	18.58	18.58	0
	BC-2	NM	NM	NM
BC-3	18.58	18.58	0	



NR = Not Recorded due to equipment theft.
 NM – Not monitored due to dry well.

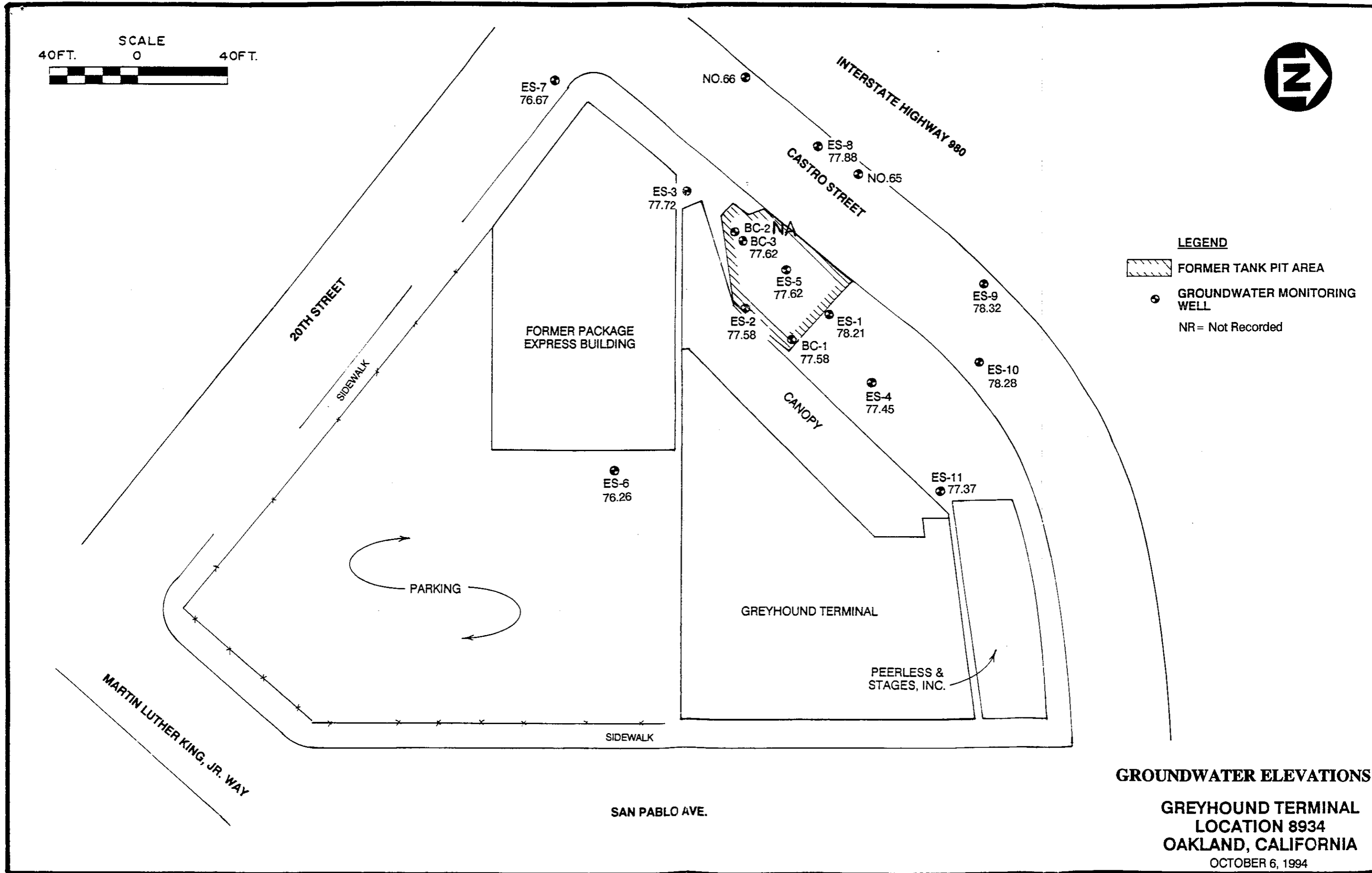
FIGURE 1





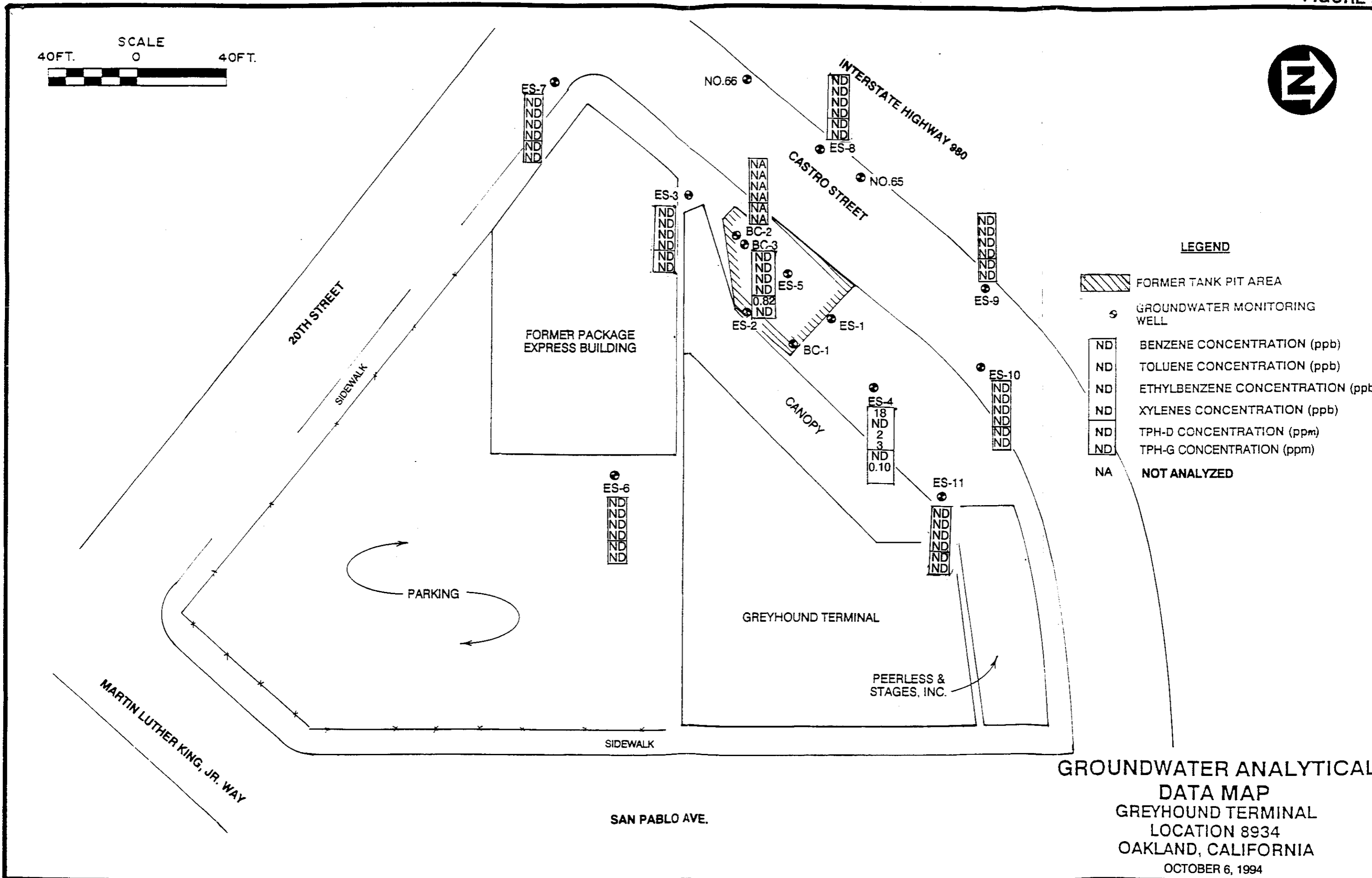
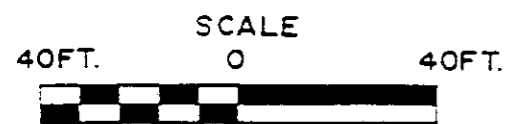
LEGEND

-  FORMER TANK PIT AREA
-  GROUNDWATER MONITORING WELL
- NR= Not Recorded

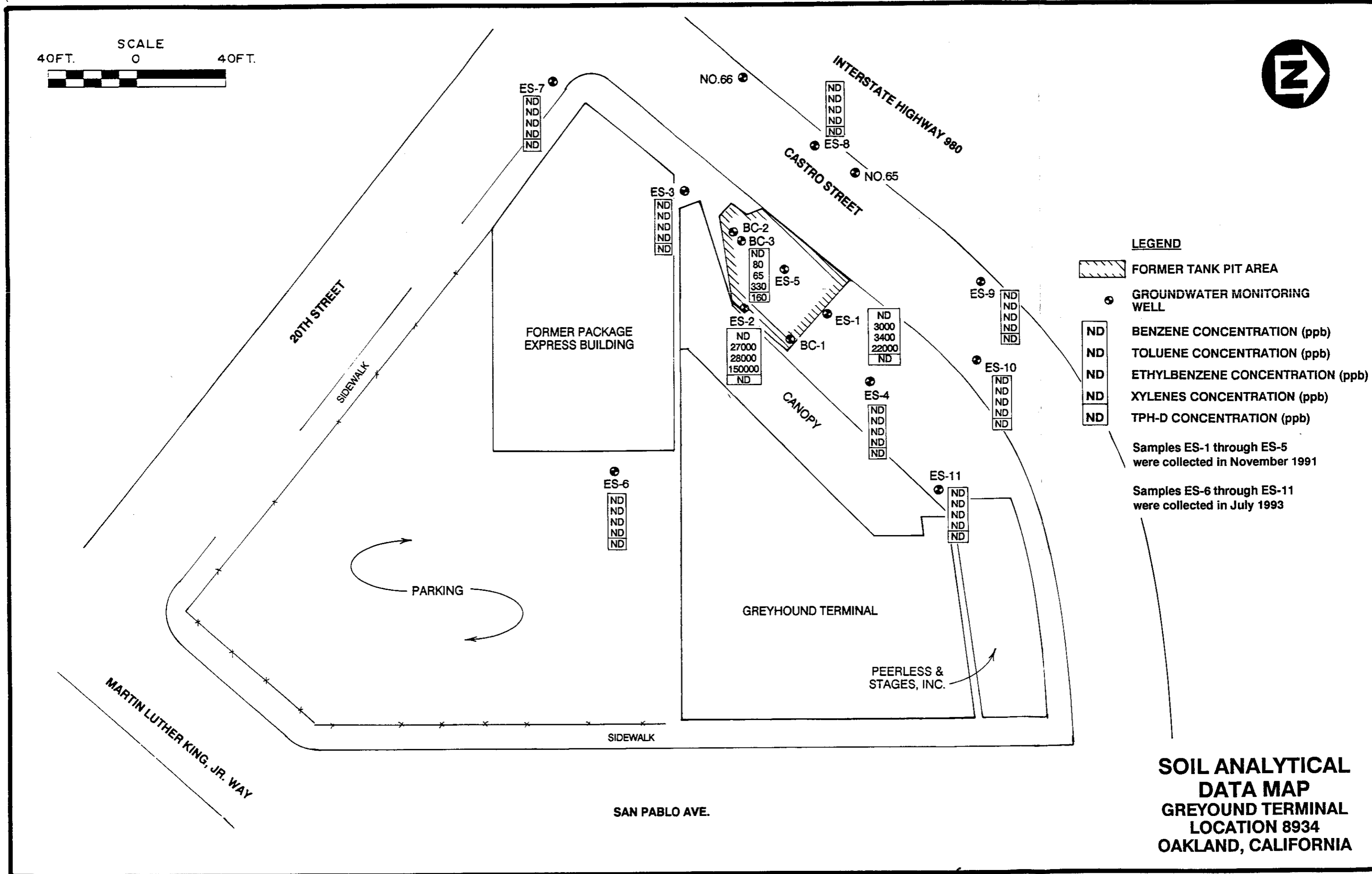
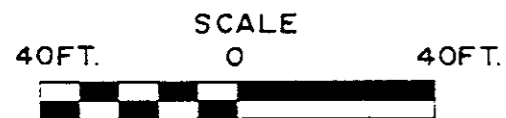


GROUNDWATER ELEVATIONS

**GREYHOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA
OCTOBER 6, 1994**



**GROUNDWATER ANALYTICAL
DATA MAP
GREYHOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA
OCTOBER 6, 1994**



APPENDIX A
ANALYTICAL LABORATORY REPORT
AND CHAIN-OF-CUSTODY



Certificate of Analysis No. 9410281-01

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW003

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 13:10:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 95
4-Bromofluorobenzene 50 «

METHOD 8020***
Analyzed by: DAO
Date: 10/13/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 100
4-Bromofluorobenzene 65

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/13/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 131
o-Terphenyl 125

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-01

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW003

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 13:10:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA		
	RESULTS	DETECTION LIMIT	UNITS
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94	10/12/94		

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance. SPL California License # 1903



Certificate of Analysis No. 9410281-02

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW004

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 14:00:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 101
4-Bromofluorobenzene 54

METHOD 8020***
Analyzed by: DAO
Date: 10/13/94

Petroleum Hydrocarbons - Gasoline 0.10 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 115
4-Bromofluorobenzene 77

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/13/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 169
o-Terphenyl 131

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

(P) - Practical Quantitation Limit ND - Not detected.
" - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-02

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW004

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 14:00:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA			UNITS
	RESULTS	DETECTION LIMIT		
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94	10/12/94			

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-03

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW006

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 11:15:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 39

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 95
4-Bromofluorobenzene 50

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 70
o-Terphenyl 97

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
- Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-03

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW006

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 11:15:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94		10/12/94		

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-04

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW007

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 12:15:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 35

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 92
4-Bromofluorobenzene 44

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 98
o-Terphenyl 98

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
" - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-04

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW007

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 12:15:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA		DETECTION LIMIT	UNITS
	RESULTS			
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94	10/12/94			

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-05

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW008

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 10:00:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 93
4-Bromofluorobenzene 35

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 91
4-Bromofluorobenzene 43

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 99
o-Terphenyl 90

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-05

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW008

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 10:00:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA			UNITS
	RESULTS	DETECTION LIMIT		
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94	10/12/94			

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-06

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW009

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 11:00:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 37

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 48

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 48
o-Terphenyl 86

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
- Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-06

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW009

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 11:00:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA			UNITS
	RESULTS	DETECTION LIMIT		
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94	10/12/94			

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-07

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Grayhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW010

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 12:00:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 93
4-Bromofluorobenzene 34

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 95
4-Bromofluorobenzene 42

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 53
o-Terphenyl 93

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
- Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-07

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW010

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 12:00:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94		10/12/94		

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-08

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW011

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 14:45:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 36

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 92
4-Bromofluorobenzene 42

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 57
o-Terphenyl 86

Mod. 8015 - Diesel
Analyzed by: SEG
Date: 10/16/94 13:05:00

ND - Not detected. (P) - Practical Quantitation Limit
« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.
QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-08

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW011

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 14:45:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94		10/12/94		

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-09

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: BC003

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 13:20:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 93
4-Bromofluorobenzene 36

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 91
4-Bromofluorobenzene 42

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

Total Petroleum Hydrocarbons-Diesel 0.82 0.1 P mg/L

Surrogate % Recovery
n-Pentacosane 794

ND - Not detected. (P) - Practical Quantitation Limit
- Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance
with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-09

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Engineering Sciences
SAMPLE ID: BC003

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 13:20:00
DATE RECEIVED: 10/07/94

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
o-Terphenyl Mod. 8015 - Diesel Analyzed by: SEG Date: 10/16/94 13:05:00		613 «		
Liquid-liquid extraction METHOD 3520 *** Analyzed by: MF Date: 10/12/94		10/12/94		

« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.
SPL California License # 1903



Certificate of Analysis No. 9410281-10

Engineering Science, Inc.
290 Elwood Davis Rd
Liverpool, NY 13088
ATTN: Martin Miller

DATE: 10/20/94

PROJECT: Greyhound Bus Station
SITE: Oakland, CA
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank

PROJECT NO:
MATRIX: LIQUID
DATE SAMPLED: 10/06/94 13:10:00
DATE RECEIVED: 10/07/94

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS. Rows include BENZENE, TOLUENE, ETHYLBENZENE, TOTAL XYLENE, and TOTAL VOLATILE AROMATIC HYDROCARBONS.

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 34 «

METHOD 8020***
Analyzed by: DAO
Date: 10/14/94

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 94
4-Bromofluorobenzene 42 «

Modified 8015 - Gasoline
Analyzed by: DAO
Date: 10/14/94

ND - Not detected. (P) - Practical Quantitation Limit
« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 17th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance
with EPA guidelines for quality assurance.
SPL California License # 1903