

ALCO  
HESSENT  
SEP 24 11 00

February 14, 1995

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 January 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 January 1995 monthly monitoring report.

Ten groundwater samples were collected at the Oakland facility between January 13 and January 16, 1995, 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 in April 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 May 15, 1995.

ENGINEERING-SCIENCE, INC.

Ms. Susan Hugo  
February 14, 1995  
Page 2

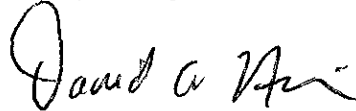
If you have any questions or require additional information, please call us at (315) 451-9560.

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

**JANUARY 1995**  
**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.

**JANUARY 1995**  
**QUARTERLY STATUS REPORT (CONTINUED)**

- **Water level measurements from most recent sampling event:**

Monitoring well data obtained on January 13 and 16, 1995 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 quarterly sampling events 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 in January 1995 are summarized in Table 2. Ten 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. Laboratory reports including chain-of-custody documentation, are included in Appendix A.

BTEX compounds were only detected in two of the samples. Benzene (19.0  $\mu\text{g/l}$ ), toluene (15  $\mu\text{g/l}$ ), ethylbenzene (72  $\mu\text{g/l}$ ), and xylenes (88  $\mu\text{g/l}$ ) were detected in sample ES-3. Benzene (12.0  $\mu\text{g/l}$ ) and xylenes (2.0  $\mu\text{g/l}$ ) were detected in sample ES-4. Toluene and ethylbenzene were not detected in sample ES-4.

TPH-D was detected in samples ES-3 (1.1 mg/l), ES-9 (1.1  $\mu\text{g/l}$ ), BC-2 (1.1 mg/l), and BC-3 (0.89 mg/l). TPH-D was not detected in the other six samples. TPH-G was only detected in two samples: ES-3 (1.6 mg/l) and ES-4 (0.15 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.

**JANUARY 1995**  
**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,

**JANUARY 1995**  
**QUARTERLY STATUS REPORT (CONTINUED)**

74,911 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 May 15, 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 serve as the tank owner commitment letter.

TABLE 1  
 MONITORING WELL DATA SUMMARY  
 GREYHOUND TERMINAL, OAKLAND, CALIFORNIA  
 January 13 and 16, 1995

Location	Elevation of T.O.C. <sup>1</sup> (Ft.)	Depth to Groundwater (Ft.)	Groundwater Elevation <sup>2</sup> (Ft.)	Product Layer Thickness (Ft.)
ES-1 <sup>3</sup>	96.64	18.43	78.21	0.04
ES-2 <sup>3</sup>	96.44	18.86	77.58	0
ES-3	96.96	17.35	79.61	0
ES-4	95.70	16.77	78.93	0
ES-5 <sup>3</sup>	95.85	18.23	77.62	0
ES-6	97.84	20.25	77.59	0
ES-7	96.40	18.11	78.29	0
ES-8	96.64	16.83	79.81	0
ES-9	95.78	15.80	79.98	0
ES-10	95.24	15.42	79.82	0
ES-11	95.92	17.16	78.76	0
BC-1 <sup>3</sup>	96.16	18.58	77.58	0
BC-2 <sup>4</sup>	96.32	12.80	83.52	0
BC-3 <sup>4</sup>	96.20	15.40	80.80	0

<sup>1</sup> 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).

<sup>2</sup> Groundwater elevation (Elevation of T.O.C. - depth to groundwater).

<sup>3</sup> Recovery Wells.

<sup>4</sup> Approximate elevation - well casings not vertical.

TABLE 2

**GROUNDWATER ANALYTICAL RESULTS  
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA  
JANUARY 13 AND 16, 1995**

Location	Date Collected	Parameter	Result	Detection Limit
ES-3	1/16	Benzene <sup>1</sup>	19	0.3 ug/L
		Toluene <sup>1</sup>	15	0.3 ug/L
		Ethylbenzene <sup>1</sup>	72	0.3 ug/L
		Xylenes (total) <sup>1</sup>	88	0.6 ug/L
		TPH-D <sup>2</sup>	1.1	0.1 mg/L
		TPH-G <sup>3</sup>	1.6	0.1 mg/L
ES-4	1/16	Benzene <sup>1</sup>	12	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	2	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	0.15	0.1 mg/L
ES-6	1/13	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
ES-7	1/13	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
ES-8	1/13	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
ES-9	1/13	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	1.1	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L



**TABLE 2  
(Continued)**

Location	Date Collected	Parameter	Result	Detection Limit
ES-10	1/16	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
ES-11	1/16	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	ND	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
BC-2	1/16	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	1.1	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L
BC-3	1/16	Benzene <sup>1</sup>	ND	0.3 ug/L
		Toluene <sup>1</sup>	ND	0.3 ug/L
		Ethylbenzene <sup>1</sup>	ND	0.3 ug/L
		Xylenes (total) <sup>1</sup>	ND	0.6 ug/L
		TPH-D <sup>2</sup>	0.89	0.1 mg/L
		TPH-G <sup>3</sup>	ND	0.1 mg/L

Notes:

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

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

<sup>3</sup> 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.

ND - Not detected above the practical quantitation limit.

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	ts	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

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
1/13/95,	ES-3	19	15	72	88	194	1.1	1.6
1/16/95	ES-4	12	ND	ND	2	14	ND	0.15
	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	1.1	ND
	ES-10	ND	ND	ND	ND	ND	ND	ND
	ES-11	ND	ND	ND	ND	ND	ND	ND
	BC-2	ND	ND	ND	ND	ND	1.1	ND
	BC-3	ND	ND	ND	ND	ND	0.89	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**

<b>Location Sample Depth</b>	<b>Date</b>	<b>Benzene ug/kg</b>	<b>Toluene ug/kg</b>	<b>Ethylbenzene ug/kg</b>	<b>Xylenes ug/kg</b>	<b>Total BTEX<sup>1</sup> ug/kg</b>	<b>TPH-D<sup>2</sup> mg/kg</b>	<b>TPH-G<sup>3</sup> mg/kg</b>
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)
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
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
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
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



TABLE 5  
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
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
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
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

TABLE 5  
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
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	
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	

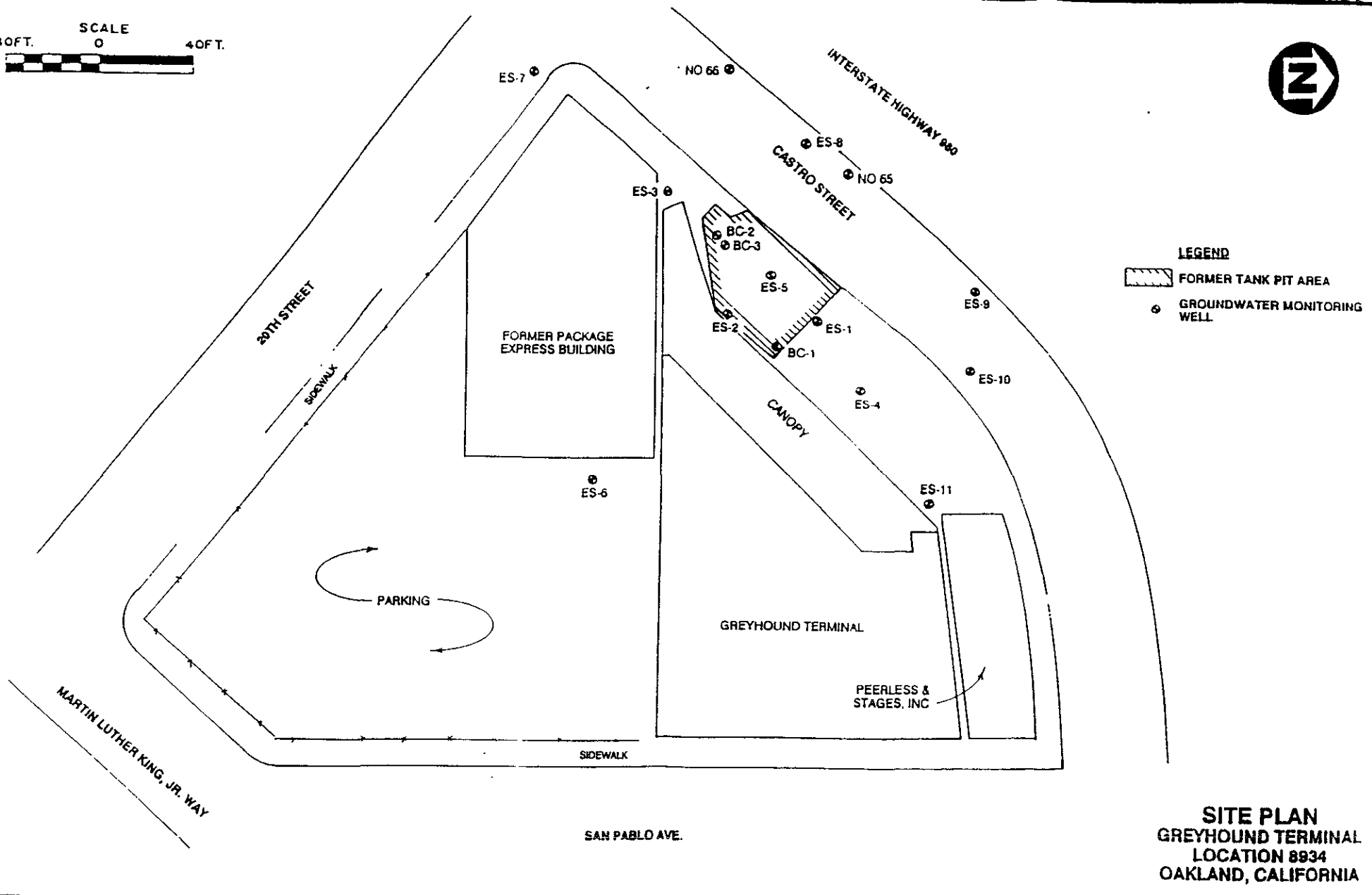
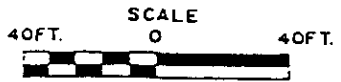
TABLE 5  
(Continued)

MONITORING WELL DATA SUMMARY

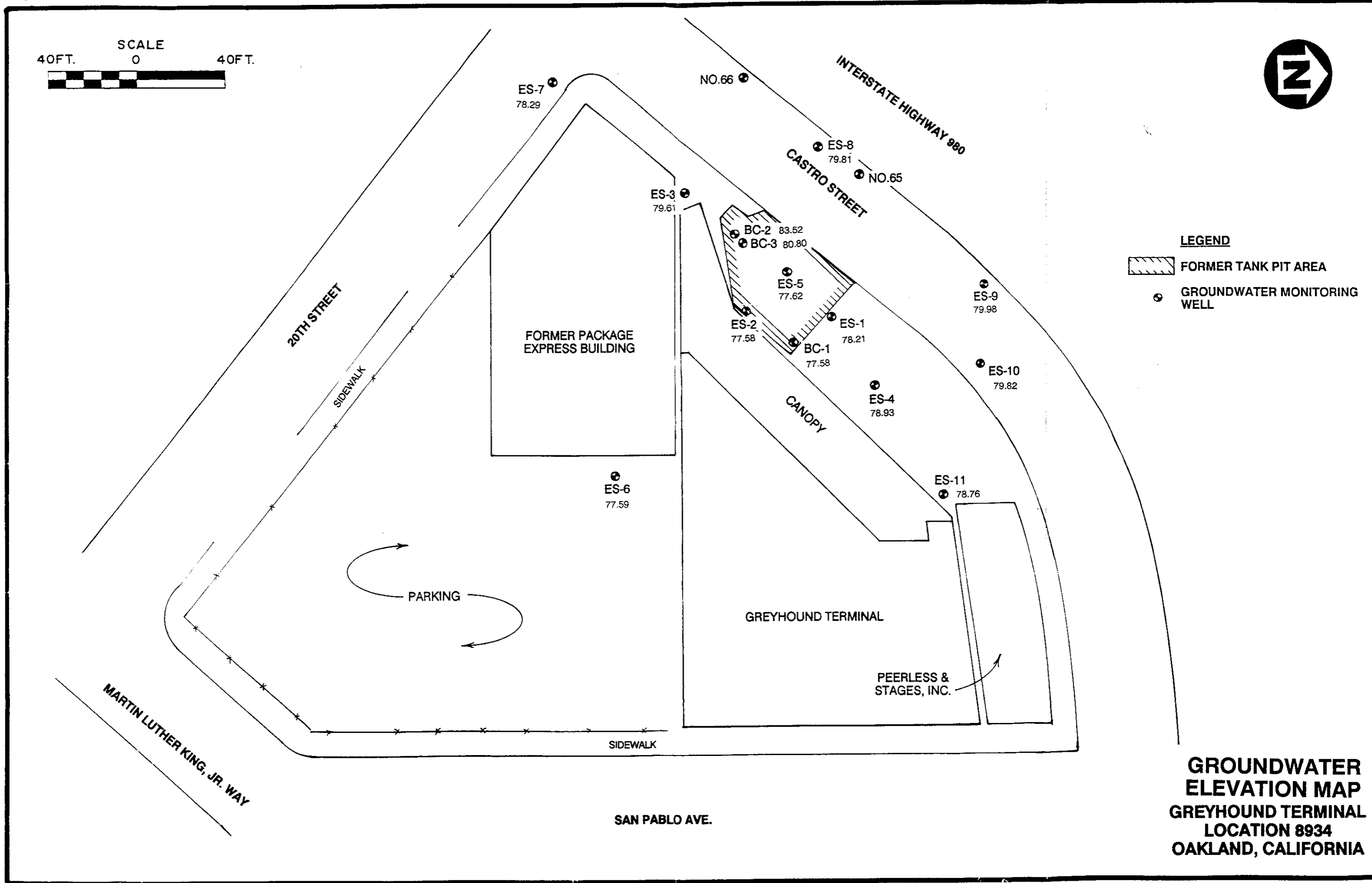
Date	Well Location	Depth to Liquid (Feet)	Depth to Water (Feet)	Free Product Thickness (Feet)
10/06/94	ES-1	18.39	18.43	0.04
	ES-2	18.86	18.86	0
	ES-3	19.24	19.24	0
	ES-4	18.25	18.25	0
	ES-5	18.23	18.23	0
	ES-6	21.58	21.58	0
	ES-7	19.73	19.73	0
	ES-8	18.76	18.76	0
	ES-9	17.46	17.46	0
	ES-10	16.96	16.96	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	
10/06/94	ES-1	18.39	18.43	0.04
	ES-2	18.86	18.86	0
	ES-3	17.35	17.35	0
	ES-4	16.77	16.77	0
	ES-5	18.23	18.23	0
	ES-6	20.25	20.25	0
	ES-7	18.11	18.11	0
	ES-8	16.83	16.83	0
	ES-9	15.80	15.80	0
	ES-10	15.42	15.42	0
	ES-11	17.16	17.16	0
	BC-1	18.58	18.58	0
	BC-2	12.80	12.80	0
BC-3	15.40	15.40	0	

NR = Not recorded due to equipment theft.  
 NM = Not measured due to dry well.

FIGURE 1

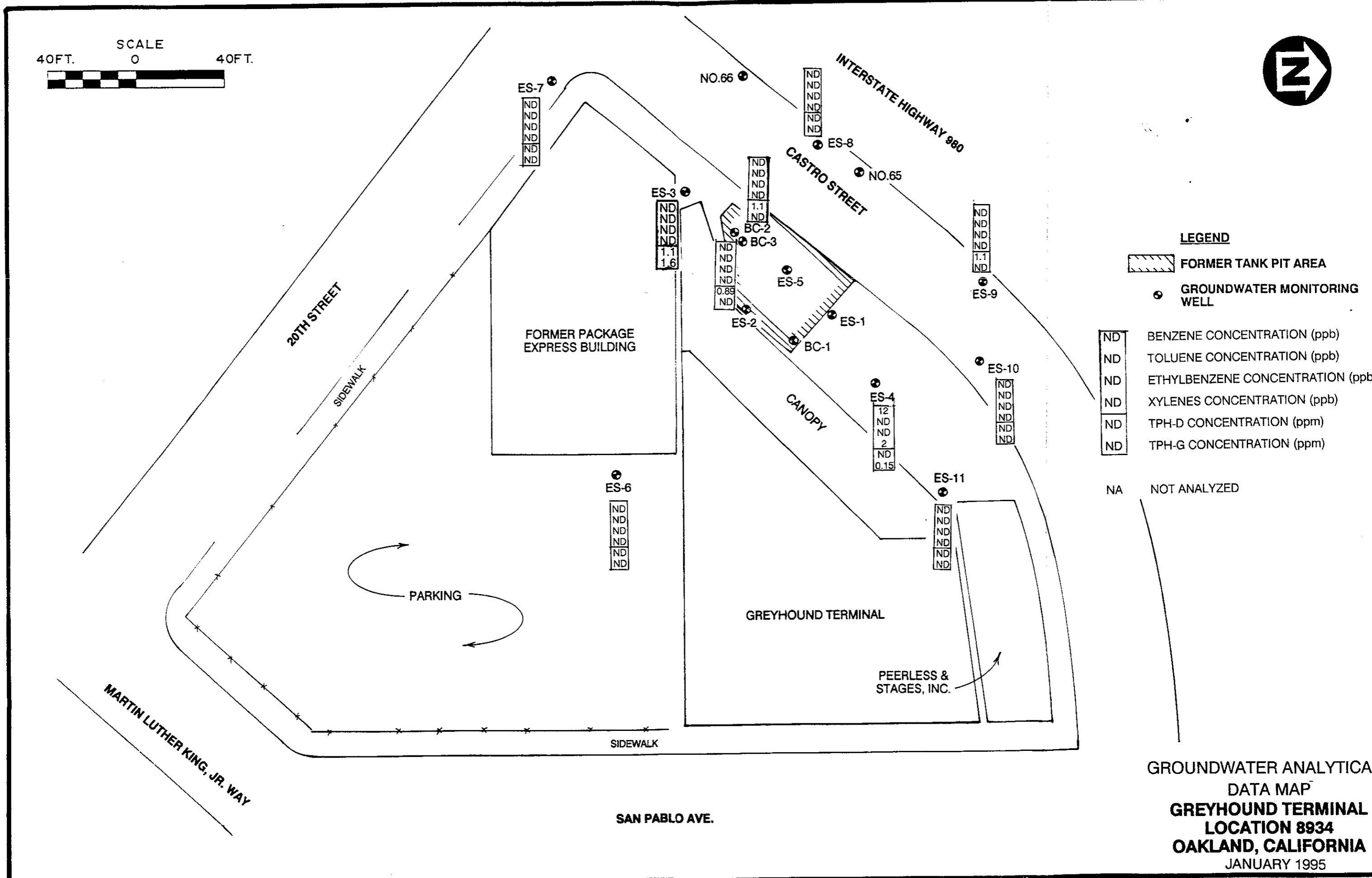


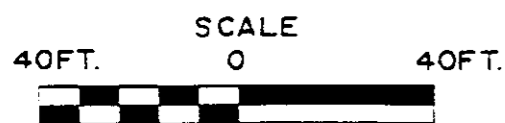
**SITE PLAN**  
GREYHOUND TERMINAL  
LOCATION 8934  
OAKLAND, CALIFORNIA



**GROUNDWATER ELEVATION MAP  
GREYHOUND TERMINAL  
LOCATION 8934  
OAKLAND, CALIFORNIA**

FIGURE 3



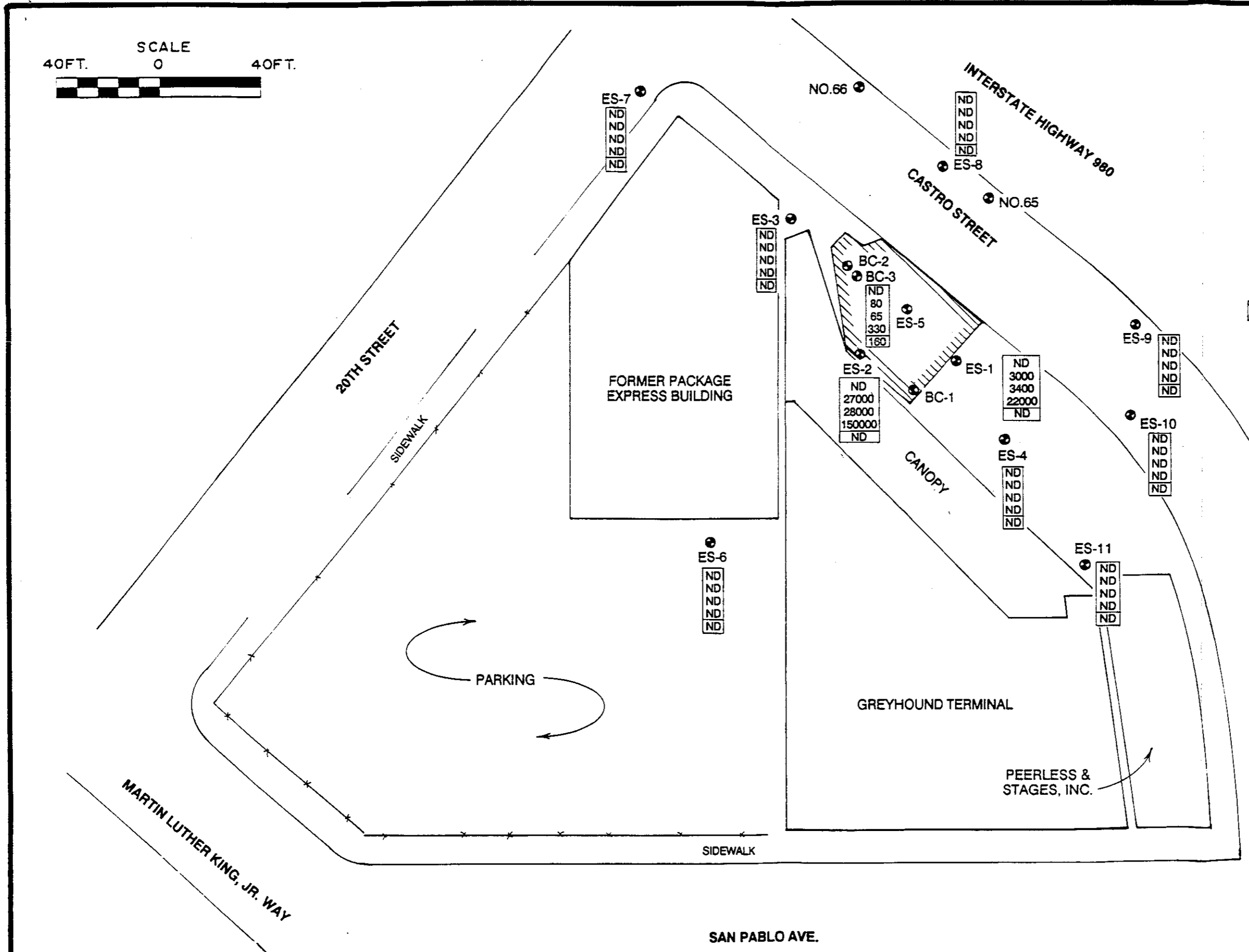


**LEGEND**

	FORMER TANK PIT AREA
	GROUNDWATER MONITORING WELL
	BENZENE CONCENTRATION (ppb)
	TOLUENE CONCENTRATION (ppb)
	ETHYLBENZENE CONCENTRATION (ppb)
	XYLENES CONCENTRATION (ppb)
	TPH-D CONCENTRATION (ppb)

Samples ES-1 through ES-5 were collected in November 1991

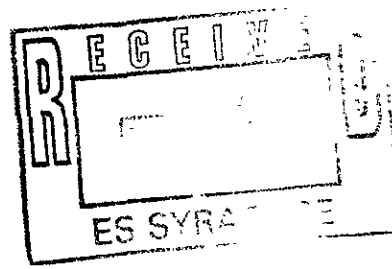
Samples ES-6 through ES-11 were collected in July 1993



**SOIL ANALYTICAL  
DATA MAP  
GREYOUND TERMINAL  
LOCATION 8934  
OAKLAND, CALIFORNIA**

**APPENDIX A**  
**ANALYTICAL LABORATORY REPORT**  
**AND CHAIN-OF-CUSTODY**





HOUSTON LABORATORY  
8880 INTERCHANGE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 01 - 502

Approved for release by:

M. Scott Sample  
S. Sample, Laboratory Director

Date: 1/31/95

K. Satterfield  
K. Satterfield, Project Manager

Date: 1/31/95



Certificate of Analysis No. H9-9501502-01

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

DATE: 01/28/95

PROJECT: Water Analysis
SITE: Greyhound Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-6

PROJECT NO: 725218.089343
MATRIX: LIQUID
DATE SAMPLED: 01/13/95 10:50:00
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

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

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

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

Handwritten signature: Karen D... SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-01

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

DATE: 01/28/95

PROJECT: Water Analysis  
SITE: Greyhound Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-6

PROJECT NO: 725218.089343  
MATRIX: LIQUID  
DATE SAMPLED: 01/13/95 10:50:00  
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	102		
2-Fluorobiphenyl	100		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/19/95 13:37:00			
Liquid-liquid extraction	01/17/95		
METHOD 3510 ***			
Analyzed by: LJ			
Date: 01/17/95			

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

*Karen Dattagui*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-02

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

DATE: 01/28/95

PROJECT: Water Analysis
SITE: Greyhound Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-7

PROJECT NO: 725218.089343
MATRIX: LIQUID
DATE SAMPLED: 01/13/95 14:30:00
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

Table with 5 columns: PARAMETER, RESULTS, DETECTION LIMIT, UNITS, and % Recovery. Rows include Benzene, Toluene, Ethylbenzene, Total Xylene, Total Volatile Aromatic Hydrocarbons, Surrogate (1,4-Difluorobenzene, 4-Bromofluorobenzene), Petroleum Hydrocarbons - Gasoline, Surrogate (1,4-Difluorobenzene, 4-Bromofluorobenzene), Modified 8015 - Gasoline, and Total Petroleum Hydrocarbons-Diesel.

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

Handwritten signature: Ken Daltrey
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-02

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

DATE: 01/28/95

PROJECT: Water Analysis  
SITE: Greyhound Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-7

PROJECT NO: 725218.089343  
MATRIX: LIQUID  
DATE SAMPLED: 01/13/95 14:30:00  
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	90		
2-Fluorobiphenyl	91		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/19/95 13:37:00			
Liquid-liquid extraction	01/17/95		
METHOD 3510 ***			
Analyzed by: LJ			
Date: 01/17/95			

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

Karen Sabayud  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-03

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

DATE: 01/28/95

PROJECT: Water Analysis
SITE: Greyhound Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-8

PROJECT NO: 725218.089343
MATRIX: LIQUID
DATE SAMPLED: 01/13/95 15:30:00
DATE RECEIVED: 01/14/95

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
4-Bromofluorobenzene

84
93

METHOD 8020\*\*\*

Analyzed by: YN

Date: 01/19/95

Petroleum Hydrocarbons - Gasoline

ND

0.1 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
4-Bromofluorobenzene

108
91

Modified 8015 - Gasoline

Analyzed by: YN

Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel

ND

0.1 P

mg/L

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

Handwritten signature: Karen J. ...
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-03

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

DATE: 01/28/95

PROJECT: Water Analysis  
SITE: Greyhound Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-8

PROJECT NO: 725218.089343  
MATRIX: LIQUID  
DATE SAMPLED: 01/13/95 15:30:00  
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	92		
2-Fluorobiphenyl	96		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/19/95 13:37:00			
Liquid-liquid extraction	01/17/95		
METHOD 3510 ***			
Analyzed by: LJ			
Date: 01/17/95			

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

SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-04

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

DATE: 01/28/95

PROJECT: Water Analysis  
 SITE: Greyhound Oakland  
 SAMPLED BY: Engineering Science  
 SAMPLE ID: MW-9

PROJECT NO: 725218.089343  
 MATRIX: LIQUID  
 DATE SAMPLED: 01/13/95 16:50:00  
 DATE RECEIVED: 01/14/95

**ANALYTICAL DATA**

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.3 P	µg/L
TOLUENE	ND	0.3 P	µg/L
ETHYLBENZENE	ND	0.3 P	µg/L
TOTAL XYLENE	ND	0.6 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	86
4-Bromofluorobenzene	95

METHOD 8020\*\*\*

Analyzed by: SLB  
 Date: 01/21/95

Petroleum Hydrocarbons - Gasoline	ND	0.1 P	mg/L
-----------------------------------	----	-------	------

<b>Surrogate</b>	<b>% Recovery</b>
1,4-Difluorobenzene	108
4-Bromofluorobenzene	91

Modified 8015 - Gasoline  
 Analyzed by: YN  
 Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel	1.1	0.1 P	mg/L
-------------------------------------	-----	-------	------

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

*Kam Sotoguel*  
 \_\_\_\_\_  
 SPL, Inc., - Project Manager





Certificate of Analysis No. H9-9501502-04

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

DATE: 01/28/95

PROJECT: Water Analysis  
SITE: Greyhound Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-9

PROJECT NO: 725218.089343  
MATRIX: LIQUID  
DATE SAMPLED: 01/13/95 16:50:00  
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	77		
2-Fluorobiphenyl	109		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/24/95 19:54:00			
Liquid-liquid extraction	01/17/95		
METHOD 3510 ***			
Analyzed by: LJ			
Date: 01/17/95			

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

*Karen Salley Zell*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501502-05

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

DATE: 01/28/95

PROJECT: Water Analysis  
SITE: Greyhound Oakland  
SAMPLED BY: Provided by SPL  
SAMPLE ID: Trip Blank

PROJECT NO: 725218.089343  
MATRIX: LIQUID  
DATE SAMPLED: 01/13/95  
DATE RECEIVED: 01/14/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	ND	0.3 P	µg/L
TOLUENE	ND	0.3 P	µg/L
ETHYLBENZENE	ND	0.3 P	µg/L
TOTAL XYLENE	ND	0.6 P	µg/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		µg/L

Surrogate

% Recovery

1,4-Difluorobenzene  
4-Bromofluorobenzene

86  
98

METHOD 8020\*\*\*

Analyzed by: YN

Date: 01/20/95

Petroleum Hydrocarbons - Gasoline

ND

0.1 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene  
4-Bromofluorobenzene

111  
94

Modified 8015 - Gasoline

Analyzed by: YN

Date: 01/20/95

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

*Kan Salley*

SPL, Inc., - Project Manager

***QUALITY CONTROL***

***DOCUMENTATION***



Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_J950119115000

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Benzene	ND	50	50	100	61 - 123
Toluene	ND	50	52	104	62 - 122
EthylBenzene	ND	50	50	100	56 - 119
O Xylene	ND	50	50	100	32 - 160
M & P Xylene	ND	100	120	120	32 - 160

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Benzene	ND	20	17	85.0	18	90.0	5.71	25	39 - 150
Toluene	ND	20	15	75.0	16	80.0	6.45	26	56 - 134
EthylBenzene	ND	20	13	65.0	15	75.0	14.3	38	61 - 128
O Xylene	ND	20	12	60.0	13	65.0	8.00	20	40 - 130
M & P Xylene	ND	40	26	65.0	29	72.5	10.9	20	43 - 152

Analyst: YN

Sequence Date: 01/19/95

SPL ID of sample spiked: 9501558-04A

Sample File ID: J\_\_790.TX0

Method Blank File ID:

Blank Spike File ID: J\_\_781.TX0

Matrix Spike File ID: J\_\_815.TX0

Matrix Spike Duplicate File ID: J\_\_816.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):

9501502-04A 9501567-05A 9501567-03A 9501567-02A  
 9501567-04A 9501567-06A 9501567-01A 9501502-05A  
 9501558-07A 9501567-07A 9501569-08A 9501502-01A  
 9501502-02A 9501502-03A 9501558-01A 9501558-03A  
 9501558-02A 9501558-05A 9501558-04A

Idelis Williams, QC Officer



Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_J950119131400

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons	ND	0.9	1.01	112	56 - 139

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Petroleum Hydrocarbons	ND	0.9	0.61	67.8	0.62	68.9	1.61	18	40 - 158

Analyst: YN

Sequence Date: 01/19/95

SPL ID of sample spiked: 9501502-02A

Sample File ID: JJ\_796.TX0

Method Blank File ID:

Blank Spike File ID: JJ\_784.TX0

Matrix Spike File ID: JJ\_817.TX0

Matrix Spike Duplicate File ID: JJ\_818.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):

9501567-05A 9501567-03A 9501567-02A 9501567-04A  
 9501567-06A 9501567-01A 9501502-05A 9501558-07A  
 9501567-07A 9501569-08A 9501502-04A 9501502-01A  
 9501502-02A 9501502-03A 9501558-01A 9501558-03A  
 9501558-02A 9501558-05A 9501558-04A

Idelis Williams, QC Officer



Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_J950120124100

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
MTBE	ND	50	49	98.0	56 - 135
Benzene	ND	50	45	90.0	61 - 123
Toluene	ND	50	46	92.0	62 - 122
EthylBenzene	ND	50	45	90.0	56 - 119
O Xylene	ND	50	45	90.0	32 - 160
M & P Xylene	ND	100	110	110	32 - 160

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			MTBE	ND	20	12			
Benzene	ND	20	21	105	22	110	4.65	33	39 - 150
Toluene	ND	20	21	105	20	100	4.88	35	56 - 134
EthylBenzene	ND	20	20	100	19	95.0	5.13	40	61 - 128
O Xylene	ND	20	18	90.0	16	80.0	11.8	29	40 - 130
M & P Xylene	ND	40	40	100	34	85.0	16.2	20	43 - 152

Analyst: SLB

Sequence Date: 01/20/95

SPL ID of sample spiked: 9501546-05A

Sample File ID: J\_\_830.TX0

Method Blank File ID:

Blank Spike File ID: J\_\_820.TX0

Matrix Spike File ID: J\_\_826.TX0

Matrix Spike Duplicate File ID: J\_\_827.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):

9501655-02A 9501655-01A 9501569-03A 9501569-06A  
 9501569-05A 9501569-02A 9501569-07A 9501569-04A  
 9501546-02A 9501546-01A 9501498-15A 9501546-06A  
 9501546-05A

Idelis Williams, QC Officer



Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_J950120130900

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons	ND	0.9	0.89	98.9	56 - 139

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
			Petroleum Hydrocarbons	ND	0.9	0.80		88.9	0.82

Analyst: SLB

Sequence Date: 01/20/95

SPL ID of sample spiked: 9501546-06A

Sample File ID: JJ\_831.TX0

Method Blank File ID:

Blank Spike File ID: JJ\_821.TX0

Matrix Spike File ID: JJ\_828.TX0

Matrix Spike Duplicate File ID: JJ\_829.TX0

\* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

% Recovery =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

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

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

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

SAMPLES IN BATCH(SPL ID):

9501655-02A 9501655-01A 9501569-03A 9501569-06A  
9501569-05A 9501569-02A 9501569-07A 9501569-04A  
9501546-02A 9501546-01A 9501498-15A 9501546-06A  
9501546-05A

Idelis Williams, QC Officer



Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_J950121060700

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Benzene	ND	50	45	90.0	61 - 123
Toluene	ND	50	45	90.0	62 - 122
EthylBenzene	ND	50	45	90.0	56 - 119
O Xylene	ND	50	45	90.0	32 - 160
M & P Xylene	ND	100	110	110	32 - 160

M A T R I X S P I K E S

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Benzene	ND	20	14	70.0	20	100	35.3 *	25	39 - 150
Toluene	ND	20	15	75.0	20	100	28.6 *	26	56 - 134
EthylBenzene	ND	20	14	70.0	20	100	35.3	38	61 - 128
O Xylene	ND	20	14	70.0	19	95.0	30.3 *	20	40 - 130
M & P Xylene	ND	40	31	77.5	42	105	30.1 *	20	43 - 152

Analyst: SLB

Sequence Date: 01/21/95

SPL ID of sample spiked: 9501655-03A

Sample File ID: J\_\_867.TX0

Method Blank File ID:

Blank Spike File ID: J\_\_856.TX0

Matrix Spike File ID: J\_\_863.TX0

Matrix Spike Duplicate File ID: J\_\_864.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):

9501655-16A 9501655-15A 9501655-14A 9501655-13A  
 9501655-12A 9501655-11A 9501655-10A 9501655-09A  
 9501655-08A 9501655-07A 9501655-06A 9501655-05A  
 9501569-01A 9501698-01A 9501502-04A 9501655-04A  
 9501655-03A

Idelis Williams, QC Officer





Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_J950121063500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons	ND	0.9	1.03	114	56 - 139

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Petroleum Hydrocarbons	ND	0.9	0.86	95.6	0.86	95.6	0	18	40 - 158

Analyst: SLB

Sequence Date: 01/21/95

SPL ID of sample spiked: 9501655-04A

Sample File ID: JJ\_868.TX0

Method Blank File ID:

Blank Spike File ID: JJ\_857.TX0

Matrix Spike File ID: JJ\_865.TX0

Matrix Spike Duplicate File ID: JJ\_866.TX0

\* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

% Recovery =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

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

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

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

SAMPLES IN BATCH(SPL ID):

9501655-16A 9501655-15A 9501655-14A 9501655-13A  
 9501655-12A 9501655-11A 9501655-10A 9501655-09A  
 9501655-08A 9501655-07A 9501655-06A 9501655-05A  
 9501546-01A 9501698-01A 9501546-03A 9501546-07A  
 9501546-04A 9501502-04A 9501655-04A 9501655-03A

Idelis Williams, QC Officer

***CHAIN OF CUSTODY***  
***AND***  
***SAMPLE RECEIPT CHECKLIST***

9501502



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

**Analysis Request and Chain of Custody Record**

Project No. 725218.089 <sup>343</sup> Client/Project Name Greyhound Outland Project Location Engineering Sciences Signature

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-6	01/13/95 1050			12 Amb + 3V0AT	H <sub>2</sub> O	HCl	TPH dissolved, TPH gas & BTXE (8020)	
MW-7	1430			↓	↓	↓	↓	
MW-8	1530			↓	↓	↓	↓	
MW-9	1650			↓	↓	↓	↓	
Tip Blank				2V0AT	↓	↓	Hold as per protocol	

Samplers. (Signature) <i>[Signature]</i>	Relinquished by: (Signature) <i>[Signature]</i>	Date: <u>01/13/95</u> Time: <u>1740</u>	Received by: (Signature) <i>[Signature]</i>	Date: _____ Time: _____	Intact
Affiliation <u>AC Peel</u>	Relinquished by: (Signature)	Date: _____ Time: _____	Received by: (Signature)	Date: _____ Time: _____	Intact
	Relinquished by: (Signature)	Date: _____ Time: _____	Received by: (Signature)	Date: _____ Time: _____	Intact <i>[Signature]</i>

SAMPLER REMARKS: \_\_\_\_\_

Seal # \_\_\_\_\_

Received for laboratory: (Signature) *[Signature]* Date: 1/14/95 Time: 10:30 Laboratory No. \_\_\_\_\_

Data Results to: \_\_\_\_\_

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE: 1/14/95  
LOT NO. \_\_\_\_\_

TIME: 10:30

CLIENT NO. \_\_\_\_\_  
CONTRACT NO. \_\_\_\_\_

CLIENT SAMPLE NOS. \_\_\_\_\_

SPL SAMPLE NOS.: 950/502

YES NO

- 1. Is a Chain-of-Custody form present?  YES  NO
- 2. Is the COC properly completed?  YES  NO

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?  YES  NO

If yes, ID#: Fedex 3447881824

- 4. Is a USEPA Traffic Report present?  YES  NO
- 5. Is a USEPA SAS Packing List present?  YES  NO
- 6. Are custody seals present on the package?  YES  NO

If yes, were they intact upon receipt?

- 7. Are all samples tagged or labeled?  YES  NO
- Do the sample tags/labels match the COC?  YES  NO
- If no, has the client been contacted about it?  
(Attach subsequent documentation from client about the situation)

- 8. Do all shipping documents agree?  YES  NO
- If no, describe what is in nonconformity:

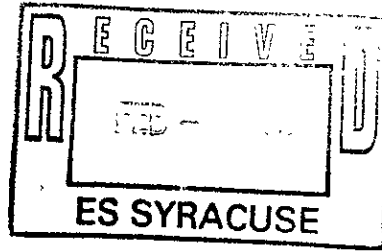
\_\_\_\_\_  
\_\_\_\_\_

- 9. Condition/temperature of shipping container: Intact 4°C
- 10. Condition/temperature of sample bottles: 5000 4°C
- 11. Sample Disposal?: SPL disposal  Return to client

NOTES (reference item number if applicable): \_\_\_\_\_

ATTEST: E. Brown  
DELIVERED FOR RESOLUTION: REC'D  
RESOLVED: \_\_\_\_\_

DATE: 1/14/95  
DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_



HOUSTON LABORATORY  
8880 INTERCHANGE  
HOUSTON, TEXAS 77054  
PHONE (713) 660-0901

SPL, INC.

REPORT APPROVAL SHEET

WORK ORDER NUMBER: 95 - 01 - 558

Approved for release by:

M. Scott Sample  
M. Scott Sample, Laboratory Director

Date: 1/31/95

Karen Satterfield  
Karen Satterfield, Project Manager

Date: 1/30/95



Certificate of Analysis No. H9-9501558-03

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-3

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 12:00:00
DATE RECEIVED: 01/17/95

Table with columns: PARAMETER, ANALYTICAL DATA, RESULTS, DETECTION LIMIT, UNITS. Rows include Benzene, Toluene, Ethylbenzene, Total Xylene, Total Volatile Aromatic Hydrocarbons, Surrogate (1,4-Difluorobenzene, 4-Bromofluorobenzene), Method 8020\*\*\*, Analyzed by: YN, Date: 01/19/95, Petroleum Hydrocarbons - Gasoline, Surrogate (1,4-Difluorobenzene, 4-Bromofluorobenzene), Modified 8015 - Gasoline, Analyzed by: YN, Date: 01/19/95, Total Petroleum Hydrocarbons-Diesel.

(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

Signature: Kim Jattaguru
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-03

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-3

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 12:00:00  
DATE RECEIVED: 01/17/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
<b>Surrogate</b>	<b>% Recovery</b>		
o-Terphenyl	.40		
2-Fluorobiphenyl	127		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/23/95 16:06:00			
Liquid-liquid extraction	01/19/95		
METHOD 3510 ***			
Analyzed by: RS			
Date: 01/19/95			

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

*Karen Dattagari*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-06

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-4

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 13:50:00
DATE RECEIVED: 01/17/95

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

Surrogate % Recovery
1,4-Difluorobenzene 89
4-Bromofluorobenzene 89
METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline 0.15 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 123
4-Bromofluorobenzene 93
Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

(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

Handwritten signature: Ka Salazar
SPL, Inc., - Project Manager





Certificate of Analysis No. H9-9501558-06

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-4

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 13:50:00  
DATE RECEIVED: 01/17/95

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
	Surrogate	% Recovery		
	o-Terphenyl	87		
	2-Fluorobiphenyl	86		
	Mod. 8015 - Diesel			
	Analyzed by: SEG			
	Date: 01/23/95 16:06:00			
	Liquid-liquid extraction	01/19/95		
	METHOD 3510 ***			
	Analyzed by: RS			
	Date: 01/19/95			

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

*Karen Salazar*  
\_\_\_\_\_  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-01

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-10

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 09:15:00
DATE RECEIVED: 01/17/95

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 84
4-Bromofluorobenzene 93

METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 113
4-Bromofluorobenzene 94

Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

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

Handwritten signature: Karen Saltykov
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-01

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-10

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 09:15:00  
DATE RECEIVED: 01/17/95

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Surrogate		% Recovery		
o-Terphenyl		78		
2-Fluorobiphenyl		107		
Mod. 8015 - Diesel				
Analyzed by: SEG				
Date: 01/23/95 16:06:00				
Liquid-liquid extraction		01/19/95		
METHOD 3510 ***				
Analyzed by: RS				
Date: 01/19/95				

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

*Karl Dalrymple*  
\_\_\_\_\_  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-02

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: MW-11

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 10:30:00
DATE RECEIVED: 01/17/95

ANALYTICAL DATA

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

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene and 4-Bromofluorobenzene.

METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene and 4-Bromofluorobenzene.

Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel ND 0.1 P mg/L

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

Handwritten signature of Karen S. [unclear]

SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-02

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: MW-11

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 10:30:00  
DATE RECEIVED: 01/17/95

PARAMETER	ANALYTICAL DATA	RESULTS	DETECTION LIMIT	UNITS
Surrogate		% Recovery		
o-Terphenyl		79		
2-Fluorobiphenyl		90		
Mod. 8015 - Diesel				
Analyzed by: SEG				
Date: 01/23/95 16:06:00				
Liquid-liquid extraction		01/19/95		
METHOD 3510 ***				
Analyzed by: RS				
Date: 01/19/95				

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

*Kare Salazar*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-05

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: BC-2

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 12:55:00
DATE RECEIVED: 01/17/95

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 83
4-Bromofluorobenzene 88
METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 112
4-Bromofluorobenzene 89
Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel 1.1 0.1 P mg/L

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

Signature: Karen Dettler
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-05

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: BC-2

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 12:55:00  
DATE RECEIVED: 01/17/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	CI		
2-Fluorobiphenyl	137		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/23/95 16:06:00			
Liquid-liquid extraction	01/19/95		
METHOD 3510 ***			
Analyzed by: RS			
Date: 01/19/95			

CI - Coeluting interference.

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

*Karen Solley*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-04

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Engineering Science
SAMPLE ID: BC-3

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95 12:40:00
DATE RECEIVED: 01/17/95

ANALYTICAL DATA

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

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Table with 2 columns: Surrogate, % Recovery. Rows include 1,4-Difluorobenzene, 4-Bromofluorobenzene.

Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

Total Petroleum Hydrocarbons-Diesel 0.89 0.1 P mg/L

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

Signature: Karen Schlegel
SPL, Inc., - Project Manager





Certificate of Analysis No. H9-9501558-04

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

DATE: 01/30/95

PROJECT: Water Analysis  
SITE: Greyhound, Oakland  
SAMPLED BY: Engineering Science  
SAMPLE ID: BC-3

PROJECT NO: 725218.08934  
MATRIX: LIQUID  
DATE SAMPLED: 01/16/95 12:40:00  
DATE RECEIVED: 01/17/95

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Surrogate	% Recovery		
o-Terphenyl	CI		
2-Fluorobiphenyl	118		
Mod. 8015 - Diesel			
Analyzed by: SEG			
Date: 01/23/95 16:06:00			
Liquid-liquid extraction	01/19/95		
METHOD 3510 ***			
Analyzed by: RS			
Date: 01/19/95			

CI - Coeluting interference.

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

*Kan Salgueiro*  
SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-07

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Provided by SPL
SAMPLE ID: Trip Blank

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/16/95
DATE RECEIVED: 01/17/95

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
4-Bromofluorobenzene

83
94

METHOD 8020\*\*\*

Analyzed by: YN

Date: 01/20/95

Petroleum Hydrocarbons - Gasoline

ND

0.1 P

mg/L

Surrogate

% Recovery

1,4-Difluorobenzene
4-Bromofluorobenzene

114
97

Modified 8015 - Gasoline

Analyzed by: YN

Date: 01/20/95

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

Handwritten signature of Kan Salgado

SPL, Inc., - Project Manager



Certificate of Analysis No. H9-9501558-08

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

DATE: 01/30/95

PROJECT: Water Analysis
SITE: Greyhound, Oakland
SAMPLED BY: Provided by SPL
SAMPLE ID: Ambient Blank

PROJECT NO: 725218.08934
MATRIX: LIQUID
DATE SAMPLED: 01/17/95
DATE RECEIVED: 01/17/95

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 84
4-Bromofluorobenzene 91

METHOD 8020\*\*\*
Analyzed by: YN
Date: 01/19/95

Petroleum Hydrocarbons - Gasoline ND 0.1 P mg/L

Surrogate % Recovery
1,4-Difluorobenzene 101
4-Bromofluorobenzene 81

Modified 8015 - Gasoline
Analyzed by: YN
Date: 01/19/95

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

Signature: Ken Salinger
SPL, Inc., - Project Manager

*QUALITY CONTROL*

*DOCUMENTATION*

Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_J950118173000

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Benzene	ND	50	46	92.0	61 - 123
Toluene	ND	50	49	98.0	62 - 122
EthylBenzene	ND	50	46	92.0	56 - 119
O Xylene	ND	50	47	94.0	32 - 160
M & P Xylene	ND	100	110	110	32 - 160

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Benzene	ND	20	21	105	20	100	4.88	25	39 - 150
Toluene	ND	20	20	100	19	95.0	5.13	26	56 - 134
EthylBenzene	ND	20	19	95.0	19	95.0	0	38	61 - 128
O Xylene	ND	20	17	85.0	17	85.0	0	20	40 - 130
M & P Xylene	ND	40	39	97.5	38	95.0	2.60	20	43 - 152

Analyst: YN

Sequence Date: 01/18/95

SPL ID of sample spiked: 9501504-01A

Sample File ID: J\_\_751.TX0

Method Blank File ID:

Blank Spike File ID: J\_\_743.TX0

Matrix Spike File ID: J\_\_777.TX0

Matrix Spike Duplicate File ID: J\_\_778.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

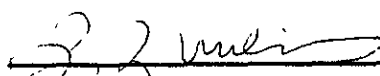
Relative Percent Difference = |( <4> - <5> | / [( <4> + <5> ) x 0.5] x 100

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

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

SAMPLES IN BATCH(SPL ID):

9501516-01A 9501558-08A 9501558-06A 9501498-13A  
 9501498-17A 9501498-14A 9501498-16A 9501498-04A  
 9501513-08A 9501503-04A 9501503-01A 9501503-02A  
 9501498-01A 9501513-09A 9501503-07A 9501503-06A  
 9501504-03A 9501504-02A 9501504-01A

  
 Idelis Williams, QC Officer

Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_J950118182600

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons	ND	0.9	1.00	111	56 - 139

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Petroleum Hydrocarbons	.15	0.9	.82	74.4	1.22	119	46.1 *	18	40 - 158

Analyst: YN

Sequence Date: 01/18/95

SPL ID of sample spiked: 9501558-06A

Sample File ID: JJ\_774.TX0

Method Blank File ID:

Blank Spike File ID: JJ\_746.TX0

Matrix Spike File ID: JJ\_779.TX0

Matrix Spike Duplicate File ID: JJ\_780.TX0

\* = Values Outside QC Range

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

ND = Not Detected/Below Detection Limit

% Recovery =  $[( <1> - <2> ) / <3> ] \times 100$

LCS % Recovery =  $( <1> / <3> ) \times 100$

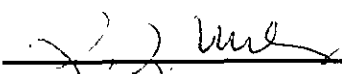
Relative Percent Difference =  $|( <4> - <5> | / [( <4> + <5> ) \times 0.5] \times 100$

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

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

SAMPLES IN BATCH(SPL ID):

9501516-01A 9501558-08A 9501558-06A 9501498-13A  
 9501498-17A 9501498-14A 9501498-16A 9501498-04A  
 9501513-08A 9501503-04A 9501503-01A 9501503-02A  
 9501498-01A 9501513-09A 9501503-07A 9501503-06A  
 9501504-03A 9501504-02A 9501504-01A

  
 \_\_\_\_\_  
 Idelis Williams, QC Officer

Matrix: Aqueous  
Units: µg/L

Batch Id: HP\_J950119115000

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Benzene	ND	50	50	100	61 - 123
Toluene	ND	50	52	104	62 - 122
EthylBenzene	ND	50	50	100	56 - 119
O Xylene	ND	50	50	100	32 - 160
M & P Xylene	ND	100	120	120	32 - 160

MATRIX SPIKES

S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Benzene	ND	20	17	85.0	18	90.0	5.71	25	39 - 150
Toluene	ND	20	15	75.0	16	80.0	6.45	26	56 - 134
EthylBenzene	ND	20	13	65.0	15	75.0	14.3	38	61 - 128
O Xylene	ND	20	12	60.0	13	65.0	8.00	20	40 - 130
M & P Xylene	ND	40	26	65.0	29	72.5	10.9	20	43 - 152

Analyst: YN

Sequence Date: 01/19/95

SPL ID of sample spiked: 9501558-04A

Sample File ID: J\_\_790.TX0

Method Blank File ID:

Blank Spike File ID: J\_\_781.TX0

Matrix Spike File ID: J\_\_815.TX0

Matrix Spike Duplicate File ID: J\_\_816.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):

9501502-04A 9501567-05A 9501567-03A 9501567-02A  
 9501567-04A 9501567-06A 9501567-01A 9501502-05A  
 9501558-07A 9501567-07A 9501569-08A 9501502-01A  
 9501502-02A 9501502-03A 9501558-01A 9501558-03A  
 9501558-02A 9501558-05A 9501558-04A

  
 \_\_\_\_\_  
 Idelis Williams, QC Officer

Matrix: Aqueous  
Units: mg/L

Batch Id: HP\_J950119131400

LABORATORY CONTROL SAMPLE

S P I K E C O M P O U N D S	Method Blank Result <2>	Spike Added <3>	Blank Spike		QC Limits(**) (Mandatory) % Recovery Range
			Result <1>	Recovery %	
Petroleum Hydrocarbons	ND	0.9	1.01	112	56 - 139

MATRIX SPIKES

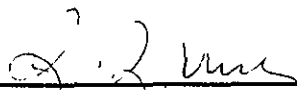
S P I K E C O M P O U N D S	Sample Results <2>	Spike Added <3>	Matrix Spike		Matrix Spike Duplicate		MS/MSD Relative % Difference	QC Limits(***) (Advisory)	
			Result <1>	Recovery <4>	Result <1>	Recovery <5>		RPD Max.	Recovery Range
Petroleum Hydrocarbons	ND	0.9	0.61	67.8	0.62	68.9	1.61	18	40 - 158

Analyst: YN  
Sequence Date: 01/19/95  
SPL ID of sample spiked: 9501502-02A  
Sample File ID: JJ\_796.TX0  
Method Blank File ID:  
Blank Spike File ID: JJ\_784.TX0  
Matrix Spike File ID: JJ\_817.TX0  
Matrix Spike Duplicate File ID: JJ\_818.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):

9501567-05A 9501567-03A 9501567-02A 9501567-04A  
9501567-06A 9501567-01A 9501502-05A 9501558-07A  
9501567-07A 9501569-08A 9501502-04A 9501502-01A  
9501502-02A 9501502-03A 9501558-01A 9501558-03A  
9501558-02A 9501558-05A 9501558-04A

  
\_\_\_\_\_  
Idelis Williams, QC Officer



Matrix: Aqueous  
 Sample ID: 950117CXB1  
 Batch ID: HP\_T950123160600

Reported on: 01/30/95 10:10:48  
 Analyzed on: 01/23/95 16:06:00  
 Analyst: SEG

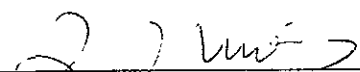
This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Petroleum Hydrocarbons-Diesel (Water)  
 Mod. 8015 - Diesel

COMPOUND	Sample Value mg/L	Spike Added mg/L	MS % Recovery #	MSD % Recovery #	Relative % Difference #
Petroleum Hydrocarbons-Die	ND	5.12	92	87	6

**NOTES**

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

  
 \_\_\_\_\_  
 Idelis Williams, QC Officer

*QUALITY CONTROL*  
*DOCUMENTATION*

*CHAIN OF CUSTODY*  
*AND*  
*SAMPLE RECEIPT CHECKLIST*

450558



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

**Analysis Request and Chain of Custody Record**

Project No. 725218.08934	Client/Project Name Greyhound Oakland	Project Location Engineering Science, Syracuse N.Y.
-----------------------------	--	--

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-10	01/16/95 0915			3 VOAS 1 12 Amber	H <sub>2</sub> O	HCl				
MW-11	1030			↓	↓	↓				
MW-3	1200									
BL-3	1240	X								
BL-2	1255	X								
MW-4	1350									
Trip Blanks	-						2 broken VOAS			Broken in transit to site
Ambient Blanks	-						2 filled VOAS 2 empty VOAS			Poured directly into 2 VOAS. 2 empty VOAS also submitted

Samplers: (Signature) 	Relinquished by: (Signature) 	Date: 01/16/95 Time: 1600	Received by: (Signature) 	Date: Time:	Intact
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
SAMPLER REMARKS.	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
Seal #			Received for laboratory: (Signature) 	Date: 1/17/95 Time: 10:30	Laboratory No.
			Data Results to:		

SPL HOUSTON ENVIRONMENTAL LABORATORY

SAMPLE LOGIN CHECKLIST

DATE: 1/17/95  
LOT NO. \_\_\_\_\_

TIME: 10:30

CLIENT NO. \_\_\_\_\_  
CONTRACT NO. \_\_\_\_\_

CLIENT SAMPLE NOS. \_\_\_\_\_

SPL SAMPLE NOS.: 9501558

- |  | <u>YES</u>                          | <u>NO</u>                           |
|--|-------------------------------------|-------------------------------------|
| 1. Is a Chain-of-Custody form present?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 2. Is the COC properly completed?<br>If no, describe what is incomplete:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| _____<br>_____<br>_____  |                                     |                                     |
| If no, has the client been contacted about it?<br>(Attach subsequent documentation from client about the situation)  |                                     |                                     |
| 3. Is airbill/packing list/bill of lading with shipment?<br>If yes, ID#: <u>Fedex 1154089370</u>   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 4. Is a USEPA Traffic Report present?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Is a USEPA SAS Packing List present?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 6. Are custody seals present on the package?<br>If yes, were they intact upon receipt?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 7. Are all samples tagged or labeled?<br>Do the sample tags/labels match the COC?<br>If no, has the client been contacted about it?<br>(Attach subsequent documentation from client about the situation) | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 8. Do all shipping documents agree?<br>If no, describe what is in nonconformity:   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| _____<br>_____   |                                     |                                     |
| 9. Condition/temperature of shipping container: <u>- Intact 4C</u>   |                                     |                                     |
| 10. Condition/temperature of sample bottles: <u>GOOD 4C</u>  |                                     |                                     |
| 11. Sample Disposal?: SPL disposal <input checked="" type="checkbox"/> Return to client <input type="checkbox"/>   |                                     |                                     |

NOTES (reference item number if applicable): \_\_\_\_\_

ATTEST: G. Brown DATE: 1/17/95  
DELIVERED FOR RESOLUTION: REC'D \_\_\_\_\_ DATE: \_\_\_\_\_  
RESOLVED: \_\_\_\_\_ DATE: \_\_\_\_\_