Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

90 MAR 33 AM 10: 33

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

March 30, 1990

Ed

Mr. Rafat Shahid
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Chevron Service Station #9-3356
19201 Center Street
Castro Valley, CA

Dear Mr. Shahid:

Enclosed we are forwarding the Quarterly Groundwater Sampling Report dated March 21, 1990, conducted by our consultant Alton Geoscience, Inc., for the above referenced site. As indicated in the report, no detectable hydrocarbon contaminants were present in any of the monitoring wells.

Chevron will sample this site one additional quarter, which will complete one years worth of sampling, then evaluate the case for closure.

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the circumstances, to the best of my knowledge.

If you have any questions or comments please do not hesitate to call me at (415) 842 - 9625.

Very truly yours,

C. G. Trimbach

By John Randall

JMR/jmr
Enclosure

cc: Mr. Lester Feldman
RWQCB-Bay Area
1800 Harrison Street
Suite # 700
Oakland, CA 94612

ALTON GEOSCIENCE, INC.

QUARTERLY GROUND WATER MONITORING AND SAMPLING REPORT

CHEVRON STATION NUMBER 3356
19201 CENTER STREET
CASTRO VALLEY, CALIFORNIA

March 21, 1990

1000 Burnett Avenue, Suite 140 • Concord, CA 94520 • (415) 682-1582 • Fax 682-8921

ALTON GEOSCIENCE, INC.

March 21, 1990

Mr. John Randall
Chevron U.S.A. Inc.
Post Office Box 5004
San Ramon, California 94583-0804 30-030

Subject: Quarterly Ground Water Monitoring Report
Chevron Station Number 3356
19201 Center Street
Castro Valley, California

Dear Mr. Randall:

In accordance with our agreement, Alton Geoscience, Inc. herewith transmits the Quarterly Ground Water Monitoring and Sampling Report for Chevron Station Number 3356, located at 19201 Center Street, Castro Valley, California. Figure 1 - Vicinity Map shows the location of the site.

The monitoring and sampling of Monitoring Wells MW-1, MW-2, and MW-3 were performed on February 22, 1990, in accordance with the requirements and procedures of the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the Alameda County Department of Environmental Health.

FIELD PROCEDURES

Prior to purging the wells, water levels were measured from the top of casing to the nearest 0.01 foot using an electronic sounder. Ground water samples were collected with a hand bailer and observed for the presence of free product or sheen.

Water samples were collected after more than 4 casing volumes of ground water were purged from each well. Each sample was collected using a clean Teflon bailer (dedicated for each well), transferred into clean sample containers, and delivered to a state-certified laboratory for analysis, following proper chain of custody procedures.

SAMPLING AND ANALYTICAL RESULTS

The results of the monitoring and laboratory analyses of the ground water samples for this quarter are summarized in Table 1, as well as the results of previous quarterly monitoring and sampling events. Based on the previous

wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and flow direction were determined as shown in Figure 2.

No free product or sheen was noted in any of the ground water samples. Ground water from MW-1, however, did exhibit a slight sewage odor. The water sampling survey forms, presenting the results of the field activities and observations, are presented in Appendix A, including the official laboratory reports and chain of custody records.

SCHEDULE

The next quarterly sampling event is scheduled for May 1990. The report presenting the results of the field and analytical data is scheduled to be submitted in June 1990.

Copies of this report should be submitted to the following agencies for their review:

1. Mr. Scott Seery
   Alameda County Health Agency
   Department of Environmental Health
   80 Swan Way, Room 200
   Oakland, California 94621

2. Mr. Lester Feldman
   Regional Water Quality Control Board
   San Francisco Bay Region
   1111 Jackson Street, Room 6000
   Oakland, California 94607

Please call if you have any questions concerning this report.

Sincerely,

ALTON GEOSCIENCE, INC.

Walid Naouchi, R.E.A. 01231
Project Engineer

Al Sevilla, R.C.E. 26392
Division General Manager

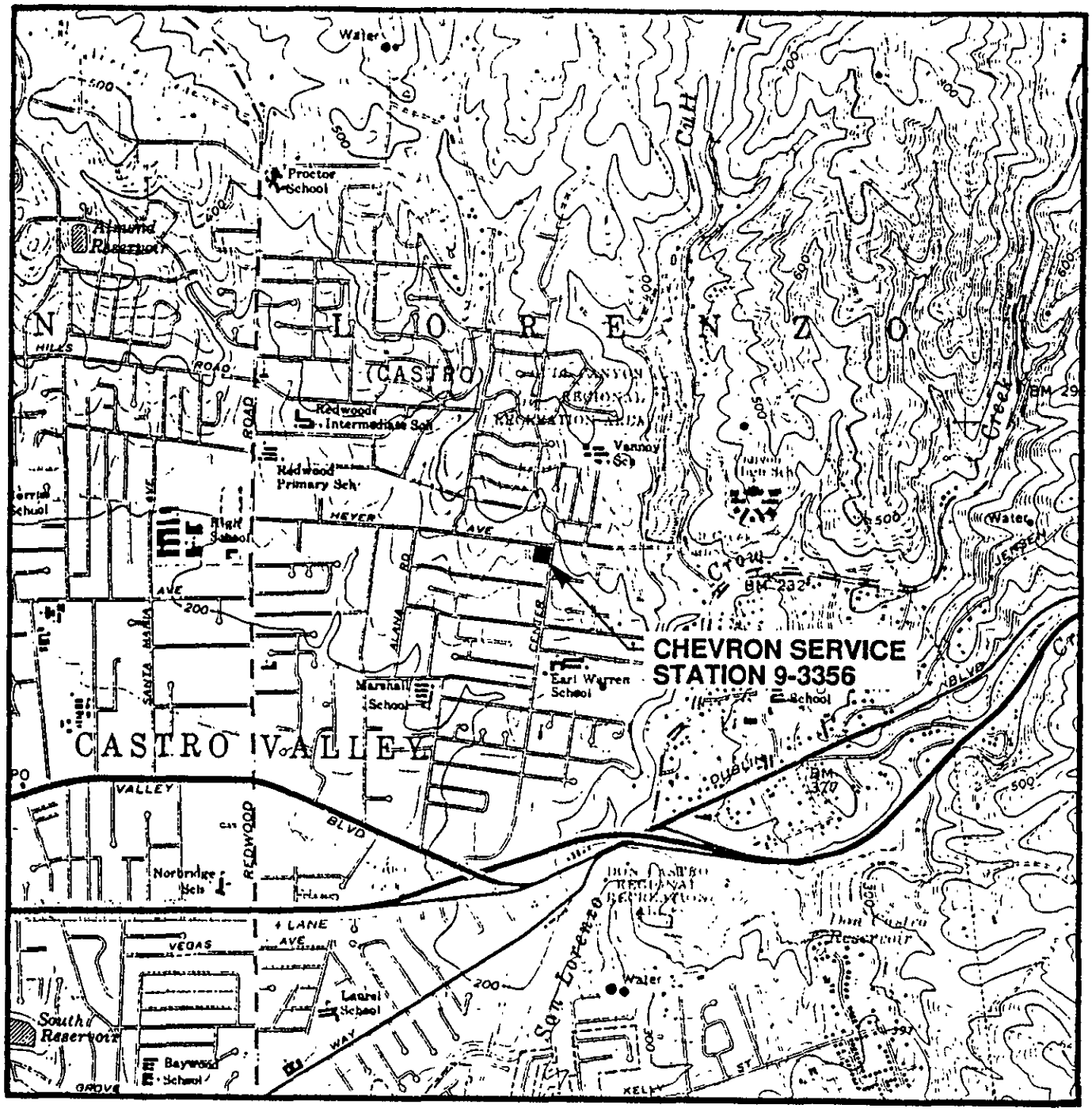
Enclosure

Table 1. Summary of Results of Ground Water Sampling
Chevron Service Station #3356, 19201 Center Street
Castro Valley, California
Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	DEPTH TO WATER (ft)	GROUND WATER ELEVATION (ft above msl)	TPH-G (8015)	TPH-D (8015)	PHC (601)	TOG (413.2)	B (8020)	E (8020)	T (8020)	X (8020)	ORG-Pb (7420)	ANALYTICAL LAB
MW-1	09/06/89	18.30	266.92	<1.0	---	---	---	<0.5	<0.5	<0.5	<0.5	<50	GTEL
MW-1	11/20/89	18.06	267.16	<500	---	---	---	<0.3	<0.3	<0.3	<0.6	<50	GTEL
MW-1	02/22/90	18.04	267.18	<50	---	---	---	<0.3	<0.3	<0.3	<0.3	<50	GTEL
MW-2	09/06/89	13.91	272.25	23	---	---	---	1	1	4	4	<50	GTEL
MW-2	11/20/89	13.81	272.36	<500	---	---	---	<0.3	<0.3	<0.3	<0.6	<50	GTEL
MW-2	02/22/90	13.68	272.48	<50	---	---	---	<0.3	<0.3	<0.3	<0.3	<50	GTEL
MW-3	09/06/89	18.73	265.73	<1.0	---	<n	1,000	<0.5	<0.5	<0.5	<0.5	<50	GTEL
MW-3	11/20/89	17.65	266.81	<500	---	<n	<1,000	<0.3	<0.3	<0.3	<0.6	<50	GTEL
MW-3	02/22/90	16.84	267.62	<50	---	<n	<1,000	<0.3	<0.3	<0.3	<0.3	<50	GTEL

EXPLANATION FOR TABLE 1

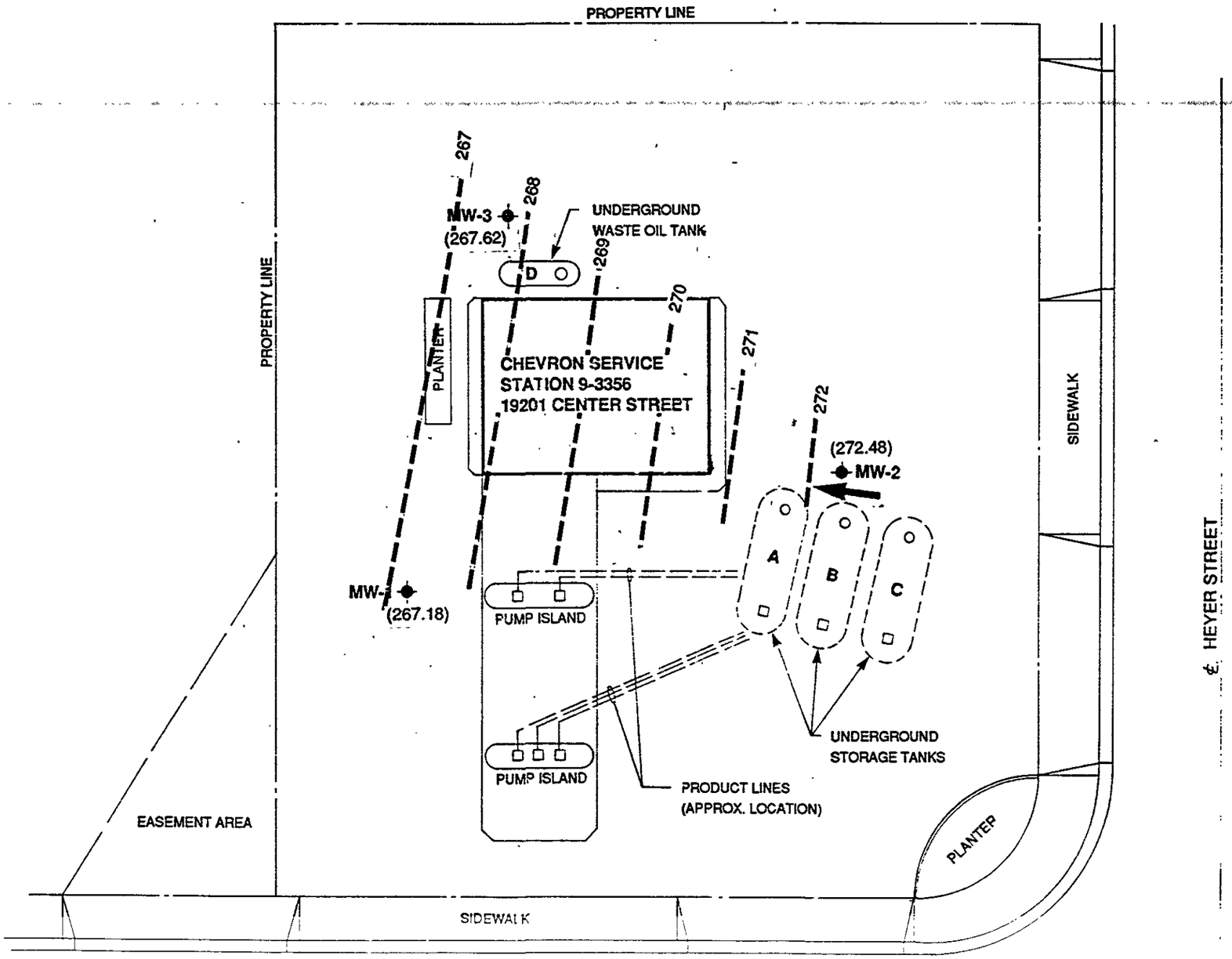
TPH-G	: Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)
TPH-D	: Total Petroleum Hydrocarbons as Diesel (EPA method 8015 modified)
TOG	: Total Oil and Grease (EPA method 413.2)
PHC	: Purgeable Halocarbons (EPA method 601)
B	: Benzene (EPA method 8020)
T	: Toluene (EPA method 8020)
E	: Ethylbenzene (EPA method 8020)
X	: Xylenes (EPA method 8020)
ORG-Pb	: Organic lead (EPA method 7420)
---	: Not analyzed
<n	: Not detected at method detection limit of n parts per billion (ppb)
ft above msl	: Feet above Mean Sea Level



Source:
USGS Map, Hayward Quadrangle, California
7.5-minute series (Topographic) 1959,
Photo Revised 1980

Figure 1. Vicinity Map

CHECKED BY: DATE: DRAWN BY: DATE:	**ALTON GEOSCIENCE** 1000 Burnett Ave., Ste 140 Concord, CA 94520



N

20 10 0 20

SCALE IN FEET

LEGEND

- GROUND WATER MONITORING WELL
- UNDERGROUND TANK SIZE & CONTENT
  - A: 10,000 gal. Unleaded Regular
  - B: 10,000 gal. Leaded Regular
  - C: 10,000 gal. Supreme Unleaded
  - D: 500 gal. Waste Oil
- GROUND WATER ELEVATION CONTOUR
- DIRECTION OF GROUND WATER FLOW

Figure 2. Site Plan Showing Ground Water Contour Elevation

Source Chevron U.S.A

PROJECT NO. 30-030

APPENDIX A

SURVEY AND WATER LEVEL MONITORING DATA

WATER SAMPLING FORMS

LABORATORY REPORTS

CHAIN OF CUSTODY RECORDS

SURVEY AND WATER LEVEL MONITORING DATA

Well Number	Elevation* (feet)**	Depth to Water (feet)	Water Level Elevation (feet)**
	February 22, 1990 Data		
MW-1	285.22	18.04	267.18
MW-2	286.16	13.68	272.48
MW-3	284.46	16.84	267.62
	November 20, 1989 Data		
MW-1	285.22	18.06	267.16
MW-2	286.16	13.81	272.36
MW-3	284.46	17.65	266.81
	September 12, 1989 Data		
MW-1	285.22	18.39	266.83
MW-2	286.16	13.97	272.19
MW-3	284.46	17.78	266.68
	September 6, 1989 Data		
MW-1	285.22	18.30	266.92
MW-2	286.16	13.91	272.25
MW-3	284.46	18.73	265.73

Note: Elevation* = elevation in feet above mean sea level as measured at top of casing (NGVD-1929)
(feet)** = feet above mean sea level (NGVD-1929)

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Castro Valley Date: 2/22/90

Well: MW-1 Sampling Team: William Shipp, Alison Watts

Well Development Method:

Sampling Method: Bailer

Describe Equipment Before Sampling This Well: Triple rinsed with TSP, tap water, and deionized water

Well Development/Well Sampling Data

Total Well Depth: 34.88 feet Time: 11:30 Water level Before Pumping: 18.04

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
16.84	feet x	0.16	(0.65)	10.95	3	33

Depth Purging From: ____ feet. Time Purging Begins: 11:30

Notes on Initial Discharge: Cloudy, light grey

Time	Volume	pH	X1000 Conductivity	T	Notes
11:34	8	7.90	3.03	69.4	cloudy, light grey
11:37	13	7.55	3.16	69.8	Cloudy, light grey, sewer odor
11:41	18	7.31	2.96	69.6	Turbid, grey sewer odor
2:02	23	8.01	2.97	68.9	Cloudy, grey, sewer odor
2:07	33.5	7.55	2.98	69.1	Turbid, grey, sewer

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH				
Conductivity				
Temperature (F)				

Presample Collection Gallons Purged: 33.5

Time Sample Collection Begins: 2:08

Time Sample Collection Ends: 2:12

Total Gallons Purged: 35.5

Comments: Well dry with poor recovery at 11:40. Stopped purging and resumed at 2:00 p.m.

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Castro Valley Date: 2/22/90

Well: MW-2 Sampling Team: William Shipp, Alison Watts

Well Development Method:

Sampling Method: Bailer

Describe Equipment Before Sampling This Well: Triple rinsed with TSP, tap water, and deionized water

Well Development/Well Sampling Data

Total Well Depth: 30.06 feet Time: 1:12 Water level Before Pumping: 13.68

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
16.38	feet x	0.16	0.65	10.65	3	32

Depth Purging From: ____ feet. Time Purging Begins: ____

Notes on Initial Discharge: Clear

Time	Volume	pH	Conductivity	T	Notes
1:17	8	7.90	2.58	69.6	Clear
1:20	14	7.63	2.62	67.6	Cloudy, light grey, sewer odor
1:23	22	7.52	2.61	67.8	Turbid, light grey, sewer odor
1:27	28	7.47	2.08	67.7	Silty, grey brown, sewer odor
1:35	34	7.57	2.09	67.4	Silty, grey brown, sewer odor

Time Field Parameter Measurement Begins: ____

	Rep #1	Rep #2	Rep #3	Rep #4
pH	7.63	7.52	7.47	7.57
Conductivity	2.62	2.61	2.08	2.09
Temperature (F)	67.6	67.8	67.7	67.4

Presample Collection Gallons Purged: 34

Time Sample Collection Begins: 1:40

Time Sample Collection Ends: 1:43

Total Gallons Purged: 36

Comments: Poor recovery, white particle matter.

ALTON GEOSCIENCE, INC.
Well Development and
Water Sampling Field Survey

Project # 30-030 Site: Castro Valley Date: 2/22/90

Well: MW-3 Sampling Team: William Shipp, Alison Watts

Well Development Method: _____

Sampling Method: Bailer

Describe Equipment Before Sampling This Well: Triple rinsed with TSP, tap water, and deionized water

Well Development/ Well Sampling Data

Total Well Depth: 39.52 feet Time: 11:55 Water level Before Pumping: 16.84

Water Column		Casing Diameter 2-inch	4-inch	Volume	Factor	Volume to Purge
22.68	feet x	0.16	(0.65)	14.74	3	44

Depth Purging From: ____ feet. Time Purging Begins: 12:00 p.m.

Notes on Initial Discharge: Clear

Time	Volume	pH	Conductivity	T	Notes
12:05	12	7.63	1.64	70.5	Cloudy, light grey
12:10	20	7.49	1.77	70.1	Cloudy, light grey
12:13	28	7.46	1.78	70.1	Turbid, grey brown
12:17	36	7.43	1.80	69.9	Turbid, grey brown
12:23	44	7.42	1.72	69.7	Silty, grey brown well is turning dry

Time Field Parameter Measurement Begins: _____

	Rep #1	Rep #2	Rep #3	Rep #4
pH	7.49	7.46	7.43	7.42
Conductivity	1.77	1.78	1.80	1.72
Temperature (F)	70.1	70.1	69.9	69.7

Presample Collection Gallons Purged: 44

Time Sample Collection Begins: 12:35

Time Sample Collection Ends: 12:45

Total Gallons Purged: 46

Comments: _____

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 13, 1990

Stephan Rosen
Alton Geoscience
1000 Burnett Ave, Suite 140
Concord, CA 94520

Dear Mr. Rosen:

Enclosed please find the analytical results report prepared by GTEL for samples received on 02/27/90.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 13, 1990

Table 1

ANALYTICAL RESULTS

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/L[1]
GTEL No.	Client ID				
01	MW-3	02/22/90	03/06/90	03/06/90	<1

1 = Method detection limit = 1.0 mg/L; analyte below this level would not be detected.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 13, 1990

QA Conformance Summary

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

1.0 Blanks

The method blank was below the detection limit as shown in Table 2.

2.0 Initial Instrument Calibration

The range of concentrations of the initial instrument calibration are shown in Table 3.

3.0 Calibration Verification Standards

3.1 The control limits were met for the initial calibration verification standard (ICVS) as shown in Table 4.

3.2 The control limits were met for the continuing calibration verification standard (CCVS) as shown in Table 4.

4.0 D.I. Water Spike (WS) Accuracy

The control limits were met for the reference oil in the WS as shown in Table 5.

5.0 Sample Duplicate Precision

No sample was provided for a duplicate run.

Table 2

METHOD BLANK DATA

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Date of Analysis: 03/06/90

Analyte	Concentration, mg/L
Oil and Grease	<1

<# = Not detected at the indicated detection limit.

Table 3

INITIAL CALIBRATION STANDARDS DATA

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Date of Analysis: 03/06/90

Standard Number	Concentration, mg/L
1	1.0
2	5.0
3	10.0
4	50.1
5	100.2

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 13, 1990

Table 4

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS RESULTS

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Date of Analysis: 03/06/90

Initial Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Oil and Grease	5.1	5.3	104	80 - 120
Continuing Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Oil and Grease	5.1	4.4	86	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 4a

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS SOURCE

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Initial Calibration Verification Standard		
Analyte	Lot Number	Source
Oil and Grease	R05/STK 27	GTEL
Continuing Calibration Verification Standard		
Analyte	Lot Number	Source
Oil and Grease	R04/STK 19	GTEL

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 13, 1990

Table 5

D.I. WATER SPIKE (WS) RECOVERY REPORT

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Date of Analysis: 03/06/90 Units: mg/L

Analyte	WS Result	Amount Added	WS, % Recovery	Acceptability Limits, %[1]
Oil and Grease	5.2	5.1	102	70 - 130

1 = Arbitrary limits, pending experimental determination.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Western Region
4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002676
Report Issue Date: March 8, 1990

Stephan Rosen
Alton Geoscience
1000 Burnett Ave, Suite 140
Concord, CA 94520

Dear Mr. Rosen:

Enclosed please find the analytical results report prepared by GTEL for samples received on 02/27/90.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P Popek /RAB

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002676
Report Issue Date: March 8, 1990

Table 1

ANALYTICAL RESULTS

Purgeable Halocarbons in Water
EPA Method 601

Date Sampled		02/22/90			
Date Analyzed		02/28/90			
Client Identification		MW-3			
GTEL Sample Number		01			
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5			
Bromomethane	0.5	<0.5			
Dichlorodifluoromethane	0.5	<0.5			
Vinyl chloride	1	<1			
Chloroethane	0.5	<0.5			
Methylene chloride	0.5	<0.5			
Trichlorofluoromethane	0.5	<0.5			
1,1-Dichloroethene	0.2	<0.2			
1,1-Dichloroethane	0.5	<0.5			
trans-1,2-Dichloroethene	0.5	<0.5			
Chloroform	0.5	<0.5			
1,2-Dichloroethane	0.5	<0.5			
1,1,1-Trichloroethane	0.5	<0.5			
Carbon tetrachloride	0.5	<0.5			
Bromodichloromethane	0.5	<0.5			
1,2-Dichloropropane	0.5	<0.5			
trans-1,3-Dichloropropene	0.5	<0.5			
Trichloroethene	0.5	<0.5			
Dibromochloromethane	0.5	<0.5			
1,1,2-Trichloroethane	0.5	<0.5			
cis-1,3-Dichloropropene	0.5	<0.5			
2-Chloroethylvinyl ether	1	<1			
Bromoform	0.5	<0.5			
1,1,2,2-Tetrachloroethane	0.5	<0.5			
Tetrachloroethene	0.5	<0.5			
Chlorobenzene	0.5	<0.5			
1,3-Dichlorobenzene	0.5	<0.5			
1,2-Dichlorobenzene	0.5	<0.5			
1,4-Dichlorobenzene	0.5	<0.5			

1 = Extraction by EPA Method 5030

QA Conformance Summary

Purgeable Halocarbons in Water
EPA Method 601

1.0 Blanks

Zero of 29 target compounds found in Reagent blank as shown in Table 2.

2.0 Independent QC Check Sample

The control limits were met for 8 out of 8 QC check compounds as shown in Table 3.

3.0 Surrogate Compound Recoveries

Percent recovery limits were met for the surrogate compound (Bromofluorobenzene) for all samples as shown in Table 4.

4.0 Matrix Spike (MS) Accuracy

Percent recovery limits were met for 3 of 3 compounds in the MS as shown in Table 5.

5.0 Reagent Water Spike (WS) and Reagent Water Spike Duplicate (WSD) Precision

Relative percent difference (RPD) criteria was met for 3 of 3 compounds in the WS and WSD as shown in Table 6.

6.0 Sample Handling

6.1 Sample handling and holding time criteria were met for all samples.

6.2 There were no exceptional conditions requiring dilution of samples.

Table 2

REAGENT BLANK DATA

Purgeable Halocarbons in Water
EPA Method 601

Date of Analysis: 02/28/90

Analyte	Observed Result, ug/L
Chloromethane	<0.5
Bromomethane	<0.5
Dichlorodifluoromethane	<0.5
Vinyl chloride	<1
Chloroethane	<0.5
Methylene chloride	<0.5
Trichlorofluoromethane	<0.5
1,1-Dichloroethene	<0.2
1,1-Dichloroethane	<0.5
trans-1,2-Dichloroethene	<0.5
Chloroform	<0.5
1,2-Dichloroethane	<0.5
1,1,1-Trichloroethane	<0.5
Carbon tetrachloride	<0.5
Bromodichloromethane	<0.5
1,2-Dichloropropane	<0.5
trans-1,3-Dichloropropene	<0.5
Trichloroethene	<0.5
Dibromochloromethane	<0.5
1,1,2-Trichloroethane	<0.5
cis-1,3-Dichloropropene	<0.5
2-Chloroethylvinyl ether	<1
Bromoform	<0.5
1,1,2,2-Tetrachloroethane	<0.5
Tetrachloroethene	<0.5
Chlorobenzene	<0.5
1,3-Dichlorobenzene	<0.5
1,2-Dichlorobenzene	<0.5
1,4-Dichlorobenzene	<0.5

<# = Not Detected at the indicated detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002676
Report Issue Date: March 8, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Halocarbons in Water
EPA Method 601

Date of Analysis: 02/25/90

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Vinyl Chloride	100	96	96	85 - 115
Bromomethane	100	87	87	85 - 115
Methylene Chloride	100	102	102	85 - 115
1,1-Dichloroethane	100	104	104	85 - 115
Chlorobenzene	100	98	98	85 - 115
1,1,1-Trichloroethane	100	112	112	85 - 115
Bromodichloromethane	100	111	111	85 - 115
1,1,2,2-Tetrachloroethane	100	112	112	85 - 115

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Halocarbons in Water
EPA Method 601

Analyte	Lot Number	Source
Vinyl Chloride	LA21062	Purgeable C Supelco
Bromomethane	LA21062	Purgeable C Supelco
Methylene Chloride	LA21173	Purgeable A Supelco
1,1-Dichloroethane	LA21173	Purgeable A Supelco
Chlorobenzene	LA21173	Purgeable A Supelco
1,1,1-Trichloroethane	LA20674	Purgeable B Supelco
Bromodichloromethane	LA20674	Purgeable B Supelco
1,1,2,2-Tetrachloroethane	LA20674	Purgeable B Supelco

Table 4

SURROGATE COMPOUND RECOVERY

Bromofluorobenzene

Purgeable Halocarbons in Water
EPA Method 601

Acceptability Limits[1]: 63 - 131 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	50	50	100
01	50	33	66
MS	50	42	84
WS	50	42	84
WSD	50	39	78

MS = Matrix Spike
WS = Reagent Water Spike
WSD = Reagent Water Spike Duplicate
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Project Number: SFB-175-0204.72
Consultant Project Number 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002676
Report Issue Date: March 8, 1990

Table 5

MATRIX SPIKE (MS) RECOVERY REPORT

Purgeable Halocarbons in Water
EPA Method 601

Date of Analysis: 03/02/90
Sample Spiked: D003032-01

Units: ug/L

Analyte	Sample Result	MS Result	Concentration Added	MS, % Recovery	Acceptability Limits, %[1]
1,1-Dichloroethene	<0.5	54.0	75	72	64 - 114
Chlorobenzene	<0.5	57.3	75	76	58 - 123
Trichloroethene	<0.5	65.9	75	88	66 - 120

<# = Not detected at the indicated detection limit.
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 6

REAGENT WATER SPIKE (WS) AND REAGENT WATER SPIKE DUPLICATE (WSD) RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Purgeable Halocarbons in Water
EPA Method 601

Date of Analysis: 02/28/90 Units: ug/L

Analyte	Concentration Added	WS Result	WSD Result	WS, % Recovery	WSD, % Recovery
1,1 Dichloroethene	75	56.3	56.9	75	76
Chlorobenzene	75	63.4	59.7	84	80
Trichloroethene	75	64.5	65.0	86	87

Analyte	RPD, %	Maximum RPD, %	Acceptability Limits % Recovery[1]
1,1 Dichloroethene	1	30	72 - 116
Chlorobenzene	5	30	58 - 126
Trichloroethene	1	30	79 - 119

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
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Concord, CA 94520
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(800) 544-3422 from inside California
(800) 423-7143 from outside California

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002675
Report Issue Date: February 28, 1990

Stephan Rosen
Alton Geoscience
1000 Burnett Ave, Suite 140
Concord, CA 94520

Dear Mr. Rosen,

Attached please find the analytical results for the samples received by GTEL on February 27, 1990.

GTEL maintains a formal quality assurance program to ensure the integrity of the analytical results. All quality assurance criteria were achieved during the analysis unless otherwise noted in the footnotes to the analytical report.

The specific analytical methods used and cited in this report are approved by state and federal regulatory agencies. GTEL is certified for the analysis reported herein by the California State Department of Health Services under certificate number 194.

If you have any questions regarding this analysis, or if we may service any additional analytical needs, please give us a call.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002675
Report Issue Date: February 28, 1990

Table 1

ANALYTICAL RESULTS

Organic Lead in Water by Flame AA
EPA Method 7420[1]

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration mg/L (2)
GTEL No.	Client ID				
01	MW-1	02/22/90	02/27/90	02/27/90	<0.05
02	MW-2	02/22/90	02/27/90	02/27/90	<0.05
03	MW-3	02/22/90	02/27/90	02/27/90	<0.05

1 = Extraction by DHS method; LUFT Manual, 12/87 rev.: 250 mL sample extracted with 50 mL Xylene/MIBK mixture, Aliquat 336.
2 = Method detection limit = 0.05 mg/L; analyte below this level would not be detected.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002675
Report Issue Date: February 28, 1990

QA Conformance Summary

Organic Lead in Water by Flame AA
EPA Method 7420

1.0 Blanks

The method blank was below the detection limit as shown in Table 2.

2.0 Initial Instrument Calibration

The range of concentrations of the initial instrument calibration are shown in Table 3.

3.0 Calibration Verification Standards

3.1 The control limits were met for the initial calibration verification standard (ICVS) as shown in Table 4.

3.2 The control limits were met for the continuing calibration verification standard (CCVS) as shown in Table 4.

4.0 Sample Duplicate Precision

Relative percent difference criterion was met for the sample duplicate as shown in Table 5.

5.0 Sample Handling

5.1 Sample handling and holding time criteria were met for all samples.

5.2 There were no exceptional conditions requiring dilution of samples.

Project Number: SF8-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002675
Report Issue Date: February 28, 1990

Table 2

METHOD BLANK DATA

Organic Lead in Water by Flame AA
EPA Method 7420

Date of Analysis: 02/27/90

Analyte	Concentration, mg/L
Organic Lead	<0.05

<# = Not detected at the indicated detection limit.

Table 3

INITIAL CALIBRATION STANDARDS DATA

Organic Lead in Water by Flame AA
EPA Method 7420

Date of Analysis: 02/27/90

Standard Number	Concentration, mg/L
1	0
2	0.4
3	0.8
4	2.0

Table 4

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS RESULTS

Organic Lead in Water by Flame AA
EPA Method 7420

Date of Analysis: 02/27/90

Initial Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Organic Lead	1.2	1.246	104	80 - 120
Continuing Calibration Verification Standard				
Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[1]
Organic Lead	1.2	1.243	104	80 - 120

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Table 4a

INITIAL AND CONTINUING CALIBRATION
VERIFICATION STANDARDS SOURCE

Organic Lead in Water by Flame AA
EPA Method 7420

Initial Calibration Verification Standard		
Analyte	Lot Number	Source
Organic Lead	3791	MCB
Continuing Calibration Verification Standard		
Analyte	Lot Number	Source
Organic Lead	3791	MCB

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002675
Report Issue Date: February 28, 1990

Table 5

LABORATORY DUPLICATE SAMPLE RESULTS
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Organic Lead in Water by Flame AA
EPA Method 7420

Date of Analysis: 02/27/90
Client ID: MW-1
Sample Used: 01
Units: mg/L

Analyte	Sample Result	Duplicate Result	RPD, %	Maximum RPD, %
Organic Lead	<0.05	<0.05	NA	20

NA = Not Applicable

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL
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Western Region
4080-C Pike Ln., Concord, CA 94520
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In CA: (800) 544-3422
Outside CA: (800) 423-7143

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 8, 1990

Stephan Rosen
Alton Geoscience
1000 Burnett Ave, Suite 140
Concord, CA 94520

Dear Mr. Rosen:

Enclosed please find the analytical results report prepared by GTEL for samples received on 02/27/90.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 8, 1990

Table 1

ANALYTICAL RESULTS

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

Sample Identification		Date Sampled	Date Extracted	Date Analyzed	Concentration, mg/L[1]
GTEL No.	Client ID				
01	MW-3	02/22/90	03/06/90	03/06/90	<1

1 = Method detection limit = 1.0 mg/L; analyte below this level would not be detected.

GTEL ENVIRONMENTAL LABORATORIES, INC

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002674
Report Issue Date: March 8, 1990

QA Conformance Summary

Total Recoverable Oil and Grease in Water by Infrared
EPA Method 413.2

1.0 Blanks

The method blank was below the detection limit as shown in Table 2.

2.0 Initial Instrument Calibration

The range of concentrations of the initial instrument calibration are shown in Table 3.

3.0 Calibration Verification Standards

3.1 The control limits were met for the initial calibration verification standard (ICVS) as shown in Table 4.

3.2 The control limits were met for the continuing calibration verification standard (CCVS) as shown in Table 4.

4.0 D.I. Water Spike (WS) Accuracy

The control limits were met for the reference oil in the WS as shown in Table 5.

5.0 Sample Duplicate Precision

No sample was provided for a duplicate run.

GTEL
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Western Region
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Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

Stephan Rosen
Alton Geoscience
1000 Burnett Ave, Suite 140
Concord, CA 94520

Dear Mr. Rosen:

Enclosed please find the analytical results report prepared by GTEL for samples received on 02/27/90.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Emma P. Popek /RMB

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

Table 1

ANALYTICAL RESULTS

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015[1]

GTEL Sample Number		01	02	03	
Client Identification		MW-1	MW-2	MW-3	
Date Sampled		02/22/90	02/22/90	02/22/90	
Date Analyzed		03/01/90	03/01/90	03/01/90	
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	
Toluene	0.3	<0.3	<0.3	<0.3	
Ethylbenzene	0.3	<0.3	<0.3	<0.3	
Xylene (total)	0.6	<0.6	<0.6	<0.6	
TPH as Gasoline	50	<50	<50	<50	

1 = Extraction by EPA Method 5030

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

QA Conformance Summary

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

1.0 Blanks

Five of 5 target compounds were below detection limits in the reagent blank as shown in Table 2.

2.0 Independent QC Check Sample

The control limits were met for 4 out of 4 QC check compounds as shown in Table 3.

3.0 Surrogate Compound Recoveries

Percent recovery limits were met for the surrogate compound (naphthalene) for all samples as shown in Table 4.

4.0 Matrix Spike (MS) Accuracy

Percent recovery limits were met for 4 of 4 compounds in the MS as shown in Table 5.

5.0 Reagent Water Spike (WS) and Reagent Water Spike (WSD) Duplicate Precision

Relative percent difference (RPD) criteria was met for 4 of 4 analytes in the WS and WSD as shown in Table 6.

6.0 Sample Handling

6.1 Sample handling and holding time criteria were met for all samples.

6.2 There were no exceptional conditions requiring dilution of samples.

Table 2

REAGENT BLANK DATA

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Date of Analysis: 03/01/90

Analyte	Concentration, ug/L
Benzene	<0.3
Toluene	<0.3
Ethylbenzene	<0.3
Xylene (total)	<0.6
Gasoline	<50

<# = Not detected at the indicated detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Date of Analysis: 02/16/90

Analyte	Expected Result, ug/L	Observed Result, ug/L	Recovery, %	Acceptability Limits, %
Benzene	50	51	102	85 - 115
Toluene	50	52	104	85 - 115
Ethylbenzene	50	50	100	85 - 115
Xylene (total)	150	153	102	85 - 115

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Analyte	Lot Number	Source
Benzene	LA18104	SUPELCO
Toluene	LA18104	SUPELCO
Ethylbenzene	LA18104	SUPELCO
Xylene (total)	LA18104	SUPELCO

Table 4

SURROGATE COMPOUND RECOVERY

Naphthalene

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Acceptability Limits[1]: 70 - 130 %

GTEL No.	Expected Result, ug/L	Surrogate Result, ug/L	Surrogate Recovery, %
Blank	200	191	96
01	200	168	84
02	200	174	87
03	200	178	89
MS	200	178	89
WS	200	176	88
WSD	200	199	100

MS = Matrix Spike
WS = Reagent Water Spike
WSD = Reagent Water Spike Duplicate
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

Table 5

MATRIX SPIKE (MS) RECOVERY REPORT

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Date of Analysis: 03/01/90
Sample Spiked: 03
Client ID: MW-3
Units: ug/L

Analyte	Sample Result	Concentration Added	Concentration Recovered	MS Result	MS, % Recovery	Acceptability Limits[1], %
Benzene	<0.3	25	22.7	22.7	91	71 - 123
Toluene	<0.3	25	22.3	22.3	89	69 - 120
Ethylbenzene	<0.3	25	21.8	21.8	87	72 - 121
Xylene (total)	<0.6	75	67.7	67.7	90	75 - 123

<# = Not detected at the indicated detection limit.
† = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Project Number: SFB-175-0204.72
Consultant Project Number: 30-030
Contract Number: N46CWC0244-9-X
Facility Number: 3356
Work Order Number: D002673
Report Issue Date: March 8, 1990

Table 6

REAGENT WATER SPIKE (WS) AND REAGENT WATER SPIKE DUPLICATE (WSD)
RECOVERY AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Purgeable Aromatics and Total Petroleum Hydrocarbons
as Gasoline in Water
EPA Method 8020/8015

Date of Analysis: 03/01/90 Units: ug/L

Analyte	Concentration Added	WS Result	WS, % Recovery	WSD Result	WSD, % Recovery
Benzene	25	23.6	94	24.2	97
Toluene	25	23.2	93	23.7	95
Ethylbenzene	25	23.7	95	23.3	93
Xylene (total)	75	70.8	94	71.4	95

Analyte	RPD, %	Maximum RPD, %	Acceptability Limits[1] % Recovery
Benzene	3	30	84 - 128
Toluene	2	30	83 - 122
Ethylbenzene	2	30	82 - 120
Xylene (total)	1	30	86 - 123

1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Chain-of-Custody Record

Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583
FAX (415) 842-9591

Chevron Facility Number 3356
Consultant Release Number 2612520
Consultant Project Number 30-030
Consultant Name Alton Geoscience
Address 1000 Burnett Ave, Ste. 140
Fax Number 415-682-8921
Project Contact (Name) Stephan Rosen
(Phone) (415) 682-1582

Chevron Contact (Name) John Randall
(Phone) 415-842-9625
Laboratory Name GTEL
Contract Number
Samples Collected by (Name) Alison Watts
Collection Date 2/22/90
Signature Alison Watts

Sample Number	Lab Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite	Time	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline / BTEX	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Lead - Organic DHS-Luft	EDB DHS-AB 1803	601	Hold		Remarks
MW-1		4	W	G	2:08	BTEX W/ACID	Y	X					X			X		
MW-2		4	W	G		"	Y	X					X			X		
MW-3		6	W	G		"	Y	X		X			X		X			601 not acid preserved

NOTE: 2-22-90 Collection Date

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)
Alison Watts	Alton Geoscience	2-26-90/1200	Jane Gressinger			24 Hrs
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	48 Hrs
	Concord Courier	26 Feb/3:30				5 Days
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	(10 Days)
			Kathy Brau		2-27-90 8:15	

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