



ENGINEERING-SCIENCE, INC.

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August 5, 1992

Mr. Dennis Byrne
Alameda County Department
of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Greyhound Terminal
Location 8934
Monthly Monitoring

Dear Mr. Byrne:

On behalf of Greyhound Lines, Inc., Engineering-Science, Inc. (ES) is pleased to submit the July, 1992, monthly monitoring report for the Greyhound Terminal in Oakland. Attached you will find Table 1 which lists the measured water levels and free-product thicknesses from on-site wells monitored during our site visit. Figure 1 shows the locations of the monitoring wells.

During our site visit on July 7, 1992, groundwater samples were collected from all on-site monitoring wells which did not exhibit a measurable thickness of free-phase hydrocarbons. The samples were collected as part of Greyhound's quarterly sampling program. Groundwater samples were analyzed for TPHD DTSC (LUFT Method) and BTEX (EPA Method 602). The analytical data are summarized on Table 2. A copy of the analytical results and chain-of-custody are included as Attachment A.

Greyhound is currently finalizing plans and obtaining the required permits to install a hydrocarbon recovery system to address the free product plume at the facility. Greyhound will keep the Alameda County Department of Environmental Health informed of continuing remediation activities.

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

Sincerely,

ENGINEERING-SCIENCE, INC.

M-N. Miller/om

Martin N. Miller
Environmental Technician

David A. Nickerson

David A. Nickerson
Project Manager

MNM/DAN/lml

cc: Mr. Richard Hiatt, RWQCB
Tom Portele, GLI, Dallas, TX

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TABLE 1
GREYHOUND LINES, INC.
OAKLAND, CA
MONITORING SUMMARY
JUNE 7, 1992

Location	Depth to Liquid (feet)	Depth to Water (feet)	Product Thickness (feet)	Remarks
ES-1	18.60	18.60	0	Film
ES-2	20.02	19.62	.40	Free Product
ES-3	19.52	19.52	0	Clear
ES-4	18.51	18.51	0	Clear
ES-5	22.23	20.23	2.0	Free Product
BC-1	19.55	20.66	1.11	Free Product
BC-2	16.89	16.89	0	Clear
BC-3	16.68	16.68	0	Clear

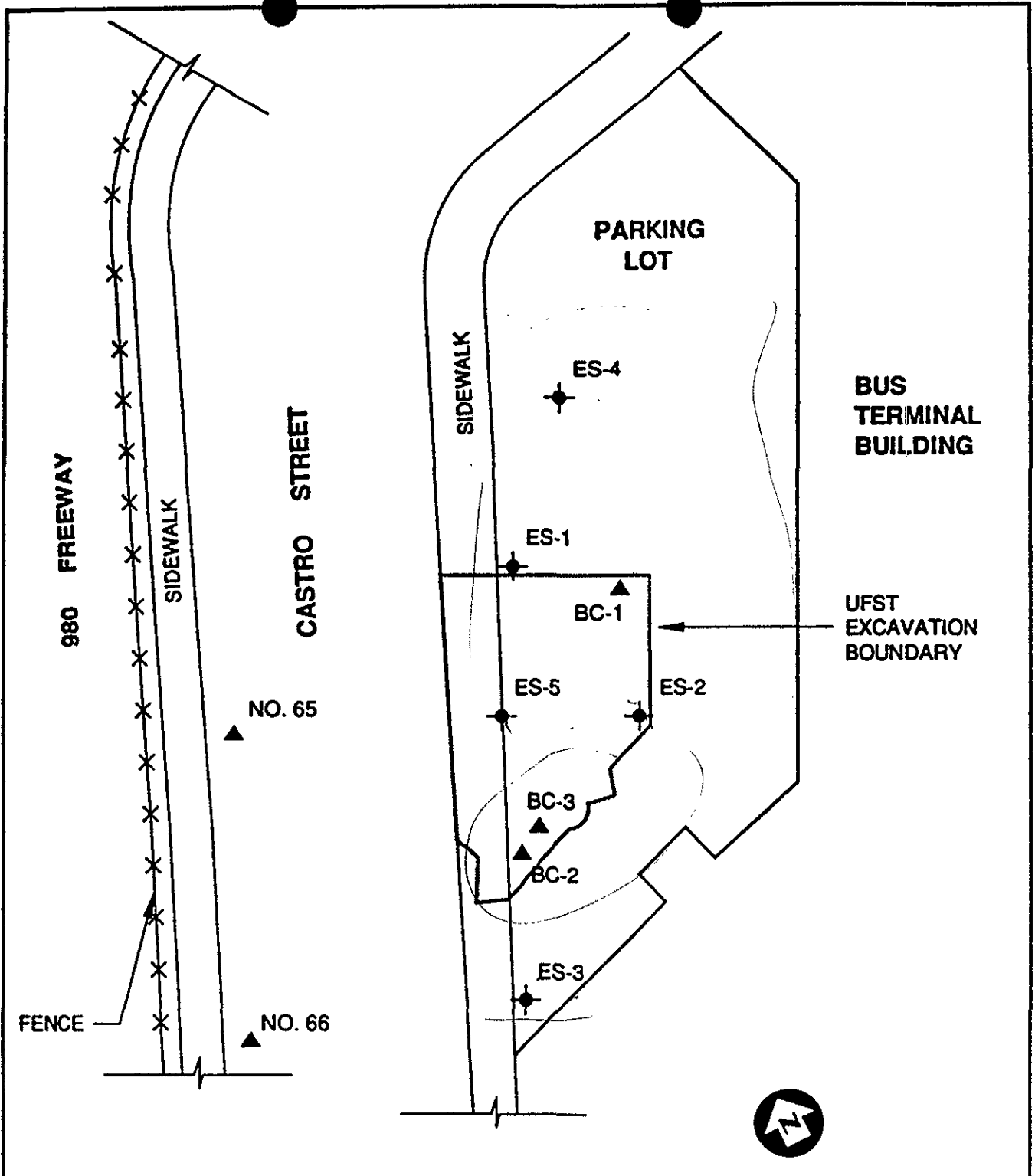
TABLE 2
ANALYTICAL DATA SUMMARY
OAKLAND, CALIFORNIA
JULY 8, 1992



Sample Location	Sample Matrix	Benzene	Toluene	Ethyl-benzene	Xylene	Total ⁽¹⁾ BTEX	TPH ⁽²⁾
ES-3	Water	54.0	21.0	48.0	34.0	157	1.3
ES-4	Water	31.0	5.6	ND	2.8	39.4	ND
BC-2	Water	ND	ND	ND	8.4	8.4	2.1
BC-3	Water	ND	2.5	ND	6.1	8.6	3.9

ND - Parameter analyzed but not detected above the Method Detection Limit.

(1) BTEX analysis by EPA Method 602, results reported in ug/l.

(2) TPHD (total petroleum hydrocarbons-diesel) analysis by EPA Modified Method 8015 (DTSC-LUFT) results reported in mg/l.



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

ATTACHMENT A
LABORATORY REPORT AND CHAIN-OF-CUSTODY

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.:4149

% Moisture:NA

Client ID:ES-3

Matrix:WATER

Laboratory ID:4149-2

Level:NA

Sample wt./vol : 5 ML

Unit:UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed:07/09/92
Date Confirmed:NA

=====

Compound	Result	Reporting Limit
Benzene	54.0	1.0
Ethyl Benzene	48.0	2.0
Toluene	21.0	2.0
Xylenes (total)	34.0	2.0

=====

Compound	Result	Reporting Limit
Benzene	54.0	1.0
Ethyl Benzene	48.0	2.0
Toluene	21.0	2.0
Xylenes (total)	34.0	2.0

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

ANALYST: *AW*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.:4149

% Moisture:NA

Client ID:ES-4

Matrix:WATER

Laboratory ID:4149-1

Level:NA

Sample wt./vol : 5 ML

Unit:UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed:07/09/92
Date Confirmed:NA

Compound	Result	Reporting Limit
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Benzene	31.0	1.0
Ethyl Benzene	ND	2.0
Toluene	5.6	2.0
Xylenes (total)	2.8	2.0

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

ANALYST: *APB*

GROUP LEADER: *[Signature]*

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.:4149

% Moisture:NA

Client ID:BC-2

Matrix:WATER

Laboratory ID:4149-4

Level:NA

Sample wt./vol : 5 ML

Unit:UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed:07/09/92
Date Confirmed:NA

=====

Compound	Result	Reporting Limit
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=====

Benzene	ND	1.0
Ethyl Benzene	ND	2.0
Toluene	ND	2.0
Xylenes (total)	8.4	2.0

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

ANALYST: *AB*

GROUP LEADER: *Rudert*

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.:4149

% Moisture:NA

Client ID:BC-3

Matrix:WATER

Laboratory ID:4149-3

Level:NA

Sample wt./vol : 5 ML

Unit:UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed:07/09/92
Date Confirmed:NA

=====

Compound	Result	Reporting Limit
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=====

Benzene	ND	1.0
Ethyl Benzene	ND	2.0
Toluene	2.5	2.0
Xylenes (total)	6.1	2.0

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

ANALYST: *ASB*

GROUP LEADER: *Fred*

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.:4149

% Moisture:NA

Client ID:TRIP BLANK

Matrix:WATER

Laboratory ID:4149-5

Level:NA

Sample wt./vol : 5 ML

Unit:UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed:07/09/92
Date Confirmed:NA

=====

Compound	Result	Reporting Limit
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=====

Benzene	ND	1.0
Ethyl Benzene	ND	2.0
Toluene	ND	2.0
Xylenes (total)	ND	2.0

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

ANALYST: *AM*

GROUP LEADER: *Rudal*

GC ANALYTICAL REPORT
Analytical Method
BTEX Aromatic Compounds

Work Order NO.: 4149

% Moisture: NA

Client ID: METHOD BLANK

Matrix: WATER

Laboratory ID: MWVG5920709

Level: NA

Sample wt./vol : 5 ML

Unit: UG/L

Dilution Factor: 1
COLUMN ID: VGC5-DB624

Date Analyzed: 07/09/92
Date Confirmed: NA

Compound	Result	Reporting Limit
Benzene	ND	1.0
Ethyl Benzene	ND	2.0
Toluene	ND	2.0
Xylenes (total)	ND	2.0

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

ANALYST: *AS*

GROUP LEADER: *fuwal*

QUALITY CONTROL RESULTS SUMMARY
ANALYTICAL REPORT
BTEX AROMATIC COMPOUNDS

Work Order No.: 4149

QC sample No.: SWVG5920702A&B

Date analyzed: 07/02/92

Matrix: WATER

Dilution factor: 1

COMPOUND	SA	SR	MS	MS	MSD	MSD	RPD	QC LIMITS	
8010 analysis	UG/L	UG/L	UG/L	PR	UG/L	PR		RPD	PR
8020 analysis	UG/L	UG/L	UG/L	PR	UG/L	PR		RPD	PR
Benzene	20.0	ND	21.1	106	21.2	106	0	29	39-150
Toluene	20.0	ND	21	105	21.8	109	4	28	46-148

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

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

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

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

ANALYST: AM

QC:

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015

Work Order NO.:4149
Laboratory ID:4149-02
Client ID:ES-3
Date Collected:07-07-92

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

DIESEL:
Date Extracted:07-10-92
Dilution Factor: 1.0
Date Analyzed:07-27-92
Inst. Ser. #:EGC-2 FID/NPD
QC Batch #:W92QCB009DES

Compound	Result	Reporting Limit
DIESEL	1.3	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *md*

GROUP LEADER: *lucy*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015

Work Order NO.:4149
Laboratory ID:4149-01
Client ID:ES-4
Date Collected:07-07-92

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

DIESEL:
Date Extracted:07-10-92
Dilution Factor: 1.0
Date Analyzed:07-27-92
Inst. Ser. #:EGC-2 FID/NPD
QC Batch #:W92QCB009DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *ml*

GROUP LEADER: *Ruser*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015

Work Order NO.:4149
Laboratory ID:4149-04
Client ID:BC-2
Date Collected:07-07-92

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

DIESEL:
Date Extracted:07-10-92
Dilution Factor: 1.0
Date Analyzed:07-27-92
Inst. Ser. #:EGC-2 FID/NPD
QC Batch #:W92QCB009DES

Compound	Result	Reporting Limit
DIESEL	2.1	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *mf*

GROUP LEADER: *hurd*

GC ANALYTICAL REPORT
Analytical Method
Modified EPA 8015

Work Order NO.:4149
Laboratory ID:4149-03
Client ID:BC-3
Date Collected:07-07-92

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

DIESEL:
Date Extracted:07-10-92
Dilution Factor: 1.0
Date Analyzed:07-27-92
Inst. Ser. #:EGC-2 FID/NPD
QC Batch #:W92QCB009DES

Compound	Result	Reporting Limit
DIESEL	3.9	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *ml*

GROUP LEADER: *Luon*

GC ANALYTICAL REPORT

Analytical Method
Modified EPA 8015

Work Order NO.:4149
Laboratory ID:MWDES920710
Client ID:(METHOD BLANK)
Date Collected:07-07-92

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

DIESEL:
Date Extracted:07-10-92
Dilution Factor: 1.0
Date Analyzed:07-27-92
Inst. Ser. #:EGC-2 FID/NPD
QC Batch #:W92QCB009DES

Compound	Result	Reporting Limit
DIESEL	ND	0.05

ND-Not Detected
NA-Not Applicable

ANALYST: *mf*

GROUP LEADER: *Luved*

QUALITY CONTROL RESULTS SUMMARY
VOLATILE ORGANICS ANALYSIS
METHOD 8015

Work Order No.: 4149,4163 Date collected: NA
 QC sample No.: SWDES920710A&B Date Extracted: 07-10-92
 Matrix: WATER Date analyzed: 07-27-92
 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	3.8	77	4.0	79	3	25	75-125

MS = Spike sample
 MSD = Spike sample duplicate
 SR = Sample result
 SA = Spike added

NC = Not calculated
 ** = Out of limits

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

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

ANALYST: *MJ*

QA:

ENGINEERING-SCIENCE

CHAIN OF CUSTODY RECORD FOR WATER SAMPLES

ES JOB NO. 54139.33		PROJECT NAME/LOCATION GLI Oakland		PRESERVATIVES REQUIRED										SHIP TO: EFREN SABLAN, SAMPLE CUSTODIAN ENGINEERING-SCIENCE BERKELEY LABORATORY 600 BANCROFT WAY BERKELEY, CA 94710 VOICE: 415/841-7353 OR 415/548-7970 FAX: 415/548-7635		
FIELD CONTACT: David Nickerson		ANALYSES REQUIRED										REMARKS				
SAMPLERS NAMES & SIGNATURES MARTIN N. MILLER <i>Martin N. Miller</i>																
DATE	TIME	FIELD SAMPLE IDENTIFIER	BTEX METHANOL 80% TPH (LUST)													BTEX (3-40 ml) (ground water) TPH-D (2-1L) No Labels were put on from Lab TEMP. 6°C
07/07/92	1315	ES-4	X	X												
07/07/92	1330	ES-3	X	X												
07/07/92	1400	BCE3	X	X												
07/07/92	1415	BCE2	X	X												
?	?	TRIP BLANKS	X													
FIELD CUSTODY RELINQUISHED BY: <i>Martin N. Miller</i>		DATE: 07/07/92 TIME: 1500														
SHIPPED VIA: <i>FedEx</i>		AIRBILL # <i>3927632903</i>		ON RECEIPT: CUSTODY SEALS? _____ ; TEMP: _____ °C												
RECEIVED FOR LABORATORY BY: <i>[Signature]</i>		DATE: 07/08/92 TIME: 0900														