PACIFIC
ENVIRONMENTAL
GROUP, INC.

Be 10/19/93

September 21, 1993
Project 305-79.01

Mr. Robert E. Cave
Permit Services Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

Re: BAAQMD Authority to Construct 10111 Start-up Results
Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California
WIC No 204-7620-1502

Dear Mr. Cave:

On behalf of Shell Oil Company, Pacific Environmental Group, Inc. (PACIFIC) is operating a soil vapor extraction (SVE) and treatment system (S-1 and A-1, respectively) at the site referenced above. This letter presents source emission test results for the first 3 days of SVE system operation, as required by the referenced Authority to Construct. Source test data, summarized in Table 1, verify that the SVE system is in compliance with permit conditions.

Condition 4 of the referenced Authority to Construct requires that the influent and effluent vapor from the SVE system be sampled and analyzed for benzene and total volatile organic compounds (VOCs) during the first 3 days of operation. In addition, Condition 4 requires that the benzene emission rate be calculated in pounds per day (lbs/day), based on the effluent vapor analysis results and the SVE system flow rate.

Influent and effluent vapor samples were collected on August 31 through September 2, 1993 and sent to Sequoia Analytical (Sequoia), a California State-certified laboratory. The samples were analyzed for total petroleum hydrocarbons calculated as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) using EPA Method 8015/8020. SVE flow rate during the first

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

3 days of operation was monitored via a Pitot tube assembly at the inlet to S-1. Certified analytical reports and chain-of-custody documentation for both influent and effluent samples are included as Attachment A.

If you have any questions or require addition information, please do not hesitate to call me.

Sincerely,

Pacific Environmental Group, Inc.

Suzanne McClurkin-Nelson
Engineering Technician

Mark W. Boyd
Staff Engineer

Attachments: Table 1 - Soil Vapor Extraction System Start-up Data
Attachment A - Certified Analytical Reports and Chain-of-Custody Documentation

cc: Mr. Dan Kirk, Shell Oil Company
Mr. Barney Chan, Alameda County Health Care Services Agency

Table 1
Soil Vapor Extraction System Start–up Data

Shell Service Station
285 Hegenberger Road at Leet Drive
Oakland, California

Date Sampled	Flow Rate (scfm)	TPH as Gasoline: Influent Concentration (ppmv)	TPH as Gasoline: Effluent Concentration (ppmv)	TPH as Gasoline: Destruction Efficiency (%)	TPH as Gasoline: Emmision Rate (lbs/day)	Benzene: Influent Concentration (ppmv)	Benzene: Effluent Concentration (ppmv)	Benzene: Destruction Efficiency (%)	Benzene: Emmision Rate (lbs/day)
08/30/93	33.5	7,801	NS	--	--	124	NS	--	--
08/31/93	37.3	2,364	57	97.60	3.405	28	0.15	99.47	0.006
09/01/93	30.1	3,073	19	99.39	0.904	49	0.07	99.85	0.002
09/02/93	46.3	2,080	15	99.27	1.126	55	0.49	99.11	0.025

TPH = Total petroleum hydrocarbons
scfm = Standard cubic feet per minute
ug/L = Micrograms per liter
lbs = Pounds
NS = Not sampled
Destruction efficiency [%] = [(1 – (effluent concentration/influent concentration))*100]
August 30, 1993 system start–up terminated due to equipment malfunctions.

200 gall / day
24 hr
24(60) min → .14 gal/min

ATTACHMENT A

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on August 31,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3HE7101	Air, Infl	8/31/93	EPA 5030/8015/8020
3HE7102	Air, Effl	8/31/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	305-79.01/Shell, Oakland	Sampled:	Aug 31, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Aug 31, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 1, 1993
Attention: Justin Hawkins	First Sample #:	3HE7101		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3HE7101 Infl	Sample I.D. 3HE7102 Effl
Purgeable Hydrocarbons	5.0	10,000	240
Benzene	0.050	99	0.52
Toluene	0.050	47	0.76
Ethyl Benzene	0.050	110	8.1
Total Xylenes	0.050	170	14
Chromatogram Pattern:		Gas + Non-gas < C8	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	2.5
Date Analyzed:	8/31/93	8/31/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	102	100

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-79.01/Shell, Oakland
QC Sample Group: 3HE7101-02

Reported: Sep 1, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nipp	M. Nipp	M. Nipp	M. Nipp
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK083193	GBLK083193	GBLK083193	GBLK083193
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/31/93	8/31/93	8/31/93	8/31/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	99	100	99	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HD6202	3HD6202	3HD6202	3HD6202
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	8/31/93	8/31/93	8/31/93	8/31/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	100	100	100	100
Matrix Spike Duplicate % Recovery:	100	100	110	107
Relative % Difference:	0.0	0.0	9.5	6.8

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Page 1 of 1

Site Address: 285 Hegenberger Rd Oakland

WIC#: 204-5508-5504

Shell Engineer: DAN Kirk
Phone No.: 675 4768 (510)
Fax #: 675 6172

Consultant Name & Address:
PACIFIC ENVIRONMENTAL GROUP, INC.
2025 GATEWAY PLACE, Ste. 440 SAN JOSE, CALIFORNIA 95110

Consultant Contact: Justin Hawkins
Phone No.: 408 441-7500
Fax #: 441-7539

Comments:

Sampled by: [signature]

Printed Name: Joe Vojcek

LAB: Sequoia

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 GRO			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	8/31/93				X	1						X				1 Liter Amber	N	N	UST Soil Vapor	9308E71
VEW1																				
VEW2																				
VEW-3			CANCELLED PER JUSTIN HAWKINS																	
VEW-4																				
VEW-5																				
EFFL																				

UST AGENCY: _____

CHECK ONE (1) BOX ONLY	CT/DT
G.W. Monitoring	4461
Site Investigation	4441
Soil Classify/Disposal	4442
Water Classify/Disposal	4443
Soil/Air Rem. or Sys. O & M	X 4452
Water Rem. or Sys. O & M	4453
Other	

TURN AROUND TIME: 24 hours X; 48 hours; 15 days (Normal); Other

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

Relinquished By (signature)	Printed Name	Date / Time	Received (signature)	Printed Name	Date / Time
[signature]	Joe Vojcek	8-31-93 1450	[signature]	David Alderman	8/31/93 1450
[signature]	David Alderman	8/31/93 3:40			

Received (signature): [signature] — Printed Name: P. HUFANO — Date: 8-31-93 Time: 1540

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Shell Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH

MASTER LOG NO. / PAGE: 9308E71
DATE OF LOG-IN: 8-31-93

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken*
2. Custody Seal Nos.: —
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker (Present) / Absent
6. Airbill No.: —
7. Sample Tags: (Present) / Absent* Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact)/Broken*/Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives Used: (Yes) / No*
11. Date Rec. at Lab: 8-31-93
12. Time Rec. at Lab: 1540

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	INFL	TEDLAR	A	8-31	
2		VEW 1				
3		2				
4		3				
5		4				
6		5				
7		EFFL				

* If checked, contact Project Manager and attach record of resolution

SHELL OIL COMPANY 305 7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 8-31-93
Page 1 of 1

Site Address: 285 Hegenberger Rd Oakland

WIC#: 204-5508-5504

Shell Engineer: DAN Kirk
Phone No.: (510) 675 4768
Fax #: 676 6172

Consultant Name & Address: PACIFIC ENVIRONMENTAL GROUP, INC.
2025 GATEWAY PLACE, Ste. 440 SAN JOSE, CALIFORNIA 95110

Consultant Contact: Justin Hawkins
Phone No.: 408 441-7500
Fax #: 441-7539

Comments:

Sampled by: _____

Printed Name: Joe Vujcich

LAB: Segona

CHECK ONE (1) BOX ONLY		CT/DT
G.W. Monitoring	☐	4461
Site Investigation	☐	4441
Soil Classify/Disposal	☐	4442
Water Classify/Disposal	☐	4443
Soil/Air Rem. or Sys. O & M	☒	4452
Water Rem. or Sys. O & M	☐	4453
Other	☐	

TURN AROUND TIME
- 24 hours ☒
- 48 hours ☐
- 15 days ☐ (Normal)
- Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 GRO	Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL	8/31/93				X	1						X		1 Liter Amber	N	N	UST Soil Vapor	
~~Vent~~	↓				↓	↓						↓		↓		↓		
Vent 2																		
Vent 3																		
Vent 4																		
~~Vent 5~~																		
EFFL	↓				↓	↓						↓		↓		↓		

	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature): Joe Vujcich	Joe Vujcich	8-31-93	1450	David Alderman	David Alderman	8/31/93	1450
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:
Relinquished By (signature):	Printed Name:	Date:	Time:	Received (signature):	Printed Name:	Date:	Time:

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Rev. 1/12/93

Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on September 2,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I05401	Air, Infl	9/1/93	EPA 5030/8015/8020
3I05402	Air, Effl	9/1/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	305-79.01/Shell, Oakland	Sampled:	Sep 1, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 2, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 9, 1993
Attention: Justin Hawkins	First Sample #:	3I05401		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L (ppb)	Sample I.D. 3I05401 Infl	Sample I.D. 3I05402 Effl
Purgeable Hydrocarbons	5.0	13,000	79
Benzene	0.050	170	0.25
Toluene	0.050	95	0.38
Ethyl Benzene	0.050	120	2.8
Total Xylenes	0.050	230	5.0
Chromatogram Pattern:		Gas + Non-gas < C8	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	9/2/93	9/2/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	111	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Justin Hawkins

Client Project ID: 305-79.01/Shell, Oakland
QC Sample Group: 3I05401-02
Reported: Sep 9, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nipp	M. Nipp	M. Nipp	M. Nipp
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK090293	GBLK090293	GBLK090293	GBLK090293
Date Prepared:	-	-	-	-
Date Analyzed:	9/2/93	9/2/93	9/2/93	9/2/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	99	100	100	100
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HD3602	3HD3602	3HD3602	3HD3602
Date Prepared:	-	-	-	-
Date Analyzed:	9/2/93	9/2/93	9/2/93	9/2/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	100	100	100	103
Matrix Spike Duplicate % Recovery:	110	110	110	107
Relative % Difference:	9.5	9.5	9.5	3.8

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

CLIENT NAME: PEG
REC. BY: (PRINT): LS

MASTER LOG NO. / PAGE: 9309054
DATE OF LOG-IN: 9-2-93

CIRCLE THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s): Present / (Absent) Intact / Broken*	01	A	INFL	1 bag	air	9/1	
2. Custody Seal Nos.: —	02	A	EFFL	↓	↓		
3. Chain-of-Custody Records: (Present) / Absent*							
4. Traffic Reports or Packing List: Present / (Absent)							
5. Airbill: Airbill / Sticker Present / (Absent)							
6. Airbill No.: —							
7. Sample Tags: (Present) / Absent* Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody							
8. Sample Condition: (Intact) / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*							
10. Proper Preservatives Used: (Yes) / No*							
11. Date Rec. at Lab: 9-2-93							
12. Time Rec. at Lab: 1130							

* If Circled, contact Project Manager and attach record of resolution

Form SC001

SHELL OIL COMPANY 305 79.01
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9-1-93
Page 1 of 1

Site Address: 285 Hegenberger OAKLand

WIC#: 204 7620 1502

Shell Engineer: DAN Kirk
Phone No.: (510) 675-6168
Fax #: 675-6172

Consultant Name & Address:
PACIFIC ENVIRONMENTAL GROUP, INC.
2025 GATEWAY PLACE, Ste. 440 SAN JOSE, CALIFORNIA 95110

Consultant Contact: JUSTIN HAWKINS
Phone No.: 408 441-7500
Fax #: 441-7539

Comments:

Sampled by: Joe Vojvoda

Printed Name: Joe Vojvoda

Analysis Required

LAB: SEQUOIA

CHECK ONE (1) BOX ONLY	CT/DT
G.W. Monitoring	☐ 4461
Site Investigation	☐ 4441
Soil Classify/Disposal	☐ 4442
Water Classify/Disposal	☐ 4443
Soil/Air Rem. or Sys. O & M	☒ 4452
Water Rem. or Sys. O & M	☐ 4453
Other	☐

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days ☒ (Normal) Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: _____

	Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1	INFL	9/1/93				X	1						Y				Liter (brass)	N	N	UST/Soil VAPOR	9309054
2	EFFL	↓				↓	1						↓				↓	↓	↓	gas	

Relinquished By (signature): Joe Vojvoda	Printed Name: Joe Vojvoda	Date: 9-1-93 Time: 1500	Received (signature): M Doden	Printed Name: M Doden	Date: 9/2/93 Time: 0730
Relinquished By (signature): M Doden	Printed Name: M Doden	Date: 9/2/93 Time: 0915	Received (signature): David Alderman	Printed Name: David Alderman	Date: 9/2/93 Time: 10:5
Relinquished By (signature): David Alderman	Printed Name: David Alderman	Date: 9/2/93 Time: 1130	Received (signature): L Stenstrom	Printed Name: L Stenstrom	Date: 9/2/93 Time: 1130

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

(rev. 1/13/93) Shell Oil Chn. of Custody

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Boyd

Project: 305-79.01/Shell, Oakland

Enclosed are the results from 2 air samples received at Sequoia Analytical on September 3,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3I14901	Air, Infl	9/2/93	EPA 5030/8015/8020
3I14902	Air, Effl	9/2/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	305-79.01/Shell, Oakland	Sampled:	Sep 2, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Air	Received:	Sep 3, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Sep 9, 1993
Attention: Mark Boyd	First Sample #:	3I14901		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3I14901 Infl	Sample I.D. 3I14902 Effl
Purgeable Hydrocarbons	5.0	8,800	64
Benzene	0.050	190	1.7
Toluene	0.050	130	1.0
Ethyl Benzene	0.050	130	4.4
Total Xylenes	0.050	330	5.0
Chromatogram Pattern:		Gas	Gas

Quality Control Data

Report Limit Multiplication Factor:	100	1.0
Date Analyzed:	9/4/93	9/4/93
Instrument Identification:	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	123	110

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Boyd

Client Project ID: 305-79.01/Shell, Oakland

QC Sample Group: 3I14901-02

Reported: Sep 9, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	M. Nipp	M. Nipp	M. Nipp	M. Nipp
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK090493	GBLK090493	GBLK090493	GBLK090493
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/4/93	9/4/93	9/4/93	9/4/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	100	100	100	103
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	3HE7803	3HE7803	3HE7803	3HE7803
Date Prepared:	N.A.	N.A.	N.A.	N.A.
Date Analyzed:	9/4/93	9/4/93	9/4/93	9/4/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	110	110	110	107
Matrix Spike Duplicate % Recovery:	110	100	110	107
Relative % Difference:	0.0	9.5	0.0	0.0

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation and analytical methods employed for the samples. The LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SHELL OIL COMPANY 305-7901
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No: _____

Date: 9/3/93
Page 1 of 1

Site Address: 285 HEGENBERGER, OAKLAND

WIC#: 204-5508-5304

Shell Engineer: DANKIRK — Phone No.: (510) 675-6168 Fax #: (510) 675-6172

Consultant Name & Address: PACIFIC ENVIRONMENTAL GROUP, INC. 2025 GATEWAY PLACE, Ste. 440 SAN JOSE, CALIFORNIA 95110

Consultant Contact: MARK BOYD — Phone No.: 408 441-7500 Fax #: 441-7539

Comments:

Sampled by: JAMES C. MONROE

Printed Name: JAMES MONROE

LAB: SEQUOIA

Analysis Required

CHECK ONE (1) BOX ONLY	CT/DT
G.W. Monitoring	4461
Site Investigation	4441
Soil Classify/Disposal	4442
Water Classify/Disposal	4443
Soil/Air Rem. or Sys. O & M	4452
Water Rem. or Sys. O & M	4453
Other	

TURN AROUND TIME: 24 hours ☐ 48 hours ☐ 15 days ☒ (Normal) Other ☐ _____

NOTE: Notify Lab as soon as Possible of 24/48 hrs. TAT.

UST AGENCY: _____

Sample ID	Date	Sludge	Soil	Water	Air	No. of conts.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Combination TPH 8015 & BTEX 8020 GAS			Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
INFL.	9/3/93				X	1						X							UST SOIL VAPOR GAS	9309149-01
EFFL.	9/3/93				X	1						X							↓	02

	Printed Name:	Date:	Time:
Relinquished By (signature):	JAMES C. MONROE	9/3/93	1730
Relinquished By (signature):	M DODEN	9/3/93	1430
Relinquished By (signature):	D. NEWCOMB	9/3/93	1450

	Printed Name:	Date:	Time:
Received (signature):	M DODEN	9/3/93	1730
Received (signature):	D. NEWCOMB	9/3/93	1430
Received (signature):			

THE LABORATORY MUST PROVIDE A COPY OF THIS CHAIN-OF-CUSTODY WITH INVOICE AND RESULTS

Shell Oil Chain of Custody

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): PH

MASTER LOG NO. / PAGE: 9309149
DATE OF LOG-IN: 9-3-93

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
1. Custody Seal(s):	Present / (Absent) Intact / Broken*	01	A	INFL	TEDLAR	A	9-2	
2. Custody Seal Nos.:		02	↓	EFFL	↓	↓	↓	
3. Chain-of-Custody Records:	(Present) / Absent*							
4. Traffic Reports or Packing List:	Present / (Absent)							
5. Airbill:	Airbill / Sticker Present / (Absent)		N.S.					
6. Airbill No.:								
7. Sample Tags:	(Present) / Absent*							
Sample Tag Nos.:	(Listed) / Not Listed on Chain-of-Custody							
8. Sample Condition:	(Intact)/Broken*/Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree?	(Yes) / No*							
10. Proper Preservatives Used:	Yes / No*							
11. Date Rec. at Lab:	9-3-93							
12. Time Rec. at Lab:	1420							

*If no, contact Project Manager and attach record of resolution