GeoStrategies Inc.

April 9, 1993

3714

Shell Oil Company
P. O. Box 5278
Concord, California 94520

Attn: Mr. Dan Kirk

Re: **QUARTERLY REPORT/HYDROPUNCH SURVEY**
Shell Service Station
350 Grand Avenue
Oakland, California
WIC# 204-5510-0204

Mr. Kirk:

This Quarterly Report/Hydropunch Survey prepared by GeoStrategies Inc. (GSI) presents the results of the 1993 first quarter sampling and describes the drilling of [redacted] at the above-referenced site (Plate 1). Groundwater sampling data were furnished by the Shell Oil Company sampling contractor.

EXECUTIVE SUMMARY

- Three hydropunch borings (HP-1 through HP-3) were drilled on January 27, 1993 to delineate the lateral and vertical extent of petroleum hydrocarbons in soil and groundwater.
- The groundwater samples from Borings HP-2 and HP-3 were reported as None Detected (ND) for benzene.
- Well S-3 has remained ND for benzene since October 1991.

766705-12

SITE DESCRIPTION

There are currently three ground-water monitoring wells at the site; Wells S-1 through S-3 (Plate 2). In addition, eight exploratory soil borings have been drilled at the site (S-A through S-E and HP-1 through HP-3). These wells and borings were installed and drilled in 1990 and 1993 by GSI.

CURRENT QUARTER SAMPLING RESULTS

Depth to water-level measurements were obtained in each monitoring well on January 6, 1993. Static ground-water levels were measured from the surveyed top of each well box and recorded to the nearest $\pm$0.01 foot. Water level elevations, referenced to Mean Sea Level (MSL) datum and the stabilized values of measured physical parameters are presented in Table 1. Water level data were used to construct a quarterly water-level map (Plate 2). no potentiometric contours.
Each well was monitored for the presence of floating product. Floating product was not observed in the wells this quarter.

what's the flow direction? (looks NE, away from Lake)

Ground-water samples were collected from the monitoring wells on January 6, 1993. Samples were analyzed for Total Petroleum Hydrocarbons calculated as Gasoline (TPH-Gasoline) according to EPA Method 8015 (Modified), and for Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) according to EPA Method 8020. The ground-water samples were analyzed by Anametrix, Inc., a California State-certified laboratory located in San Jose, California. The laboratory analytical reports and Chain-of-Custody form are presented in Appendix A. A chemical isoconcentration map for benzene is presented on Plate 3. Current and historical chemical analytical data are presented in Table 2. ✓

HYDROPUNCH SOIL BORING SURVEY

On January 27, 1993, hydropunch soil borings HP-1, HP-2, and HP-3 were drilled to depths of 10, 13, and 14 feet below grade, respectively. A truck-mounted hollow-stem auger drilling rig was used to drill the hydropunch borings.

Soil samples were collected at five-foot intervals using a modified California split-spoon sampler fitted with stainless steel and brass tube liners. A GSI geologist observed the drilling, described the soil samples using the Unified Soil Classification System and Munsell Soil Color Chart, and prepared a lithologic log for each boring. Field work was performed according to GSI Field Methods and Procedures (included in the GSI Work Plan dated August 6, 1992). The borings were backfilled with 11-sack cement grout from total depth to ground surface. The exploratory boring logs are presented in Appendix B.

Soil Sampling

A soil sample collected from each sampled interval was used to perform head-space analysis in the field as a reconnaissance-level indicator of the presence of organic vapor. Head-space analysis involved removing soil from the stainless steel liner into a clean jar and immediately covering the jar with aluminum foil secured under a ring-type threaded lid. After approximately 20 minutes, the foil was pierced and the head-space within the jar was tested for total organic vapor using an Organic Vapor Meter (OVM) photoionization detector. The results of head-space analysis are presented on the boring logs (Appendix B).

Soil samples retained for chemical analysis were collected in clean brass tube liners. Upon removal from the sampler, the soil samples were immediately covered on both ends with teflon tape and sealed with plastic end caps. The soil samples were labeled, entered on a Chain-of-Custody form, placed in a cooler with blue ice and transported to National Environmental Testing, Inc. (NET), a State-certified analytical laboratory located in Santa Rosa, California.

Water Sampling

Groundwater samples were collected from the hydropunch borings using a clean, acrylic bailer. The samples were placed in 40-milliliter glass VOA bottles, entered on a Chain-of-Custody Form, placed in a cooler with blue ice, and submitted to NET Pacific, Inc., a State-certified analytical laboratory located in Santa Rosa, California.

Soil Analytical Results

The soil samples were collected at 6.5 feet below grade and submitted to NET Pacific for chemical analysis. Samples were analyzed for TPH-Gasoline, TPH-Diesel and BTEX. Chemical analytical results are summarized in Table 3.

TPH-Gasoline, TPH-Diesel and benzene were detected only in soil sample HP-1-6.5, at concentrations of 1500, 18 and 0.11 parts per million (ppm), respectively. Soil samples from HP-2 and HP-3 were ND for TPH-Gasoline and Benzene. The NET Pacific analytical report and Chain-of-Custody form are presented in Appendix C.

Groundwater Analytical Results

The groundwater samples from the hydropunch borings were submitted to NET Pacific for chemical analysis. Specific chemical analysis for these water samples included TPH-Gasoline, TPH-Diesel, and BTEX. Chemical analytical results are summarized in Table 2.

TPH-Gasoline and benzene were detected in water sample HP-1 at 22,000 and 2,500 parts per billion (ppb), respectively. Water samples for Borings HP-2 and HP-3 were ND for TPH-Gasoline and benzene. These data have been plotted and are presented on the benzene concentration map (Plate 3).

DISCUSSION

On January 27, 1993, three off-site hydropunch borings (HP-1, HP-2, and HP-3) were drilled for soil and groundwater sample collection (Plate 2). The borings were drilled to total depths of 10, 13, and 14 feet below grade, respectively. TPH-Gasoline and Benzene were detected in soil sample HP-1-6.5 at concentrations of 1,500 and 0.11 ppm, respectively. The soil samples from borings HP-2 and HP-3 were ND for TPH-Gasoline and BTEX. Based on this data, the dissolved hydrocarbon plume appears delineated south and west of the underground storage tank complex.

Due to safety concerns, HP-1 was moved from beneath overhead powerlines along the west side of Perkins Street to a location closer to the Shell service station. Another boring on the south side of Grand Avenue was eliminated due to numerous underground utilities.

If you have any questions, please call.

GeoStrategies Inc. by,

Timothy J. Walker
Geologist

Michael Carey
Engineering Geologist
C.E.G. 1351

CERTIFIED ENGINEERING GEOLOGIST
MICHAEL C. CAREY
C.E.G. 1351
EXP: 6-30-94
STATE OF CALIFORNIA

TJW/MCC/rmt

Plate 1. Vicinity Map
Plate 2. Site Plan/Water-Level Map
Plate 3. Benzene Concentration Map

Appendix A: Blaine Monitoring Report and Chain-of-Custody Form
Appendix B: Exploratory Boring Logs
Appendix C: NET Pacific Analytical Report and Chain-of-Custody Form

QC Review: E.M.

766705-12

TABLE 1

MONITORING WELL FIELD MEASUREMENT DATA
FIRST QUARTER 1993

WELL DESIGNATION	WATER LEVEL FIELD DATA	TOB ELEV. (FT-MSL)	DEPTH TO WATER (FT)	GROUNDWATER ELEV. (FT-MSL)	TOTAL WELL DEPTH (FT)	FLOATING PRODUCT THICKNESS (FT)	WATER SAMPLE FIELD DATE	pH (STD. UNITS)	ELECTRICAL CONDUCTIVITY uMHOS/cm)	TEMP. (F)	TURBIDITY (NTU)
S-1	09-Oct-91	20.84	9.62	11.22	17.6	ND	09-Oct-91	7.19	676	70.1	NR
S-1	23-Jan-92	20.84	8.94	11.90	17.5	ND	23-Jan-92	6.65	748	60.9	>200
S-1	27-Apr-92	20.84	7.06	13.78	17.3	ND	27-Apr-92	6.94	707	67.7	>200
S-1	10-Jul-92	20.84	8.31	12.53	17.6	ND	10-Jul-92	6.72	785	74.4	229
S-1	08-Oct-92	20.84	9.65	11.29	17.6	Sheen	08-Oct-92	6.75	709	76.1	238
S-1	06-Jan-93	20.84	9.88	10.96	17.6	ND	06-Jan-93	7.20	700	65.8	9.9
S-2	09-Oct-91	21.24	10.28	10.96	15.0	ND	09-Oct-91	6.67	660	71.8	NR
S-2	23-Jan-92	21.24	9.51 rose	11.73	15.0	ND	23-Jan-92	6.35	1150	51.8	>200
S-2	27-Apr-92	21.24	7.83 rose	13.41	14.8	ND	27-Apr-92	6.68	1094	74.1	>200
S-2	10-Jul-92	21.24	8.67 fell	12.57	15.0	ND	10-Jul-92	6.40	1017	76.2	425
S-2	08-Oct-92	21.24	9.48 fell	11.76	15.0	ND	08-Oct-92	6.27	943	75.4	224
S-2	06-Jan-93	21.24	8.56 rose	12.68	15.0	ND	06-Jan-93	7.30	1000	65.0	19.68
S-3	09-Oct-91	22.70	12.98	9.72	15.1	ND	09-Oct-91	6.61	451	70.1	NR
S-3	23-Jan-92	22.70	13.06	9.64	15.0	ND	23-Jan-92	5.58	544	55.5	>200
S-3	27-Apr-92	22.70	7.25	15.45	14.7	ND	28-Apr-92	6.80	667	72.4	>200
S-3	10-Jul-92	22.70	8.46	14.24	15.0	ND	11-Jul-92	7.13	490	76.3	128
S-3	08-Oct-92	22.70	11.77	10.93	15.0	ND	08-Oct-92	6.11	542	78.3	175
S-3	06-Jan-93	22.70	12.53	10.17	15.1	ND	06-Jan-93	7.30	600	63.4	>200
HP-1	06-Jan-93	—	—	—	10.0	ND	06-Jan-93	NR	NR	NR	NR
HP-2	06-Jan-93	—	—	—	13.0	ND	06-Jan-93	NR	NR	NR	NR
HP-3	06-Jan-93	—	—	—	14.0	ND	06-Jan-93	NR	NR	NR	NR

TOB = Top of Well Box.
FT-MSL = Elevation in Feet, relative to Mean Sea Level.
STD. UNITS = Standard pH units.
uHMOS/cm = Microhoms per centimeter.
F = Degrees Fahrenheit.
NTU = Nephelometric Turbidity Units.
ND = Non Detected.
NR = Not Reported; data not available.

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TABLE 2

SUMMARY OF ANALYTICAL RESULTS
FIRST QUARTER 1993

micrograms per liter (ug/l) or parts per billion (ppb)

Sample Date	Sample Point	TPH-G (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)	TPH-D (ug/l)
09-Oct-91	S-1	120	10	<0.5	<0.5	<0.5	260^
23-Jan-92	S-1	<50	<0.5	<0.5	<0.5	<0.5	<50
27-Apr-92	S-1	<50	1.2	<0.5	<0.5	<0.5	70*
10-Jul-92	S-1	<50	13	<0.5	<0.5	<0.5	93
06-Oct-92	S-1	62	<0.5	<0.5	<0.5	<0.5	110
06-Jan-93	S-1	85	1.1	<0.5	<0.5	<0.5	81
09-Oct-91	S-2	29000	6300	510	1700	2400	32000*
23-Jan-92	S-2	31000	5800	480	2000	2700	36000*
27-Apr-92	S-2	21000+	4800	320	1600	1400	12000*
10-Jul-92	S-2	31000	7500	940	3400	3500	3700@
06-Oct-92	S-2	57000	9300	1200	4000	4900	4500@
06-Jan-93	S-2	[illegible]	[illegible]	360	3000	3000	[illegible]
09-Oct-91	S-3	<50	<0.5	<0.5	<0.5	<0.5	N/A
23-Jan-92	S-3	<50	<0.5	<0.5	<0.5	<0.5	N/A$
27-Apr-92	S-3	<50	<0.5	<0.5	<0.5	<0.5	100
10-Jul-92	S-3	<50	<0.5	<0.5	<0.5	<0.5	68
06-Oct-92	S-3	<50	<0.5	<0.5	<0.5	<0.5	<100&
06-Jan-93	S-3	<50	<0.5	<0.5	<0.5	<0.5	<10
09-Oct-91	TB	NR	NR	NR	NR	NR	NR
23-Jan-92	TB	<50	<0.5	<0.5	<0.5	<0.5	<50
27-Apr-92	TB	<50	1.1	<0.5	<0.5	<0.5	<50
10-Jul-92	TB	<50	<0.5	0.7	<0.5	0.6	<50
06-Oct-92	TB	<50	<0.5	<0.5	<0.5	<0.5	<50
06-Jan-93	TB	<50	<0.5	<0.5	<0.5	<0.5	N/A
06-Jan-93	DUP for S-2	[illegible]	5600	330	3000	3000	7600
27-Jan-93	HP-1	[illegible]	[illegible]	130	1400	140	[illegible]
27-Jan-93	HP-2	<50	<0.5	4.4	<0.5	<0.5	N/A
27-Jan-93	HP-3	<50	<0.5	<0.5	<0.5	<0.5	N/A

TABLE 2

SUMMARY OF ANALYTICAL RESULTS
FIRST QUARTER 1993

micrograms per liter (ug/l) or parts per billion (ppb)

TPH-G	=	Total Petroleum Hydrocarbons calculated as Gasoline
TPH-D	=	Total Petroleum Hydrocarbons calculated as Diesel
PPB	=	Parts Per Billion
N/A	=	Not Analyzed
NR	=	Not Reported; Data Not Available

^	Compounds detected and calculated as diesel are not characteristic of the standard diesel chromatographic pattern.
*	Compounds detected and calculated as diesel appear to be the less volatile constituents of gasoline.
+	Compounds detected and calculated as gasoline are not characteristic of the standard gasoline chromatographic pattern.
@	Concentrations reported as diesel is primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene.
$	Well dried during purging and did not recover to a level sufficient for collection of a sample for analysis of TPH-D
&	The TPH-D reporting limit was increased due to the low sample volume available.
-	The positive result for petroleum hydrocarbons as diesel appears to be due to the presence of lighter hydrocarbons rather than diesel.

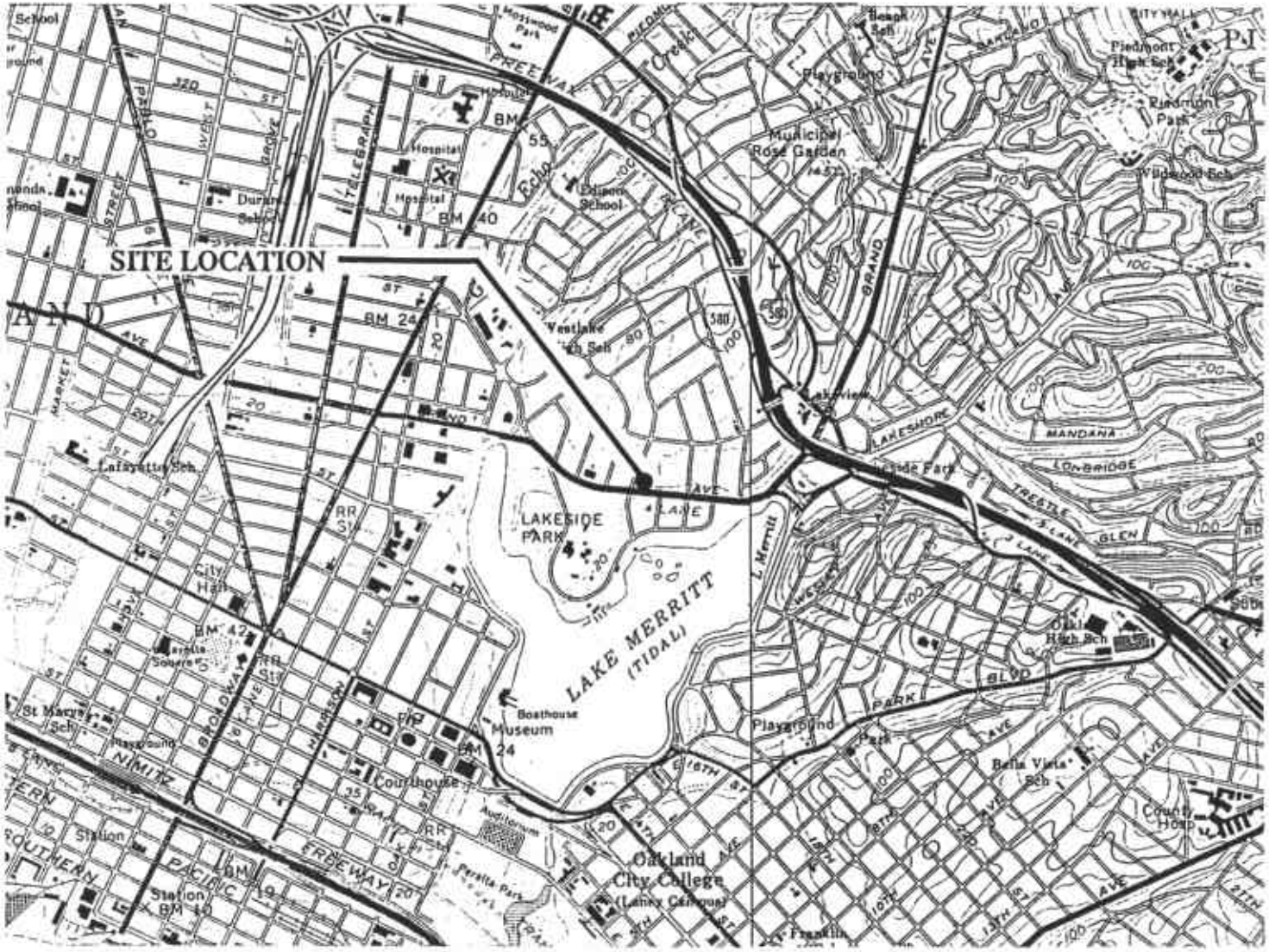
TABLE 3

SOIL ANALYSES DATA

SAMPLE NO.	SAMPLE DATE	ANALYSIS DATE	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)
HP-1-6.5	27-Jan-93	01-Feb-93	1,500	0.11	0.81	0.86	1.2	18
HP-2-6.5	27-Jan-93	02-Feb-93	<1.0	<0.0025	<0.0025	<0.0025	<0.0025	<1
HP-3-6.5	27-Jan-93	02-Feb-93	<1.0	<0.0025	<0.0025	<0.0025	<0.0025	<1

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million

Note: All data shown as <x are reported as ND (none detected).



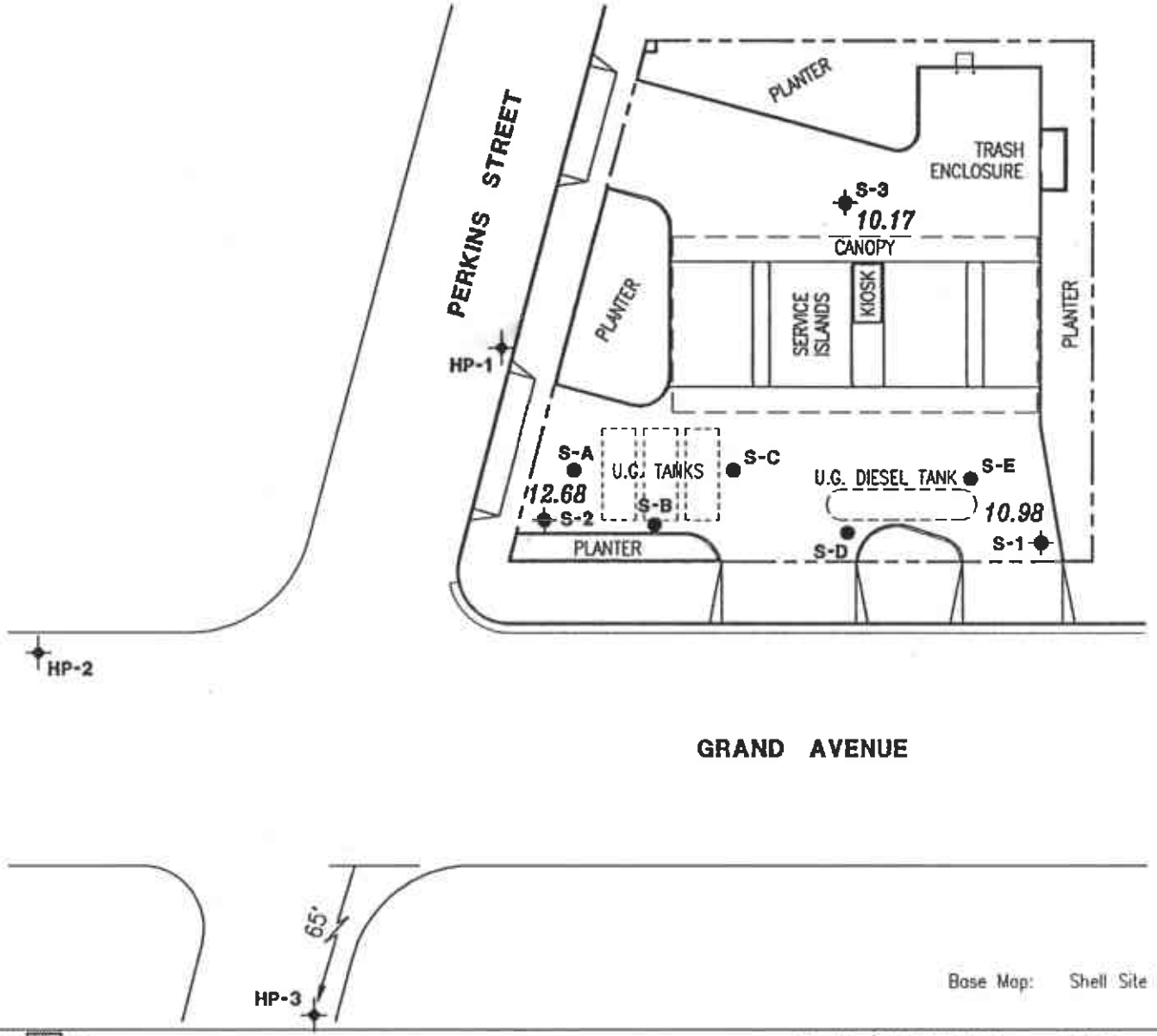
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
Shell Service Station
350 Grand Avenue
Oakland, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7667		3/91	



EXPLANATION

- Ground-water monitoring well
- Soil boring
- Hydropunch
- **99.99** Ground-water elevation in feet referenced to Mean Sea Level (MSL) measured on January 6, 1993

NOTES: 1. Water levels may be influenced by irrigation practices and/or site construction activities.

Base Map: Shell Site Plan dated 12-21-89

N

0 40

Scale in Feet

GeoStrategies Inc.

SITE PLAN/WATER LEVEL MAP
Shell Service Station
350 Grand Avenue
Oakland, California

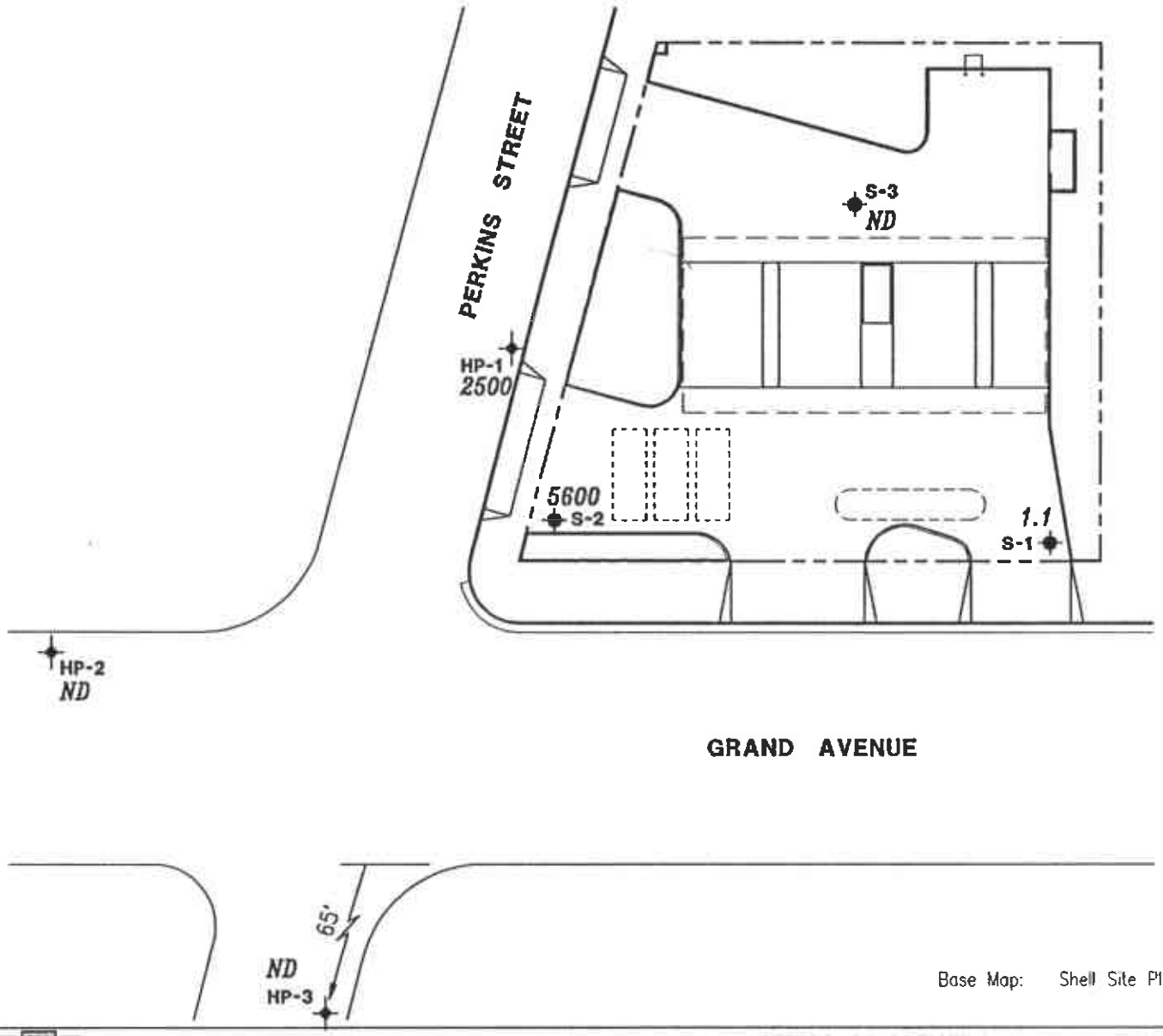
PLATE **2**

JOB NUMBER 766705-12

REVIEWED BY

DATE 3/93

REVISED DATE



EXPLANATION

- Ground-water monitoring well
- Hydropunch
- *0.05* Benzene concentration in ppb sampled on January 6, 1993
- *ND* Not Detected (See laboratory reports for detection limits)

NOTES: 1. Water samples from hydropunch locations collected on January 27, 1993

Base Map: Shell Site Plan dated 12-21-89

GeoStrategies Inc.

BENZENE CONCENTRATION MAP
Shell Service Station
350 Grand Avenue
Oakland, California

PLATE
3

JOB NUMBER
766705-12

REVIEWED BY

DATE
3/93

REVISED DATE

APPENDIX A

BLAINE MONITORING REPORT

AND

CHAIN-OF-CUSTODY FORM

BLAINE
TECH SERVICES INC.

985 TIMOTHY DRIV
SAN JOSE. CA 9513
(408) 995-553
FAX (408) 293-677

January 18, 1993

Shell Oil Company
P.O. Box 5278
Concord, CA 94520-9998

Attn: Daniel T. Kirk

SITE:
Shell WIC # 204-5510-0204
350 Grand Avenue
Oakland, California

QUARTER:
1st quarter of 1993

QUARTERLY GROUNDWATER SAMPLING REPORT 930106-N-1

This report contains data collected during routine inspection, gauging and sampling of groundwater monitoring wells performed by Blaine Tech Services, Inc. in response to the request of the consultant who is overseeing work at this site on behalf of our mutual client, Shell Oil Company. Data collected in the course of our field work is presented in a TABLE OF WELL GAUGING DATA. The field information was collected during our preliminary gauging and inspection of the wells, the subsequent evacuation of each well prior to sampling, and at the time of sampling.

Measurements taken include the total depth of the well and the depth to water. The surface of the water was further inspected for the presence of immiscibles which may be present as a thin film (a sheen on the surface of the water) or as a measurable free product zone (FPZ). At intervals during the evacuation phase, the purge water was monitored with instruments that measure electrical conductivity (EC), potential hydrogen (pH), temperature (degrees Fahrenheit), and turbidity (NTU). In the interest of simplicity, fundamental information is tabulated here, while the bulk of the information is turned over directly to the consultant who is making professional interpretations and evaluations of the conditions at the site.

667 - A

TABLE OF WELL GAUGING DATA

WELL I.D.	WELL DIAMETER (inches)	DATA COLLECTION DATE	MEASUREMENTS REFERENCED TO	QUALITATIVE OBSERVATIONS (sheen)	DEPTH TO FIRST IMMISCIBLE LIQUID (FPZ) (feet)	THICKNESS OF IMMISCIBLE LIQUID ZONE (feet)	VOLUME OF IMMISCIBLES REMOVED (ml)	DEPTH TO WATER (feet)	DEPTH TO WELL BOTTOM (feet)
S-1	3	01-06-93	GRADE	--	NONE	--	--	9.86	17.66
S-2	3	01-06-93	GRADE	ODOR	NONE	--	--	8.56	15.05
S-3	3	01-06-93	GRADE	--	NONE	--	--	12.53	15.06

STANDARD PROCEDURES

Evacuation

Groundwater wells are thoroughly purged before sampling to insure that the sample is collected from water that has been newly drawn into the well from the surrounding geologic formation. The selection of equipment to evacuate each well is based on the physical characteristics of the well and what is known about the performance of the formation in which the well has been installed. There are several suitable devices which can be used for evacuation. The most commonly employed devices are air or gas actuated pumps, electric submersible pumps, and hand or mechanically actuated bailers. Our personnel frequently employ USGS/Middleburg positive displacement pumps or similar air actuated pumps which do not agitate the water standing in the well.

Normal evacuation removes three case volumes of water from the well. More than three case volumes of water may be removed in cases where more evacuation is needed to achieve stabilization of water parameters. Less than three case volumes of water may be obtained in cases where the well dewaters and does not recharge to 80% of its original volume within two hours and any additional time our personnel have reason to remain at the site. In such cases, our personnel return to the site within twenty four hours and collect sample material from the water which has recharged into the well case.

Decontamination

All apparatus is brought to the site in clean and serviceable condition. The equipment is decontaminated after each use and before leaving the site.

Free Product Skimmer

The column headed, VOLUME OF IMMISCIBLES REMOVED (ml) is included in the TABLE OF WELL GAUGING DATA to cover situations where a free product skimming device must be removed from the well prior to gauging. Skimmers are installed in wells with a free product zone on the surface of the water. The skimmer is a free product recovery device which often prevents normal well gauging and free product zone measurements. The 2.0" and 3.0" PetroTraps fall into the category of devices that obstruct normal gauging. In cases where the consultant elects to have our personnel pull the skimmers out of the well and gauge the well, our personnel perform the additional task of draining the accumulated free product out of the PetroTrap before putting it back in the well. This recovered free product is measured and logged in the VOLUME OF IMMISCIBLES REMOVED column. Gauging at such site is performed in accordance with specific directions from the professional consulting firm overseeing work at the site on Shell's behalf.

Sample Containers

Sample material is collected in specially prepared containers which are provided by the laboratory that performs the analyses.

Sampling

Sample material is collected in stainless steel bailer type devices normally fitted with both a top and a bottom check valve. Water is promptly decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA standard for handling volatile organic and semi-volatile compounds.

Following collection, samples are promptly placed in an ice chest containing prefrozen blocks of an inert ice substitute such as Blue Ice or Super Ice. The samples are maintained in either an ice chest or a refrigerator until delivered into the custody of the laboratory.

Sample Designations

All sample containers are identified with a site designation and a discrete sample identification number specific to that particular groundwater well. Additional standard notations (e.g. time, date, sampler) are also made on the label. Either the requested analyses or the specific analytes are written on the sample label (e.g. TPH-G, BTEX).

Chain of Custody

Samples are continuously maintained in an appropriate cooled container while in our custody and until delivered to the laboratory under a standard Shell Oil Company chain of custody. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of the person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

Hazardous Materials Testing Laboratory

The samples obtained at this site were delivered to Anametrix, Inc. in San Jose, California. Anametrix, Inc. is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #1234.

Objective Information Collection

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. performs no consulting and does not become involved in the marketing or installation of

remedial systems of any kind. Blaine Tech Services, Inc. is concerned only with the generation of objective information, not with the use of that information to support evaluations and recommendations concerning the environmental condition of the site. Even the straightforward interpretation of objective analytical data is better performed by interested regulatory agencies, and those engineers and geologists who are engaged in the work of providing professional opinions about the site and proposals to perform additional investigation or design remedial systems.

Reportage

Submission of this report and the attached laboratory report to interested regulatory agencies is handled by the consultant in charge of the project. Any professional evaluations or recommendations will be made by the consultant under separate cover.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/lpn

attachments: chain of custody
certified analytical report

cc: GeoStrategies, Inc.
2140 W. Winton Ave.
Hayward, CA 94545
ATTN: Ellen Fostersmith

9301063 (10/20) (18)

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD
Serial No:_____

Date: 1-6-93
Page 1 of 1

Site Address: 350 GRAND AVE. OAKLAND, CA

WIC#: 204-5510-0204

Shell Engineer: DAN KIRK — Phone No.: 510 675-6171 — Fax #:

Consultant Name & Address: BLAINE TECH SERVICES 985 TIMOTHY DR SAN JOSE CA 95122

Consultant Contact: GLEN BENNETT — Phone No.: — Fax #:

Comments: BTS #930106-N-1

Sampled by: [signature]

Printed Name: NATE OVERMEYER

LAB: ANAMETRIX

CHECK ONE (1) BOX ONLY — CT/DT

- Quarterly Monitoring ☒ 6441
- Site Investigation ☐ 6441
- Soil Closure/Disposal ☐ 6442
- Water Closure/Disposal ☐ 6443
- Soil/Air Rem. or Sys. O & M ☐ 6442
- Water Rem. or Sys. O & M ☐ 6443
- Other ☐

TURN AROUND TIME

- 24 hours ☐
- 48 hours ☐
- 10 days ☒ (Normal)
- Other ☐ ____

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

Analysis Required

#	Sample ID	Date	Sludge	Soil	Water	Air	No. of cont.	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	S-1	1/6/93			X		4		X				X			N	40 ML	HCL	N	GROUNDWATER	
2	S-2	"			X		4		X				X			"	"	"	"	"	
3	S-3	"			X		4		X				X			"	"	"	"	"	
4	DUP.	"			X		4		X				X			"	"	"	"	"	
5	TB	↓			X		2						X			↓	40 ML	HCL	↓	TRIP BLANK	

Relinquished By (Signature)	Printed Name	Date	Time	Received (Signature)	Printed Name	Date	Time
[signature]	NATE OVERMEYER	1-7-93	1055	[signature]	BONNY S. CORRIZOSA	1-7-93	1655
[signature]	BONNY S. CORRIZOSA	1-7-93	1708	[signature]	Maria Barajas	1/7/93	17:08
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 ITS INVOICE AND RESULTS

ANAMETRIX INC
Environmental & Analytical Chemistry

Part of INCHCAPE ENVIRONMENTAL

REPORT

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9301063
Date Received : 01/07/93
Project ID : 204-5510-0204
Purchase Order: MOH-B813

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9301063- 1	S-1
9301063- 2	S-2
9301063- 3	S-3
9301063- 4	DUP
9301063- 5	TB

This report consists of 7 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen, Ph.D.
Laboratory Director

1-21-92
Date

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9301063
Date Received : 01/07/93
Project ID : 204-5510-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9301063- 1	S-1	WATER	01/06/93	TPHd
9301063- 2	S-2	WATER	01/06/93	TPHd
9301063- 3	S-3	WATER	01/06/93	TPHd
9301063- 4	DUP	WATER	01/06/93	TPHd
9301063- 1	S-1	WATER	01/06/93	TPHg/BTEX
9301063- 2	S-2	WATER	01/06/93	TPHg/BTEX
9301063- 3	S-3	WATER	01/06/93	TPHg/BTEX
9301063- 4	DUP	WATER	01/06/93	TPHg/BTEX
9301063- 5	TB	WATER	01/06/93	TPHg/BTEX

REPORT SUMMARY
ANAMETRIX, INC. (408)432-8192

MR. GLEN BENNETT
BLAINE TECH
985 TIMOTHY STREET
SAN JOSE, CA 95133

Workorder # : 9301063
Date Received : 01/07/93
Project ID : 204-5510-0204
Purchase Order: MOH-B813
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as diesel for samples S-2 and DUP are primarily due to the presence of a lighter petroleum product, possibly gasoline or kerosene.

Cheryl Balmer 1/19/93
Department Supervisor Date

Luna Shor 1/20/93
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9301063
Matrix : WATER
Date Sampled : 01/06/93

Project Number : 204-5510-0204
Date Released : 01/13/93

	Reporting Limit	Sample I.D.# S-1	Sample I.D.# S-2	Sample I.D.# S-3	Sample I.D.# DUP	Sample I.D.# TB
COMPOUNDS	(ug/L)	-01	-02	-03	-04	-05
Benzene	0.5	1.1	5600	ND	5600	ND
Toluene	0.5	ND	360	ND	330	ND
Ethylbenzene	0.5	ND	3000	ND	3000	ND
Total Xylenes	0.5	ND	3000	ND	3000	ND
TPH as Gasoline	50	85	55000	ND	55000	ND
% Surrogate Recovery		93%	108%	106%	106%	106%
Instrument I.D.		HP21	HP21	HP21	HP21	HP21
Date Analyzed		01/11/93	01/11/93	01/11/93	01/11/93	01/11/93
RLMF		1	250	1	250	1

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Steve Sims 1/21/93
Analyst Date

Cheryl Balmer 1/21/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS
(GASOLINE WITH BTEX)
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9301063
Matrix : WATER
Date Sampled : N/A

Project Number : 204-5510-0204
Date Released : 01/13/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BJ1101E3 BLANK				
Benzene	0.5	ND				
Toluene	0.5	ND				
Ethylbenzene	0.5	ND				
Total Xylenes	0.5	ND				
TPH as Gasoline	50	ND				
% Surrogate Recovery		104%				
Instrument I.D.		HP21				
Date Analyzed		01/11/93				
RLMF		1				

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA Method 8020 following sample purge and trap by EPA Method 5030.
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Luna Shar 1/20/93
Analyst Date

Cheryl Balmer 1/19/93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9301063
Matrix : WATER
Date Sampled : 01/06/93
Date Extracted: 01/11/93

Project Number : 204-5510-0204
Date Released : 01/19/93
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9301063-01	S-1	01/12/93	10	81
9301063-02	S-2	01/13/93	100	5600
9301063-03	S-3	01/12/93	10	ND
9301063-04	DUP	01/15/93	100	7600
DWBL011193	METHOD BLANK	01/12/93	10	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 10 mg/Kg.
ND - Not detected at or above the practical quantitation limit for the method.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following sample extraction by EPA Method 3550.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Irina Sher 1/20/93
Analyst Date

Cheryl Balmer 1/19/93
Supervisor Date

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: LAB CONTROL SAMPLE	Anametrix I.D.	: LCSW0111
Matrix	: WATER	Analyst	: IS
Date Sampled	: N/A	Supervisor	: CP
Date Analyzed	: 01/11/93	Date Released	: 01/19/93
		Instrument ID	: HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	10.0	8.4	84%	49-159
Toluene	10.0	8.8	88%	53-156
Ethylbenzene	10.0	9.6	96%	54-151
TOTAL Xylenes	10.0	8.7	87%	56-157
P-BFB			96%	53-147

* Limits established by Anametrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 01/11/93
Date Analyzed : 01/12/93

Anametrix I.D. : LCSW0111
Analyst : IS
Supervisor : [illegible]
Date Released : 01/19/93
Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	880	70%	870	70%	-1%	63-130

*Quality control established by Anametrix, Inc.

WELL GAUGING DATA

Shell WIC # 204-5510-0204

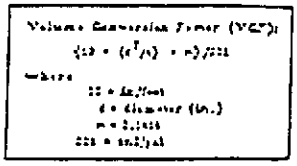
Project # 930106-N1 Date 1-6-93 Client SHELL

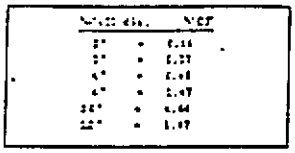
Site 350 GRAND, OAKLAND Sampler (N)

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immisible Liquid (feet)	Thickness of Immisible Liquid (ft.)	Volume of Immisibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Measured to: Top of Pipe or Grade
S-1	3	—				9.86	17.66	GRADE
S-2	3	STRONG ODOR				8.56	15.05	"
S-3	3	—				12.53	15.06	"

SHELL WELL MONITORING DATA SHEET

Project #: 930106 - N1	Wic # 204 - 5510 . 0204
Sampler: (N)	Date Sampled: 1 . 6 . 93
Well I.D.: S - 1	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 17.66 After	Depth to Water: Before 9.86 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





2.88	x	3	=	8.65
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐
Middleburg ☑
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☑
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
10:53	65.2	7.1	700	3.02	2.5	
10:56	65.6	7.2	700	9.90	5.0	DEWATERED

Did Well Dewater? Y If yes, gals. 5 Gallons Actually Evacuated: 5

Sampling Time: 12:45 (DTW 13.52)

Sample I.D.: S-1 Laboratory: ANA.

Analyzed for: TPH-GAS, BTXE, TPH-D

Duplicate I.D.: Cleaning Blank I.D.:

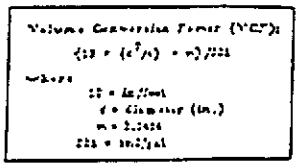
Analyzed for:

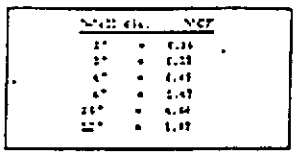
Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930106 - N1	Wic # 204-5510-0204
Sampler: (N)	Date Sampled: 1-6-93
Well I.D.: S-2	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 15.05 After	Depth to Water: Before 8.56 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





2.40	x	3	=	7.20
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☐
Middleburg ☑
Electric Submersible ☐
Suction Pump ☐
Type of Installed Pump _____

Sampling: Bailer ☒
Middleburg ☐
Electric Submersible ☐
Suction Pump ☐
Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
11:13	65.0	7.3	1000	19.68	2.5	FUEL ODOR → DEWATERED

Did Well Dewater? Y If yes, gals. 2.5 Gallons Actually Evacuated: 2.5

Sampling Time: 12:30 (DTW 12.12)

Sample I.D.: S-2 Laboratory: ANA.

Analyzed for: TPH-G, BTXE, TPH-D

Duplicate I.D.: DUP Cleaning Blank I.D.:

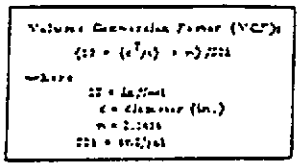
Analyzed for: SAME

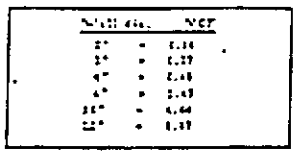
Shipping Notations:

Additional Notations:

SHELL WELL MONITORING DATA SHEET

Project #: 930106-N1	Wic # 204-5510-0204
Sampler: (N)	Date Sampled: 1-6-93
Well I.D.: S-3	Well Diameter: (circle one) 2 (3) 4 6 ___
Total Well Depth: Before 15.06 After	Depth to Water: Before 12.53 After
Depth to Free Product:	Thickness of Free Product (feet):
Measurements referenced to: PVC (Grade) Other --	





.94	x	3	=	2.80
1 Case Volume		Specified Volumes		gallons

Purging: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Type of Installed Pump ___

Sampling: Bailer ☒ Middleburg ☐ Electric Submersible ☐ Suction Pump ☐ Installed Pump ☐

TIME	TEMP. (F)	pH	COND.	TURBIDITY:	VOLUME REMOVED:	OBSERVATIONS:
10:38	63.4	7.3	500	>200	1.0	DEWATERED

Did Well Dewater? Y If yes, gals. 1 Gallons Actually Evacuated: 1

Sampling Time: 13:00 (DTW 14.02)

Sample I.D.: S-3 Laboratory: ANA.

Analyzed for: TPH-G, BTXE, TPH-D

Duplicate I.D.: Cleaning Blank I.D.:

Analyzed for:

Shipping Notations:

Additional Notations:

APPENDIX B

EXPLORATORY BORING LOGS

Field location of boring: (See Plate 2)	Project No.: 766705	Date: 1/27/93	Boring No.: HP-1
	Client: Shell Oil Company		
	Location: 350 Grand Avenue		
	City: Oakland		Sheet 1 of 1
	Logged by: RSY	Driller: Gregg	
Drilling method: Hollow-Stem Auger	Casing installation data:		
Hole diameter: 8-inches	Top of Box Elevation:	Datum:	

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								Asphalt - 3 inches
				1				
								CLAY (CL) - pale olive (5Y 6/4); stiff, moist, trace fine sand.
				2				
				3				
				4				
				5				CLAYEY SILT (ML) - very dark gray (7.5Y 3/0); stiff, moist, low plasticity.
		S&H						
			HP-1	6				
441	9		6.5					
				7				CLAY (CL) - very dark gray (5Y 3/1); stiff, moist, roots, high plasticity.
				8				
				9				
				10				
				11				
				12				Bottom of boring at 10.0 ft. 1/27/93
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Remarks:

* Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. HP-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
766705	MCC	1/93		

Field location of boring: (See Plate 2)	Project No.: 766705	Date: 1/27/93	Boring No.: HP-2
	Client: Shell Oil Company		
	Location: 350 Grand Avenue		
	City: Oakland		Sheet 1 of 1
	Logged by: RSY	Driller: Gregg	
Drilling method: Hollow-Stem Auger	Casing installation data:		
Hole diameter: 8-inches	Top of Box Elevation:	Datum:	

PID (ppm)	Blows/ft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level / Time / Date	Description
									Asphalt - concrete - 6 inches
				1					
									SILT (ML) - dark yellowish brown (10YR 3/4); medium stiff, wet; 5-10% fine sand.
				2					
				3					
				4					
				5					GRAVELLY CLAY (CL) - yellowish brown (10YR 5/6); dense, moist; 30% fine subrounded gravel, 20% medium to coarse sand; 50% clay.
		S&H	HP-2	6					
	24		6.5						
				7					
				8					
				9					
				10					
				11					
				12					
				13					Bottom of boring at 13.0 ft. 1/27/93
				14					
				15					
				16					
				17					
				18					
				19					
				20					

Remarks:

* Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. HP-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
766705	MCC	1/93		

Field location of boring: (See Plate 2)	Project No.: 766705	Date: 1/27/93	Boring No.: HP-3
	Client: Shell Oil Company		
	Location: 350 Grand Avenue		
	City: Oakland		Sheet 1 of 1
	Logged by: RSY	Driller: Gregg	
Drilling method: Hollow-Stem Auger	Casing installation data:		
Hole diameter: 8-inches	Top of Box Elevation:	Datum:	

PID (ppm)	Blows/ft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level / Time / Date	Description
									Asphalt - baserock - 6 inches
				1					
									GRAVELLY CLAY with SAND (CL) - dark yellowish brown (10YR 4/6); stiff, moist; 50% clay, 30% angular fine gravel, 20% medium to coarse sand.
				2					
				3					
				4					
				5					
		S&H							
			HP-3	6					Decrease gravel to trace at 5.0 ft; color change to light olive brown (2.5Y 6/6).
0	23		6.5						
				7					
				8					
				9					
				10					
				11					
				12					Color change to very dark gray (7.5YR 3/0) at 8.0 ft.
				13					
				14					Saturated at 13.0 ft.
				15					
				16					
				17					Bottom of boring at 14.0 ft. 1/27/93
				18					
				19					
				20					

Remarks:

* Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. HP-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
766705	MCC	1/93		

APPENDIX C

NET PACIFIC ANALYTICAL REPORT

AND

CHAIN-OF-CUSTODY FORM

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

Bob Lauritzen
Gettler-Ryan, Inc.
2150 W. Winton Avenue
Hayward, CA 94545

Date: 02/09/1993
NET Client Acct. No: 1815
NET Pacific Job No: 93.00277
Received: 01/29/1993

Client Reference Information

Shell, 350 Grand Ave., Oakland

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

Enclosure(s)

Ref: Shell, 350 Grand Ave., Oakland

gw

SAMPLE DESCRIPTION: HP-1
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149913)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	100			
as Gasoline	22	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	100			
Benzene	2.5	0.0005	mg/L	8020
Ethylbenzene	1.4	0.0005	mg/L	8020
Toluene	0.13	0.0005	mg/L	8020
Xylenes (Total)	0.14	0.0005	mg/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	90		% Rec.	5030
METHOD 3510 (GC,FID)				
DILUTION FACTOR*	50			
DATE EXTRACTED	01-29-93			
DATE ANALYZED	02-01-93			
as Diesel	14**	0.05	mg/L	3510

** The positive result for Petroleum Hydrocarbons as Diesel appears to be due to the presence of lighter hydrocarbons rather than Diesel.

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: HP-2 ✓
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149914)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
as Gasoline	ND ✓	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
Benzene	ND ✓	0.0005	mg/L	8020
Ethylbenzene	ND	0.0005	mg/L	8020
Toluene	0.0044	0.0005	mg/L	8020
Xylenes (Total)	ND	0.0005	mg/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	82		% Rec.	5030

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: HP-3
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149915)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
as Gasoline	ND ✓	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
Benzene	ND ✓	0.0005	mg/L	8020
Ethylbenzene	ND	0.0005	mg/L	8020
Toluene	ND	0.0005	mg/L	8020
Xylenes (Total)	ND	0.0005	mg/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	90		% Rec.	5030

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: TB
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149916)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
as Gasoline	ND	0.05	mg/L	5030
METHOD 8020 (GC,Liquid)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	1			
Benzene	ND	0.0005	mg/L	8020
Ethylbenzene	ND	0.0005	mg/L	8020
Toluene	ND	0.0005	mg/L	8020
Xylenes (Total)	ND	0.0005	mg/L	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	84		% Rec.	5030

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: HP-1-6.5
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149917)

soil

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-01-93			
DILUTION FACTOR*	200			
as Gasoline	1,500	1	mg/Kg	5030
METHOD 8020 (GC,Solid)	--			
DATE ANALYZED	01-30-93			
DILUTION FACTOR*	10			
Benzene	0.11	0.0025	mg/Kg	8020
Ethylbenzene	0.86	0.0025	mg/Kg	8020
Toluene	0.81	0.0025	mg/Kg	8020
Xylenes (Total)	1.2	0.0025	mg/Kg	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	423**		% Rec.	5030
METHOD 3550 (GC,FID)				
DILUTION FACTOR*	1			
DATE EXTRACTED	02-01-93			
DATE ANALYZED	02-02-93			
as Diesel	18	1	mg/Kg	3550

** High surrogate recovery due to matrix interference.

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: HP-2-6.5
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149918)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	02-02-93			
DILUTION FACTOR*	1			
as Gasoline	ND ✓	1	mg/Kg	5030
METHOD 8020 (GC,Solid)	--			
DATE ANALYZED	02-02-93			
DILUTION FACTOR*	1			
Benzene	ND ✓	0.0025	mg/Kg	8020
Ethylbenzene	ND	0.0025	mg/Kg	8020
Toluene	ND	0.0025	mg/Kg	8020
Xylenes (Total)	ND	0.0025	mg/Kg	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	85		% Rec.	5030
METHOD 3550 (GC,FID)				
DILUTION FACTOR*	1			
DATE EXTRACTED	02-01-93			
DATE ANALYZED	02-02-93			
as Diesel	ND ✓	1	mg/Kg	3550

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: HP-3-6.5
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149919)

Parameter	Results	Reporting Limit	Units	Method
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	01-30-93			
DILUTION FACTOR*	1			
as Gasoline	ND	1	mg/Kg	5030
METHOD 8020 (GC,Solid)	--			
DATE ANALYZED	01-30-93			
DILUTION FACTOR*	1			
Benzene	ND	0.0025	mg/Kg	8020
Ethylbenzene	ND	0.0025	mg/Kg	8020
Toluene	ND	0.0025	mg/Kg	8020
Xylenes (Total)	ND	0.0025	mg/Kg	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	83		% Rec.	5030
METHOD 3550 (GC,FID)				
DILUTION FACTOR*	1			
DATE EXTRACTED	02-01-93			
DATE ANALYZED	02-02-93			
as Diesel	ND	1	mg/Kg	3550

Ref: Shell, 350 Grand Ave., Oakland

SAMPLE DESCRIPTION: SP-1
Date Taken: 01/27/1993
Time Taken:
LAB Job No: (-149920)

Parameter	Results	Reporting Limit	Units	Method
Org. Lead (FLAA)	ND	1.0	mg/Kg	DOHS-LUFT
TPH (Gas/BTXE,Solid)				
METHOD 5030 (GC,FID)	--			
DATE ANALYZED	01-30-93			
DILUTION FACTOR*	1			
as Gasoline	ND	1	mg/Kg	5030
METHOD 8020 (GC,Solid)	--			
DATE ANALYZED	01-30-93			
DILUTION FACTOR*	1			
Benzene	ND	0.0025	mg/Kg	8020
Ethylbenzene	ND	0.0025	mg/Kg	8020
Toluene	ND	0.0025	mg/Kg	8020
Xylenes (Total)	ND	0.0025	mg/Kg	8020
SURROGATE RESULTS	--			
Bromofluorobenzene	85		% Rec.	5030

Ref: Shell, 350 Grand Ave., Oakland

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	101	ND	100	102	2.0
Benzene	0.0005	mg/L	104	ND	101	98	2.0
Toluene	0.0005	mg/L	106	ND	99	98	<1
Gasoline	1.0	mg/Kg	105	ND	102	100	1.6
Benzene	0.0025	mg/Kg	104	ND	106	102	3.8
Toluene	0.0025	mg/Kg	104	ND	100	97	3.7
Gasoline	1.0	mg/Kg	116	ND	105	110	4.7
Benzene	0.0025	mg/Kg	89	ND	117	87	30
Toluene	0.0025	mg/Kg	97	ND	95	94	1.4
Diesel	0.05	mg/L	N/A	ND	68	70	2.8

COMMENT: Blank Results were ND on other analytes tested.

Org. Lead	1.0	mg/Kg	97	ND	133	139	4.3

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

SHELL OIL COMPANY
RETAIL ENVIRONMENTAL ENGINEERING - WEST

CHAIN OF CUSTODY RECORD

Serial No: 1874

Date:

Page 1 of 1

Site Address: 350 Grand Ave, Oakland

WIC#: 204-5510-0204

Shell Engineer: Dan Kirk

Phone No.:

Fax #:

Consultant Name & Address: GETTLER-RYAN INC.
2150 W. WINTON AVE. HAYWARD, CA 94545

Consultant Contact: BOB LAURITZEN

Phone No.: (510) 783-7500
Fax #: 783-1089

Comments:

Sampled by: RANDALL YOUNG

Printed Name: Randell Young

LAB: NET

CHECK ONE (1) BOX ONLY		CT/DT
Quarterly Monitoring	☐	5461
Site Investigation	☑	5441
Soil Classify/Disposal	☐	5442
Water Classify/Disposal	☐	5443
Soil/Air Rem. or Sys. O & M	☐	5452
Water Rem. or Sys. O & M	☐	5453
Other	☐	

TURN AROUND TIME	
24 hours	☐
48 hours	☐
16 days	☑ (Normal)
Other	☐

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

Analysis Required

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	Organic Lead		Asbestos	Container Size	Preparation Used	Composite Y/N	MATERIAL DESCRIPTION	SAMPLE CONDITION/ COMMENTS
HP-1	1/27/93			✓		3 VOA, 1 L.	✓	✓	✓											
HP-2	1/27/93			✓		3 VOA	✓		✓											
HP-3	1/27/93			✓		3 VOA	✓		✓											
TB	1/27/93			✓		2 VOA	✓		✓											
HP-1-6.5	1/27/93		✓			1	✓	✓	✓											
HP-2-6.5	1/27/93		✓			1	✓	✓	✓											
HP-3-6.5	1/27/93		✓			1	✓	✓	✓											
SP-1	1/27/93		✓				✓		✓				✓							

Relinquished By (signature):	Printed Name:	Date/Time:	Received (signature):	Printed Name:	Date/Time:
Randell Young	RANDALL YOUNG	Date: 1/28/93 Time: 1431	Kurt Holman	KURT HOLMAN	Date: 1/28/93 Time: 1431
Kurt Holman	KURT HOLMAN	Date: 1/28/93 Time: 1900			Date: Time:
		Date: Time:	A. Lope	Anny Lope	Date: 1/29/93 Time: 0800

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

CUSTODY SEALED @ 1/28/93 1900

GeoStrategies Inc.

LETTER OF TRANSMITTAL

Environmental Consulting
Engineering and Geologic Services

DATE April 12 1993

TO: Ms. Jennifer Eberle
Alameda Co. Environmental Health
80 Swan Way Room 200
Oakland Ca 94621

PROJECT NO. 7667.05
SUBJECT: Shell Service Station
350 Grand Ave.
Oakland Ca

THE FOLLOWING ITEMS ARE:

☐ ATTACHED ☐ FORWARDED SEPARATELY VIA _____

QUANTITY	PROJECT NO.	DATE	DESCRIPTION
1	7667	4/9/93	Quarterly / Hydropunch Report

THESE ARE TRANSMITTED as checked below:

- ☐ For approval
- ☐ For your use
- ☑ As requested
- ☐ For review and
- ☐ Approved
- ☐ Approved as noted
- ☐ Returned for
- ☐ Other _____

COMMENTS:

Signed: Kenneth J. Walker

☑ 2140 W. Winton Avenue, Hayward, CA 94545
(510) 352-4800 - FAX (510) 783-1089

☐ 601 University Avenue, Suite 150, Sacramento, CA 95825
(916) 568-7500 - FAX (916) 568-7504

Copies To:

Mr. Lester Feldman Regional Water Quality Control Board
Mr. Dan Kirk Shell Oil Company

D:\KELLY\LTROFTRN.FRM(kj)