

ENGINEERING-SCIENCE, INC.

290 Elwood Davis Road, Suite 312 • Liverpool, New York 13088 • (315) 451-9560 • Fax: (315) 451-9570

9012317 11:2:11

March 8, 1993

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

✓ STD 3889

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), the third quarterly groundwater monitoring report for the GLI terminal in Oakland, California.

The information contained in the January 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 January 7, and analyzed for TPH-D (DHS/LUFT Method Modified EPA 8015/3510), and BTEX (EPA Method 602). Figure 1 provides a site map showing the monitoring well locations. The detection limits specified in the 1989 LUFT Manual (Appendix D, Table 3-5) were met by the analytical laboratory. Physical data for the monitoring wells sampled January 7, 1993 are summarized on Table 1 and the analytical results are summarized on Table 2. Previous groundwater analytical data have been summarized on Table 3.

Ms. Susan Hugo
March 8, 1993
Page 2

GLI will continue the groundwater monitoring program consisting of monthly groundwater level measurements and quarterly groundwater sampling at this location for a total period of one year to better define the impact to groundwater at the site.

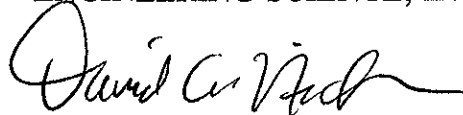
The February site visit was conducted on February 4, 1993. The next groundwater sampling event will be conducted during the month of April 1993. The Alameda County Department of Environmental Health (ACDEH) will be notified at least one week prior to the sampling event. The fourth quarterly status report will be prepared and submitted to your department on or before May 15, 1993.

In accordance with ACDEH's letter to Greyhound dated October 23, 1992, Greyhound has prepared a work plan to conduct a supplemental site assessment for the purpose of defining the extent of the dissolved-phase contamination at this location. The work plan is currently being reviewed by Greyhound and will be submitted to ACDEH for review no later than April 2, 1993.


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

DLC/DAN/lml

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

JANUARY 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.

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 at the facility 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 immediately responded by preparing a Tank Closure Documentation Report for this facility. This report was submitted to ACDEH on December 15, 1992. Greyhound still awaits any comments ACDEH may have regarding the current groundwater monitoring program, free product recovery operations, and tank closure documentation submitted for this location. ✓

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

In accordance with ACDEH's letter to Greyhound dated October 23, 1992 and Greyhound's response to the letter submitted to ACDEH on November 23, 1992, Greyhound proposed to conduct a supplemental site assessment investigation in the Spring of 1993. The purpose of the supplemental site assessment is to completely define the lateral extent of the dissolved contaminant plume. Greyhound has prepared a work plan for this investigation and will submit the work plan to ACDEH for review no later than April 2, 1993. Upon review and approval of the work plan by ACDEH, Greyhound will obtain the required permits and implement the supplemental site assessment at this location. ✓

Results of the supplemental assessment will be presented in a report that will be submitted to ACDEH. The report will also include an evaluation of clean-up standards and additional remedial action. In the interim, Greyhound will continue free product

JANUARY 1993
QUARTERLY STATUS REPORT (CONTINUED)

recovery operations, monthly groundwater monitoring, and quarterly sampling and analyses.

- **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, 495 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 monitoring, quarterly groundwater sampling and hydrocarbon recovery program will continue for a period of one year or until free product has been removed from the groundwater. ✓

A work plan for the supplemental site assessment will be prepared and submitted to ACDEH no later than April 2, 1993. ✓ After review and approval of the work plan by ACDEH, Greyhound will implement the supplemental site assessment in accordance with the schedule provided in the work plan. ✓

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

Approximately 495 gallons of free product and contaminated groundwater have been recovered to date. Recovered diesel fuel and contaminated groundwater has 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 recovered diesel fuel and contaminated groundwater have been included in Appendix A.

JANUARY 1993
QUARTERLY STATUS REPORT (CONTINUED)

- **Monitoring well data:**

The physical data obtained from the monitoring wells located at the facility on January 7, 1993 are presented in Table 1. Figure 1 is a site map showing the monitoring well locations. Free product has been observed in four out of eight of the on-site monitoring wells to date (Recovery wells ES-1, ES-2, ES-5, and BC-1). Figure 2 shows groundwater level elevations measured in January 1993. Note that groundwater levels in the area of the recovery wells (ES-1, ES-2, ES-5, and BC-1) are depressed due to recovery operations which have created a cone of depression toward the recovery wells, preventing further migration of contaminants off-site.

- **Analytical results of groundwater or soil sampling:**

Results of the most recent quarterly groundwater sampling event (January 1993) are summarized in Table 2. Four of the eight monitoring wells were sampled. Monitoring wells ES-1, ES-2, ES-5 and BC-1 were not sampled because free product was present. TPH-D concentrations were below the laboratory reporting limits in all of the groundwater samples collected. Benzene was detected in only two samples: ES-3 at 52.0 $\mu\text{g}/\text{l}$ and ES-4 at 30.0 $\mu\text{g}/\text{l}$. Ethylbenzene was detected in three samples: ES-3 at 100 $\mu\text{g}/\text{l}$, ES-4 at 7.7 $\mu\text{g}/\text{l}$, and BC-2 at 1.5 $\mu\text{g}/\text{l}$. Toluene was detected in three samples: ES-3 at 49.0 $\mu\text{g}/\text{l}$, ES-4 at 6.7 $\mu\text{g}/\text{l}$, and BC-2 at 1.1 $\mu\text{g}/\text{l}$. Xylene (total) was detected in three samples: ES-3 at 250 $\mu\text{g}/\text{l}$, ES-4 at 16.0 $\mu\text{g}/\text{l}$, and BC-2 at 9.5 $\mu\text{g}/\text{l}$. BTEX concentrations in groundwater sample BC-3 were below the laboratory detection limits. Greyhound will resample these wells during the next quarterly sampling event in April 1993. In addition to BTEX and TPH-D, TPH-G will also be analyzed during the next and subsequent quarterly sampling events in accordance with ACDEH requirements (letter to Greyhound, October 23, 1992).

Groundwater analytical data from previous quarterly sampling events have been summarized on Table 3. Soil analytical data from the preliminary site investigation is included as Table 4.

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

A "zero line" for groundwater contamination has not been mapped because the extent of dissolved contamination has not been completely defined. After the supplemental site assessment has been implemented, a zero line showing the extent of dissolved hydrocarbon contamination will be provided.

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

JANUARY 1993
QUARTERLY STATUS REPORT (CONTINUED)

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 January 7, 1993 suggest an overall northerly groundwater flow direction with a strong influence of flow toward the recovery wells (ES-1, ES-2, ES-5, and BC-1) (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 is presented in Table 4. The laboratory results from the most recent groundwater sampling event, including chain-of-custody documentation, are included in Appendix B.

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

At the present time, a map delineating the extent of groundwater contamination has not been prepared due to lack of sufficient data points to construct the map. Figure 3 shows analytical data for groundwater samples collected on January 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. Soil contamination appears to be 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 possible extent of TPHD contamination in this area. The extent of soil contamination at the site will be determined during 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.

JANUARY 1993
QUARTERLY STATUS REPORT (CONTINUED)

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

Approximately 495 gallons of recovered diesel fuel and contaminated groundwater have been removed to date. As of February 22, 1993, 31,706 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 operational with only brief shutdown periods since January 4, 1993. The shutdown periods happened as a result of the system's high level alarm switches which deactivate the system after the system's product reservoir becomes full. The system is currently monitored twice weekly to ensure that the system operates continuously.

- **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. At the end of 1993, an evaluation of the data obtained from these programs will be made to determine whether further action is required at the site. The next quarterly status report will be prepared and submitted to ACDEH on or before May 15, 1993.

Greyhound will submit a work plan for the Supplemental Site Assessment on or before April 2, 1993 for ACDEH review and approval. The supplemental site assessment activities and report preparation will follow the approved schedule which will be proposed in the work plan.

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

At the present time, there is insufficient data to make these estimates. The quantity of soil and extent of groundwater contamination and the time required to remediate this site will be carefully evaluated after the supplemental site assessment data are collected and one year of groundwater monitoring has been completed.

TABLE 1

MONITORING WELL DATA SUMMARY
 Greyhound Terminal, Oakland, California
 January 7, 1993

Location	Elevation of PVC T.O.C (Ft.)	Depth to Water (Ft.)	Groundwater Elevation (*) (Ft. MSL)	Product Layer Thickness (ft.)
ES-1	21.33	20.26	1.07	.01
ES-2	21.83	20.40	1.43	.35
ES-3	22.33	19.20	3.13	0
ES-4	21.09	18.76	2.33	0
ES-5	21.24	22.00	-0.76	2.65
BC-1	21.55	21.76	-0.21	2.16
BC-2	NA	13.50	NA	0
BC-3	NA	16.55	NA	0

T.O.C. – Top of Casing

NA – Not Available (Well casings not vertical.)

(*) Elevations based on site surface vertical datum (97.50, on steel grate for storm sewer near wash rack) in the field and later converted to Mean Sea Level (MSL): 97.50 = 12.0 MSL.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA
JANUARY 7, 1993

Location	Date Collected	Parameter	Result	Detection Limit
ES-3	1/7	Benzene ¹	52.0 ✓	1.5 ug/L*
		Ethylbenzene ¹	100.0	1.5 ug/L*
		Toluene ¹	49.0	1.5 ug/L*
		Xylenes (total) ¹	250.0	3.0 ug/L*
		TPH-D ²	ND	0.05 mg/L
ES-4	1/7	Benzene ¹	30.0	0.3 ug/L
		Ethylbenzene ¹	7.7	0.3 ug/L
		Toluene ¹	6.7	0.3 ug/L
		Xylenes (total) ¹	16.0	0.6 ug/L
		TPH-D ²	ND	0.05 mg/L
BC-2	1/7	Benzene ¹	ND	0.3 ug/L
		Ethylbenzene ¹	1.5	0.3 ug/L
		Toluene ¹	1.1	0.3 ug/L
		Xylenes (total) ¹	9.5	0.6 ug/L
		TPH-D ²	ND	0.05 mg/L
BC-3	1/7	Benzene ¹	ND	0.3 ug/L
		Ethylbenzene ¹	ND	0.3 ug/L
		Toluene ¹	ND	0.3 ug/L
		Xylenes (total) ¹	ND	0.6 ug/L
		TPH-D ²	ND	0.05 mg/L

¹ Analyzed by EPA Method 602

² Analyzed by DHS/LUFT Method Modified EPA 8015

* Dilution Factor of 5

Wells ES-1, 2, 5, and BC-1 were not sampled due to the presence of free product

* note FP Recovery system started 1/4/93

TABLE 3

SUMMARY OF PREVIOUS
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
07/08/92	ES-3	54 ^(17/93) (52)	21 (49)	48 (100)	34 (250)	157	1.3 (ND)
	ES-4	31 (30)	5.6 (6.7)	ND (7.7)	2.8 (16)	39.4	ND (ND)
	BC-2	ND (ND)	ND (1.1)	ND (1.5)	8.4 (9.5)	8.4	2.1 (ND)
	BC-3	ND (ND)	2.5 (ND)	ND (ND)	6.1 (ND)	8.6	3.9 (ND)
10/06/92	ES-3	93	18	ND	11	122	ND
	ES-4	100	8.2	ND	7.6	115.8	ND
	BC-2	ND	1.1	0.9	7.2	9.2	ND
	BC-3	ND	1.9	0.5	1.8	4.2	0.8

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

(*) – Total petroleum hydrocarbons diesel (TPH-D) were analyzed and characterized by GC/FID in accordance with DHS/LUFT method (modified EPA method 8015/ solution preparation method 3510).

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

Location Sample Depth*	Benzene ug/kg	Toluene ug/kg	Ethylbenzene ug/kg	Xylenes ug/kg	Total BTEX ug/kg	TPHD(a) mg/kg
ES-1 (16-18)	ND	3,000	3,400	22,000	28,400	ND
ES-2 (16-18)	ND	27,000	28,000	150,000	205,000	ND
ES-3 (18-19)	ND	ND	ND	ND	ND	ND
ES-4 (16-16.5)	ND	ND	ND	ND	ND	ND
ES-5 (15-17)	ND	80	65	330	475	160
California ARARs:	0.3-1 (b) (mg/kg)	0.3-50(b) (mg/kg)	1-50(b) (mg/kg)	1-50(b) (mg/kg)	—	100(c), 1000(d) (mg/kg)

NOTES:

ARAR = Available Applicable or Relevant Appropriate Requirements.

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

* Depth given in feet below ground surface.

(a) Total petroleum hydrocarbons as diesel (TPHD) were analyzed and characterized by GCFID in accordance with DHS/LUFT Method (modified EPA Method 8015).

(b) California LUFT criteria. Note the ARARs are given in ppm, whereas the results are in ppb.

(c) RWQCB - Level that initiates a soil/groundwater characterization investigation.

(d) California Hazardous Waste based on ignitability.

TABLE 5

MONITORING WELL DATA SUMMARY
GREYHOUND TERMINAL, OAKLAND, CALIFORNIA

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

Screen (ft)

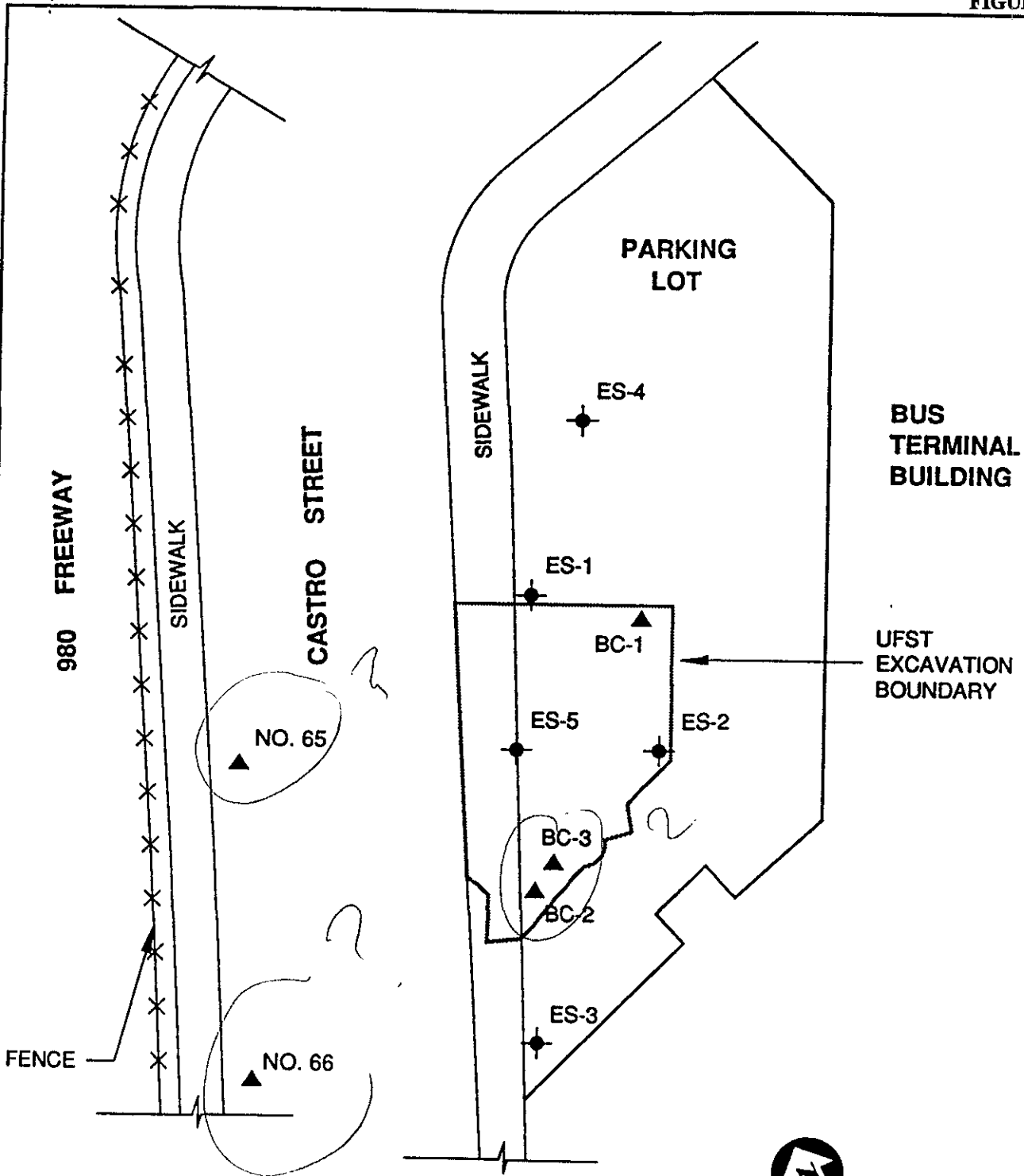
ES1 - 10-32
 ES2 - 10-30
 ES3 - 15-35
 ES4 - 10-30
 ES5 = 10-30

TABLE 5
(Continued)

MONITORING WELL DATA SUMMARY

Date	Well Location	Depth to Liquid (Ft.)	Depth to Water (Ft.)	Free Product Thickness (Ft.)
10/6/92	ES-1	19.08	19.10	.02
	ES-2	19.41	20.00	.59
	ES-3	19.96	19.96	0
	ES-4	18.92	18.92	0
	ES-5	18.24	21.37	3.13
	BC-1	18.82	21.14	2.32
	BC-2	18.50	18.50	0
	BC-3	18.93	18.93	0
11/6/92	ES-1	18.52	18.53	.01
	ES-2	18.84	19.44	.60
	ES-3	18.84	19.84	0
	ES-4	18.94	18.94	0
	ES-5	17.60	20.92	3.32
	BC-1	18.24	20.69	2.45
	BC-2	15.98	15.98	0
	BC-3	16.81	16.81	0
12/12/92	ES-1	18.55	18.55	0
	ES-2	18.75	19.10	.35
	ES-3	19.10	19.10	0
	ES-4	18.51	18.51	0
	ES-5	17.50	20.35	2.85
	BC-1	18.25	20.75	2.50
	BC-2	12.17	12.17	0
	BC-3	17.84	17.84	0

FIGURE 1



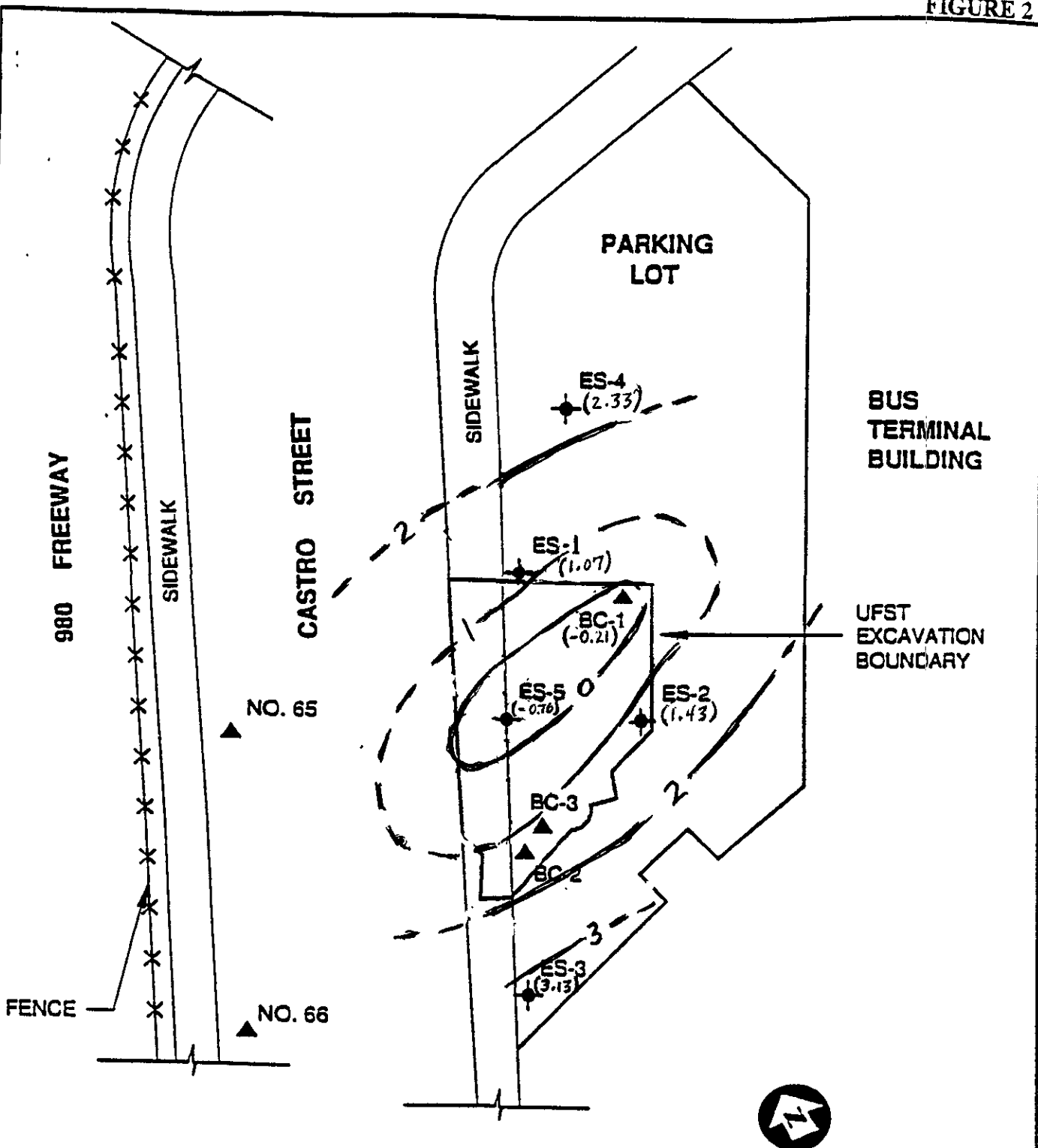
EXPLANATION

-  ES-1
 NEW MONITORING WELL
-  BC-1
 EXISTING MONITORING WELL

NOTE: WELLS BC-2, BC-3; CASINGS ARE NOT VERTICAL

GREYHOUND LINES, INC.
 LOCATION 8934
 2103 SAN PABLO AVENUE
 OAKLAND, CALIFORNIA

WELL LOCATION MAP



EXPLANATION

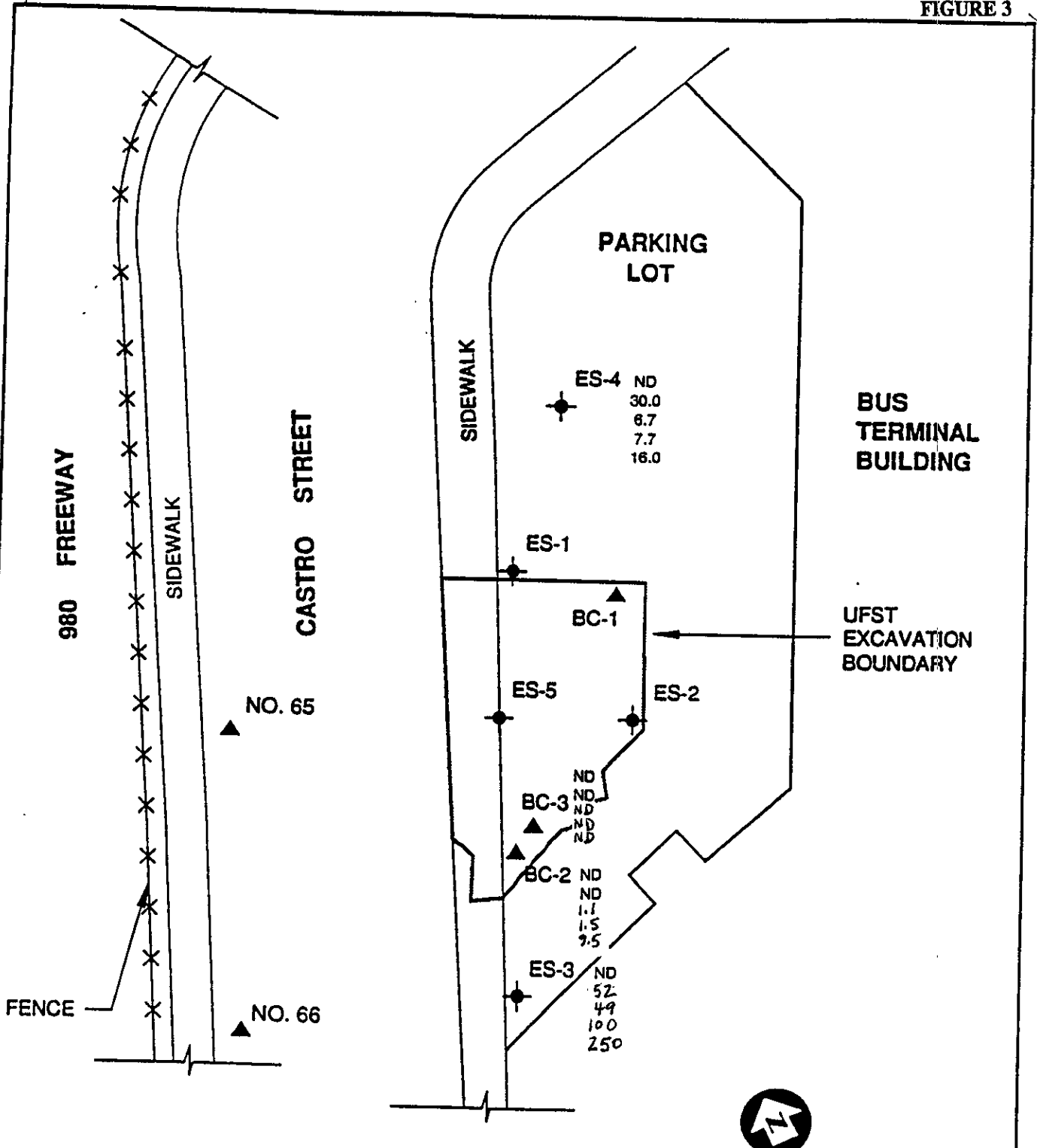
- (2-13) GROUNDWATER ELEVATION AT WELL (FEET ABOVE MEAN SEA LEVEL)
- 2 - Groundwater Elevation Contour
(Based on Groundwater Level Measurements taken on 1/7/93)





GREYHOUND LINES, INC.
 LOCATION 8934
 2103 SAN PABLO AVENUE
 OAKLAND, CALIFORNIA

GROUNDWATER CONTOUR MAP
 (1/7/93)

FIGURE 3

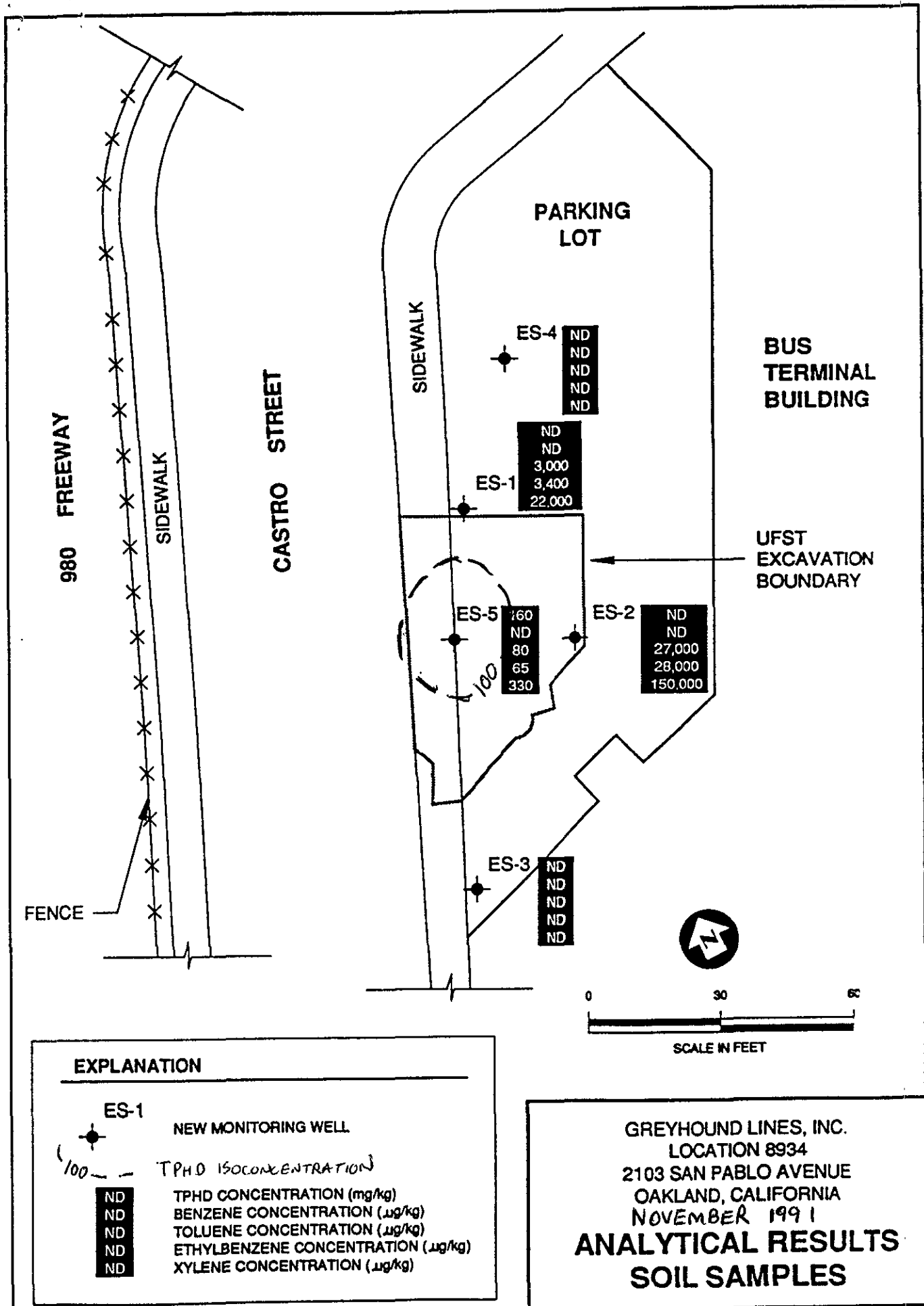


EXPLANATION



- 
ES-1
 NEW MONITORING WELL
- 
BC-1
 EXISTING MONITORING WELL
- ND
 ND
 1.1
 1.5
 9.5
- TPHD CONCENTRATION (mg/l)
 BENZENE CONCENTRATION (µg/l)
 TOLUENE CONCENTRATION (µg/l)
 ETHYLBENZENE CONCENTRATION (µg/l)
 XYLENE CONCENTRATION (µg/l)



GREYHOUND LINES, INC.
 LOCATION 8934
 2103 SAN PABLO AVENUE
 OAKLAND, CALIFORNIA
 JANUARY 7, 1993
ANALYTICAL RESULTS
GROUNDWATER SAMPLES



EXPLANATION

- 
ES-1
 NEW MONITORING WELL
- 
 TPHD ISOCONCENTRATION
- | |
|----|
| ND |
| ND |
| ND |
| ND |
| ND |
| ND |

 TPHD CONCENTRATION (mg/kg)
 BENZENE CONCENTRATION (µg/kg)
 TOLUENE CONCENTRATION (µg/kg)
 ETHYLBENZENE CONCENTRATION (µg/kg)
 XYLENE CONCENTRATION (µg/kg)

GREYHOUND LINES, INC.
 LOCATION 8934
 2103 SAN PABLO AVENUE
 OAKLAND, CALIFORNIA
 NOVEMBER 1991
ANALYTICAL RESULTS
SOIL SAMPLES

APPENDIX A
WASTE DISPOSAL MANIFESTS



EVERGREEN VACUUM SERVICES

VENDOR # 5284
INVOICE # 3992
ISS. DATE 1-18-93
AMOUNT 516.75
DATE 1-25-93
ACCT # 643

A member of the Evergreen Group of companies
dedicated to the protection of the environment.

6880 Smith Ave., Newark, CA 94560
(800) 972-5284 EPA ID# CAD980695761

INVOICE V No 3992

JOB LOCATION

JOB #

930301

BILLING INFORMATION

DATE:

1-18-93

OK CUM

CUSTOMER	NAME <u>Greyhound station</u>				NAME <u>H-372</u>				P.O.#	
	ADDRESS <u>2103 SAN PABLO AVE</u>				ADDRESS <u>3851 CHARLES PARK DR</u>				CUSTOMER NO. <u>926002</u>	
	CITY	STATE	ZIP	CO	CITY	STATE	ZIP	CO	PHONE NO. <u>(408) 265 4300</u>	
	<u>Oakland</u>	<u>CA</u>	<u>94606</u>		<u>SAN JOSE</u>	<u>CA</u>	<u>95136</u>			

PLEASE PAY FROM THIS INVOICE

TERMS: NET 7 DAYS

PRODUCT	MANIFEST #	GALLONS	PRICE	AMOUNT
WASTE PETROLEUM OILS COMBUSTIBLE LIQUID NA1270	<u>92690952</u>	<u>165</u>		
HAZARDOUS WASTE LIQUID ORME-E UN9189		<u>TRANS</u>		
WASTE OIL WITH > 1000 PPM HALOGENS				
OTHER:				

EMULSIFIED

TSDF EVERGREEN OIL, INC. (415) 795-4400
6880 Smith Ave. EPA ID# CAD980887418
Newark, CA

TOTAL CHARGES

I CERTIFY THAT THE ABOVE AMOUNTS AND INFORMATION TO BE CORRECT

Bruce m. Perno
DRIVER

ROUTE #

DRIVER SIGNATURE

[Signature]
GENERATOR'S SIGNATURE



EVERGREEN VACUUM SERVICES

A member of the Evergreen Group of companies
dedicated to the protection of the environment.

VENDOR # 5284
INVOICE # 4155
INV. DATE 4-15-93
AMOUNT 561.75
DATE 2-11-93
ACCT. # 643

INVOICE V No 4155

6880 Smith Ave., Newark, CA 94560
(800) 972-5284 EPA ID# CAD98069376

RECEIVED FEB 04 1993

JOB LOCATION

BILLING INFORMATION
ACCT. # 930321

DATE: 2-4-93

CUSTOMER	NAME <u>Greyhound Bus Terminal</u>				JOB # <u>930321</u>				P.O.#			
	ADDRESS <u>2103 San P.</u>				ADDRESS <u>3851 Charter Park Drive</u>				CUSTOMER NO.			
	CITY	STATE	ZIP	CO.	CITY	STATE	ZIP	CO.	PHONE NO.			
	<u>Oakland</u>	<u>CA</u>			<u>San Jose</u>	<u>CA</u>	<u>95131</u>		<u>(408) 265-7300</u>			

PLEASE PAY FROM THIS INVOICE

TERMS: NET 7 DAYS

PRODUCT	MANIFEST #	GALLONS	PRICE	AMOUNT
WASTE PETROLEUM OILS COMBUSTIBLE LIQUID NA1270	<u>92092492</u>	<u>165</u>		
HAZARDOUS WASTE LIQUID ORME-E UN9189		<u>Truck Time</u>		
WASTE OIL WITH > 1000 PPM HALOGENS				
OTHER:				

TSD/ EVERGREEN OIL, INC. (415) 795-4400
6880 Smith Ave. EPA ID# CAD980887418
Newark, CA

TOTAL CHARGES

I CERTIFY THAT THE ABOVE AMOUNTS AND INFORMATION TO BE CORRECT.

Wayman McDonald
DRIVER ROUTE # DRIVER SIGNATURE

[Signature]
GENERATOR'S SIGNATURE



EVERGREEN VACUUM SERVICES

A member of the Evergreen Group of Companies
dedicated to the protection of the environment

OK
CLIENT

INVOICE V No 4317

6880 Smith Ave., Newark, CA 94560
(800) 972-5284 EPA ID# CAD980695761

RECEIVED FEB 19 1993

CUSTOMER	JOB LOCATION				BILLING INFORMATION				DATE: 2-19-93
	NAME GREY HOUND STATION				NAME HSR				P.O.#
	ADDRESS 2103 SAN PABLO				ADDRESS 3851 CARTER PARK				CUSTOMER NO.
	CITY	STATE	ZIP	CO	CITY	STATE	ZIP	CO	PHONE NO.
	OAK, CA	94606		SAN JOSE, CA		95136		409 265 4300	

PLEASE PAY FROM THIS INVOICE

TERMS: NET 7 DAYS

PRODUCT	MANIFEST #	GALLONS	PRICE	AMOUNT
WASTE PETROLEUM OILS COMBUSTIBLE LIQUID NA1270	92092756	165 DISP		
HAZARDOUS WASTE LIQUID ORME-E UN9189/ENDOR # 5284				
WASTE OIL WITH > 1000 PPM HALOGENS INVOICE # 4317				
OTHER: INV. DATE 2-19-93				
AMOUNT 2-26-93				

TRANS.
POSTED

TSD/ EVERGREEN OIL, INC. (415) 7950000
6880 Smith Ave. EPA ID# CAD980887418
Newark, CA

DATE \$561.75
ACT # 643

TOTAL CHARGES

JOB # 926001 CERTIFY THAT THE ABOVE AMOUNTS AND INFORMATION TO BE CORRECT

DRIVER: *C.S. Sifuentes*
ROUTE #
DRIVER SIGNATURE

Richard Uyung
GENERATOR'S SIGNATURE

APPENDIX B
ANALYTICAL LABORATORY REPORT
AND CHAIN-OF-CUSTODY



Report Date: February 8, 1993

Work Order No.:4716

Client: Dave Nickerson
ES Syracuse/Greyhound-Oakland
290 Elwood Davis Road
Liverpool, NY 13088

Date of Sample Receipt: 01/08/92

Your water samples identified as:

ES-3
ES-4
BC-2
BC-3

were analyzed for BTEX by EPA Method 602 and diesel by TPHD
GCFID (3510) (modified EPA Method 8015).

Finally your water sample identified as:

TRIP BLANK

was analyzed for BTEX by EPA Method 602.

The analytical report for the samples listed above are
attached.

GC ANALYTICAL REPORT

analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GREYSTONE, OAKLAND

Work Order NO. #4216

Moisture: NA

Client ID: ES-2

Matrix: WATER

Laboratory ID: #4216-1

Level: NA

Date Collected: 01/02/93

Unit: UG/L

Dilution Factor: 5

Date Analyzed: 01/18/93

Date Confirmed: NA

Compound	Result	Reporting Limit
Benzene	52.0	1.5
Ethyl Benzene	100.0	1.5
Toluene	49.0	1.5
Xylenes (total)	250.0	3.0

ND: Not Detected
NA: Not Applicable
D: Dilution Factor

ANALYST: *AS*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT

Analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO. #4216

% Moisture: NA

Client ID: LS-4

Matrix: WATER

Laboratory ID: 4/16-2

Level: NA

Date Collected: 01/02/93

Unit: UG/L

Dilution Factor: 1

Date Analyzed: 01/14/93

Date Confirmed: NA

Compound	Result	Reporting Limit
----------	--------	-----------------

Benzene	30.0	0.3
Ethyl Benzene	7.7	0.3
Toluene	6.7	0.3
Xylenes (total)	16.0	0.6

ND Not Detected
NA Not Applicable
D Dilution Factor

ANALYST: *AS*

GROUP LEADER: *[Signature]*

6. ANALYTICAL REPORT

Analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME # GREYHOUND, OAKLAND

Work Order NO. #4216

Moisture#NA

Client ID#BL 2

Matrix#WATER

Laboratory ID#4216-3

Level#NA

Date Collected# 01/07/93

Unit#UG/L

Dilution Factor# 1

Date Analyzed#01/10/93

Date Confirmed#NB

Compound	Result	Reporting Limit
Benzene	ND	0.3
Ethyl Benzene	1.5	0.3
Toluene	1.1	0.3
Xylenes (total)	9.5	0.6

ND-Not Detected
NA-Not Applicable
D-Dilution Factor

Analyst: *AB*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT

Analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GRLYHOUND, OAKLAND

Work Order NO.: 4/16

% Moisture: NA

Client ID: BL 3

Matrix: WATER

Laboratory ID: 4/16-4

Level: NA

Date Collected: 01/07/95

Unit: UG/L

Dilution Factor: 1

Date Analyzed: 01/18/95

Date Confirmed: NA

Compound

Result

Reporting
Limit

Benzene

ND

0.3

Ethyl Benzene

ND

0.3

Toluene

ND

0.3

Xylenes (Total)

ND

0.6

ND: Not Detected
NA: Not Applicable
D: Dilution Factor

ANALYST: *AS*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT

Analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO.: 4716

% Moisture: ND

Client ID: IRTP BLANK

Matrix: WATER

Laboratory ID: 4716-5

Level: ND

Date Collected: 01/02/93

Unit: UG/L

Dilution Factor: 1

Date Analyzed: 01/18/93

Date Confirmed: ND

Compound	Result	Reporting Limit
Benzene	ND	0.3
Ethyl Benzene	ND	0.3
Toluene	ND	0.3
Xylenes (total)	ND	0.6

ND Not Detected
NI Not Applicable
D Dilution Factor

ANALYST: *AB*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT

Analytical Method

BIUX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO. #4216

% Moisture: NA

Client ID: METHOD BLANK

Matrix: WATER

Laboratory ID: MW062930114

Level: NR

Date Collected: NA

Unit: UG/L

Dilution Factor: 1

Date Analyzed: 01/14/93

Date Confirmed: NA

Compound

Result

Reporting
Limit

Benzene

ND

0.5

Ethyl Benzene

ND

0.3

Toluene

ND

0.3

Xylenes (total)

ND

0.6

ND Not Detected
NA Not Applicable
D Dilution Factor

ANALYST: AS

GROUP LEADER:



GC ANALYTICAL REPORT

Analytical Method

BTEX Aromatic Compounds (EPA Method 602)

PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO.: 4716

% Moisture: NA

Client ID: METHOD BLANK

Matrix: WATER

Laboratory ID: MW062930118B

Level: NA

Date Collected: NA

Unit: 06/L

Dilution Factor: 1


Date Analyzed: 01/18/93

Date Confirmed: NA

Compound	Result	Reporting Limit
Benzene	ND	0.3
Ethyl Benzene	ND	0.3
Toluene	ND	0.3
Xylenes (Total)	ND	0.6

ND-Not Detected
 NA-Not Applicable
 D-Dilution Factor

ANALYST: AB

GROUP LEADER: 

QUALITY CONTROL RESULTS SUMMARY
ANALYTICAL REPORT
BTEX AROMATIC COMPOUNDS

Work Order No.: 4716

QC Sample No.: SW06293011408B

Date analyzed: 01/14/93

Matrix: WATER

Dilution factor: 1

COMPOUND	SN	SR	MS	MSD	QC LIMITS
	UG/KG	UG/KG	UG/KG	UG/KG	RPD PR
8010 analysis					
COMPOUND	SN	SR	MS	MSD	QC LIMITS
	UG/KG	UG/KG	UG/KG	UG/KG	RPD PR
8020 analysis					
Benzene	20	ND	21	105	21.3 107 1 29 39-150
Toluene	20	ND	19.6	98	20.2 101 3 28 46-148

MS = Spike sample
MSD = Spike sample duplicate
SR = Sample result
SN = Spike added
ND = Not Found at or Above Detection Limits

NC = Not calculated
NA = Not Applicable
** = Out of limits

$$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$$

$$PR = 100 \times ((MS \text{ or } MSD) - SR) / SN$$

ANALYST: *AS*

QC: *MMB*

ES-ENGINEERING SCIENCE, INC.

600 Bancroft Way
Berkeley, CA 94710

GC ANALYTICAL REPORT

Analytical Method

Modified EPA 8015, TPHD GCFID(3510)

PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO.: 4716

Laboratory ID: 4716-1

Client ID: ES-3

Date Collected: 01/07/93

% Moisture: NA

Matrix: WATER

Level: NA

Units: mg/L

DIESEL:

Date Extracted: 01/19/93

Dilution Factor: 1.0

Date Analyzed: 01/28/93

Inst. Ser. #: EGC-2

QC Batch #: W93QCB002DFS

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *MS*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015, TPHD GCFID(3510)
PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO.: 4716
Laboratory ID: 4716-2
Client ID: ES-4
Date Collected: 01/07/93

% Moisture: NA
Matrix: WATER
Level: NA
Units: mg/L

DIESEL:
Date Extracted: 01/19/93
Dilution Factor: 1.0
Date Analyzed: 01/28/93
Inst. Ser. #: EGC-2
QC Batch #: W93QCB002DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *AB*

GROUP LEADER: *Wood*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015,TPHD GC/FID(3510)
PROJECT NAME: GREYHOUND, OAKLAND

Work Order NO.: 4716
Laboratory ID: 4716-3
Client ID: BC-2
Date Collected: 01/07/93

% Moisture: NA
Matrix: WATER
Level: NA
Units: mg/L

DIESEL:
Date Extracted: 01/19/93
Dilution Factor: 1.0
Date Analyzed: 01/28/93
Inst. Ser. #: EGC-2
QC Batch #: W93QCB002DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *AB*

GROUP LEADER: *Wood*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015,TPHD GCFID (3510)
PROJECT NAME:GREYHOUND, OAKLAND

Work Order NO.:4716
Laboratory ID:4716-4
Client ID:BC-3
Date Collected:01/07/93

% Moisture:NA
Matrix:WATER
Level:NA
Units:mg/L

DIFSEL:
Date Extracted:01/19/93
Dilution Factor: 1.0
Date Analyzed:01/28/93
Inst. Ser. #:EGC-2
QC Batch #:W93QCB002DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *ABC*

GROUP LEADER: *Russell*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015,TPHD GCFID (3510)
PROJECT NAME:GREYHOUND, OAKLAND

Work Order NO.:4716	% Moisture:NA
Laboratory ID:MWDES930119	Matrix:WATER
Client ID:METHOD BLANK	Level:NA
Date Collected:NA	Units:mg/L

DIESEL:
Date Extracted:01/19/93
Dilution Factor: 1.0
Date Analyzed:01/28/93
Inst. Ser. #:EGC-2
QC Batch #:W93QCB002DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *AB*

GROUP LEADER: *[Signature]*

QUALITY CONTROL RESULTS SUMMARY
VOLATILE ORGANICS ANALYSIS
METHOD 8015

Work Order No.: 4713,4716,4720,4721 Date collected: NA
 QC sample No.: SWDES930119A&B Date Extracted: 01/19/93
 Matrix: WATER Date analyzed: 01/28/93
 Units: MG/L Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS	
	MG/L	MG/L	MG/L	PR	MG/L	PR		RPD	PR
DIESEL	5.0	ND	3.9	79	3.92	78	1	25	50-150

MS = Spike sample NC = Not calculated
 MSD = Spike sample duplicate ** = Out of limits
 SR = Sample result
 SA = Spike added

$RPD = 100 \times (MS - MSD) / ((MS + MSD) / 2)$

$PR = 100 \times ((MS \text{ or } MSD) - SR) / SA$

ANALYST: *AMS*

QA: *AMS*

ENGINEERING-SCIENCE
CHAIN OF CUSTODY RECORD

ES JOB NO.		PROJECT NAME/LOCATION		PRESERVATIVES REQUIRED												SHIP TO:															
SY 139.33		GLI Oakland		<table border="1"> <tr> <td>H₂</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>												H ₂															ES BERKELEY
H ₂																															
FIELD CONTACT:		DAVE NICKERSON		ANALYSES REQUIRED																											
SAMPLERS NAMES & SIGNATURES																REMARKS															
DATE	TIME	FIELD SAMPLE IDENTIFIER																													
01/07/93	1215	ES-3		BTEX 602																											
	1225	ES-4		TPH-D																											
	1235	BC-2														BC-2 & BC-3															
	1245	BC-3														Went Dry Could only Get One TPH-D for EACH!															
FIELD CUSTODY RELINQUISHED BY: <i>Martin W. Miller</i>				DATE: 01/07/93				TIME: 1330																							
SHIPPED VIA: <i>FedEx</i>		AIRBILL # 4821484382		ON RECEIPT: CUSTODY SEALS? _____				TEMP: _____ °C																							
RECEIVED FOR LABORATORY BY: <i>[Signature]</i>				DATE: 01/08/93				TIME: 10:00																							