Chevron U.S.A. Products Company
2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

April 23, 1993

Ms. Juliet Shin
Alameda County Health Care Services
Department of Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Re: Former Chevron Service Station #9-1153
3126 Fernside Boulevard, Alameda, CA

Dear Ms. Shin:

Enclosed is the Offsite Ground Water Sampling Report dated April 1, 1993, prepared by our consultant Weiss Associates for the above referenced site. Ground water samples were collected by drilling three 2-inch diameter borings to approximately 7.5 feet below grade at three off-site locations designated BH-A, BH-B, and BH-C. Ground water was encountered at approximately 2 feet below grade. This work was performed to evaluate ground water quality down and cross gradient of the existing ground water extraction trench.

Samples collected from the boreholes were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. Laboratory analyses indicate concentrations of dissolved hydrocarbons measured in ground water samples collected from BH-A and BH-B were low to non-detect. A ground water sample collected from BH-C contained 190,000 ppb TPH-G, and 3,200 ppm benzene.

Analytical results indicate that the majority of the dissolved hydrocarbon plume is located slightly south of the site, somewhat cross-gradient to the extraction trench. However, monitor well MW-4 located further cross-gradient in this same direction has historically reported low to non-detectable concentrations of dissolved hydrocarbons indicating that the dissolved hydrocarbon plume is limited in extent in this direction.

In your letter dated February 19, 1993, you approved the above scope of work on the condition that these borings and ground water samples be used as a screening tool for placement of permanent wells. Originally, the wells were intended for evaluating the performance of the ground water extraction system only. However, the gathered data will also be useful in selecting permanent monitor well locations. A file search was performed for the European Auto Repair located at 1928 High Street, adjacent and down gradient to the Chevron site to review the site history. Records on file with the Alameda Fire Department indicate that on June 23, 1987, three underground storage tanks were removed from that site. Only soil samples were taken at this time and analytical results reported TPH-G concentrations below the method detection limit and xylenes and toluene up to 0.092 ppm and 0.013 ppm, respectively. It appears that no ground water sampling was performed in association with the tank removal. Any information Alameda County Health Care Services may be able to provide in regards to this site would greatly assist in determining monitor well locations.

It appears that the ground water extraction system is successful in removing hydrocarbon impacted

ground water. Operational records indicate that the system has removed approximately 70,000 gallons of ground water to date. Laboratory analyses on ground water collected from Boring BH-B report low to non-detectable concentrations of hydrocarbons immediately downgradient of the extraction system. Additional assessment will be necessary not only to define the hydrocarbon plume, but to evaluate system performance and determine if modifications to the treatment system are warranted.

Following the next sampling event, Chevron will instruct its consultant to prepare a work plan for additional off-site investigation. You had originally requested that such a work plan be submitted within 60 days of completion of the above field work. Chevron respectfully requests that the date for submittal of this work plan be moved to sixty days from Chevron's receipt of the current data, or June 6, 1993.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-8134.

Very truly yours,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Eddy So, RWQCB - Bay Area
Ms. B.C. Owen
File (9-1153 SA1R)

Mr. Larry Bolten
State Farm Insurance
2509 Santa Clara Avenue
Alameda, CA 94501

Weiss Associates
Environmental and Geologic Services
5500 Shellmound Street, Emeryville, CA 94608-2411 Fax: 510-547-5043 Phone: 510-547-5420

April 1, 1993

Mark Miller
Chevron U.S.A. Products Company
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Offsite Ground Water Sampling
Former Chevron Service Station #9-1153
3126 Fernside Drive
Alameda, California
WA Job #4-630-06

Dear Mr. Miller:

This letter presents results from offsite ground water sampling conducted by Weiss Associates (WA) on March 9, 1993 at the above-referenced site (Figure 1). The objective of this work was to further assess the distribution of dissolved hydrocarbons in ground water down gradient and cross gradient of the existing extraction trench located at the west end of the site. Our scope of work was proposed in the February 3, 1993 Offsite Ground Water Sampling work plan approved by the Alameda County Health Care Services Agency on February 19, 1993.

On March 9, 1993, WA drilled three 2-in. diameter borings about 7.5 ft below grade at locations labelled BH-A, BH-B and BH-C (Figure 2). Beneath the first ft of road surface and base rock, the soil consisted of sandy silt to silty sand to the total depth explored. We encountered ground water at about 2 ft below grade.

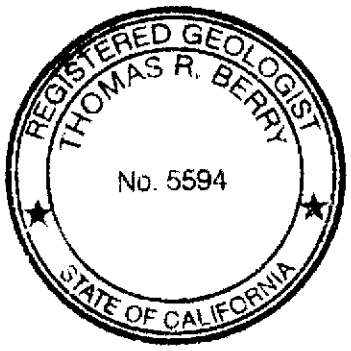
Using a polyethylene disposable bailer, we purged between 2.6 and 2.9 gallons of water from each boring, and collected ground water samples in 40 ml vials preserved with hydrochloric acid. To eliminate the possibility of cross-contamination, we used a new bailer for each sample. Samples were placed in an ice-filled cooler and transported to a California-certified analytical laboratory under chain of custody protocol. After completing the ground water sampling, we backfilled each boring with bentonite pellets and patched the road surface with concrete.

Ground water samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by Modified EPA Method 8015 and benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020. Analytic results are presented in Table 1 and the analytical report and chain of custody form are included as Attachment A.

190,000 parts per billion (ppb) TPH-G and 3,200 ppb benzene were detected in the ground water sample from boring BH-C located about 20 ft southeast of onsite well C-1. Only minor concentrations, 160 ppb TPH-G and 6.4 ppb benzene, were detected in ground water from boring BH-A and no hydrocarbons except 2.1 ppb benzene were detected in ground water from boring BH-B.

The analytic results indicate that the main body of dissolved hydrocarbons is slightly south of the site, cross-gradient of the ground water extraction trench. However, because hydrocarbons have not been detected in well MW-4[1], it is likely that the dissolved hydrocarbon plume is very limited in this direction.

WA appreciates the opportunity to provide investigation and remediation services to Chevron. Please feel free to call if you have any questions or require further information.



Sincerely,
Weiss Associates

Thomas R. Berry, R.G.
Project Geologist

TRB:trb

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Attachments: Figure 1 - Site Location Map
Figure 2 - Soil Boring Locations
Table 1 - Analytic Results
A - Analytical Report and Chain of Custody

[1]Groundwater Technology, 1992, December 3. Quarterly monitoring report prepared for Chevron USA Products Company, 2 pp, 3 attachments.

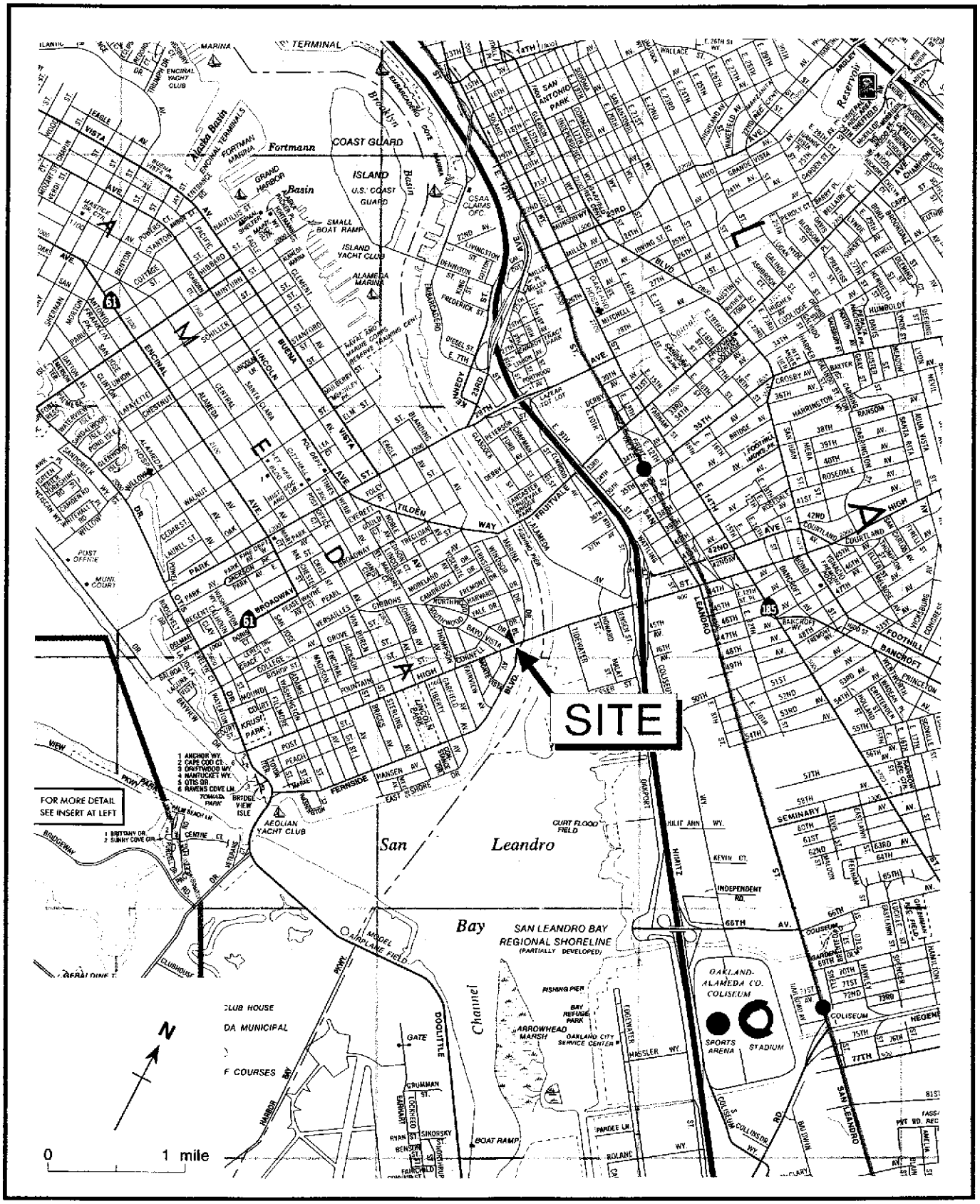

Figure 1. Site Location Map - Former Chevron Service Station #9-1153, 3126 Fernside Boulevard, Alameda, California

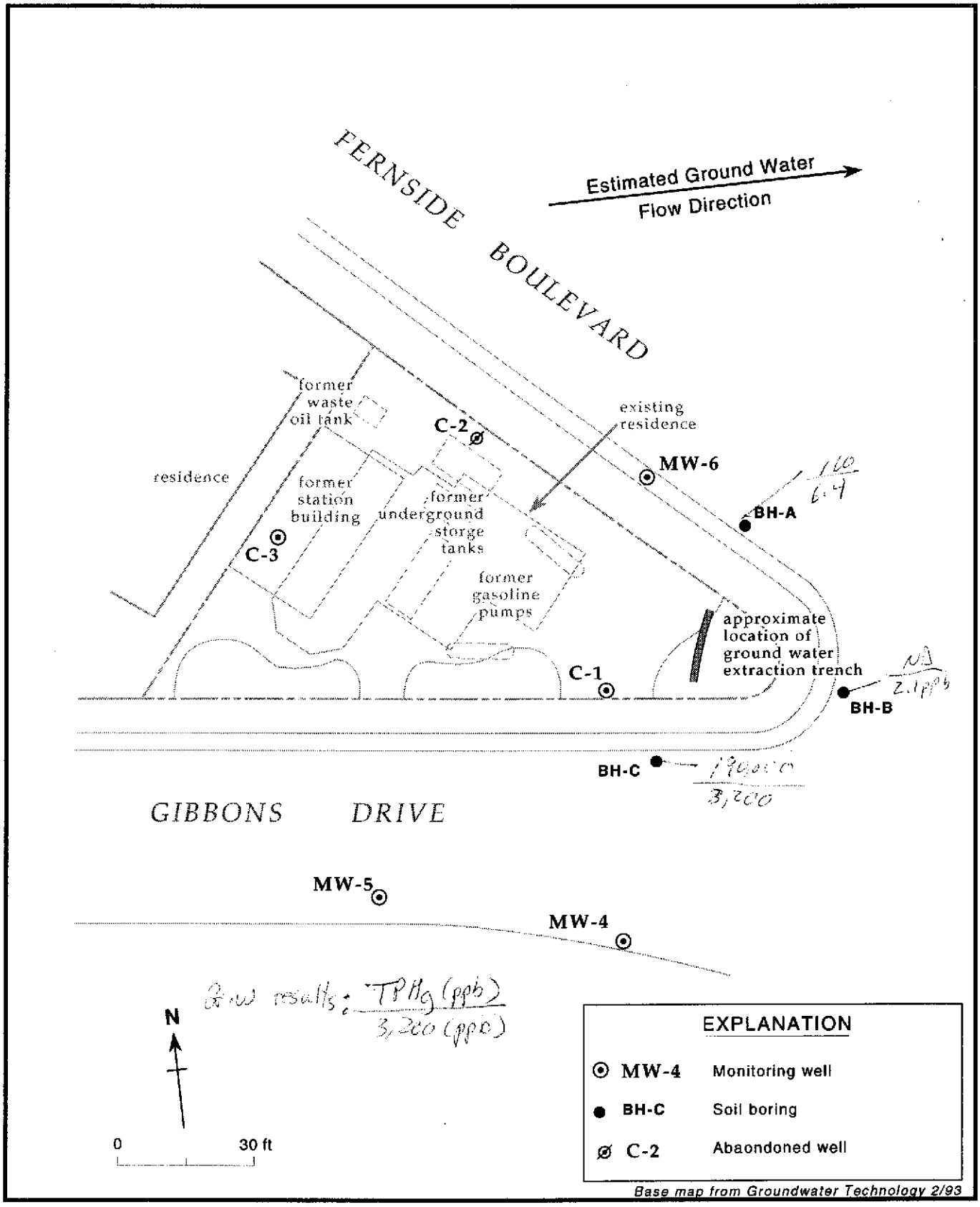

Figure 2. Soil Boring Locations - Former Chevron Service Station #9-1153, 3126 Fernside Boulevard, Alameda, California

3/17/93

Table 1. Analytic Results for Ground Water - Former Chevron Service Station #91153, 3126 Fernside Drive, Alameda, California

Boring ID	Date Sampled	Analytical Lab	Analytic Method	TPH-G	B	E	T	X
				<----------parts per billion (µg/L)---------->				
BH-A	03/09/93	SPA	8015/8020	160	6.4	1.0	1.6	3.2
BH-B	03/09/93	SPA	8015/8020	<50	2.1	<0.5	<0.5	<0.5
BH-C	03/09/93	SPA	8015/8020	190,000	3,200	6,000	830	1,500

Abbreviations:

TPH-G = Total petroleum hydrocarbons as gasoline by Modified EPA Method 8015
B = Benzene by EPA Method 8015
E = Ethylbenzene by EPA Method 8015
T = Toluene by EPA Method 8015
X = Xylenes by EPA Method 8015
<n = Not detected at detection limits of n parts per billion

Analytical Laboratory:

SPA = Superior Precision Analytical Laboratory, San Francisco, California

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Weiss Associates

ATTACHMENT A

ANALYTICAL REPORT AND CHAIN OF CUSTODY FORM

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

Weiss Associates
Attn: TOM BERRY

Project 4-630-06
Reported 03/16/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
14236- 1	BH-A	03/09/93	03/15/93	Water
14236- 2	BH-B	03/09/93	03/11/93	Water
14236- 3	BH-C	03/09/93	03/12/93	Water

RESULTS OF ANALYSIS

Laboratory Number:	14236- 1	14236- 2	14236- 3
Gasoline:	160	ND<50	190000
Benzene:	6.4	2.1	3200
Toluene:	1.6	ND<0.5	830
Ethyl Benzene:	1.0	ND<0.5	6000
Xylenes:	3.2	ND<0.5	1500
Concentration:	ug/L	ug/L	ug/L

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: 14236

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

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	92/97	5%	76-111
Benzene:	85/85	0%	78-110
Toluene:	95/96	1%	78-111
Ethyl Benzene:	97/98	1%	78-118
Xylenes:	93/94	1%	73-113

Richard Srna, Ph.D.
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☒ No 14776

Chain-of-Custody-Re

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

Chevron Facility Number: SS# 9-1153
Facility Address: 3126 Fernside Blvd, Alameda, CA
Consultant Project Number: 4-630-06
Consultant Name: Weiss Associates
Address: 5500 Shellmound St. Emeryville, CA 94608
Project Contact (Name): Thomas Berry
(Phone) (510) 450-6000 (Fax Number) (510) 547-5043

Chevron Contact (Name): Marc Miller
(Phone): (510) 842-8134
Laboratory Name: Superior Precision Analytical, Inc.
Laboratory Release Number: 5901420
Samples Collected by (Name): Brian Busch
Collection Date: 3/9/93
Signature: Brian Busch

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air 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
								Analyses To Be Performed												
BH-A		2	W	G	1348	HCl	Y	X												
BH-B		2	W	G	1240	HCl	Y	X												
BH-C		2	W	G	1250	HCl	Y	X												

Please initial:
Samples Stored in ice
Appropriate containers
Samples preserved
VOA's without headspace
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Brian Busch	WEISS	3/9/93 1515	ALVAREZ	AERO	3/10 1220
ALVAREZ	AERO	3/10 1355			
			Received For Laboratory By (Signature): Cecilia G Jorgens		Date/Time: 3/10/93 1355

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

COC-3.DWG/03 91/HCH

→ STORED OVERNIGHT IN A LOCKED, SECURE PLACE

Please initi

CHECKLIST FOR PROPER CHAIN OF CUSTODY COMPLETION

CONSULTANT INFORMATION SECTION

____ Facility #, Facility Address, Consultant Project #, and Laboratory Release #.
* Samples cannot be processed without release #.

____ Project Contact
* The final report will go to this person

____ Collection Date
* If more than one day, designate which samples were collected on which day, in the remarks section.

SAMPLE INFORMATION SECTION

____ Sample Number
* Identification which is pertinent to the consultant

____ Number of Containers and Sample Preservation

Tips for working with the laboratory
* Do not use electrician's tape
* When in doubt re-sample
* Use waterproof markers
* A trip blank is required

ANALYSES

SW-846	Common Name	MDL	Containers/Preservative
@8015	Total Petro. Hydrocarb. as Gasoline	W: 50 ppb S: 1 ppm	3 x 40 ml VOA/HCL 60g/none
8015	Total Petro. Hydrocarb. as Diesel	W: 50 ppb S: 1 ppm	2 x 1L bottle/none 100g/none
5520	Oil and Grease	W: 5000 ppb S: 50 ppm	1 x 1L bottle/HCL 100g/none
@8020	Arom. Volatiles - BTXE	W: 0.5 ppb S: 0.005 ppm	3 x 40mL VOA/HCL 60g/none
8240	Arom. Volatiles - GC/MS	W: 2-20 ppb S: 0.01-0.1 ppm	3 x 40mL VOA/HCL 60g/none
7240	Total Pb	W: 500 ppb S: 10 ppm	1 x 500mL bottle/HNO3 100g/none
1803	EDB	W: 0.05 ppb S: 0.0005 ppb	2 x 240mL bottle/none 100g/none
8010	Halocarbons	W: 0.5-4 ppb S: 0.005-0.01 ppm	3 x 40mL VOA/HCL 100g/none

____ Desired Analyses Marked and Correct

____ Turn Around Time
* If not noted the contracted TAT will be assumed.

@ May be run in series

CBR/jt:T4-130