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HAZMAT

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November 16, 1993

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

Re: Greyhound Terminal Location #8934 Oakland, California Quarterly Report

Dear Ms. Hugo:

Engineering-Science, Inc. (ES) is pleased to present, on behalf of Greyhound Lines, Inc. (GLI), this quarterly groundwater monitoring report for the GLI terminal in Oakland, California. The report also serves as the October 1993 monthly monitoring report.

The information contained in this Quarterly Status Report is presented in the format shown in "Appendix A" of the "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" (August 1990). GLI has reviewed and approved this report and has assigned ES to be their designated representative for preparation and submittal of the quarterly status reports. The enclosed quarterly report has been completed accurately, and in accordance with all applicable LUFT and Tri-Regional requirements. GLI agrees with the conclusions and recommendations outlined in this cover letter and the attached report.

Groundwater samples were collected at the Oakland facility on October 7, and analyzed for total petroleum hydrocarbons as diesel (TPH-D), and BTEX (EPA Method 602). A site map showing the monitoring well locations is included as Figure 1. The detection limits specified in the 1989 LUFT Manual (Appendix D, Table 3-5) were met by the analytical laboratory. All physical data for the monitoring wells sampled on October 7, 1993 are summarized on Table 1. The analytical results are summarized on Table 2. Previous groundwater analytical data have been summarized on Table 3.

The next groundwater sampling event will be conducted during the month of January 1994. The Alameda County Department of Environmental Health (ACDEH) will be notified at least one week prior to the sampling event so that a representative of ACDEH may be on site. The next quarterly status report will be prepared and submitted to your department on or before February 16, 1994.

Ms. Susan Hugo November 16, 1993 Page 2

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

Sincerely,

ENGINEERING-SCIENCE, INC.

David A. Nickerson Project Manager

David I Cha

David L. Chaffin, R.G.

California Registered Geologist (No. 4885)

DLC/DAN/EJS

cc: T. Portele, GLI, Dallas, TX

Richard Hiett, Regional Water Quality Control Board

OCTOBER 1993 QUARTERLY STATUS REPORT GREYHOUND TERMINAL OAKLAND, CALIFORNIA

· Status of investigation and cleanup activities:

A preliminary site investigation was completed by Engineering-Science, Inc. (ES) in January 1992. 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 consisting of monthly groundwater level measurements and quarterly groundwater sampling and reporting was initiated by Greyhound in June 1992 to better define the impact of former UST operations to groundwater.

Based on measurable thicknesses of free product discovered in four existing monitoring wells on-site, 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).

ACDEH requested that Greyhound provide documentation regarding the underground fuel storage tank system (UST) removal, including disposal documentation in a letter to Greyhound dated October 23, 1992. Greyhound subsequently prepared a Tank Closure Documentation Report for this facility. The report was submitted to ACDEH on December 15, 1992. Greyhound awaits any comments ACDEH may have regarding the current groundwater monitoring program, free product recovery operations, and tank closure documentation submitted for this location.

In July 1993, Greyhound implemented a Supplemental Site Assessment at the facility to define the full extent of contamination both on and off-site. A site plan showing the locations of new monitoring wells ES-6 through ES-11 is included as Figure 1. 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 has finalized a Preliminary Risk Assessment and Supplemental Site Assessment report, both of which will be submitted shortly to ACDEH.

Proposed continuing or next phase of investigation:

Based on the results of the Supplemental Site Assessment and Preliminary Risk Evaluation, Greyhound proposes to continue free product recovery and monthly groundwater monitoring. No soil corrective actions are warranted at this location and Greyhound has proposed that site-specific cleanup levels be established to leave residual soil contamination in place.

Results of the supplemental assessment will be presented in a report that will be submitted to ACDEH.

Method of cleanup proposed or implemented to date:

In October 1992, Greyhound proposed a free product recovery system for the removal of free product in four wells. A hydrocarbon recovery system was installed in November 1992 after receiving approval from Ms. Susan Hugo (ACDEH). Recovery operations were initiated during the week of January 4, 1993. To date, approximately 615 gallons of free product and contaminated groundwater have been recovered and properly disposed off-site by Evergreen Vacuum Services, a State of California-certified waste hauler.

· Time schedules for the completion of the investigation of the site and remediation:

The monthly groundwater monitoring, quarterly groundwater sampling, and hydrocarbon recovery programs should continue until free product has been removed from the groundwater. Greyhound proposes long-term groundwater monitoring beyond free product recovery, until the risk for off-site migration of residual contaminants has been shown to not exist.

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

Approximately 615 gallons of free product and contaminated groundwater have been recovered to date. Recovered diesel fuel and contaminated groundwater have been properly recycled off-site by Evergreen Vacuum Services, a State of California-certified waste hauler.

· Manifest required for transport of hazardous substances:

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

Monitoring well data:

The physical data obtained from the monitoring wells on October 7, 1993 are presented in Table 1. A site map showing the monitoring well locations is included as Figure 1. Physical data obtained during previous monthly monitoring visits are given in Table 5. Free product thicknesses have been eliminated or significantly reduced in the four recovery wells on-site (ES-1, ES-2, ES-5, and BC-1) since installation of the recovery system in November 1992. A groundwater contour map (Figure 2) was constructed from groundwater level elevations measured on September 1, 1993. Note that groundwater flow direction, originally estimated to be north, now appears to be toward the southeast.

Analytical results of groundwater or soil sampling:

Results of the most recent quarterly groundwater sampling event (October 1993) are summarized in Table 2. Ten of the 14 monitoring wells were sampled. Monitoring wells ES-1, ES-2, ES-5 and BC-1 were not sampled due to the presence of free product or hydrocarbon sheens.

TPH-D concentrations were non-detect for all samples except BC-2 (1.4 mg/l) and BC-3 (1.4 mg/l). Benzene was detected in only three samples: ES-3 at a concentration of 2.0 μ g/l, ES-4 at a concentration of 8.0 μ g/l, and ES-6 at a concentration of 1.0 μ g/l.

Toluene was detected only in ES-3 at a concentration of 1.0 μ g/1. Xylenes were detected in three samples: ES-3 (2.0 μ g/1), ES-4 (2.0 μ g/1), and BC-3 (2.0 μ g/1).

BTEX concentrations in groundwater samples collected from ES-7 through ES-11, and BC-2 were below the laboratory detection limits. Greyhound will resample these wells during the next quarterly sampling event in January 1994.

Groundwater analytical data from previous quarterly sampling events are summarized on Table 3. Soil analytical data from the preliminary and supplemental site investigations are shown on Table 4.

· A site map showing the "zero line" of contamination, and changes in analyses and gradient measurements over the last quarter:

A map showing groundwater contaminant concentrations has been prepared and included as Figure 3.

 Tabulated data for all monitoring wells including groundwater elevations collected to date:

The physical data collected to date for all of the monitoring wells located at the facility are presented in Table 5.

· A site map delineating groundwater elevation contours based on recent data:

Groundwater elevations determined by water level measurements made on September 1, 1993 suggested a southeasterly groundwater flow direction at the site (Figure 2).

• Analytical results from all previous sampling events including laboratory reports for the most recent sampling event and chain-of-custody documentation:

A summary of the analytical results from previous groundwater sampling events is presented in Table 3. A summary of the analytical data for soil samples collected to date is presented in Table 4. The laboratory results from the most recent groundwater sampling event, including chain-of-custody documentation, are included in Appendix A.

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

A map delineating the extent of groundwater contamination is included as Figure 3. Figure 3 shows analytical data for groundwater samples collected on October 7, 1993 plotted on a site base map.

Figure 4 is a site map indicating areas of soil contamination based on data obtained during the preliminary site investigation completed during November 1991 and the supplemental site assessment conducted in July 1993. Soil contamination is limited to the area near sample locations ES-1, ES-2, and ES-5. A 100 mg/kg TPHD contour has been included to illustrate the extent of TPHD contamination in this area. The extent of soil contamination at the site has been completely defined by the supplemental site assessment.

· Tank owner commitment letter:

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

The quantity of groundwater and vapors removed during the reporting period and cumulative to date:

Approximately 615 gallons of recovered diesel fuel and contaminated groundwater have been removed to date. This represents an increase of an additional 15 gallons of free product recovered during the last two quarters. As of October 7, 1993, 59,570 gallons of carbon-treated groundwater have been processed through the recovery system on-site and discharged to the sanitary sewer.

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

The system has been fully operational with only a brief shutdown period between October 6 and October 21, 1993 during which a problem with the system's air compressor caused a temporary shutdown. The system was repaired and placed back on-line on October 21, 1993 and is currently inspected by ES personnel during monthly monitoring visits and daily by facility personnel.

· Timelines for activities currently underway or proposed:

Greyhound will continue the monthly groundwater monitoring, quarterly sampling, and hydrocarbon recovery program in accordance with all applicable LUFT and Tri-Regional requirements. The next quarterly status report will be prepared and submitted to ACDEH on or before February 16, 1993.

Greyhound will submit the Supplemental Site Assessment and Preliminary Risk Evaluation reports to ACDEH for review and approval of recommendations.

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

A calculation of the remaining volume of residual soil contamination remaining at the facility can be made based on the results of the Supplemental Site Assessment. However, Greyhound has proposed to leave existing residual soil contamination in place under site-specific cleanup levels which are supported by the low risk to human health and the environment indicated by the results of the Preliminary Risk Evaluation which will be provided to ACDEH shortly for review.

The quantity of contaminants remaining in groundwater cannot be estimated since the volume of the initial release is unknown. The time required to remediate the site will be estimated following ACDEH review of the Risk Assessment and Supplemental Site Assessment Reports.

TABLE 1

MONITORING WELL DATA SUMMARY
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
October 7, 1993

Location	Elevation of PVC T.O.C (Ft.)	Depth to Water (Ft.)	Groundwater I Elevation (*)	
ES-1	96.64	19.03	77.61	0.01
ES-2	96.44	19.60	76.84	0.03
ES-3	96.96	19.62	77.34	0
ES-4	95.70	18.62	77.08	0
ES-5	95.85	19.33	76.52	0.68
ES-6	97.84	21.81	76.03	0
ES-7	96.40	19.99	76.41	0
ES-8	96.64	19.13	77.51	0
ES-9	95.78	17.90	77.88	0
ES-10	95.24	17.40	77.84	0
ES-11	95.92	18.90	77.02	0
BC-1	96.16	19.43	76.73	0.18
BC-2	96.32	19.02	77.30 ***	0
BC-3	96.20	18.58	77.62 ^{**}	0

T.O.C. - Top of Casing

^{** -} Well casings not vertical.

^(*) Elevations based on site surface vertical datum (97.50, on steel grate for storm sewer near wash rack).

GROUNDWATER ANALYTICAL RESULTS GREYHOUND TERMINAL, OAKLAND, CALIFORNIA OCTOBER 7, 1993

TABLE 2

Location	Date Collected	Parameter	Result	Detection Limit
ES-3	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	2.0 ND 1.0 2.0 ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-4	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPHD ²	8.0 ND ND 2.0 ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-6	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	1.0 ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-7	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	ND ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-8	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	ND ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-9	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPHD ²	ND ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L

TABLE 2 (Continued) GROUNDWATER ANALYTICAL RESULTS GREYHOUND TERMINAL, OAKLAND, CALIFORNIA OCTOBER 7, 1993

Location	Date Collected	Parameter	Result	Detection Limit
ES-10	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPHD ²	ND ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
ES-11	10/7	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	ND ND ND ND ND	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
BC-2	4/6	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	ND ND ND ND 1.4	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L
BC-3	4/6	Benzene ¹ Ethylbenzene ¹ Toluene ¹ Xylenes (total) ¹ TPH-D ²	ND 1.0 ND 2.0 1.4	0.3 ug/L 0.3 ug/L 0.3 ug/L 0.6 ug/L 0.50 mg/L

¹ Analyzed by EPA Method 602. Concentrations in ug/l.

Notes:

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 analytical method detection limit.

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

TABLE 3

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

Sampling Date	Location	Benzene ug/l	Toluene ug/l	Ethylbenzene 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	8.0	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	ИD	0.12	ND

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

Sampling	Location	**************************************	the control of the co	Ethylbenzene		Total BTEX	TPH-D(*)	TPH-G(*)
Date		ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	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
	E\$-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	1.90	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

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		Ethylbenzene ug/kg			TPH=D² 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.

Total BTEX= analyzed by EPA Method 8020. Results reported in ug/kg. Refer to analytical laboratory reports for method detection limit.

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.

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

3.8695.38318##88000	Well	Depth to Liquid	Water	Free Product Thickness
Date	Location	(Feet)	(Feet)	(Feet)
6/16/92	ES-1	20.18	23.78	3.60
0, 10,012	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
77.702	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
5 , 5 , 7 5 5	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

		Depth to	Depth to	Free Product
	Well	Liquid	Water	Thickness
Date 10/6/92	Location ES-1	(Feet) 19.08	(Feet) 19.10	(Feet) .02
10/0/92	ES-1 ES-2	19.41	20.00	.59
	ES-3	19.96	19.96	.59
	ES-4	18.92	18.92	Ö
	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	ŏ
	DO0	10.55	10.50	J
11/6/92	ES-1	18.52	18.53	.01
, 0, 0=	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
10/10/00	FO 4	10.55	40 FE	•
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
0.,0.,00	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

Depth to Depth to Free Product Walf Liquid Water Thickness Date Location (Feet) (Feet) (Feet) (Feet)	**************************************	WOINTOIN	Depth to		
Date Location (Feet) (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-3 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-3		MAAH			
02/04/93	nata ("表现"作品,是有一种的现在分词,这个人的。		14 (4.5) 1 (4.	
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-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 ES-6 17.28 17.28 0 ES-1 18.26 18.26 0 BC-2 15.20 15.20 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 15.44 15.44 0	r avales :	Location			
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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		ES-3	17.98	17.98	0
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		ES-4	17.32	17.32	0
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		ES-5	17.40	17.99	0.59
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-1	18.05	18.06	0.01
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-2	14.58	14.58	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	15.50	15.50	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	04/06/93	ES-1	17.08	17.88	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		ES-2	18.20	18.31	0.11
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		ES-3	15.92	15.92	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		ES-4	17.26	17.26	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		ES-5	17.28	17.28	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-1	18.26	18.26	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-2	15.20	15.20	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	15.44	15.44	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	05/06/93	ES-1	18.36	18.36	0
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	00,00,00	ES-2			
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					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-1 18.61 18.71 0.10 BC-2 16.89 16.89 0					
BC-2 16.89 16.89 0					
		BC-3	16.34	16.34	0

TABLE 5 (Continued)

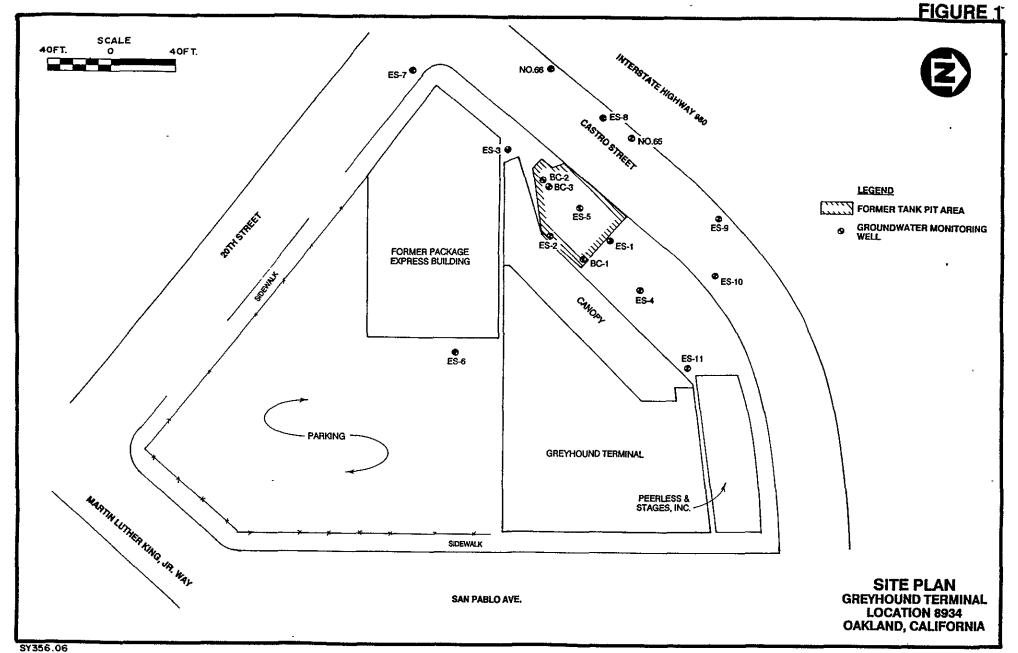
MONITORING WELL DATA SUMMARY

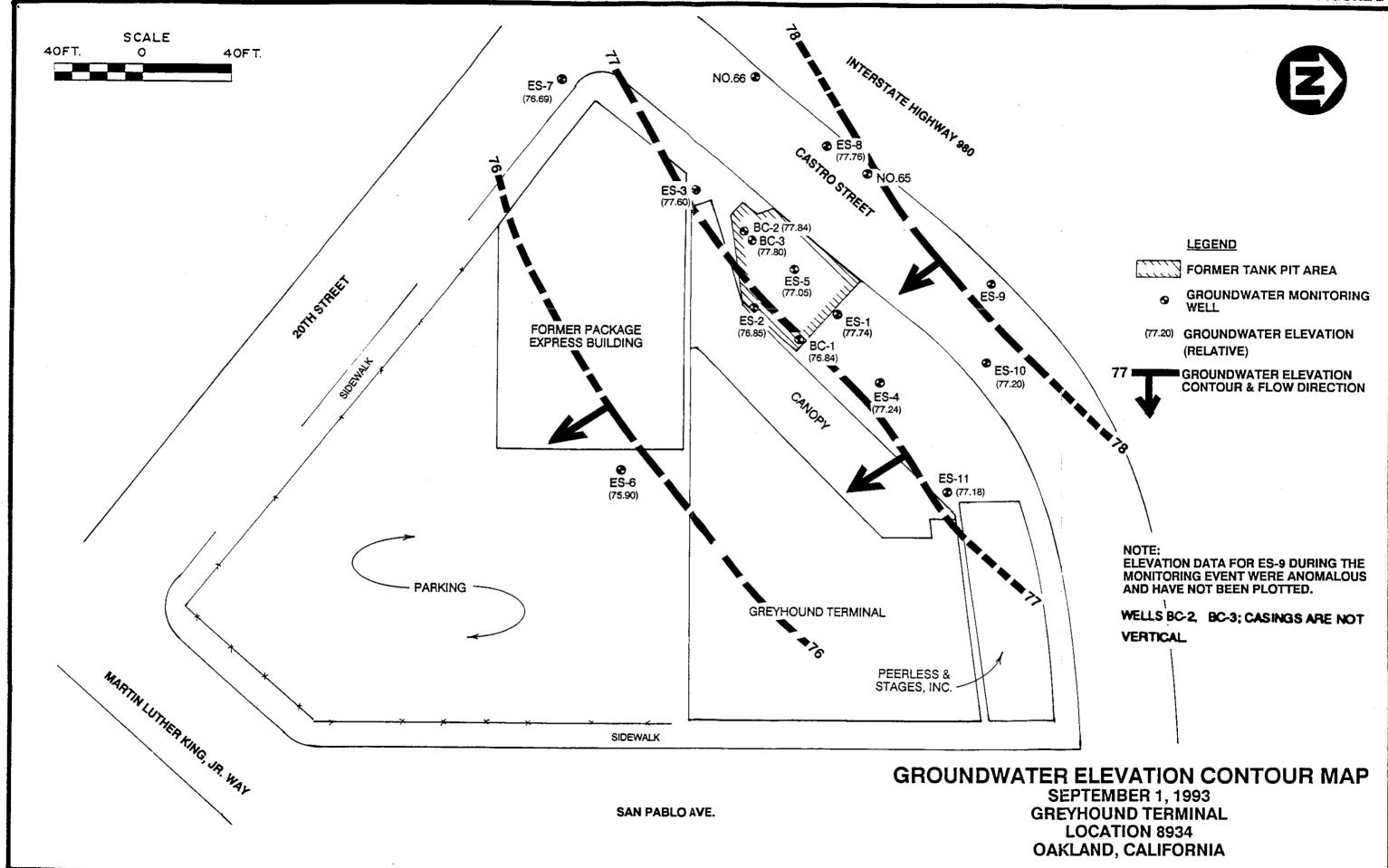
14. 17. 300 38. 32. 33. 33. 33. 33. 33. 33. 33. 33. 33		Depth to	Depth to	Free Product
	Well	Liquid	Water	Thickness
Date	Location	(Feet)	(Feet)	(Feet)
00/40/00	50 4	40.00	40.00	0
06/10/93	ES-1	18.60	18.60	0
	ES-2	19.10	19.11	0.01
	ES-3	NR	NR	NR
	ES-4	17.93	17.93	0
	ES-5	18.31	18.36	0.05
	BC-1	18.85	18.91	0.06
	BC-2	16.58	16.58	0
	BC-3	16.71	16.71	0
00,000	FC 4	40.00	40.60	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
06/04/93	ES-2	19.15	19.18	0.03
	ES-3		19.18	0.05
		19.18		
	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

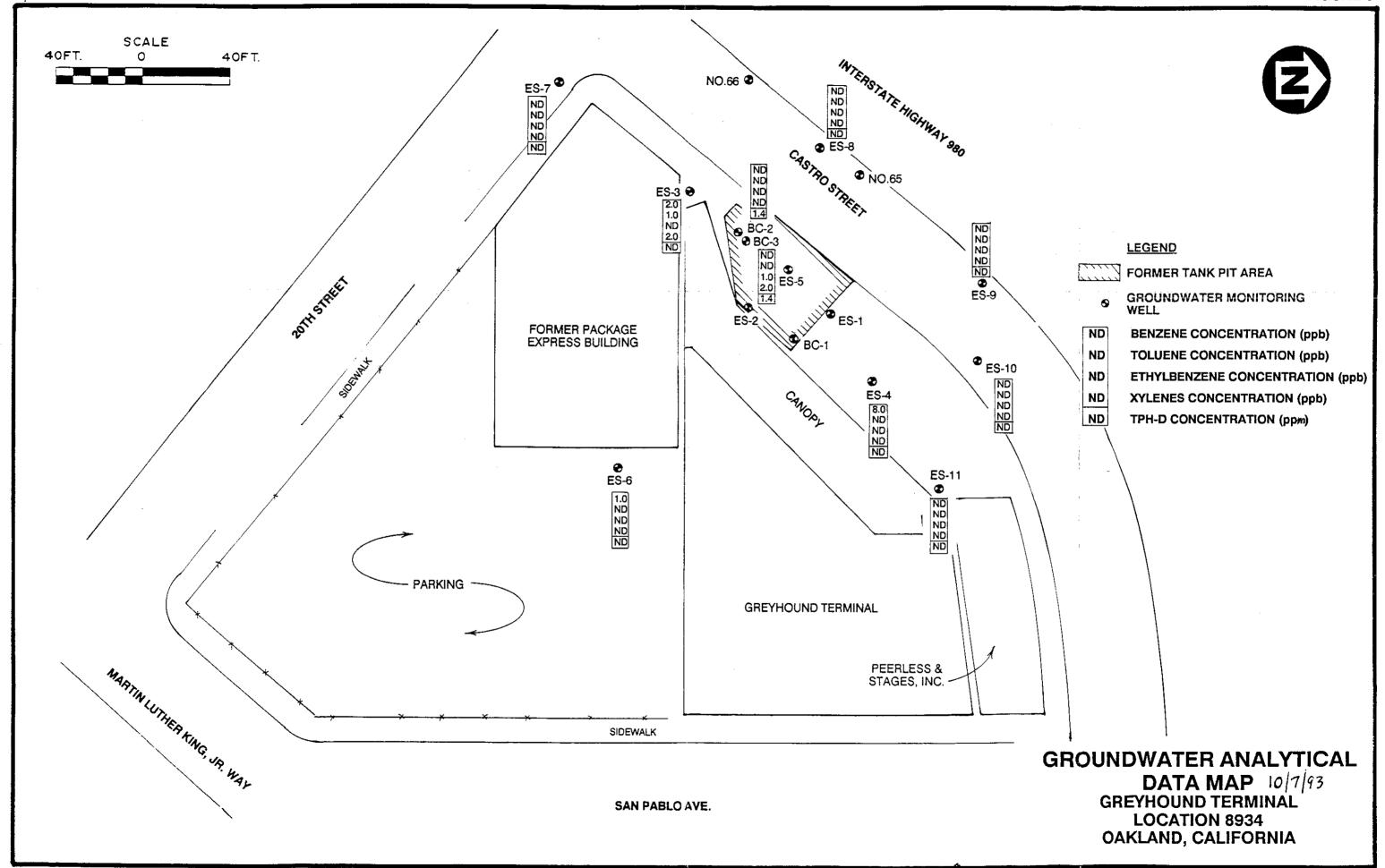
TABLE 5 (Continued)

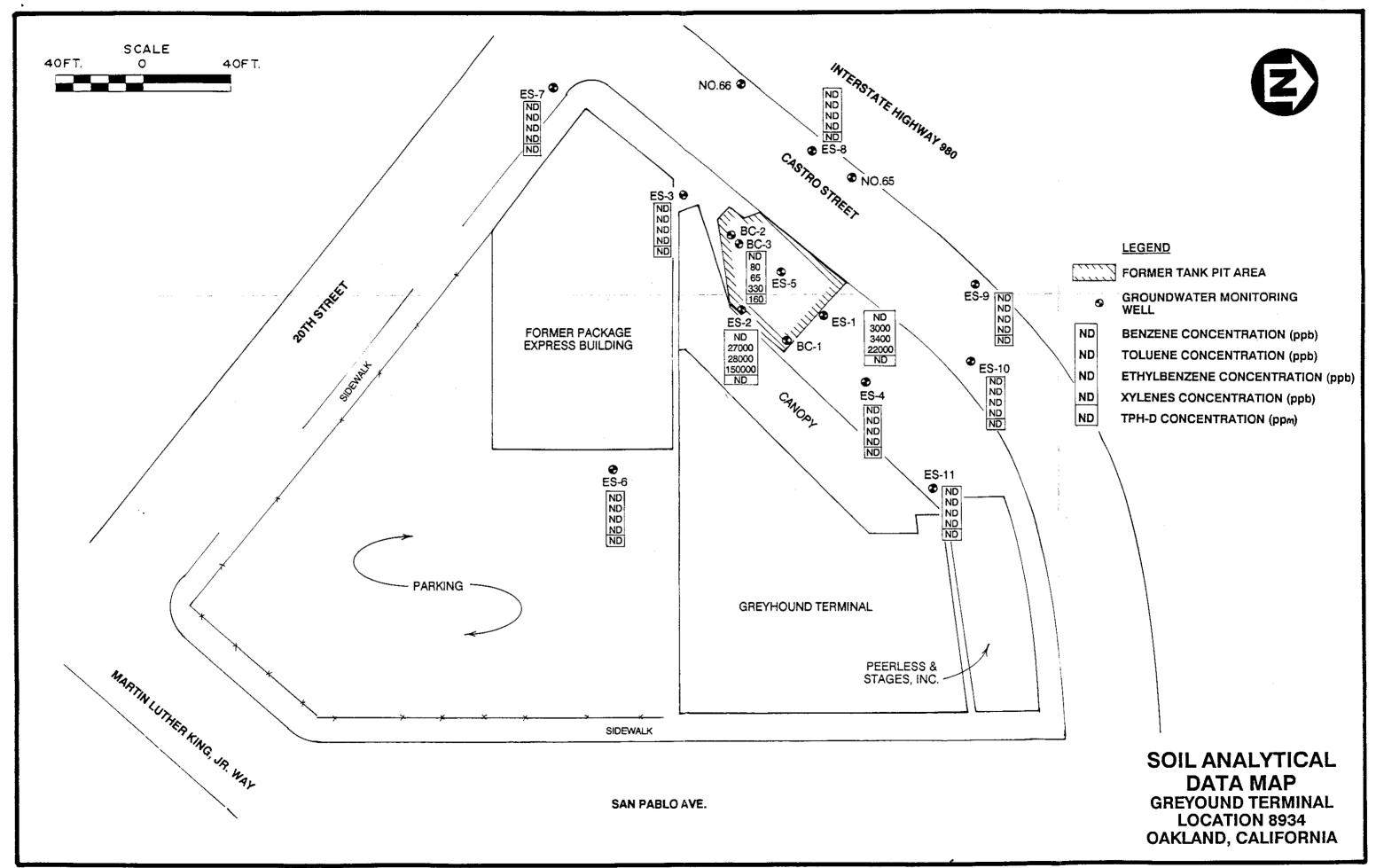
MONITORING WELL DATA SUMMARY

77000000000000000000000000000000000000		Depth to	Depth to	Free Product
	Well	Liquid	Water	Thickness
Date	Location	(Feet)	(Feet)	(Feet)
<u> </u>				
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









APPENDIX A

ANALYTICAL LABORATORY REPORT AND CHAIN-OF-CUSTODY



SPL-HOUSTON ENVIRONMENTAL LABORATORY

UST REPORT FAX COVER PAGE

TO:	D. Tickerson
COMPANY:	Engacering Science
FAX NUMBER:	(315) 451-9570
PROJECT NUM	(315) 451-9570 BER: 54360.18
FROM: NORM	A PEDRAZA - UST DOCUMENT CONTROL
FAX NUMBER:	(713) 660-8975 —
TELEPHONE N	UMBER: (713) 660-0901 —
TOTAL NUMBE	ER OF PAGES INCLUDING COVER: 17
REF/COMMENT	rs:
<u>,</u>	

P.O. BOX 20807 HOUSTON, TX 77225 P.O. 80X 31780 LAFAYETTE, LA 70503

1000 RIVERBEND, SUITEF 459 HUGHE 70503 ST. ROSE LA 70067 TRAVERSE SOUTHERN PETROLEUM LABORATORIES, INC.

IF YOU DO NOT RECEIVE LEGIBLE COMES OF ALL PAGES-PLEASE NOTIFY ME IMMEDIATELY!

459 HUGHES DRIVE TRAVERSE CITY, MI 49684 106 N. MYRLE CARTHAGE, TX 75633



Engineering Science, Inc.

290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc. PROJECT NO: 54360.18
SITE: Oakland, California MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 09:30:00

SAMPLE ID: MW-3 DATE RECEIVED: 10/08/93

ANALYTICAL	DATA		
PARAMETER	RESULTS	DETECTION	Units
BENZENE	2	LIMIT 0.3 P	ug/L
TOLUENE	1	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	นฐ์/L
TOTAL XYLENE	2	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	5		ug/L
Surrogate	% Recovery	•	
1,4-Difluorobenzene	94		
4-Bromofluorobenzene METHOD 602 *	92		
Analyzed by: MOO			
Date: 10/10/93			•
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/L
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00			

⁽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



Engineering Science, Inc. 290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

PROJECT NO: 54360.18

PROJECT: Greyhound Lines, Inc. SITE: Oakland, California

MATRIX: LIQUID

SAMPLED BY: Engineering Science

DATE SAMPLED: 10/07/93 10:30:00

DATE: 10/19/93

SAMPLE ID: MW-4

DATE RECEIVED: 10/08/93

ANALYTICAL	DATA		
PARAMETER	RESULTS	DETECTION	UNITS
BENZENE	8	LIMIT 0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ETHYLBENZENE	ND	0.3 P	ug/L
TOTAL XYLENE	2	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	10		ug/L
Surrogate	% Recovery	•	
1,4-Difluorobenzene	87		
4-Bromofluorobenzene	93		
METHOD 602 *.			
Analyzed by: MOO			
Date: 10/10/93			•
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/L
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00		-	

⁽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



Engineering Science, Inc. 290 Elwood Davis Rd Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc.

SITE: Oakland, California

PROJECT NO: 54360.18

MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 12:30:00

SAMPLE ID: MW+6 DATE RECEIVED: 10/08/93

ANALYTICAL	DATA		
PARAMETER	Results	DETECTION LIMIT	UNITS
BENZENE	1	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/L
ethylbenzene	ИD	0.3 P	ug/L
TOTAL XYLENE	ND	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	1		ug/L
Surrogate	% Recovery	•	
1,4-Difluorobenzene	83		
4-Bromofluorobenzene	97		
METHOD 602 *			
Analyzed by: MOO		•	
Date: 10/10/93			
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/L
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00			

⁽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



Engineering Science, Inc. 290 Elwood Davis Rd Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc. PROJECT NO: 54360.18
SITE: Oakland, California MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 13:15:00

SAMPLE ID: MW-7 DATE RECEIVED: 10/08/93

ANALYTICA	L DATA			
PARAMETER	1	results	DETECTION	UNITS
			LIMIT	
BENZENE	_	ND	0.3 P	ug/I
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 HYDROCARBON	S	ИD		ug/L
Surrogate	% R	ecovery	•	
1,4-Difluorobenzene		91		
4-Bromofluorobenzene		106		
METHOD 602 *				
Analyzed by: JZL				
Date: 10/12/93	•			
Petroleum Hydrocarbons-Diesel		ND	0.50	mg/L
Mod. Calfornia DHS				
Analyzed by: SG				
Date: 10/13/93 12:48:00				

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



Engineering Science, Inc. 290 Elwood Davis Rd Liverpool, New York 13088

ATTN: D. Nickerson

PROJECT NO: 54360.18

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc. SITE: Oakland, California MATRIX: LIQUID

DATE SAMPLED: 10/07/93 14:00:00 SAMPLED BY: Engineering Science

DATE RECEIVED: 10/08/93 SAMPLE ID: MW-8

ANALYTICA:	L DATA		
PARAMETER	results	DETECTION	UNITS
		rimit.	
BENZENE	ND	0.3 P	ug/I
TOLUENE .	ND	0.3 P	ug/1
ETHYLBENZENE	ND	0.3 P	ug/I
TOTAL XYLENE	ND	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBON	s nd		ug/I
Surrogate	% Recovery	•	
1,4-Difluorobenzene	86		
4-Bromofluorobenzene	97		
METHOD 602 *			
Analyzed by: MOO			
Date: 10/10/93		•	•
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/I
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00			

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



Engineering Science, Inc. 290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc.

PROJECT NO: 54360.18

SITE: Oakland, California

MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 14:40:00

SAMPLE ID: MW-9 DATE RECEIVED: 10/08/93

ANALYTICAL	DATA		
PARAMETER	RESULTS	DETECTION	UNITS
		LIMIT	
BENZENE	ND	0.3 P	ug/L
TOLUENE	ND	0.3 P	ug/I
ethylbenžene	ND	0.3 P	ug/I
TOTAL XYLENE	ND	0.6 P	ug/L
TOTAL VOLATILE AROMATIC HYDROCARBONS	ND		ug/I
Surrogate	% Recovery	•	
1,4-Difluorobenzene	86		
4-Bromofluorobenzene	96		
METHOD 602 *	• •		
Analyzed by: MOO			
Date: 10/10/93			0
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/I
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00			

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



Engineering Science, Inc. 290 Elwood Davis Rd Liverpool, New York 13088

PROJECT: Greyhound Lines, Inc.

ATTN: D. Nickerson

PROJECT NO: 54360,18

DATE: 10/19/93

MATRIX: LIQUID

SITE: Oakland, California DATE SAMPLED: 10/07/93 15:15:00 SAMPLED BY: Engineering Science

DATE RECEIVED: 10/08/93 SAMPLE ID: MW-10

ANALYTICA	L DATA		
PARAMETER	RESULTS	DETECTION	UNITS
		LIMIT	
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 HYDROCARBON	s nd		ug/I
surrogate	% Recovery	•	
1,4-Difluorobenzene	8 <u>-</u> 6		
4-Bromofluorobenzene	98		
METHOD 602 *			
Analyzed by: MOO			
Date: 10/10/93	•		,
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/I
Mod. Calfornia DHS			
Analyzed by: SG			
Date: 10/13/93 12:48:00			

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



Engineering Science, Inc. 290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

PROJECT NO: 54360.18

PROJECT: Greyhound Lines, Inc.

MATRIX: LIQUID

SITE: Oakland, California SAMPLED BY: Engineering Science

DATE SAMPLED: 10/07/93 11:20:00

DATE: 10/19/93

SAMPLE ID: MW-11

DATE RECEIVED: 10/08/93

ANALYTICAL DATA				
PARAMETER	RESULTS	DETECTION .	UNITS	
BENZENE	ND	LIMIT 0.3 P	11 m	
TOLUENE	, ND	0.3 P	ug/I	
ETHYLBENZENE	ND	0.3 P	ug/I	
TOTAL XYLENE	ND	0.5 P	ug/L	
TOTAL VOLATILE AROMATIC HYDROCARBO		U.O.F	ug/L	
TOTAL VOLATILE ANOMALIC HIDROCARDON	ND ND		nd/I	
Surrogate	% Recovery	·		
1,4-Difluorobenzene	87			
4-Bromofluorobenzene	95			
METHOD 602 *				
Analyzed by: MOO				
Date: 10/10/93	•		•	
Petroleum Hydrocarbons-Diesel	ND	0.50	mg/L	
Mod. Calfornia DHS			2.	
Analyzed by: SG	•			
Date: 10/13/93 12:48:00				

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



Engineering Science, Inc. 290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

10/19/93

PROJECT: Greyhound Lines, Inc. PROJECT NO: 54360.18 SITE: Oakland, California MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 11:30:00

SAMPLE ID: A DATE RECEIVED: 10/08/93

ANALYT	ICAL DATA	<u> </u>	
PARAMETER	RESULTS	PQL*	UNITS
Benzene	ND	5	μg/L
Bromodichloromethane	, ND	5	μ g/ L
Bromoform	ND	5	μg/L
Bromomethane	ND	10	μ g/ L
Carbon Tetrachloride	ND	5	μg/L
Chlorobenzene	ND	5	μg/Ľ
Chloroethane	ND	10	μg/L
2-Chloroethylvinylether	ND	10	μg/L
Chloroform	ND	5	μg/L
Chlòromethane	ND	10	μ g/ L
Dibromochloromethane	ND	5	μg/L
1,1-Dichloroethane	ND	5	μg/L
1,2-Dichloroethane	ND	5	μg/L
1,1-Dichloroethene	ИĎ	5	$\mu {f g}/{f L}$
total-1,2-Dichloroethene	ИD	5	μg/L
1,2-Dichloropropane	ИD	5	μg/L
cis-1,3-Dichloropropene	ИD	5	μ g/L
trans-1,3-Dichloropropene	ND	5	μg/L
Ethylbenzene	ИD	5	μg/L
Methylene Chloride	ND	5	μ g/ L
1,1,2,2-Tetrachloroethane	ND	5 5	μg/L
Tetrachloroethene	ND	5	μg/L
Toluene	ИD	5	μg/L
1,1,1-Trichloroethane	ИD	5 5	μg/L
1,1,2-Trichloroethane	ND	5 5	μg/L
Trichloroethene	ДИ	5	μg/L
Trichlorofluoromethane	ND	5	μg/L
Vinyl Chloride	. ИД	10	μg/L

METHOD: 624 (continued on next page)



Engineering Science, Inc.

SAMPLE ID: A

ANALYTICAL DATA (continued)

PARAMETER

RESULTS

PQL*

UNITS

ANALYZED BY: JC

DATE/TIME: 10/14/93 12:52:00

METHOD: 624

NOTES:

* - Practical Quantitation Limit

ND - Not Detected

NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL California License # 1903



Engineering Science, Inc.

290 Elwood Davis Rd

Liverpool, New York 13088 ATTN: D. Nickerson

10/19/93

PROJECT: Greyhound Lines, Inc. PROJECT NO: 54360.18 SITE: Oakland, California MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 11:30:00

DATE RECEIVED: 10/08/93 SAMPLE ID: B

ANALYTI	CAL DATA		·
Parameter	RESULTS	PQL*	UNITS
Benzene	ИD	5	hd/r
Bromodichloromethane	ַמֹע	5	μg/L
Bromoform	ND	5	μg/L
Bromomethane	ND	10	μg/L
Carbon Tetrachloride	ND	5	μg/L
Chlorobenzene	ND	5	μg/L
Chloroethane	ND	10	μg/L
2-Chloroethylvinylether	ממ	10	μg/L
Chloroform	ND	5	μg/L
Chloromethane	ND	10	μg/L
Dibromochloromethane	ND	5	μg/L
1,1-Dichloroethane	ND	5	μg/L
1,2-Dichloroethane	ND	5	μg/L
1,1-Dichloroethene	ND	.5 5	μg/L
total-1,2-Dichloroethene	ND	5	μg/L
1,2-Dichloropropane	ND	5	μ g/ L
cis-1,3-Dichloropropene	ND	5	μg/L
trans-1,3-Dichloropropene	ND	5	μg/L
Ethylbenzene	ND	5	μg/L
Methylene Chloride	ND	5	μg/L
1,1,2,2-Tetrachloroethane	ND	5	μ g/L
Tetrachloroethene	ND	5 5	μg/L
Toluene	ND	5	μg/L
1,1,1-Trichloroethane	ND	5	μg/L
1,1,2-Trichloroethane	NĎ	5	μ g/ ${f L}$
Trichloroethene	ND	5	μg/L
Trichlorofluoromethane	ND	5	μg/L
Vinyl Chloride	ND	10	μg/L

METHOD: 624

(continued on next page)



Engineering Science, Inc.

SAMPLE ID: B

ANALYTICAL DATA (continued)

PARAMETER

RESULTS

POL*

UNITS

ANALYZED BY: JC

DATE/TIME: 10/14/93 13:32:00

METHOD: 624

NOTES: * - Practical Quantitation Limit

ND - Not Detected .

NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL California License # 1903



Engineering Science, Inc. 290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

10/19/93

PROJECT: Greyhound Lines, Inc. PROJECT NO: 54360.18
SITE: Oakland, California MATRIX: LIQUID

SAMPLED BY: Engineering Science DATE SAMPLED: 10/07/93 11:30:00

SAMPLE ID: C DATE RECEIVED: 10/08/93

ANALYTI	CAL DATA		
PARAMETER	RESULTS	PQL*	UNITS
Benzene	10	5	μg/L
Bromodichloromethane	ND	5	μg/L
Bromoform	ND	5	μg/L
Bromomethane	ND	10	μg/L
Carbon Tetrachloride	ND	5	μg/L
Chlorobenzene	ND	5	μg/L
Chloroethane	ND	10	μg/L
2-Chloroethylvinylether	ND	10	μg/L
Chloroform	ND	5	μ d/ Γ
Chlòromethane	ND	10	μg/L
Dibromochloromethane	ND	5	μg/L
1,1-Dichloroethane	ND	5 5	μg/L
1,2-Dichloroethane	ND	5	μg/L
1,1-Dichloroethene	ND	5	μg/L
total-1,2-Dichloroethene	ND	5	μg/L
1,2-Dichloropropane	ND	5	μg/L
cis-1,3-Dichloropropene	ND	5	μg/Ľ
trans-1,3-Dichloropropene	ND	5	μg/L
Ethylbenzene	ND	5	μg/L
Methylene Chloride	ND	5	μg/L
1,1,2,2-Tetrachloroethane	ND	5	μg/L
Tetrachloroethene	ND	5	μg/L
Toluene	7	5	μg/L
1,1,1-Trichloroethane	ND	5	μg/L
1,1,2-Trichloroethane	ND	5 5 5	μ <mark>g</mark> /L
Trichloroethene	ND	S	μg/L
Trichlorofluoromethane	ND	5	μg/L
Vinyl Chloride	ND	10	μg/L
•	· ·		. 21

METHOD: 624

(continued on next page)



Engineering Science, Inc.

SAMPLE ID: C

ANALYTICAL DATA (continued)

PARAMETER

RESULTS

PQL*

UNITS

ANALYZED BY: JC

DATE/TIME: 10/14/93 14:12:00

METHOD: 624

NOTES: * - Practical Quantitation Limit

ND - Not Detected

NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL California License # 1903



Engineering Science, Inc.

290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc.

SITE: Oakland, California

SAMPLED BY: Engineering Science

SAMPLE ID: BC-2

PROJECT NO: 54360,18

MATRIX: LIQUID

DATE SAMPLED: 10/07/93 09:50:00

DATE RECEIVED: 10/08/93

ANALYTICA	L DATA		
PARAMETER	RESULTS	DETECTION	UNITS
		LIMIT	
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	s nd		ug/I
Surrogate	% Recovery	•	
1,4-Difluorobenzene	86		
4-Bromofluorobenzene	98		
METHOD 602 *			
Analyzed by: MOO			
Date: 10/10/93		,	·
Petroleum Hydrocarbons-Diesel	1.4	0.50	mg/I
Mod. Calfornia DHS		·	
Analyzed by: SG			
Date: 10/13/93 12:48:00			

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

SPL, Inc., - Shari L. Grice

9100



Engineering Science, Inc.

290 Elwood Davis Rd

Liverpool, New York 13088

ATTN: D. Nickerson

DATE: 10/19/93

PROJECT: Greyhound Lines, Inc.

SITE: Oakland, California

SAMPLED BY: Engineering Science

SAMPLE ID: BC-3

PROJECT NO: 54360.18 MATRIX: LIQUID

DATE SAMPLED: 10/07/93 10:00:00

DATE RECEIVED: 10/08/93

ANALYTICAL DATA			
PARAMETER	results	DETECTION	UNITS
		LIMIT	
BENZENE	ND	0.3 P	ng/I
TOLUENE	ND	0.3 P	ug/I
ETHYLBENZENE	1	0.3 P	ug/I
TOTAL XYLENE	2	0.6 P	ug/I
TOTAL VOLATILE AROMATIC HYDROCARBONS	3		ug/I
Surrogate	% Recovery	•	
1,4-Difluorobenzene	88		
4-Bromofluorobenzene	100		
METHOD 602 *			
Analyzed by: MOO			
Date: 10/10/93			•
Petroleum Hydrocarbons-Diesel	1.4	0.50	mg/l
Mod. Calfornia DHS			•
Analyzed by: SG			
Date: 10/13/93 12:48:00			

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