Chevron

May 22, 1998

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing – Sales West
Phone 510 842-9500

Mr. Barney Chan
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

#541

Re: Chevron Service Station #9-1851
451 Hegenberger Road
Oakland, California

Dear Mr. Chan:

Enclosed is the Groundwater Investigation report that was prepared by our consultant Pacific Environmental Group Inc., for the above noted site. This report notes the results to determine the extent of MtBE in the groundwater and to evaluate whether water line trenches are acting as preferential pathways for the migration of MtBE.

The scope of work performed included the collection of groundwater samples at off-site locations along the water line trench and down gradient of the site.

Four hand-augured soil borings were advanced off-site into the fill material covering the water line. Due to highly compacted fill material in the southeast corner of the site, Boring GW-1 could not be completed using hand tools. The use of hand tools is necessary when exploring underground utilities; therefore, it was not possible to collect a sample for Boring GW-1.

Grab groundwater samples were collected from each boring and analyzed for TPH-g, BTEX and MtBE constituents. The concentrations were below method detection limits for all constituents and therefore did not require MtBE confirmation with EPA Method 8260.

No concentrations of the constituents were detected, therefore, the water line trench backfill is not acting as a preferential pathway for the migration of MtBE. The extent of MtBE has been defined to below method detection levels to the south and west of the site.

If you have any questions, I can be contacted at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

Cc. Bill Scudder, Chevron

Mr. Ben Shimek
451 Hegenberger Road
Oakland, CA 94621

PACIFIC
ENVIRONMENTAL
GROUP, INC.

AN ITT COMPANY

May 21, 1998
Project 325-055.1A

Mr. Phil Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, California 94583

Re: **Groundwater Investigation**
Chevron Service Station 9-1851
451 Hegenberger Road at Edgewater Road
Oakland, California

Dear Mr. Briggs:

This letter, prepared by Pacific Environmental Group, Inc. (PEG) on behalf of Chevron Products Company (Chevron), documents the activities to determine the extent of methyl tert-butyl ether (MtBE) confirmed in groundwater at the site referenced above and to evaluate whether water line trenches are acting as preferential pathways for the migration of MtBE. The scope of work performed included the collection of groundwater samples at off-site locations along the water line trench and downgradient of the site.

This report includes the site background and the findings of the groundwater investigation.

SITE BACKGROUND

Site Description

The site is located at the northwest corner of the intersection of Hegenberger Road and Edgewater Drive in Alameda, California (Figure 1). The site is located approximately 1,700 feet east of San Leandro Creek which flows towards San Francisco Bay. Land use near the site is generally commercial and industrial. The locations of the station building and pump islands and underground storage tank (UST) complexes are shown on Figure 2. The UST complex in the southeast corner of the property includes three 10,000-gallon fuel tanks. The waste oil tank is located immediately west of the station building. A methanol UST is located north of the station building and is part of a State of California program.

Previous Investigations

In October 1995, Gettler-Ryan completed four groundwater monitoring wells (Wells MW-1 through MW-4) and advanced one soil boring. Quarterly groundwater monitoring has been performed since the wells were installed. Depth to groundwater has ranged from 1.83 to 5.33 feet below ground surface (bgs). Groundwater flow varies from west to southeast at an average gradient of 0.01 foot per foot.

Soils beneath the site vary in composition from clay to sand with gravel to the maximum depth explored of 16.5 feet bgs, and consist of heterogeneous fill on former Bay Mud flats. The lithology encountered during the site investigation has indicated that the western portion of the site is underlain by soils consisting of silty clay or clay to between approximately 3 or 4 feet bgs. Sand with gravel was then encountered to between approximately 6 to 7 feet bgs. Clay and silty clay was then encountered to the total depth explored of 16.5 feet bgs. Lithology on the eastern portion of the site is more variable. Boring SB-1 encountered clay and fat clay to 5 feet bgs. The boring was then terminated at 6 feet bgs after intersecting silty clay with lenses of clayey sand. The boring for Well MW-4 encountered silty clay to approximately 8 feet bgs. A layer of silty sand extended between approximately 8 and 10.5 feet bgs. Clay and silty clays were then encountered to the maximum depth of 16.5 feet bgs. Sand with gravel was not encountered in either Boring SB-1 or Well MW-4. Geologic cross-sections are shown on Figures 2 and 3.

Analytical results of soils have indicated that only minor concentrations of petroleum hydrocarbons are present, and were only detected in one boring (the boring for Well MW-2) located near the waste oil tank. Well MW-2 at 5.5 feet reported the only concentration of total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) in soil at 8.4 parts per million (ppm). The sample also reported 2,100 ppm total oil and grease, and 77 ppm total extractable petroleum hydrocarbons calculated as diesel (TEPH-d). Chloroform was reported at 9.2 ppm, but no other halogenated volatile organic compounds were detected. No benzene was detected in any sample analyzed.

Groundwater analytical results also indicate that concentrations of petroleum hydrocarbons are generally limited to Well MW-2. During the February 19, 1998 monitoring event, Well MW-2 reported less than 100 parts per billion (ppb) TPPH-g and 1.8 ppb benzene. TEPH-d was reported at 3,800 ppb, however the laboratory indicated that the chromatogram pattern indicated an unidentified hydrocarbon. MtBE was detected at 230 ppb.

All wells have reported detectable concentrations of MtBE in groundwater. The maximum concentration of MtBE, 11,000 ppb, was reported from Well MW-4 on December 17, 1996. Well MW-4 is located immediately south of the UST complex and during the February 19, 1998 sampling event reported 6,600 ppb MtBE. Well MW-3, located

adjacent to the methanol UST, reported 380 ppb MtBE on February 19, 1998. Well MW-1, located at the southwest corner of the property, has reported up to 940 ppb MtBE, but only 14 ppb MtBE was reported during the most recent monitoring event (February 19, 1998).

In September 1997, PEG conducted a site evaluation for potential MtBE impacts. The evaluation concluded that it is possible that a commingled MtBE plume may exist from the Chevron and the Unocal sites, and that due to the shallow depth to groundwater (less than 5 feet bgs) and the locations of water line trenches beneath Hegenberger Road and Edgewater Drive, preferential pathways may exist for MtBE migration.

GROUNDWATER INVESTIGATION

The work performed on April 9, 1998 was designed to determine the extent of MtBE in groundwater and to evaluate whether the water line trenches are acting as preferential pathways for the migration of MtBE. Four hand-augered soil borings were advanced off-site into the fill material covering the water line (Figure 1). The depth of each boring was approximately 4 to 5 feet bgs depending on the groundwater elevation at each location. Due to highly compacted fill material in the southeast corner of the site, Boring GW-1 could not be completed utilizing hand tools. The use of hand tools is necessary when exploring underground utilities; therefore, it was not possible to collect a sample for Boring GW-1. Field and laboratory procedures are presented as Attachment A.

"Grab" groundwater samples were collected from each shallow boring (Borings GW-2 through GW-5). The groundwater samples were submitted to the analytical laboratory for analysis of total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) in accordance with EPA Method 8015 (modified), and benzene, toluene, ethylbenzene, total xylenes (BTEX compounds), and MtBE using EPA Method 8020. All analytes were non-detect in all of the groundwater samples (Table 1) and therefore did not require MtBE confirmation by EPA Method 8260. Copies of the certified analytical reports and chain-of-custody documentation are presented as Attachment B.

CONCLUSION

in the areas where sampled.

No detectable concentrations of TPPH-g, BTEX compounds, or MtBE were present in the groundwater samples collected. Therefore, the water line trench backfill is not acting as a preferential pathway for the migration of MtBE. The extent of MtBE has been defined to non-detectable levels to the south and west of the site.

If you have any questions regarding the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.

Ross Tinline
Project Geologist
RG 5860

Attachments:
- Table 1 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPPH as Gasoline, BTEX Compounds, and MtBE)
- Figure 1 - TPPH-g/Benzene/MtBE Concentration in Groundwater Map
- Figure 2 - Geologic Cross-Section A-A'
- Figure 3 - Geologic Cross-Section B-B'
- Attachment A - Field and Laboratory Procedures
- Attachment B - Certified Analytical Reports and Chain-of-Custody Documentation

Table 1
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, and MtBE)

Chevron Service Station 9-1851
451 Hegenberger Road at Edgewater Road
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	MtBE (ppb)
GW-2	04/09/98	ND	ND	ND	ND	ND	ND
GW-3	04/09/98	ND	ND	ND	ND	ND	ND
GW-4	04/09/98	ND	ND	ND	ND	ND	ND
GW-5	04/09/98	ND	ND	ND	ND	ND	ND

TPPH = Total purgeable petroleum hydrocarbons
MtBE = Methyl tert-butyl ether
ppb = Parts per billion
ND = Not detected
See certified analytical reports for detection limits.

N

LEGEND

- MW-4 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION (CHEVRON)
- MW-3 ◒ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION (UNOCAL)
- SB-1 ● SOIL BORING LOCATION AND DESIGNATION
- GW-1 ✦ GROUNDWATER GEOPROBE SAMPLING LOCATION AND DESIGNATION
- WATER LINE
- SD STORM DRAIN LINE
- SS SANITARY SEWER LINE
- ○ MANHOLE
- 5.4 / 0.0 DEPTH BELOW GROUND SURFACE (FEET) / ELEVATION (FEET, MSL)
- A A' LINE OF GEOLOGIC CROSS-SECTION
- ND/ND/ND TPPH-g/BENZENE/MtBE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION, 4-9-98
- ND NOT DETECTED

EDGEWATER DRIVE
PLANTER
21" SD
15" SS
SS
-4.1
-0.14
-4.43
GW-5 ND/ND/ND
GW-4 ND/ND/ND
MW-1
11.1 / -4.82
6.48 / -1.08
GW-3 ND/ND/ND
MW-2
MW-3
MW-4
CHEVRON SERVICE STATION
A'
B
B'
-0.37
24" SD
-0.45
-0.72
2.0
3.0
-2.89
48" SD
-2.55
HEGENBERGER ROAD
-3.00
SD
A
MW-10
5.4 / 0.0
MW-6
UNOCAL SERVICE STATION
MW-3
MW-9
7.56 / -2.16
-6.9
30" SD
GW-2
GW-1
ND/ND/ND
7.22 / -0.96
SB-1
7.46 / -1.2
7.46 / -1.2
42" SS
-0.98
2.62
30" SS
UNION BANK
24" SD
1.19
0.49
10" SS
2.29
-0.45
0.2
2.02

SCALE
0 100 200 FEET

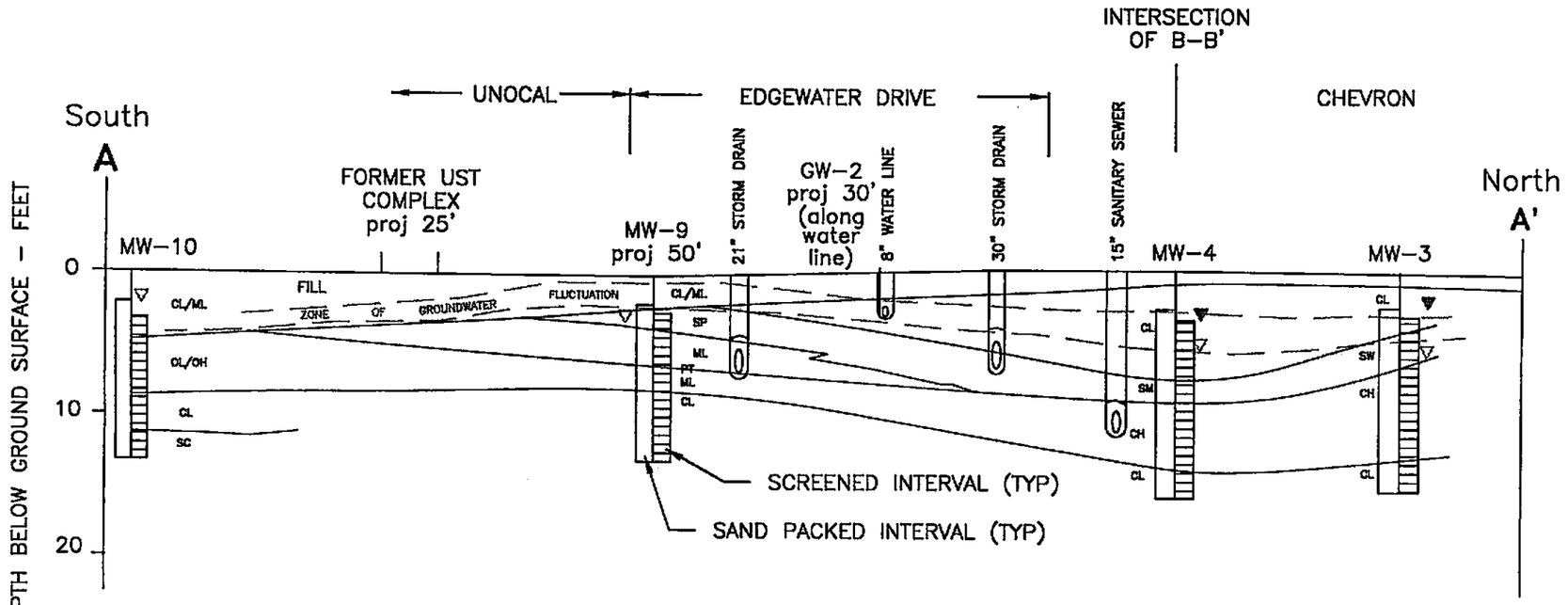
Reference: 325/055/Utility.vsd

PACIFIC ENVIRONMENTAL GROUP, INC.

TITLE:
TPPH-g/BENZENE/MtBE CONCENTRATION IN GROUNDWATER MAP

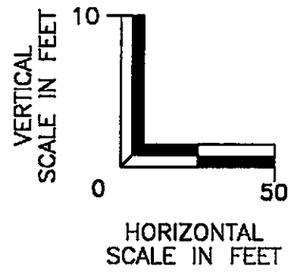
PREPARED FOR:
CHEVRON SERVICE STATION 9-1851
451 Hegenberger Road at Edgewater Drive
Oakland, California

DATE: 7-22-97 | PROJECT: 325-055.1A | FIGURE: 1



LEGEND

ML, CL, OL, CH, OH, Pt	PRIMARILY FINE GRAINED DEPOSITS
SW, SP, SC	PRIMARILY COARSE GRAINED DEPOSITS
MW–10	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
GW–1	BORING LOCATION AND DESIGNATION (FOR GRAB GROUNDWATER SAMPLING)
▽	FIRST ENCOUNTERED WATER LEVEL
▼	STATIC WATER LEVEL, 2–19–98
proj	PROJECTED ONTO LINE OF SECTION IN FEET



PACIFIC ENVIRONMENTAL GROUP, INC.

TITLE:

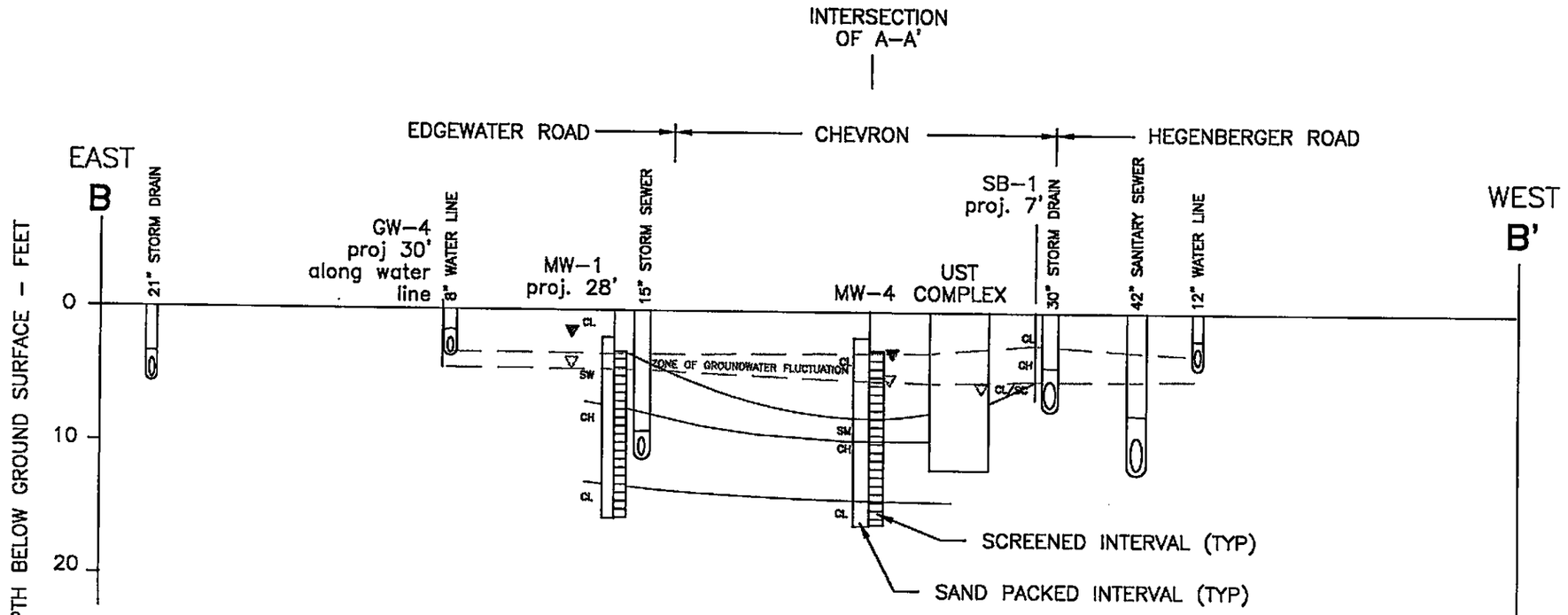
GEOLOGIC CROSS-SECTION A-A'

PREPARED FOR:

CHEVRON SERVICE STATION 9-1851
451 Hegenberger Road at Edgewater Drive
Oakland, California

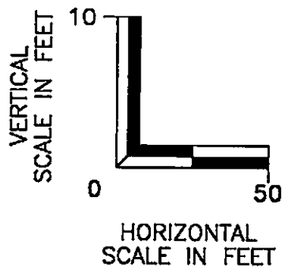
DATE: 5–5–98	PROJECT: 325–055.1A	FIGURE: 2

Reference: 325/055/XSecAA.dwg



LEGEND

CL, CH, ML	PRIMARILY FINE GRAINED DEPOSITS
SW, SM, SC	PRIMARILY COARSE GRAINED DEPOSITS
MW–1	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SB–1	SOIL BORING LOCATION AND DESIGNATION
GW–4	BORING LOCATION AND DESIGNATION (FOR GRAB GROUNDWATER SAMPLING)
▽	FIRST ENCOUNTERED WATER LEVEL
▼	STATIC WATER LEVEL, 2–19–98
proj	PROJECTED ONTO LINE OF SECTION IN FEET



Reference: 325/055/XSecBB.dwg

PACIFIC ENVIRONMENTAL GROUP, INC.

TITLE:

GEOLOGIC CROSS-SECTION B-B'

PREPARED FOR:

CHEVRON SERVICE STATION 9-1851
451 Hegenberger Road at Edgewater Drive
Oakland, California

DATE: 9–3–97	PROJECT: 325–055.1A	FIGURE: 3

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

Groundwater Sampling Procedure

This procedure involved manually advancing a 2-1/2-inch diameter stainless steel hand auger into the soil. As the auger filled with soil, the auger was removed from the boring and the soil contained within the auger was then extracted. Once the appropriate depth was reached, the hand auger was removed from the boring. "Grab" groundwater samples were then collected using a disposable bailer to fill the appropriate containers. These samples were then placed in a cooler with ice for transport to the laboratory under chain-of-custody protocol. The temperature of the cooler was recorded upon delivery to the laboratory. All borings were backfilled with a layer of sand to approximately 2 feet below ground surface, then filled with neat cement grout.

Laboratory Procedures

The analytical methods for determining the presence of total purgeable petroleum hydrocarbons calculated as gasoline, benzene, toluene, ethylbenzene, xylenes, and MtBE was taken from EPA Methods 8015 (modified) and 8020. The above analytical methods utilize the purge-and-trap technique, with final detection by gas chromatography using a flame-ionization detector and a photo-ionization detector. All analyses were performed by a California State-certified laboratory.

ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

APR 2 8 1998

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 325-055.1B/9-1851 Hegenberger	Sampled: 04/09/98
2025 Gateway Place, Suite 440	Sample Descript: GW-2	Received: 04/10/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/16/98
Attention: Ross Tinline	Lab Number: 9804740-01	Reported: 04/20/98

QC Batch Number: GC041698BTEX21A
Instrument ID: GCHP21

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Ross Tinline

Client Proj. ID: 325-055.1B/9-1851 Hegenberger
Sample Descript: GW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9804740-02

Sampled: 04/09/98
Received: 04/10/98

Analyzed: 04/16/98
Reported: 04/20/98

QC Batch Number: GC041698BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	83

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 325-055.1B/9-1851 Hegenberger	Sampled: 04/09/98
2025 Gateway Place, Suite 440	Sample Descript: GW-4	Received: 04/10/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/16/98
Attention: Ross Tinline	Lab Number: 9804740-03	Reported: 04/20/98

QC Batch Number: GC041698BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	83

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group	Client Proj. ID: 325-055.1B/9-1851 Hegenberger	Sampled: 04/09/98
2025 Gateway Place, Suite 440	Sample Descript: GW-5	Received: 04/10/98
San Jose, CA 95110	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 04/16/98
Attention: Ross Tinline	Lab Number: 9804740-04	Reported: 04/20/98

QC Batch Number: GC041698BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Ross Tinline

Client Project ID: 325.055.1B/9-1851 Hegenberger
Matrix: LIQUID
Work Order #: 9804740 01-04

Reported: Apr 24, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC041698BTEX21A	GC041698BTEX21A	GC041698BTEX21A	GC041698BTEX21A	GC041698BTEX21A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	C. DeMartini	C. DeMartini	C. DeMartini	C. DeMartini	C. DeMartini
MS/MSD #:	980486102	980486102	980486102	980486102	980486102
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Analyzed Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	12	11	11	34	67
MS % Recovery:	120	110	110	113	112
Dup. Result:	12	11	11	34	65
MSD % Recov.:	120	110	110	113	108
RPD:	0.0	0.0	0.0	0.0	3.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK041698	BLK041698	BLK041698	BLK041698	BLK041698
Prepared Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Analyzed Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Instrument I.D.#:	GCHP21	GCHP21	GCHP21	GCHP21	GCHP21
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	11	11	11	33	64
LCS % Recov.:	110	110	110	110	107
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Ross Tinline

Client Project ID: 325.055.1B/9-1851 Hegenberger
Matrix: LIQUID
Work Order #: 9804740 01-04
Reported: Apr 24, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Gas
QC Batch#:	GC041698BTEX03A	GC041698BTEX03A	GC041698BTEX03A	GC041698BTEX03A	GC041698BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	C. DeMartini	C. DeMartini	C. DeMartini	C. DeMartini	C. DeMartini
MS/MSD #:	980486102	980486102	980486102	980486102	980486102
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Analyzed Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
Result:	12	12	12	35	67
MS % Recovery:	120	120	120	117	55
Dup. Result:	11	12	11	35	67
MSD % Recov.:	110	120	110	117	112
RPD:	8.7	0.0	8.7	0.0	0.0
RPD Limit:	0-25	0-25	0-25	0-25	0-25
LCS #:	BLK041698	BLK041698	BLK041698	BLK041698	BLK041698
Prepared Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Analyzed Date:	4/16/98	4/16/98	4/16/98	4/16/98	4/16/98
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L	60 µg/L
LCS Result:	11	11	11	34	65
LCS % Recov.:	110	110	110	113	108
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Ross Tinline

Client Proj. ID: 325-055.1B/9-1851 Hegenberger

Lab Proj. ID: 9804740

Received: 04/10/98

Reported: 04/20/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 9 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): Kevin Kesel

WORKORDER: 9804740
DATE OF LOG-IN: 041198

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) — Intact / Broken*
2. Custody Seal #: Put in Remarks Section
3. Chain-of-Custody: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill #:
7. Sample Tags: (Present) / Absent
   Sample Tags #s: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives used: (Yes) / No*
11. Date Rec. at Lab: 4/10/98
12. Time Rec. at Lab: 1159
13. Temp Rec. at Lab: 13°C

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC.)
01	A-C	GW-2	(3) VOA	H_2O	4/9/98	
02		3				
03		4				
04		5				
		C/C				
		4/10/98				

*if Circled, contact Project Manager and attach record of resolution.

Page ____ of ____

Revision 6/18/97
RCPTLOG.XLS

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

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

Chevron Facility Number 9-1851
Facility Address 451 HEGENBERGER
Consultant Project Number 325 055.1B
Consultant Name Pacific Environmental Group
Address 2025 Gateway Place Ste.440 San Jose 95110
Project Contact (Name) ROSS TINLINE
(Phone) (408)441-7500 (Fax Number) 441-7539

Chevron Contact (Name) PHIL BRIGGS
(Phone)
Laboratory Name SEQUOIA
Laboratory Release Number
Samples Collected by (Name) MARK WILSON
Collection Date 4/9/98
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	MTBE					Remarks
GW-2	01	3	W			HCl	Y	X								X					NOTE: DO NOT BILL TB-LB SAMPLE 9804740
GW-3	02	↓	↓			↓	↓	X								X					
GW-4	03	↓	↓			↓	↓	X								X					
GW-5	04	↓	↓			↓	↓	X								X					ap 10 11 59

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	P.E.G.	4/10/98 9:30		SA	4/10/98 845
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	SA	4/10/98			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					4/10/98 1154

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs.
5 Days
10 Days
As Contracted