ALTON GEOSCIENCE
THE RESULTS TEAM

M[illegible] '91 T.L.H.

November 5, 1991

Ms. Nancy Vukelich
Chevron U.S.A.
Post Office Box 5004
San Ramon, California 94583-0804

310-299

Subject: Ground Water Sampling Frequency Reduction
Chevron Service Station 9-3356
19201 Center Street
Castro Valley, California

Dear Ms. Vukelich:

Alton Geoscience presents the following review for reduction in sampling frequency at Chevron Service Station 9-3356, 19201 Center Street, Castro Valley, California. Currently, three onsite ground water monitoring wells, MW-1, MW-2 and MW-3, are sampled on a quarterly basis.

Our recommendations are founded on ground water analytical results that consistently exhibit nondetectable to low level concentrations of total petroleum hydrocarbons as gasoline (TPH-G), as well as benzene, toluene, ethylbenzene, and xylenes (BTEX).

Since ground water sampling began on September 6, 1989, analytical results from monitoring well MW-1 have shown nondetectable concentrations of TPH-G and BTEX, except one occurrence of benzene reported above detection limits at a concentration of 0.3 ppb on May 29, 1990.

Initially, TPH-G was detected in MW-2 at a concentration of 23 ppb on September 6, 1989. Since then, TPH-G has not been detected in MW-2. Intermittently, BTEX constituents have been detected in MW-2 at concentrations up to 9 ppb; however, BTEX constituents were not detected in MW-2 during the most recent sampling event.

TPH-G and BTEX constituents have not been detected in MW-3 since ground water sampling began on September 6, 1989. Total Oil and Grease (TOG) has been detected one time in MW-3 at a concentration of 1000 ppb on September 6, 1989.

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

While TPH-G and BTEX constituents were detectable during the first sampling event on September 6, 1989, neither TPH-G nor BTEX constituents were detected in any of the ground water samples collected during the most recent sampling event. Given this trend towards nondetection of TPH-G and BTEX constituents in ground water samples collected at the site, and the low levels of TPH-G/BTEX constituents detected in samples from the past, Alton Geoscience recommends that sampling frequency be reduced to semi-annual for the subject facility.

Alton Geoscience will continue to monitor and sample Chevron Service Station 9-3356 on a quarterly basis until otherwise notified to reduce frequency. Please call John De George at (510) 682-1582 if you have any questions regarding this recommendation.

Respectfully submitted,

ALTON GEOSCIENCE

John De George
Staff Geologist

Robert E. Logan, R.G. 5088
Manager, Concord Operations

ALTON GEOSCIENCE
THE RESULTS TEAM

T.L.H.

November 1, 1991

Ms. Nancy Vukelich
Chevron U.S.A., Inc.
Post Office Box 5004
San Ramon, California 94583-0804

310-299

Subject: Quarterly Ground Water Monitoring Report
Chevron Station No. 9-3356
19201 Center Street
Castro Valley, California

Dear Ms. Vukelich:

In accordance with our agreement, Alton Geoscience transmits this Quarterly Ground Water Monitoring and Sampling Report for Chevron Station No. 9-3356, located at 19201 Center Street, Castro Valley, California. Figure 1 shows the site location.

Monitoring and sampling of the ground water monitoring wells was performed on September 19, 1991, in accordance with the requirements and procedures of the California Regional Water Quality Control Board (RWQCB) and local regulatory agencies.

FIELD PROCEDURES

Prior to purging and sampling the wells, each well was checked for liquid-phase hydrocarbons or sheen. The depth to ground water and, if present, free product thickness was measured in each well from the top of casing using an electronic interface probe with 0.01 foot tolerance.

Ground water samples were collected after more than 3 casing volumes of ground water was purged from each well. Each sample was collected using a clean bailer. Ground water samples were then decanted into the appropriate clean sample containers for delivery to a California-certified laboratory following proper preservation and chain of custody procedures. Purged ground water was stored onsite in DOT-approved, 55-gallon drums, then pumped out of the drums by Erickson Inc. and delivered to Gibson Oil/ Pilot Petroleum of Redwood City, California for recycling.

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Concord, California 94520
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SAMPLING AND ANALYTICAL RESULTS

The results of the monitoring and laboratory analyses of the ground water samples for this quarter, as well as the results of previous quarterly monitoring and sampling events, are summarized in Table 1. Based on the previous wellhead elevation survey data and depth to water measurements collected during this monitoring event, ground water elevations and the general ground water gradient direction at this site are presented in Figure 2.

The official laboratory reports and chain of custody records are included in Appendix A.

Please call John De George at (510) 682-1582 if you have any questions concerning this report.

Sincerely,

ALTON GEOSCIENCE,

John De George
Staff Geologist

Robert E. Logan, R.G. 5088
Manager, Concord Operations

wp93356jd

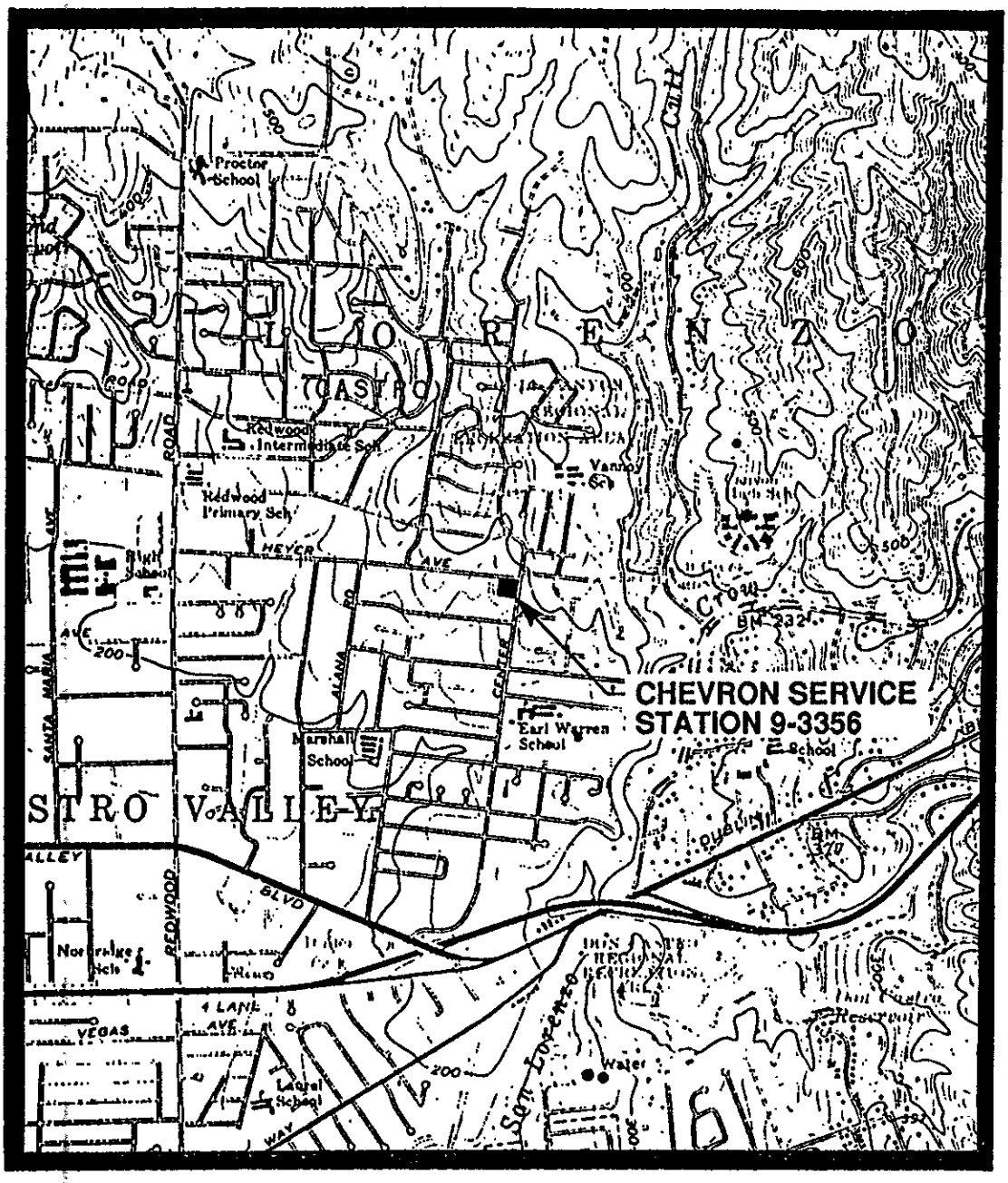


FIGURE 1: SITE VICINITY MAP

CHEVRON SERVICE STATION NO. 9 - 3356
19201 CENTER STREET
CASTRO VALLEY, CALIFORNIA

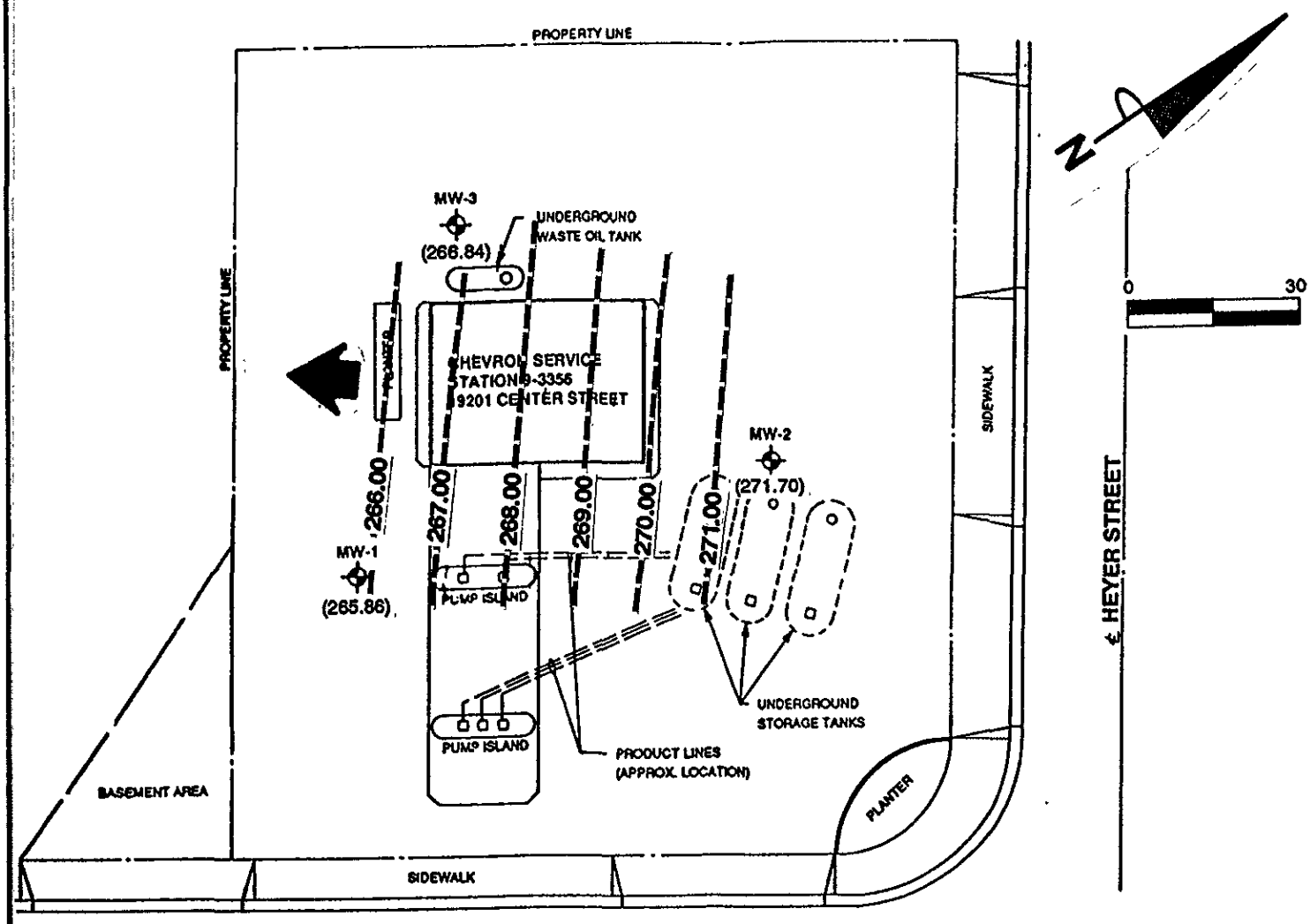
PROJECT NO. 310-299

0 2000

APPROXIMATE SCALE IN FEET

SOURCE: U.S.G.S. MAP, HAYWARD QUADRANGLE, CALIFORNIA 7.5 MINUTE SERIES (TOPOGRAPHIC) PHOTOED 1959. PHOTOREVISED 1980.

ALTON GEOSCIENCE
1000 Burnett Ave., Ste. 140
Concord, CA 94520



LEGEND:

- GROUND WATER MONITORING WELL
- (265.86) GROUND WATER ELEVATION (FEET ABOVE MEAN SEA LEVEL [NGVD-1929])
- GROUND WATER ELEVATION CONTOUR
- GENERAL GROUND WATER GRADIENT DIRECTION

NOTE:

1. CONTOUR LINES ARE INTERPRETIVE BASED ON FLUID LEVELS IN MONITORING WELLS MEASURED ON **9/19/91.**

SOURCE: CHEVRON U.S.A.

PROJECT NO. 310-299

FIGURE 2.

GROUND WATER ELEVATION CONTOUR MAP

CHEVRON SERVICE STATION
NO. 9-3356
19201 CENTER STREET
CASTRO VALLEY, CALIFORNIA

ALTON GEOSCIENCE
1000 Burnett Ave. Ste. 140
Concord, California

310-299

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	HVOC	TOG	B	T	E	X	ORG-Pb	LAB
MW-1	09/06/89	285.22	18.25	266.97	ND<1.0	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	GTEL
MW-1	09/12/89	285.22	18.39	266.83	---	---	---	---	---	---	---	---	NA
MW-1	11/20/89	285.22	18.06	267.16	ND<500	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-1	02/22/90	285.22	18.04	267.18	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-1	05/29/90	285.22	18.55	266.67	ND<50	---	---	0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-1	09/27/90	285.22	19.13	266.09	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	---	GTEL
MW-1	01/16/91	285.22	19.32	265.90	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-1	09/19/91	285.22	19.36	265.86	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-2	09/06/89	286.16	13.72	272.44	23	---	---	1	4	1	4	ND<50	GTEL
MW-2	09/12/89	286.16	13.97	272.19	---	---	---	---	---	---	---	---	NA
MW-2	11/20/89	286.16	13.81	272.35	ND<500	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-2	02/22/90	286.16	13.68	272.48	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-2	05/29/90	286.16	13.92	272.24	ND<50	---	---	2	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-2	09/27/90	286.16	14.75	271.41	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.6	---	GTEL
MW-2	01/16/91	286.16	14.44	271.72	ND<50	---	---	9	ND<0.5	ND<0.5	2	---	SAL
MW-2	09/19/91	286.16	14.46	271.70	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-2D	09/19/91	286.16	14.46	271.70	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-3	09/06/89	284.46	18.73	265.73	ND<1.0	ND*	1000	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<50	GTEL
MW-3	09/12/89	284.46	17.78	266.68	---	---	---	---	---	---	---	---	NA
MW-3	11/20/89	284.46	17.65	266.81	ND<500	ND*	ND<1000	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-3	02/22/90	284.46	16.84	267.62	ND<50	ND*	ND<1000	ND<0.3	ND<0.3	ND<0.3	ND<0.6	ND<50	GTEL
MW-3	05/29/90	284.46	17.13	267.33	ND<50	ND*	ND<1000	ND<0.3	ND<0.3	ND<0.3	ND<0.3	ND<50	GTEL
MW-3	09/27/90	284.46	18.38	266.08	ND<50	ND*	---	ND<5	ND<5	ND<5	ND<5	---	GTEL
MW-3D	09/27/90	284.46	18.38	266.08	ND<50	---	ND<1000	---	---	---	---	---	GTEL
MW-3	01/16/91	284.46	18.28	266.18	ND<50	ND*	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-3D	01/16/91	284.46	18.28	266.18	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
MW-3	09/19/91	284.46	17.62	266.84	ND<50	ND*	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL

310-299

Table 1
Summary of Results of Ground Water Sampling
Chevron Service Station No. 9-3356
19201 Center Street, Castro Valley, California

Concentrations in parts per billion (ppb)

WELL ID	DATE OF SAMPLING/ MONITORING	CASING ELEVATION	DEPTH TO WATER	GROUND WATER ELEVATION	TPH-G	HVOC	TOG	B	T	E	X	ORG-Pb	LAB
TB	11/20/89	NA	NA	NA	ND<500	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	GTEL
TB	02/22/90	NA	NA	NA	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	GTEL
TB	05/29/90	NA	NA	NA	ND<50	---	---	ND<0.3	ND<0.3	ND<0.3	ND<0.3	---	GTEL
TB	09/27/90	NA	NA	NA	ND<50	---	---	---	---	---	---	---	GTEL
TB	01/16/91	NA	NA	NA	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
TB	09/19/91	NA	NA	NA	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL
RINSATE	09/27/90	NA	NA	NA	ND<50	---	---	---	---	---	---	---	GTEL
RINSATE	01/16/91	NA	NA	NA	---	---	---	---	---	---	---	---	NA
RINSATE	09/19/91	NA	NA	NA	ND<50	---	---	ND<0.5	ND<0.5	ND<0.5	ND<0.5	---	SAL

EXPLANATION OF ABBREVIATIONS:

TPH-G :Total Petroleum Hydrocarbons as Gasoline (EPA method 8015 modified)
HVOC :Halogenated Volatile Organic Compounds (EPA method 8010)
TOG :Total Oil and Grease (EPA method 503D & 503E)
B :Benzene (EPA method 8020 or 8240)
T :Toluene (EPA method 8020 or 8240)
E :Ethylbenzene (EPA method 8020 or 8240)
X :Xylenes (EPA method 8020 or 8240)
ORG-Pb :Organic Lead

--- :Not Analyzed/Not Measured
NA :Not Applicable/Not Available
ND :Not Detected
ND* :See laboratory reports for various detection limits.
TB :Trip Blank
D :Duplicate
GTEL :GTEL Analytical Laboratory
SAL :Superior Analytical Laboratory

Note: Top of casing and ground water elevations are expressed as feet above mean sea level (NGVD-1929).

APPENDIX A

OFFICIAL LABORATORY RESULTS
AND
CHAIN OF CUSTODY FORMS

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

OCT -3 1991

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 12370
CLIENT: Alton Geoscience
CLIENT JOB NO.: 310-299

DATE RECEIVED: 09/20/91
DATE REPORTED: 09/30/91

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
12370- 1	RS	09/19/91	09/25/91
12370- 2	TB	09/19/91	09/30/91
12370- 3	MW-1	09/19/91	09/30/91
12370- 4	MW-2	09/19/91	09/25/91
12370- 5	MW-3	09/19/91	09/25/91
12370- 6	MW-2D	09/19/91	09/30/91

Laboratory Number:	12370 1	12370 2	12370 3	12370 4	12370 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Laboratory Number:	12370 6
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)
OIL AND GREASE:	NA
TPH/GASOLINE RANGE:	ND<50
TPH/DIESEL RANGE:	NA
BENZENE:	ND<0.5
TOLUENE:	ND<0.5
ETHYL BENZENE:	ND<0.5
XYLENES:	ND<0.5

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 12370

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/l = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/l
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/l
Standard Reference: 07/23/91

SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/l
Standard Reference: 06/13/91

ANALYTE	REFERENCE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Oil & Grease	NA	NA	NA	NA	NA
Diesel	NA	NA	NA	NA	NA
Gasoline	07/23/91	200ng	95/94	1.8	59-121
Benzene	06/13/91	200ng	95/97	2.1	70-125
Toluene	06/13/91	200ng	92/94	2.2	74-116
Ethyl Benzene	06/13/91	200ng	92/95	2.7	75-120
Total Xylene	06/13/91	600ng	99/102	2.2	75-119

Richard Srna, Ph.D.
Cecilia Jongwin (for)
Laboratory Director

Superior Precision Analytical, Inc.
1555 Burke, Unit I ▪ San Francisco, California 94124 ▪ (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 12370-1
CLIENT: Alton Geoscience
JOB NO.: 310-299

DATE SAMPLED: 09/19/91
DATE RECEIVED: 09/20/91
DATE ANALYZED: 09/30/91

EPA SW-846 METHOD 8010
HALOGENATED VOLATILE ORGANICS
SAMPLE: MW-3

Compound	MDL (ug/L)	RESULTS (ug/l)
Chloromethane/Vinyl Chloride	1.0	ND
Bromomethane/Chloroethane	1.0	ND
Trichlorofluoromethane	0.5	ND
1,1-Dichloroethene	0.5	ND
Methylene Chloride	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethylene	0.5	ND
1,2-Dichloropropane	0.5	ND
Bromodichloromethane	0.5	ND
Cis-1,3-Dichloropropene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
Dibromochloromethane	0.5	ND
Chlorobenzene	0.5	ND
Bromoform	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,3-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
Cis-1,2-Dichloroethene	0.5	ND

MDL = Method Detection Limit
ug/l = parts per billion (ppb)
QA/QC Summary: Daily Standard RPD = <15%
MS/MSD average recovery = 90 % :MS/MSD RPD =< 4 %

Richard Srna, Ph.D.

Cecilia G Jongmi (for)
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No 12370

Chain-of-Custody-Record

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

Chevron Facility Number 9-3356
Facility Address CASTRO VALLEY
Consultant Project Number 30-299
Consultant Name ALTON
Address 1000 BURNETT AVE, CONCORD
Project Contact (Name) John DEGEORGE
(Phone) 682-1582 (Fax Number) 682-8921

Chevron Contact (Name) NANCY VUKELICH
(Phone) 842-9625
Laboratory Name SUPERIOR
Laboratory Release Number 4715950
Samples Collected by (Name) Donnie
Collection Date 9/19/91
Signature [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)	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)					Remarks
RS		1	W	G	11:00	yes	yes	X												
TB		1	↓	↓	12:00	↓	↓	↓												
mw-1		2	↓	↓	11:53	↓	↓	↓												
mw-2		2	↓	↓	12:20	↓	↓	↓												
mw-3		4	↓	↓	12:50	↓	↓	↓			X									
mw-2D		2	↓	↓	12:25	↓	↓	↓												

Analyses To Be Performed

(Stamp:) P... initial: RK ✓
S... Stored in ice. ✓
A... ...ate containers. ✓
Samples preserved. ✓
VOA's without headspace. ✓
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	ALTON	9/19/91 3:09	Jay Buenmeda	Alton	9/19/91 3:09
Jay Buenmeda	Alton	9/20/91/1650			
			Received For Laboratory By (Signature) D Stewart		9/20/91 1650

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