

GeoStrategies Inc.

2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545

9211251 00 4:17

5-10 71J

(510) 352-4800

March 26, 1992

Mr. Dennis J. Byrne
Alameda County Health Agency Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Marvin Shell
601

Reference: Shell Service Station
4411 Foothill Boulevard
Oakland, California
WIC #204-5508-3400

Mr. Byrne:

As requested by Mr. Stan Roller of Shell Oil Company, we are forwarding a copy of the March 26, 1992 Waste Oil Tank Removal Observation Report for the above referenced location.

Should you have any questions or comments, please do not hesitate to call.

Sincerely

A handwritten signature in cursive script that reads "Clyde J. Galantine".

Clyde J. Galantine
Geologist

enclosure

cc: Mr. Stan Roller, Shell Oil Company
Mr. Dan Kirk, Shell Oil Company
Mr. Antonio Edayan, Oakland Fire Prevention Bureau



GeoStrategies Inc.

WASTE OIL TANK REMOVAL OBSERVATION REPORT

Shell Service Station
4411 Foothill Boulevard
Oakland, California, California
WIC #204-5508-3400

768101-01

March 26, 1992



GeoStrategies Inc.

2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545

(510) 352-4800

March 26, 1992

Shell Oil Company
P.O. Box 4023
Concord, California 94520

Attn: Stan Roller

Re: WASTE OIL TANK REMOVAL OBSERVATION REPORT
Shell Service Station
4411 Foothill Boulevard
Oakland, California
WIC #204-5508-3400

Gentlemen:

This Waste Oil Tank Removal Observation Report by GeoStrategies Inc. (GSI) summarizes our observations at the above referenced site during the recent waste oil tank removal (Plate 1). Field excavation work was performed by Delta/Bay Builders Inc. of Antioch, California in February 1992. Field sampling was performed by GSI to comply with procedures in the State of California Water Resources Control Board (SWRCB) Leaking Underground Fuel Tank (LUFT) Field Manual and local regulations. A GSI geologist was present on-site to observe the UST removal and to collect soil samples from the waste oil tank excavation and soil stockpiles. A description of field procedures and sampling results are discussed in this report.

SITE DESCRIPTION

This site is currently occupied by a Shell Service Station. The waste oil tank was located west of the station building (Plate 2). The waste oil tank has not been in use since February 1991.

WORK DESCRIPTION

The waste oil tank was removed and sampled on February 5, 1992. The waste oil tank removal was witnessed by representatives from the Oakland Fire Department and the Alameda County Health Agency Division of Hazardous Materials (Alameda County). After removal of the waste oil tank, a soil sample was collected from beneath the tank. Soil sampling was witnessed by the Alameda County representative.

GeoStrategies Inc.

Shell Oil Company
March 26, 1992
Page 2

A soil stockpile sample was collected February 5, 1992. Upon receipt of the chemical analytical data, the stockpile was transported to the appropriate landfill.

FIELD METHODS AND PROCEDURES

Soil samples were collected by pushing a clean stainless steel sample tube into the soil until completely full. The tube was removed, covered at both ends with teflon tape and sealed with plastic end caps. The samples were labeled, placed in a cooler on blue ice, entered on a Chain-of-Custody form and transported to Sequoia Analytical Laboratory, a State-certified environmental laboratory located in Redwood City, California.

The sample beneath the waste oil tank was collected by using a backhoe bucket. The top 1 to 3 inches of soil was removed, then the sample was collected as described above.

The soil stockpile sample was collected by removing the top 6 to 12 inches of soil, then collecting the sample as described above. Four subsamples were collected for approximately 50 cubic yards of soil. The subsamples were later composited in the laboratory.

Waste Oil Tank Excavation

Soil sample SW-1 was collected at the bottom of the excavation at a depth of approximately 11 feet below grade. The location of this sample is shown on Plate 3.

The sample was analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline), Diesel (TPH-Diesel) and Oil (TPH-Oil) according to EPA Method 8015 (Modified), benzene, toluene, ethylbenzene and xylenes (BTEX) according to EPA Method 8020, Oil and Grease (O&G) according to ASTM Method 5520 E&F, Halogenated Volatile Organics (CL HC) according to EPA Method 8240 and ICAP Metals by atomic absorption (EPA Method 7000).

Sample SW-1 contained no detectable (ND) concentrations for the previously mentioned constituents except for 6.7 parts per million (ppm) total lead. Chemical analytical data are summarized in Table 1.

Soil Stockpile

Approximately 62 cubic yards of soil were stockpiled south and west of the excavation (Plate 3). Soil sample SWS-1A-D was collected from this stockpile.

768101-1

- No 8270
analytical data

GeoStrategies Inc.

Shell Oil Company
March 26, 1992
Page 3

Sample SWS-1A-D was analyzed for the above listed compounds (ie: the same as sample SW-1). In addition, the stockpile was analyzed for CAM wet 17 metals and Reactivity, Corrosivity and Ignitability for acceptance at an appropriate landfill.

Sample SWS-1A-D contained 5.2 ppm TPH-Gasoline, 0.011 ppm benzene, 14 ppm TPH-Diesel and ~~120 ppm~~ O&G. Chemical analytical data are summarized in Table 1.

SOIL STOCKPILE DISPOSITION


Upon receipt of the chemical analytical results, approximately 62 cubic yards of soil represented by sample SWS-1A-D were transported by U.S. Services to the Browning Ferris Inc. landfill, located in Livermore, California.

If you have any questions, please call.

GeoStrategies Inc. by,



Clyde J. Galantine
Geologist



John F. Vargas
Senior Geologist
R.G. 5046



CJG/JFV/dls

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Soil Sample and Stockpile Map

Appendix A: Analytical Laboratory Report and Chain-of-Custody Form

QC Review: RAL

768101-1

TABLE 1

SOIL ANALYTICAL DATA

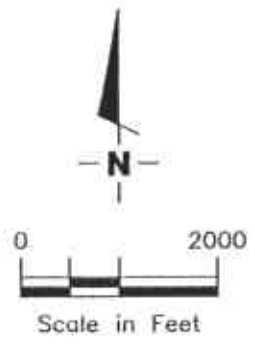
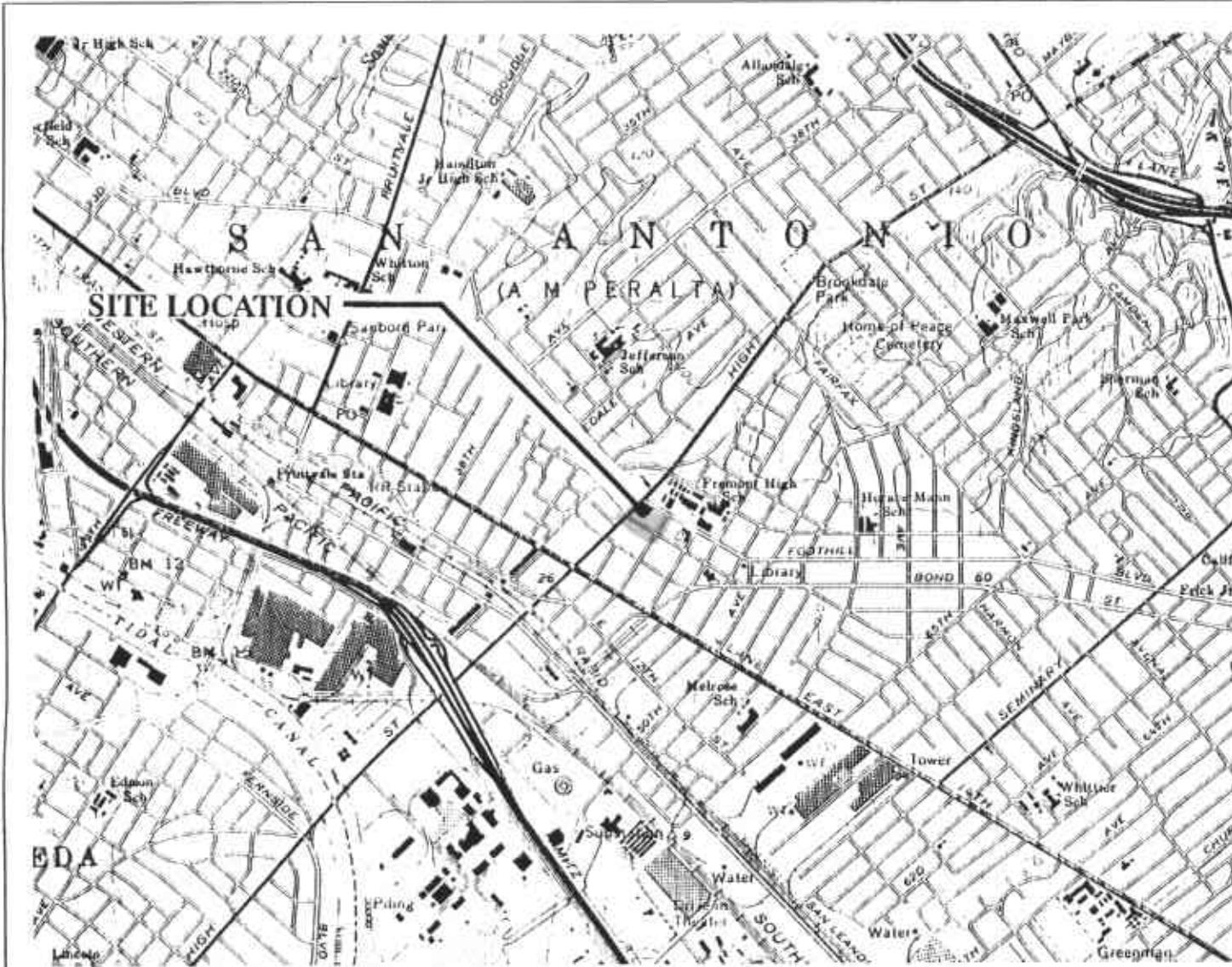
EXCAVATION AND STOCKPILE

SAMPLE #	DEPTH (FT')	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	O&G (PPM)	TOTAL LEAD PPM
SW-1	11	05-Feb-92	21-Feb-92	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<30	6.7
SWS-1A-D		05-Feb-92	21-Feb-92	5.2	0.011	0.0080	0.012	0.018	14	130	

native

stock pile

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
 TPH-D = Total Petroleum Hydrocarbons calculated as Diesel
 O&G = Oil & Grease
 PPM = Parts Per Million
 SW = Excavation sample
 SWS = Stockpile sample



Base Map: USGS Topographic Map



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VICINITY MAP
 Shell Service Station
 4411 Foothill Boulevard
 Oakland, California

PLATE

1

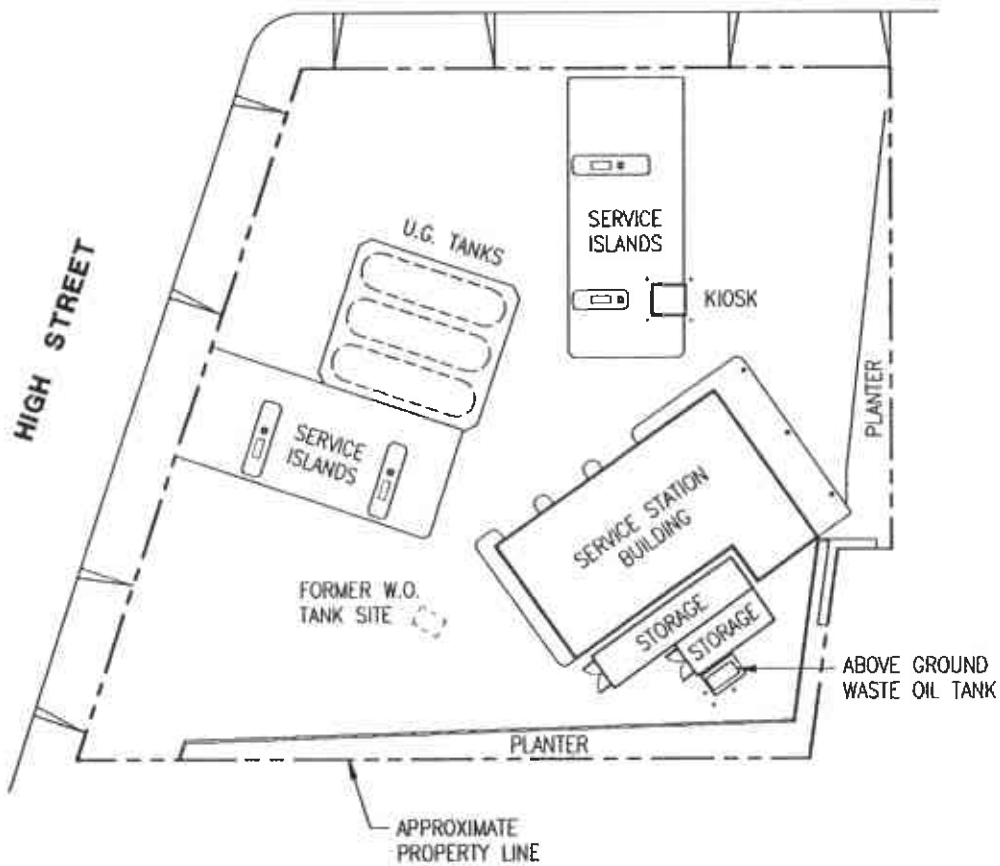
JOB NUMBER
7681

REVIEWED BY

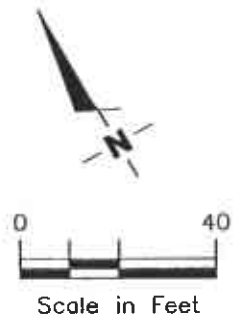
DATE
3/92

REVISED DATE

FOOTHILL BOULEVARD



Base Map: Shell Oil Company Site Plan
dated 3/6/91 (Rev. 1/10/92)



GeoStrategies Inc.

SITE PLAN
Shell Service Station
4411 Foothill Boulevard
Oakland, California

PLATE
2

JOB NUMBER
768101-1

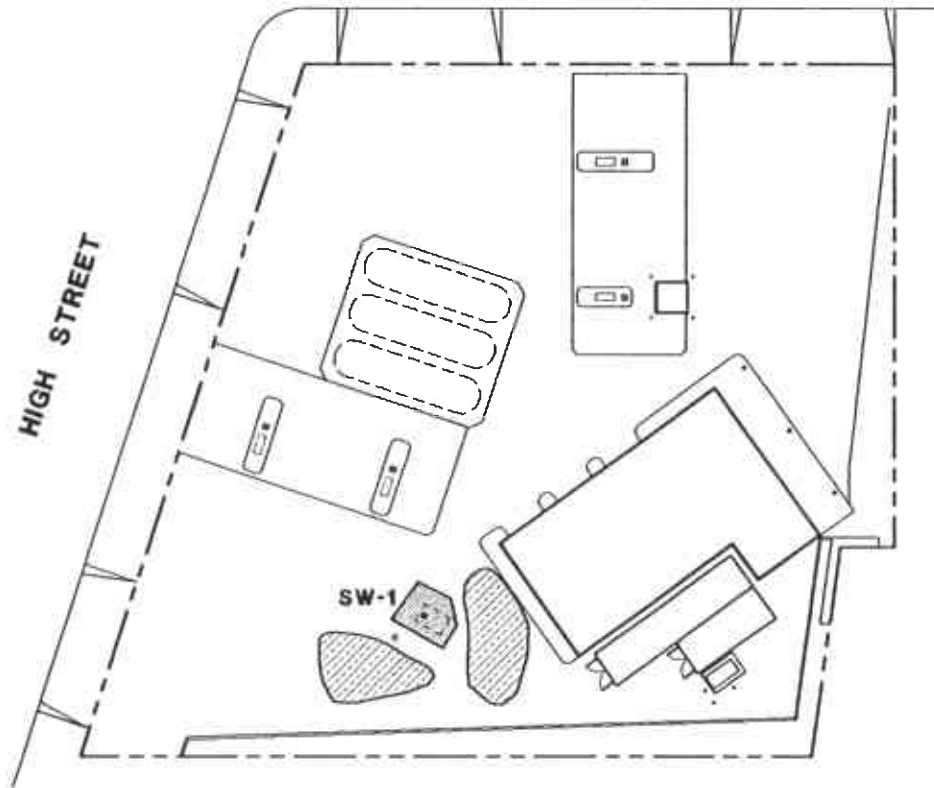
REVIEWED BY

DATE
3/92




REVISED DATE

FOOTHILL BOULEVARD

HIGH STREET

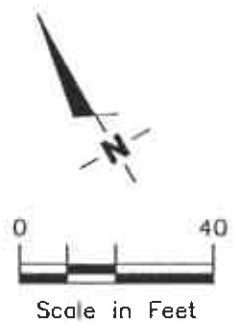


EXPLANATION

-  Approximate excavation area
-  Approximate soil stockpile area
-  SW-1 Waste oil tank excavation sample

Base Map: Shell Oil Company Site Plan dated 3/6/91 (Rev. 1/10/92)

assumed gradient is westerly



GeoStrategies Inc.

SOIL SAMPLE AND STOCKPILE MAP
Shell Service Station
4411 Foothill Boulevard
Oakland, California

PLATE

3

JOB NUMBER
768101-1

REVIEWED BY
CJG

DATE
3/92

REVISED DATE

GeoStrategies Inc.

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



SEQUOIA ANALYTICAL

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

RECEIVED
FEB 11 1992

FEB 11 1992

GETTLER-RYAN INC.
GENERAL CONTRACTORS

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Project: 7681.01, Shell, Oakland

Enclosed are the results from 2 soil samples received at Sequoia Analytical on February 6, 1992. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
2020900	Soil, SW-1	2/5/92	EPA 3550/8015 EPA 5030/8015/8020 EPA 8240 SM 5520 E&F (Gravimetric)
2020901 A-D	Soil, SWS1 A-D	2/5/92	EPA 3550/8015 EPA 5030/8015/8020 EPA 8240 SM 5520 E&F (Gravimetric)

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

Vickie Tague
Project Manager

681-A



SEQUOIA ANALYTICAL

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

Gettler Ryan	Client Project ID: 7681.01, Snell, Oakland	Sampled: Feb 5, 199
2150 W. Winton Avenue	Matrix Descript: Soil	Received: Feb 6, 199
Hayward, CA 94545	Analysis Method: EPA 5030/8015/8020	Analyzed: Feb 7, 199
Attention: John Wertz	First Sample #: 202-0900	Reported: Feb 21, 199

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P.	Benzene	Toluene	Ethyl	Xylenes
		Hydrocarbons			Benzene	
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
202-0900	SW-1	N.D.	N.D.	N.D.	N.D.	N.D.
2020901 A-D	SWS1 A-D	5.2	0.011	0.0080	0.012	0.018

Detection Limits:	1.0	0.0050	0.0050	0.0050	0.0050
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager



SEQUOIA ANALYTICAL

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

Gettler Ryan	Client Project ID: 7681.01, Shell, Oakland	Sampled: Feb 5, 199
2150 W. Winton Avenue	Matrix Descript: Soil	Received: Feb 6, 199
Hayward, CA 94545	Analysis Method: EPA 3550/8015	Extracted: Feb 7, 199
Attention: John Werfal	First Sample #: 202-0900	Analyzed: Feb 7, 199
		Reported: Feb 21, 199

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons mg/kg (ppm)
202-0900	SW-1	N.D.
2020901 A-D	SWS1 A-D	14

Detection Limits:

1.0

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

Please Note:

Sample SWS1 A-D does not appear to contain diesel fuel. Higher boiling point compounds predominate.

2020900.GET <2>



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

Gettler Ryan	Client Project ID: 7681.01, Shell, Oakland	Sampled: Feb 5, 199
2150 W. Winton Avenue	Matrix Descript: Soil	Received: Feb 6, 199
Hayward, CA 94545	Analysis Method: SM 5520 E&F (Gravimetric)	Extracted: Feb 10, 199
Attention: John Werfal	First Sample #: 202-0900	Analyzed: Feb 10, 199
		Reported: Feb 21, 199

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
202-0900	SW-1	N.D.
2020901 A-D	SWS1 A-D	130

Detection Limits: 30

Analytes reported as N.D. were not present above the stated limit of detection.

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Vickie Tague
Project Manager

2020900.GET <3>



SEQUOIA ANALYTICAL

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

Gettler Ryan	Client Project ID: 7681.01, Shell, Oakland	Sampled: Feb 5, 1999
2150 W. Winton Avenue	Sample Descript: Soil, SW-1	Received: Feb 6, 1999
Hayward, CA 94545	Analysis Method: EPA 8240	Analyzed: Feb 10, 1999
Attention: John Werfal	Lab Number: 202-0900	Reported: Feb 21, 1999

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acetone.....	500	N.D.
Benzene.....	100	N.D.
Bromodichloromethane.....	100	N.D.
Bromoform.....	100	N.D.
Bromomethane.....	100	N.D.
2-Butanone.....	500	N.D.
Carbon disulfide.....	100	N.D.
Carbon tetrachloride.....	100	N.D.
Chlorobenzene.....	100	N.D.
Chloroethane.....	100	N.D.
2-Chloroethyl vinyl ether.....	500	N.D.
Chloroform.....	100	N.D.
Chloromethane.....	100	N.D.
Dibromochloromethane.....	100	N.D.
1,1-Dichloroethane.....	100	N.D.
1,2-Dichloroethane.....	100	N.D.
1,1-Dichloroethene.....	100	N.D.
cis-1,2-Dichloroethene.....	100	N.D.
trans-1,2-Dichloroethene.....	100	N.D.
1,2-Dichloropropane.....	100	N.D.
cis-1,3-Dichloropropene.....	100	N.D.
trans-1,3-Dichloropropene.....	100	N.D.
Ethylbenzene.....	100	N.D.
2-Hexanone.....	500	N.D.
Methylene chloride.....	250	N.D.
4-Methyl-2-pentanone.....	500	N.D.
Styrene.....	100	N.D.
1,1,2,2-Tetrachloroethane.....	100	N.D.
Tetrachloroethene.....	100	N.D.
Toluene.....	100	N.D.
1,1,1-Trichloroethane.....	100	N.D.
1,1,2-Trichloroethane.....	100	N.D.
Trichloroethene.....	100	N.D.
Trichlorofluoromethane.....	100	N.D.
Vinyl acetate.....	100	N.D.
Vinyl chloride.....	100	N.D.
Total Xylenes.....	100	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Vickie Tague
Vickie Tague
Project Manager



SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland
Sample Descript: Soil
Lab Number: 202-4158

Sampled: Feb 24, 1992
Received: Feb 27, 1992
Extracted: Feb 27, 1992
Reported: Mar 4, 1992

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Soluble Threshold Limit Concentration
Waste Extraction Test

Total Threshold Limit Concentration

Analyte	STLC	Detection	Analysis	TTL	Detection	Analysis
	Max. Limit (mg/L)	Limit (mg/L)	Result (mg/L)	Max. Limit (mg/kg)	Limit (mg/kg)	Result (mg/kg)
Antimony	15	0.10	0.15	500	5.0	-
Arsenic	5.0	0.10	N.D.	500	5.0	-
Barium	100	0.10	6.9	10,000	5.0	-
Beryllium	0.75	0.010	N.D.	75	0.50	-
Cadmium	1.0	0.010	N.D.	100	0.50	-
Chromium (VI)	5.0	0.0050	N.D.	500	0.050	-
Chromium (III)	560	0.010	0.056	2,500	0.50	-
Cobalt	80	0.050	1.1	8,000	2.5	-
Copper	25	0.010	1.3	2,500	0.50	-
Lead	5.0	0.10	0.28	1,000	5.0	-
Mercury	0.20	0.00020	N.D.	20	0.010	-
Molybdenum	350	0.050	N.D.	3,500	2.5	-
Nickel	20	0.050	0.54	2,000	2.5	-
Selenium	1.0	0.10	N.D.	100	5.0	-
Silver	5.0	0.010	N.D.	500	0.50	-
Thallium	7.0	0.10	N.D.	700	5.0	-
Vanadium	24	0.050	0.69	2,400	2.5	-
Zinc	250	0.010	0.47	5,000	0.50	-
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTL results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager



SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland

QC Sample Group: 202-4158

Reported: Mar 4, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	pH	Sulfide	Cyanide
Method:	EPA 9040	EPA 9030	EPA 9010
Analyst:	Y. Arceaga	Samra/Colon	L. Colon
Reporting Units:	units	mg/kg	mg/L
Date Analyzed:	Feb 27, 1992	Mar 2, 1992	Feb 24, 1992
QC Sample #:	202-4157	202-4158	202-3224
Sample Conc.:	6.8	N.D.	N.D.
Spike Conc. Added:	N.A.	1300	8.0
Conc. Matrix Spike:	N.A.	1000	6.6
Matrix Spike % Recovery:	N.A.	77	82
Conc. Matrix Spike Dup.:	6.8	1000	6.7
Matrix Spike Duplicate % Recovery:	N.A.	77	84
Relative % Difference:	0.0	0.0	1.5

SEQUOIA ANALYTICAL

Vickie Tague
Vickie Tague
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



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Client Project ID: 7681.01, Shell, Oakland

QC Sample Group: 202-4158

Reported: Mar 4, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	STLC Barium	STLC Beryllium	STLC Cadmium	STLC Chromium	STLC Cobalt	STLC Copper
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7
Analyst:	M. Mistry	M. Mistry	M. Mistry	M. Mistry	M. Mistry	M. Mistry
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992
QC Sample #:	202-4529	202-4529	202-4529	202-4529	202-4529	202-4529
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	10	10	10
Conc. Matrix Spike:	8.6	8.1	8.5	8.4	8.2	9.1
Matrix Spike % Recovery:	86	81	85	84	82	91
Conc. Matrix Spike Dup.:	8.6	8.1	8.5	8.4	8.2	9.0
Matrix Spike Duplicate % Recovery:	86	81	85	84	82	90
Relative % Difference:	0.0	0.0	0.0	0.0	0.0	1.1

SEQUOIA ANALYTICAL

J. K. Werfal
Vickie Tague
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland

QC Sample Group: 202-4158

Reported: Mar 4, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	STLC Arsenic	STLC Lead	STLC Selenium	STLC Thallium	STLC Mercury
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 245.1
Analyst:	M. Mistry	M. Mistry	M. Mistry	M. Mistry	J. Martinez
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 3, 1992
QC Sample #:	202-4529	202-4529	202-4529	202-4529	203-0142
Sample Conc.:	0.35	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	200	10	0.0020
Conc. Matrix Spike:	10	7.9	250	8.1	0.0022
Matrix Spike % Recovery:	97	79	125	81	110
Conc. Matrix Spike Dup.:	10	8.0	250	8.1	0.0022
Matrix Spike Duplicate % Recovery:	97	80	125	81	110
Relative % Difference:	0.0	1.3	0.0	0.0	0.0

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SEQUOIA ANALYTICAL

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Gettier Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland

QC Sample Group: 202-4158

Reported: Mar 4, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	STLC Molybdenum	STLC Nickel	STLC Silver	STLC Vanadium	STLC Zinc	STLC Antimony
Method:	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7	EPA 200.7
Analyst:	M. Mistry	M. Mistry	M. Mistry	M. Mistry	M. Mistry	M. Mistry
Reporting Units:	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Date Analyzed:	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992	Mar 2, 1992
QC Sample #:	202-4529	202-4529	202-4529	202-4529	202-4529	202-4529
Sample Conc.:	N.D.	N.D.	ND..	N.D.	0.014	N.D.
Spike Conc. Added:	10	10	10	10	10	10
Conc. Matrix Spike:	8.7	8.0	8.3	8.5	8.4	8.4
Matrix Spike % Recovery:	87	80	83	85	84	84
Conc. Matrix Spike Dup.:	8.7	8.0	8.3	8.5	8.4	8.3
Matrix Spike Duplicate % Recovery:	87	80	83	85	84	83
Relative % Difference:	0.0	0.0	0.0	0.0	0.0	1.2

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.:

COPY

Date: _____
Page 1 of 1

Site Address: 4411 Foothill Blvd Oakland
WICH: 204-5508-3400

Shell Engineer: Dan Kirk
Phone No. 685-3850
Fax # (510) 685-3943

Consultant Name & Address: Gettler-Ryan / GeoStrategies
7681.01 2150 W. Winton Ave.
Hayward, California 94545

Consultant Contact: John Werfal
Phone No. 783-7500
Fax #: 783-1089

Comments: ~ 40-50 yds³
Duplicate of SWS-1A-D

Sampled By: Clyde Galant
Printed Name: Clyde Galant

Analysis Required

TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Oil & Grease - 5520 E&F	X CAM 17 metals (STC)	X RCF
-------------------------	----------------------------	---------------------	------------------------------	-------------------	-------------------------	-----------------------	-------

LAB: Sequoia

CHECK ONE (1) BOX ONLY	CTAT	TURN AROUND TIME
Quarterly Monitoring <input type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation <input type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal <input checked="" type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample - Sys O&M <input type="checkbox"/>	5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

Sample ID	Date	Soil	Water	Air	No. of conds.
SWS-1A-D	2-24-92	X			1

Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
1/2 gal		Y		2024158

Relinquished By (signature): Clyde Galant
Printed name: Clyde Galant
Date: 2-24-92
Time: 3:15

Relinquished By (signature): Refrigerator
Printed name: _____
Date: 2-27-92
Time: 9:10

Relinquished By (signature): Clyde Galant
Printed name: Clyde Galant
Date: 2-27-92
Time: 9:10

Received (signature): Refrigerator
Printed name: _____
Date: 2-27-92
Time: 9:10

Received (signature): Clyde Galant
Printed name: Clyde Galant
Date: 2-27-92
Time: 9:10

Received (signature): Kevin Follett
Printed name: Kevin Follett
Date: 2-27-92
Time: 2:27:52

Printed name: _____
Date: 2-24-92
Time: 3:15

Printed name: Clyde Galant
Date: 2-27-92
Time: 9:10

Printed name: Kevin Follett
Date: 2-27-92
Time: 2:27:52

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

Last Revision Date: 10/15/91
Kevin Follett

Kevin Follett

2-27-92
0945

led 7/11 2/27 945



SEQUOIA ANALYTICAL

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

RECEIVED

FEB 27 1992

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

GETTLER-RYAN INC.
GENERAL CONTRACTORS

Project: 7681.01, Shell, Oakland

Enclosed are the results from 1 soil sample relogged at Sequoia Analytical on February 21, 1992. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
2020900	Soil, SW-1	2/5/92	Miscellaneous Metals

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

Vickie Tague
Project Manager

681-A



SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland
Sample Descript: Soil, SW-1
Lab Number: A2020900

Sampled: Feb 5, 1992
Relogged: Feb 21, 1992
Analyzed: Feb 24, 1992
Reported: Feb 26, 1992

LABORATORY ANALYSIS

Analyte	Detection Limit mg/kg	Sample Results mg/kg
Cadmium.....	0.010	N.D.
Chromium.....	0.010	79
Lead.....	0.10	6.7
Nickel.....	0.050	180
Zinc.....	0.010	56

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager



SEQUOIA ANALYTICAL

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

Gettler Ryan
2150 W. Winton Avenue
Hayward, CA 94545
Attention: John Werfal

Client Project ID: 7681.01, Shell, Oakland

QC Sample Group: 202-0900

Reported: Feb 26, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	Lead	Cadmium	Chromium	Nickel	Zinc
---------	------	---------	----------	--------	------

Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Analyst:	M. Mistry	M. Mistry	M. Mistry	M. Mistry	M. Mistry
Reporting Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Analyzed:	Feb 24, 1992	Feb 24, 1992	Feb 24, 1992	Feb 24, 1992	Feb 24, 1992
QC Sample #:	202-3215	202-3215	202-3215	202-3215	202-3215

Sample Conc.:	N.D.	N.D.	84	50	25
Spike Conc. Added:	50	50	50	50	50
Conc. Matrix Spike:	51	47	130	96	72
Matrix Spike % Recovery:	102	94	92	92	94
Conc. Matrix Spike Dup.:	52	48	130	98	74
Matrix Spike Duplicate % Recovery:	104	96	92	96	98
Relative % Difference:	1.9	2.1	0.0	2.1	2.7

SEQUOIA ANALYTICAL

Vickie Tague
Project Manager

% Recovery:	$\frac{\text{Conc. of M.S.} - \text{Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$
Relative % Difference:	$\frac{\text{Conc. of M.S.} - \text{Conc. of M.S.D.}}{(\text{Conc. of M.S.} + \text{Conc. of M.S.D.}) / 2} \times 100$

REQUEST TO RELOG SAMPLES
 (Please submit to sample control with a copy of the COC)

CLIENT: Gettler Ryan

MATRIX: soil

PREVIOUSLY LOGGED SAMPLES

TAT Change status to: 15
 Change status as of Day: 2/21 Time: 2PM

CHANGE ANALYSES

Add Analyses:

Cancel Analyses

Sample Number	Analyses	Sample Number	Analyses
<u>2020900</u>	<u>Cd, Cr, Pb, Ni, Zn</u>		

SAMPLES ON HOLD
 Add analyses

Sample description	Analyses

TAT _____
 Client Authorization (Person/Date/Time) Clyde Gallantime
 Project Manager Vickie



SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No.:

Date:

Page / of

Site Address: 4411 Foothill Blvd Oakland

WIC#: 204-5508-3400

Shell Engineer: Dan Kirk Phone No. 685-3850
Fax # (510) 685-3943

Consultant Name & Address: Gettler-Ryan / GeoStrategies
7681.01 2150 W. Winton Ave.
Hayward, California 94545

Consultant Contact: John Werfal Phone No. 783-7500
Fax #: 783-1089

Comments: W.O. Tank pull
~ 40-50 yd³ stockpile

Sampled By: Clyde Galantina

Printed Name: Clyde Galantina

Analysis Required

LAB: Sequoia

CHECK ONE (I) BOX ONLY	CT/DT	TURN AROUND TIME
Quarterly Monitoring <input type="checkbox"/>	5461	24 hours <input type="checkbox"/>
Site Investigation SW-1 <input checked="" type="checkbox"/>	5441	48 hours <input type="checkbox"/>
Soil for disposal SWS-1A-D <input checked="" type="checkbox"/>	5442	15 days <input checked="" type="checkbox"/> (Normal)
Water for disposal <input type="checkbox"/>	5443	Other <input type="checkbox"/>
Air Sample- Sys O&M <input type="checkbox"/>	5452	NOTE: Notify Lab as soon as possible of 24/48 hrs. TAT.
Water Sample - Sys O&M <input type="checkbox"/>	5453	
Other <input type="checkbox"/>		

Sample ID	Date	Soil	Water	Air	No. of conds.	TPH (EPA 8015 Mod. Gas)	TPH (EPA 8015 Mod. Diesel)	BTEX (EPA 8020/602)	Volatile Organics (EPA 8240)	Test for Disposal	Oil & Grease - 5520 E&F	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
SW-1	2-5-92	X			1	X	Y	X	X		X	26"		N	2020900	5441 Investigate
SWS-1A-D	2-5-92	X			4	X	X	X	X		X	"		Y	↓ 01	5442 Disposal

Relinquished By (signature): <u>Clyde Galantina</u>	Printed name: <u>Clyde Galantina</u>	Date: <u>2-5-92</u>	Time: <u>15:50</u>	Received (signature): <u>Refrigerator #2</u>	Printed name: <u>681</u>	Date: <u>2-5-92</u>	Time: <u>15:50</u>
Relinquished By (signature): <u>Retrieval #2 GSS</u>	Printed name: <u>AKH</u>	Date: <u>2-6-92</u>	Time: <u>12:00</u>	Received (signature): <u>AKH</u>	Printed name: <u>Frank Clui</u>	Date: <u>2-6-92</u>	Time: <u> </u>
Relinquished By (signature): <u>AKH</u>	Printed name: <u>Frank A Clui</u>	Date: <u>2-6-92</u>	Time: <u>15:15</u>	Received (signature): <u>Sophia Patiga</u>	Printed name: <u>SOPHIA PATIGA</u>	Date: <u>2-6</u>	Time: <u>3:15</u>

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