ENGINEERING-SCIENCE, INC.

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September 7, 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

Dear Ms. Hugo:

On behalf of Greyhound Lines, Inc. (Greyhound), Engineering-Science, Inc. is pleased to present the July 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 July 1994 monthly monitoring report.

Nine groundwater samples were collected at the Oakland facility on July 13, 1994, and analyzed for BTEX compounds (EPA Method 602), 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 October 1994. 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 November 18, 1994.

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

D. Chaffin for DAN
David A. Nickerson
Project Manager

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

MNM/DAN/DLC/lml

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

JULY 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.

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

  Monitoring well data obtained on July 13, 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 July 13, 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 602; 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 two of the samples. Benzene (2.0 μg/l), toluene (0.9 μg/l), ethylbenzene (0.8 μg/l), and xylenes (3.0 μg/l) were detected in sample ES-3. Benzene (9.0 μg/l) and xylenes (0.7 μg/l) were detected in sample ES-4.

  TPH-D was detected in two samples: ES-3 (0.28 mg/l), and BC-3 (0.20 mg/l). TPH-G was detected in two samples: ES-3 (0.37 mg/l), and ES-4 (0.13 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.

- **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 (July 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 850 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, 74,040

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 November 18, 1994.

- **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 serve as the tank owner commitment letter.

TABLE 1

MONITORING WELL DATA SUMMARY
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
August 3, 1994

Location	Elevation of T.O.C[1] (Ft.)	Depth to Groundwater (Ft.)	Groundwater Elevation[2]	Product Layer Thickness (Ft.)
ES-1[3]	96.64	18.48	78.16	–
ES-2[3]	96.44	18.72	77.72	–
ES-3	96.96	19.03	77.93	0
ES-4	95.70	17.94	77.76	0
ES-5[3]	95.85	17.90	77.95	–
ES-6	97.84	21.58	76.26	0
ES-7	96.40	19.40	77.00	0
ES-8	96.64	18.42	78.22	0
ES-9	95.78	17.10	78.68	0
ES-10	95.24	16.20	79.04	0
ES-11	95.92	18.18	77.74	0
BC-1[3]	96.16	18.40	77.76	–
BC-2[4]	96.32	18.36	77.96	0
BC-3[4]	96.20	18.36	77.84	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.

– Thickness was not recorded due to equipment theft.

TABLE 2

GROUNDWATER ANALYTICAL RESULTS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
JULY 13, 1994

Location	Date Collected	Parameter	Result	Detection Limit
ES–3	7/13	Benzene[1]	2.0	0.3 ug/L
		Toluene[1]	0.9	0.3 ug/L
		Ethylbenzene[1]	0.8	0.3 ug/L
		Xylenes (total)[1]	3.0	0.6 ug/L
		TPH–D[2]	0.28	0.05 mg/L
		TPH–G[3]	0.37	0.1 mg/L
ES–4	7/13	Benzene[1]	9.0	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	0.7	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	0.13	0.1 mg/L
ES–6	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L
ES–7	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L
ES–8	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	NA	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L
ES–9	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L

TABLE 2
(Continued)
GROUNDWATER ANALYTICAL RESULTS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
JULY 13, 1994

Location	Date Collected	Parameter	Result	Detection Limit
ES–10	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L
ES–11	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	ND	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L
BC–3	7/13	Benzene[1]	ND	0.3 ug/L
		Toluene[1]	ND	0.3 ug/L
		Ethylbenzene[1]	ND	0.3 ug/L
		Xylenes (total)[1]	ND	0.6 ug/L
		TPH–D[2]	0.20	0.05 mg/L
		TPH–G[3]	ND	0.1 mg/L

Notes:

[1] Analyzed by EPA Method 602. 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

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 GCFID 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

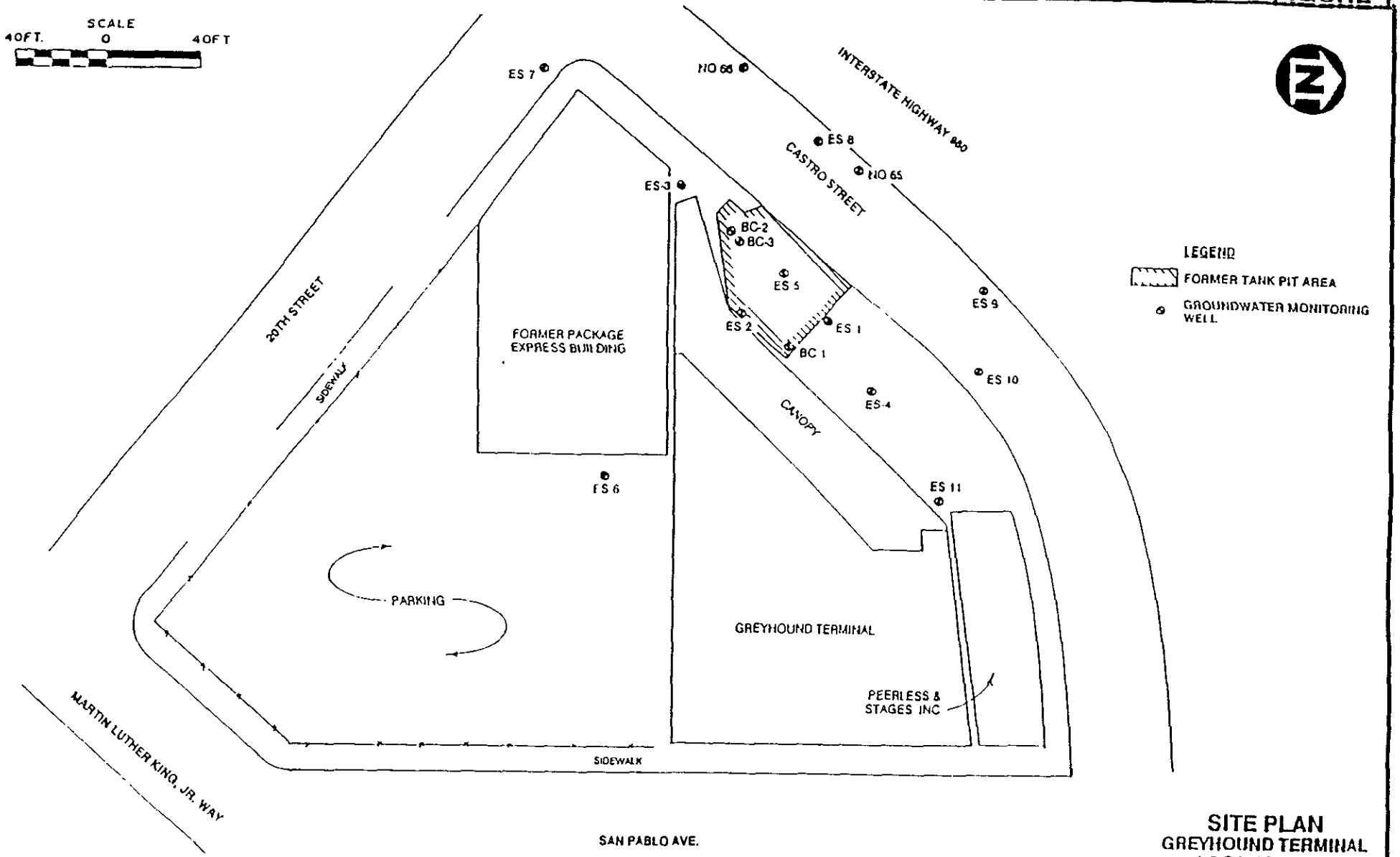
TABLE 5
(Continued)

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

NR = Not Recorded due to equipment theft.

FIGURE 1

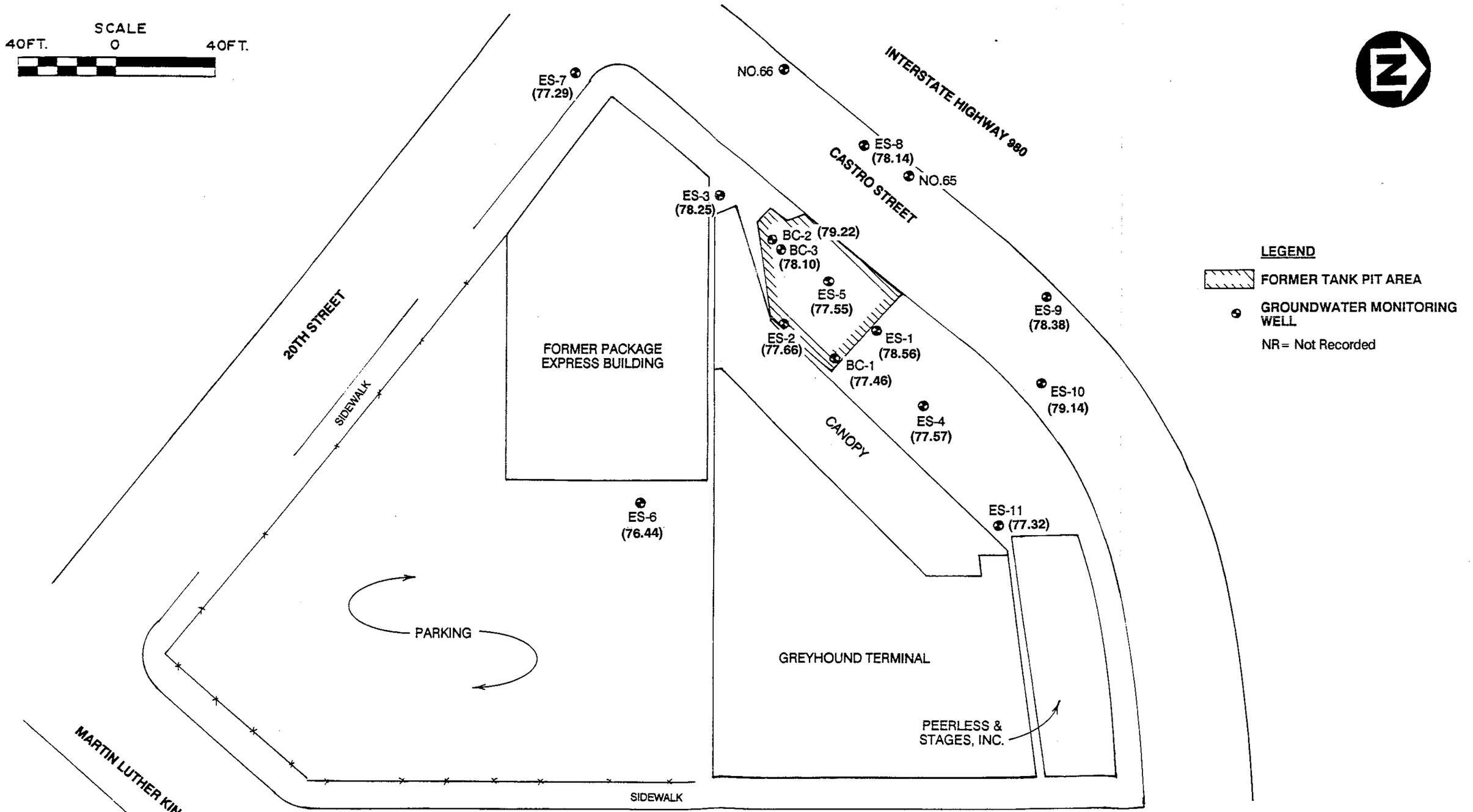


SITE PLAN
GREYHOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA

SY356.06

ENGINEERING-SCIENCE

FIGURE 2



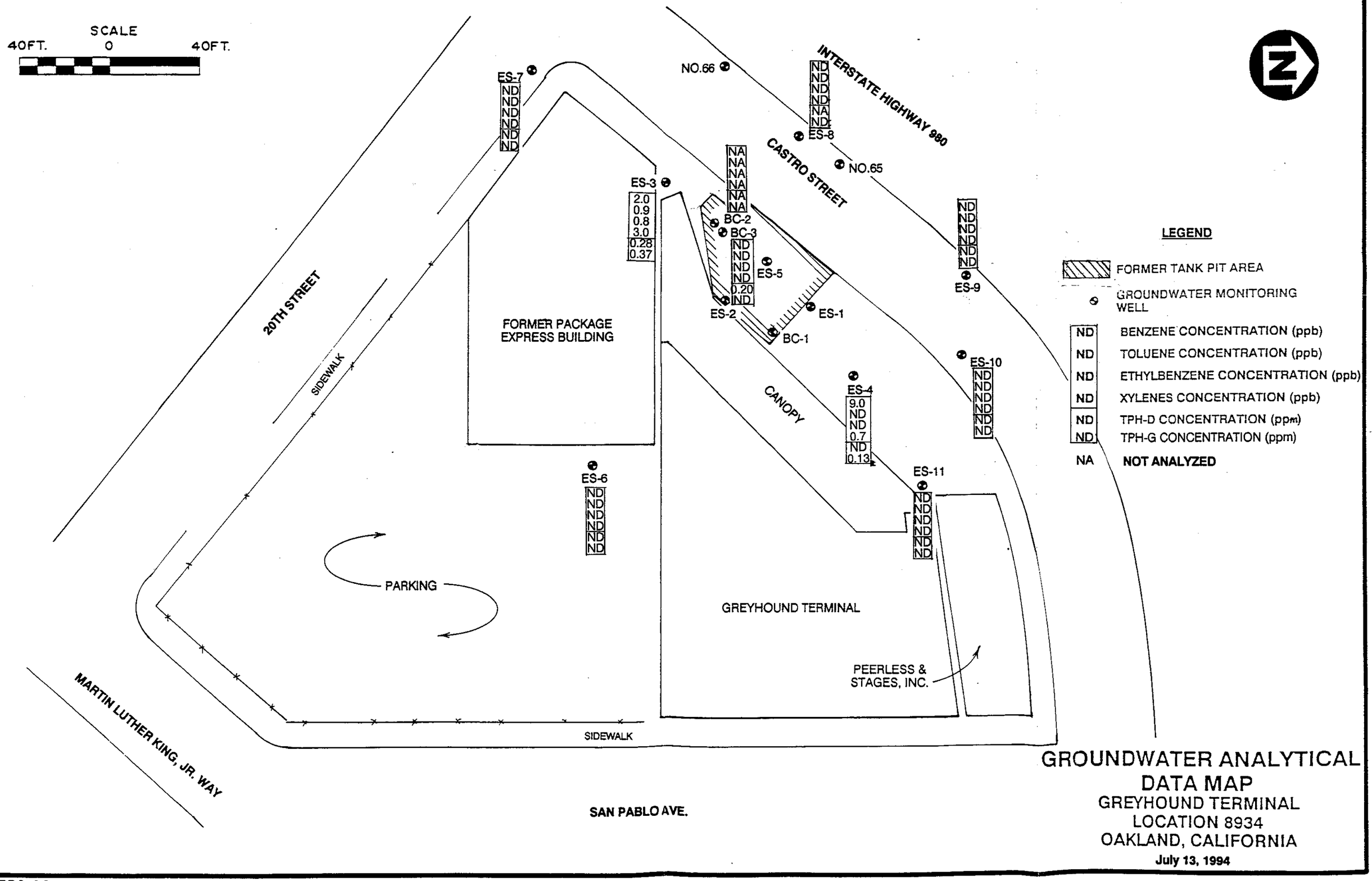
GROUNDWATER ELEVATIONS

GREYHOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA
July 13, 1994

SY356.06

ENGINEERING-SCIENCE

FIGURE 3

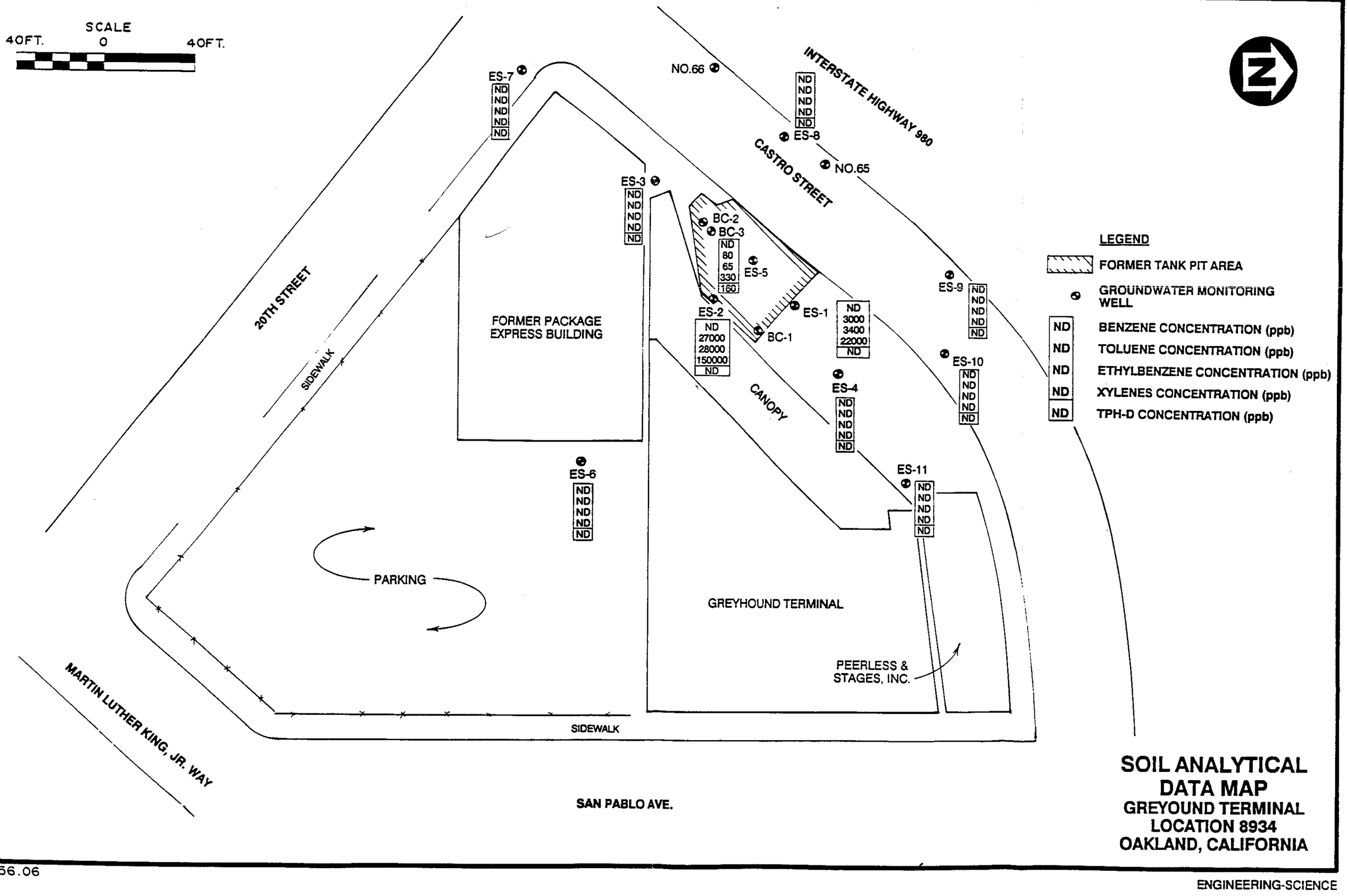


GROUNDWATER ANALYTICAL DATA MAP

GREYHOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA

July 13, 1994

FIGURE 4



SOIL ANALYTICAL DATA MAP
GREYOUND TERMINAL
LOCATION 8934
OAKLAND, CALIFORNIA

SY356.06

ENGINEERING-SCIENCE

APPENDIX A

ANALYTICAL LABORATORY REPORT AND CHAIN-OF-CUSTODY

mm

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 94-07-454

Approved for release by:

M. Scott Sample **Date:** 8/10/94
S. Sample, Laboratory Director

Kam Satterfield **Date:** 8-9-94
K. Satterfield, Project Manager

Certificate of Analysis No. 9407454-01

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-003

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 09:25:0(
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	2	0.3 P	ug/I
TOLUENE	0.9	0.3 P	ug/I
ETHYLBENZENE	0.8	0.3 P	ug/I
TOTAL XYLENE	3	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBONS	6.7		ug/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene	95		
4-Bromofluorobenzene	96		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	0.37	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	0.28	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	177		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

(P) - Practical Quantitation Limit ND - Not detected.

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. 9407454-02

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-004

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 10:00:0(
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	9	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	ug/L
TOTAL XYLENE	0.7	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	9.7		ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	101		
4-Bromofluorobenzene	91		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	0.13	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	126		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

(P) - Practical Quantitation Limit ND - Not detected.

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. 9407454-03

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-006

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 11:30:0
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNIT
BENZENE	ND	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	ug/L
TOTAL XYLENE	ND	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	102		
4-Bromofluorobenzene	96		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	115		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-04

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-007

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 12:10:0(
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	ug/L
TOTAL XYLENE	ND	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	94		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	109		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-05

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-008

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 12:55:0
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNIT
BENZENE	ND	0.3 P	ug/l
TOLUENE	ND	0.3 P	ug/l
ETHYLBENZENE	ND	0.3 P	ug/l
TOTAL XYLENE	ND	0.6 P	ug/l
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/l
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	99		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/l
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-06

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-009

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 13:45:0(
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	ug/L
TOTAL XYLENE	ND	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene	99		
4-Bromofluorobenzene	93		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/L
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	76		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-07

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-010

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 14:45:0
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNIT
BENZENE	ND	0.3 P	ug/I
TOLUENE	ND	0.3 P	ug/I
ETHYLBENZENE	ND	0.3 P	ug/I
TOTAL XYLENE	ND	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene	106		
4-Bromofluorobenzene	103		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	99		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-08

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: MW-011

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 10:50:0
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNIT:
BENZENE	ND	0.3 P	ug/I
TOLUENE	ND	0.3 P	ug/I
ETHYLBENZENE	ND	0.3 P	ug/I
TOTAL XYLENE	ND	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene	104		
4-Bromofluorobenzene	99		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	ND	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	112		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/19/94 21:10:00			

ND - Not detected. (P) - Practical Quantitation Limit

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. 9407454-09

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

DATE: 08/05/9

PROJECT: Greyhound Lines
SITE: Oakland, California
SAMPLED BY: Engineering Sciences
SAMPLE ID: BL-003

PROJECT NO: 72521808934
MATRIX: LIQUID
DATE SAMPLED: 07/13/94 10:10:0
DATE RECEIVED: 07/14/94

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNIT
BENZENE	ND	0.3 P	ug/I
TOLUENE	ND	0.3 P	ug/I
ETHYLBENZENE	ND	0.3 P	ug/I
TOTAL XYLENE	ND	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	104		
METHOD 602 *			
Analyzed by: MOO			
Date: 07/19/94			
Petroleum Hydrocarbons	ND	0.05 P	mg/I
Surrogate	**% Recovery**		
1,4-Difluorobenzene			
Modified 8015 - Gasoline			
Analyzed by: MOO			
Date: 07/19/94			
Total Petroleum Hydrocarbons-Diesel	0.20	0.1 P	mg/L
Surrogate	**% Recovery**		
n-Pentacosane	193		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 07/21/94 10:23:01			

ND - Not detected. (P) - Practical Quantitation Limit

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

QUALITY CONTROL DOCUMENTATION

METHOD 8020

Matrix: Aqueous Batch Id: HP_N940718100900

Units: µg/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	43	86.0	54 - 126
Toluene	ND	50	42	84.0	61 - 125
EthylBenzene	ND	50	37	74.0	57 - 129
O Xylene	ND	50	41	82.0	32 - 160
M & P Xylene	ND	100	86	86.0	32 * - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Benzene	2	20	21	95.0	25	115	19.0 *	12	61 - 131
Toluene	ND	20	21	105	25	125	17.4	18	57 - 127
EthylBenzene	ND	20	15	75.0	18	90.0	18.2 *	14	55 - 131
O Xylene	ND	20	15	75.0	18	90.0	18.2	29	40 - 130
M & P Xylene	ND	40	34	85.0	40	100	16.2 *	16	43 - 152

Analyst: MOO

Sequence Date: 07/19/94

SPL ID of sample spiked: 9407454-01A

Sample File ID: NN__377.TX0

Method Blank File ID:

Blank Spike File ID: NN__374.TX0

Matrix Spike File ID: NN__404.TX0

Matrix Spike Duplicate File ID: NN__405.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS%Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL-Houston Historical Data

(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID): 9407454-01A

Idelis Williams, QC Officer

SPL BATCH QUALITY CONTROL REPORT ** PAGE 1
METHOD 602

Matrix: Aqueous Batch Id: HP_N940719094800
Units: ug/L

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	43	86.0	54 - 126
Toluene	ND	50	42	84.0	61 - 125
EthylBenzene	ND	50	37	74.0	57 - 129
O Xylene	ND	50	41	82.0	32 - 160
M & P Xylene	ND	100	86	86.0	32 - 160

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
Benzene	ND	20	20	100	20	100	0	12	61 - 131
Toluene	ND	20	21	105	22	110	4.65	18	57 - 127
EthylBenzene	ND	20	17	85.0	18	90.0	5.71	14	55 - 131
O Xylene	ND	20	19	95.0	18	90.0	5.41	29	40 - 130
M & P Xylene	ND	40	40	100	41	102	1.98	16	43 - 152

Analyst: MOO
Sequence Date: 07/19/94
SPL ID of sample spiked: 9407454-03A
Sample File ID: NN__379.TX0
Method Blank File ID:
Blank Spike File ID: NN__374.TX0
Matrix Spike File ID: NN__406.TX0
Matrix Spike Duplicate File ID: NN__407.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS%Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data
(***) = Source: SPL-Houston Historical Data

SAMPLES IN BATCH(SPL ID):

9407415-10A 9407415-02A 9407415-09A 9407415-07A
9407415-06A 9407415-04A 9407415-13A 9407415-11A
9407415-03A 9407415-01A 9407430-01A 9407454-09A
9407454-08A 9407454-07A 9407454-06A 9407454-05A
9407454-04A 9407454-03A 9407454-02A 9407454-01A

Idelis Williams, QC Officer

Matrix: Aqueous
Sample ID: 9407454-04A
Batch ID: HP_N940719113700

Reported on: 07/28/94 14:41:10
Analyzed on: 07/19/94 13:52:00
Analyst: MOO

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Petroleum Hydrocarbons-Gasoline (Water)
Modified 8015 - Gasoline

C O M P O U N D	Sample Value mg/L	Spike Added mg/L	MS % Recovery #	MSD % Recovery #	Relative % Difference #
Petroleum Hydrocarbons	ND	2.5	74	82	10

NOTES

column to be used to flag recovery and RPD values with an asterisk
* values outside of QC Limits.

Idelis Williams, QC Officer

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9407154

Page 1 of 1

Environmental Laboratory
8880 Interchange Drive
Houston, Texas 77054
713/660-0901

Analysis Request and Chain of Custody Record

Project No.	Client/Project Name	Project Location
7252/808934	Greyhound LINES, INC.	OAKLAND, CA

Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Container (Size/Mat'l)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
MW-003	7/13/94 0925	X		4-40ml 1-1L	LIQUID	HCL	602 / Modified 8015 / TPHG, ID	
MW-004	7/13/94 1000	X						
MW-006	7/13/94 1130	X						
MW-007	7/13/94 1210	X						
MW-008	7/13/94 1255	X						
MW-009	7/18/94 1345	X						
MW-010	7/13/94 1445	X						
MW-011	7/13/94 1050	X						
BL-003	7/13/94 1010	X						

Samplers: (Signature)	Relinquished by: (Signature)	Date: 7/13/94 Time: 1500	Received by: (Signature)	Date: Time:	Intact
Affiliation: ENG-SCIENCE	Relinquished by: (Signature)	Date: Time	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time	Received by: (Signature)	Date: Time	Intact 3°C
			Received for laboratory: (Signature)	Date: 7/14/94 Time: 10:30	Laboratory No

SAMPLER REMARKS:

Seal # Fed ON: 01780 13 9104

Data Results to.

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE 07/14/94 TIME: 10:30 CLIENT NO. _____
LOT NO. _____ CONTRACT NO. _____

CLIENT SAMPLE NOS. _____

SPL SAMPLE NOS.: 9407454

		YES	NO
1.	Is a Chain-of-Custody form present?	✓	
2.	Is the COC properly completed?	✓	
	If no, describe what is incomplete:		
	If no, has the client been contacted about it?		
	(Attach subsequent documentation from client about the situation)		
3.	Is airbill/packing list/bill of lading with shipment?	✓	
	If yes, ID#: By FED EXP; 017801396 4		
4.	Is a USEPA Traffic Report present?		✓
5.	Is a USEPA SAS Packing List present?		✓
6.	Are custody seals present on the package?	✓	
	If yes, were they intact upon receipt?	✓	
7.	Are all samples tagged or labeled?	✓	
	Do the sample tags/labels match the COC?	✓	
	If no, has the client been contacted about it?		
	(Attach subsequent documentation from client about the situation)		
8.	Do all shipping documents agree?	✓	
	If no, describe what is in nonconformity:		

9. Condition/temperature of shipping container: Intact 3°C
10. Condition/temperature of sample bottles: good ✓
11. Sample Disposal?: SPL disposal ✓ Return to client _____

NOTES (reference item number if applicable): _____

ATTEST: A Banks DATE: 07/14/94
DELIVERED FOR RESOLUTION: REC'D _____ DATE: _____
RESOLVED: _____ DATE: _____