

EXHIBIT 1

Site Investigation and Monitoring at Chevron #9-4373 (1160 Fresno Street) and Gilbert's Exxon (4142 East Church)

- Letter from Steven J. Brussee et al., Geraghty & Miller, Inc., to Russell W. Walls, RWQCB (Sept. 3, 1996) (RWQCB-FRESNO-042544-42578) (Chevron 9-4374);
- Letter from Deanna L. Harding & Penny L. Silzer, Gettler-Ryan, Inc., to Robert Cochran, Chevron USA Prods. Co. (Aug. 6, 1996) (FCDEH-FRESNO-041724-41763) (Chevron 9-4374);
- Letter from RWQCB, to R. J. Cochran, Chevron Prods. Co. (Oct. 12, 1999) (FCDEH-FRESNO-044290-44295) (Chevron 9-4374);
- RM Assocs., Quarterly Ground Water Monitoring Report, 4142 East Church Street (June 13, 1997) (FCDEH-FRESNO-054837-54854); and
- Grisanti & Assocs., Inc., Soil & Groundwater Contamination Investigation and Corrective Action Plan, Gilbert's Exxon (RWQCB-FRESNO-043861-43967).



**GERAGHTY
& MILLER, INC.**
Environmental Services

MW

a heidemij company

September 3, 1996
Project No. RC0042.014

Mr. Russell W. Walls
Regional Water Quality Control Board -
Central Valley Region
3614 East Ashlan Avenue
Fresno, California 93726

SUBJECT: Plume Delineation, Former Chevron Service Station #9-4374, 1160 Fresno Street, Fresno, California.

Dear Mr. Walls:

On behalf of Chevron, Geraghty & Miller has submitted a Work Plan Addendum, dated November 22, 1995, for off-site soil and groundwater assessment in the vicinity of the above-referenced site. The wells proposed in that Work Plan Addendum will serve to more adequately define the extent to which soil and groundwater are affected by petroleum hydrocarbons.

The purpose of this letter is to request your concurrence in the need for the installation of a well across "C" Street, to the east of the above-referenced property. This property is occupied by a Shell gas station. This well on the Shell property is needed in order to determine whether the Shell station may be an additional source of petroleum hydrocarbons to the soil and groundwater in the vicinity. The following summaries and data provide substantial argument for this possibility.

Geraghty & Miller is extracting and destroying hydrocarbon vapors from nine on-site soil-vapor extraction wells. These wells are screened from 5 feet above to 5 feet below the average groundwater surface, located at approximately 80 feet bgs. To date, approximately 200,000 pounds of petroleum hydrocarbons have been extracted and destroyed. In addition, approximately 140,000 pounds of petroleum hydrocarbons have been extracted as the micro-biological end product of aerobic hydrocarbon degradation, carbon dioxide.

To further define the source areas of hydrocarbons being extracted, Geraghty & Miller has performed vapor analyses on samples collected from the existing monitoring and extraction wells. Gas chromatograph strips and methyl tertiary butyl ether (MTBE) concentrations were

GM_RICHMOND.DATA\CHEVRON\CHEV A-10\FRESNO-DELINTEATION\PLUME DELINEATE PL-10\RWQCB-10

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RWQCB-FRESNO-042544

Table 1:

Soil Vapor Constituents and Analytical Relationships
 Former Chevron Service Station #9-4374
 1160 Fresno Street
 Fresno, California

Well Number	TPH as		Ratio (%)	MTBE (ppmv)	Chromatograph Pattern
	Gasoline (ppmv) (a)	Total BTEX Constituents (ppmv) (a)			
MW-E	8,800	730	8.3%	130	unweathered
VEW-2D	7,800	1,228	15.7%	180	unweathered
MW-F	7,300	859	11.8%	200	0 - 50% weathered
MW-N	6,100	1,600	26.2%	720	unweathered
MW-O	6,100	1,423	23.3%	360	unweathered
MW-D	5,900	709	12.0%	140	0 - 50% weathered
MW-G	3,400	568	16.7%	120	unweathered
VEW-1	2,700	902	33.4%	ND(<1.7)	50% weathered
MW-L	2,400	315	13.1%	67	unweathered
MW-B	1,100	195.9	17.8%	26	unweathered
MW-C	830	87.3	10.5%	17	unweathered
MW-A	660	89.1	13.5%	16	0 - 50% weathered
MW-K	160	8.13	5.1%	1.5	unweathered
MW-H	100	25.6	25.6%	ND(<0.85)	75% weathered
MW-M	100	13.7	13.7%	ND(<0.85)	unweathered
MW-J	3.9	0.419	0.0%	ND(<0.017)	75% weathered

(a) Analyzed by USEPA Method 5030/8015, modified/8020.

TPH Total petroleum hydrocarbons
 BTEX Benzene, toluene, ethylbenzene, and xylenes
 MTBE Methyl tertiary butyl ether
 ppmv Parts per million by volume
 ND() Not detected (laboratory method detection limit in parentheses)

Laboratory analysis performed by Sequoia Analytical, Walnut Creek, California.

Project No. RC0042.014

California Department of Water Resources, Division of Groundwater, 9000 07781.05



GERAGHTY & MILLER, INC.



GETTLER-RYAN INC.

August 6, 1996

Job #6308.80

Mr. Robert Cochran
Chevron USA Products Company
P.O. Box 5004
San Ramon, CA 94583

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Environmental Health System
Fresno Co Community Health Dept.

Re: Former Chevron Service Station #9-4374
1160 Fresno Street
Fresno, California

Dear Mr. Cochran:

This report documents the quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On July 2, 1996, field personnel were on-site to monitor twelve wells (MW-C through MW-I and MW-K through MW-O) and sample nine wells (MW-E through MW-I and MW-L through MW-O) at the Former Chevron Service Station #9-4374 located at 1160 Fresno Street in Fresno, California. Two wells, MW-A and MW-B were inaccessible. Two wells, MW-C and MW-D, were dry, and one well, MW-K, had insufficient water to sample.

Static groundwater levels were measured on July 2, 1996. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the site wells. Static water level data and groundwater elevations are presented in Table 1. A potentiometric map is included as Figure 1.

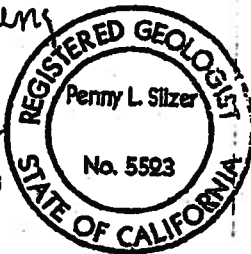
Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets for this event are also attached. The samples were analyzed by Sequoia Analytical. Analytical results are presented in Table 1. The chain of custody document and laboratory analytical reports are attached.

Thank you for allowing Gettler-Ryan to provide environmental services to Chevron. Please call if you have any questions or comments regarding this report.

Sincerely,

Deanna L. Harding
Deanna L. Harding
Project Coordinator

Penny L. Silzer
Penny L. Silzer
Senior Geologist, R.G. No. 5523



DLE/PLS/dlh
6308.QML

- Figure 1: Potentiometric Map
- Table 1: Water Level Data and Groundwater Analytical Results
- Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

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FCDEH-FRESNO-041724



Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-4374, 1160 Fresno Street, Fresno, California (continued)

Well ID TOC (B)	Date	Depth to Water (ft)	GWB (mg)	TPH(C)		B	T	ppb												
				<	>			B	X	MTBB										
MW-K (cont)	01/15/95	81.48	201.53	500		24	4.4													
	04/05/95	80.45	202.56	4,000		5.1	2.0													
	07/18/95	85.50	197.51	650		6.2	3.6													
	10/12/95	85.42	197.59	2,400		14	25													
	01/17/96	79.42	203.59	240		5.5	4.5													
	07/02/96	86.12	196.89	--		--	--													
MW-L 282.89 ¹	03/11/94	77.81	205.08	49,000		6,300	7,300													
	07/11/94	82.64	200.25	58,000		6,100	10,000													
	10/10/94	82.62	200.27	11,000		1,300	280													
	01/15/95	81.40	201.49	14,000		800	1,200													
	04/05/95	80.38	202.51	12,000		410	580													
	07/18/95	85.20	197.69	23,000		690	760													
	10/12/95	85.13	197.76	17,000		440	600													
	01/17/96	79.82	203.07	39,000		2,900	8,700													
	07/02/96	86.00	196.89	6,200		380	260													
	MW-M 282.03 ¹	03/11/94	77.59	205.04	54,000		6,600	12,000												
07/11/94		82.52	200.11	67,000		12,000	12,000													
10/10/94		82.45	200.18	1,200		75	92													
01/15/95		--	--	--		--	--													
04/05/95		--	--	--		--	--													
07/18/95		84.98	197.65	2,300		370	10													
10/12/95		84.99	197.64	810		14	14													
01/17/96		79.82	202.81	2,800		170	280													
07/02/96	85.76	196.87	360		25	1.9														
MW-N 281.96 ¹	03/11/94	76.94	205.02	29,000		1,700	4,600													
	07/11/94	81.80	200.16	290,000		67,000	130,000													
	10/10/94	81.77	200.19	16,000		930	2,300													
	01/15/95	80.65	201.31	44,000		4,000	7,600													
	04/05/95	79.95	202.01	25,000		1,500	3,000													



California Regional Water Quality Control Board

Central Valley Region

Steven T. Butler, Chair



Winston H. Hickox
Secretary for
Environmental
Protection

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Gray Davis
Governor

12 October 1999

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DEPARTMENT OF COMMUNITY HEALTH
ENVIRONMENTAL HEALTH SYSTEM

Mr. R. J. Cochran
Chevron Products Company
P.O. Box 6004
Fresno CA 94583

COMMENT ON WORK PLAN, FORMER CHEVRON STATION 9-4374, 1160 FRESNO STREET, FRESNO COUNTY

We reviewed the *Work Plan for Soil Borings and Monitoring Wells*, dated 22 April 1999, which was prepared by Gettler-Ryan, Inc. on behalf of Mr. R. J. Cochran of Chevron USA Products Company (Chevron). Our comments are presented below following a presentation of background information regarding previous site activities.

Site Background Information

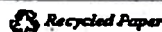
The following background information was excerpted from a 15 August 1997 *Site-Specific Health Risk Assessment* for the subject site prepared by Geraghty & Miller, Inc. for Chevron.

"In 1988, the service station was demolished; this demolition included the removal of all above- and below-ground structures, including all surface asphaltic- and Portland cement-concrete. Two 10,000-gallon and one 5,000-gallon underground gasoline storage tanks and one 500-gallon underground waste-oil tank were removed and surrounding soil was excavated.

Between September 1988 and December 1988, Krazan & Associates installed groundwater Monitoring Wells MW-A, MW-B, MW-C, and MW-D onsite. In August 1989, RMX Engineering and Construction of Sacramento, California, installed a groundwater extraction and treatment system (pump and treat). The effectiveness of the pump-and-treat system was reportedly limited by low extraction flow rates, small radii of influence, and silt infiltration of the wells. Pump-and-treat system operation ceased in August 1992.

Geraghty & Miller evaluated the remediation approach for the site in October 1992. Geraghty & Miller installed groundwater Monitoring Wells MW-E, MW-F, and MW-G in October 1992; groundwater Monitoring Wells MW-H and MW-I and Vapor Extraction Wells VW-1, VW-2S, and VW-2D in December 1993; and groundwater Monitoring Wells MW-K, MW-L, MW-M, MW-N, and MW-O in February 1994.

California Environmental Protection Agency



FCDEH-FRESNO-044290

From 1994 to 1996, Geraghty & Miller operated an SVE and thermal oxidation abatement system at the site, resulting in the destruction of an estimated 291,500 pounds of petroleum hydrocarbons."

Up to 15 groundwater monitoring wells were sampled on a quarterly schedule from May 1991 to May 1997; semi-annual monitoring has been conducted since October 1997. Product sheen or free-phase product was observed in wells MW-B, MW-C, and/or MW-D from late 1989 to mid-1991. Maximum historical BTEX and TPH-g concentrations at the site are 67000 µg/L and 670000 µg/L, respectively.

Between July 1996 and October 1998, MTBE was detected one or more times in groundwater samples from wells MW-E, MW-F, MW-G, MW-H, MW-L, MW-M, and MW-N which were analyzed using EPA Method 8020. The maximum historical MTBE concentration is 2900 µg/L (MW-N). This detection of MTBE was not confirmed by GC/MS methods. The presence of MTBE has not been confirmed in any of the four sampling events between October 1996 and April 1998 in which one or more samples were analyzed by GC/MS Methods 8240 or 8260.

Ethylene dibromide (EDB), 1,2-dichloroethane (1,2-DCA) and methylene chloride were detected in Chevron groundwater monitoring wells at maximum concentrations of up to 230, 3400 µg/L and 150 µg/L, respectively, based on a review of historical analytical data. EDB and 1,2-DCA were regularly analyzed during quarterly groundwater monitoring events from December 1991 to October 1994, but have not been analyzed since then. At the time of the October 1994 groundwater monitoring well sampling, maximum concentrations of EDB and 1,2-DCA were 180 µg/L and 3400 µg/L, respectively. The maximum 1,2-DCA concentration was detected in monitoring well MW-G, where it represented an increasing trend at the time of the last analysis for this constituent.

Monitoring wells MW-E through MW-O were analyzed for the fuel oxygenates ethanol, tertiary butyl alcohol (TBA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary amyl methyl ether (TAME) in April 1998. Results were nondetected for all wells. However, detection limits ranged up to 25000 µg/L and 5000 µg/L for ethanol and TBA, respectively; detection limits ranged up to 100 µg/L each for DIPE, ETBE, and TAME.

Review of analytical data also shows that groundwater samples from the site or vicinity monitoring wells have not been analyzed for total lead.

Work Plan Background

The 22 April 1999 work plan represents the last of multiple iterations of an 18 September 1995 *Work Plan for Additional Off-Site Soil and Groundwater Assessment*. The 18 September 1995 work plan proposed to construct three additional monitoring wells across Fresno and/or "C" Streets from the Chevron site. The wells were proposed to be in Fresno City right-of-way areas (sidewalks) to the northwest (MW-R), north (MW-Q), and northeast (MW-P) of the Chevron site. Proposed well MW-P was planned adjacent to the Shell Service Station that Chevron has contended is a possible source for a portion of the petroleum hydrocarbons detected in Chevron's monitoring well network.

Based on 26 October 1995 comments from the Regional Board to the 18 September 1995 work plan, Geraghty & Miller submitted a 22 November 1995 addendum. The addendum addressed Regional Board concerns that the extent of groundwater contamination had not been defined in any direction, and that more than the three proposed wells would be required. The addendum shifted the well proposed to

RM ASSOCIATES

CIVIL/ENVIRONMENTAL ENGINEERS

• GEOLOGISTS/HYDROGEOLOGISTS

• ENVIRONMENTAL SCIENTISTS

FILE

**QUARTERLY GROUND WATER
MONITORING REPORT
4142 EAST CHURCH STREET
FRESNO, CALIFORNIA**

JUNE 13, 1997

Project No. 93 - 11

prepared for:

**Mr. Gilbert Romero
4142 East Church Street
Fresno, California**

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Environmental Health System

prepared by:

**RM Associates
1111 East Herndon Avenue, Suite 306
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**TABLE NO. 3
GROUND WATER SAMPLE LABORATORY RESULTS
4142 EAST CHURCH STREET
FRESNO, CA 937**

MW-1	01/06/95	100	120	170	61	390	-	-
	04/24/96	130	58	13	3.7	23	-	-
	07/23/96	130	11	20	10	57	-	30.12 ²
	10/23/96	140	16	29	14	94	-	-
	01/24/97	63	5.8	2.1	0.48	12	ND	-
	04/16/97	ND	ND	ND	ND	ND	ND	-
	MW-2	01/06/95	2500	150	280	68	450	-
04/24/96		270	8.6	17	8.5	48	-	0.6
07/23/96		76	1.8	3.1	.56	9.2	-	-
10/23/96		360	14	18	2.5	84	-	-
01/24/97		210	13	8.2	0.48	75.	ND	3.1, 0.62 ²
04/16/97		ND	ND	ND	ND	0.6	ND	-
MW-3		01/06/95	2100	120	270	50	320	-
	04/24/96	250	9.9	14	7.6	45	-	-
	07/23/96	ND	0.58	1.1	ND	1.2	-	-
	10/23/96	180	17	16	4.1	39	-	-
	01/24/97	ND	ND	ND	ND	ND	ND	-
	04/16/97	170	27	1.2	3.4	34	0.72	5.4
PQL	-	50	0.3	0.3	0.3	0.6	0.3	0.5, 5 ²
WQG	-	-	1	150	700	1,750	-	0.5, 5 ²

DAm

**SOIL & GROUNDWATER CONTAMINATION INVESTIGATION
AND
CORRECTIVE ACTION PLAN**

**GILBERT'S EXXON
FRESNO, CA**

September 2001



**GRISANTI
& ASSOCIATES**

Environmental
and
Hazardous
Waste
Management

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RWQCB-FRESNO-043861

WELL NO.	TPHg	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	EPA 601(i) 1,2 DCA	LEAD mg/l
MW-3								
01/06/95	2100	120	270	50	320	--	--	--
04/24/96	250	9.9	14	7.6	45	--	--	--
07/23/96	ND	0.58	1.1	ND	1.2	--	--	--
10/23/96	180	17	16	4.1	39	--	--	--
01/24/97	ND	ND	ND	ND	ND	ND	--	--
04/16/97	170	27	1.2	3.4	34	0.72	5.4	--
10/20/97	ND	1.2	ND	ND	ND	0.75	--	--
02/05/98	ND	ND	ND	ND	ND	ND	--	--
04/22/98	ND	1.5	ND	ND	2.9	0.61	--	--
02/24/99	1700	120	33	100	430	ND	--	--
07/09/99	ND	ND	ND	ND	ND	2.8	2.1	--
07-12-00	ND	ND	ND	ND	ND	10,15	ND	ND
02/06/01	64	0.98	1.0	ND	5.5	0.94	0.95	ND
05/29/01	190	6.3	5.3	1.1	31	3.6, 2.1	5.0, 2.3	ND
MW-4								
05/29/01	1300	33	150	42	220	8.8, 6.1	5.0	ND

7/15/97?
1/14/98

GM 07-15
MTR 15
7-94
MTR 2-1
MTR 1

As indicated in Table 4 above, early analysis of groundwater showed significant contamination with gasoline constituents in MW-1, MW-2, and MW3. First sampling of these wells showed TPH gasoline levels ranging from 1900 to 2500 ppb. These concentrations decreased markedly over the years since the initial sampling in January of 1995 down to ND detectable levels in July 2000. In response to the early results RM Associates prepared and submitted a "Ground Water Investigation/Soil Vapor Extraction Test Workplan" dated December 13, 1996. While this workplan was approved with minor modification, no further actions were implemented except for quarterly monitoring of the three existing wells up until the project was taken over by Grisanti & Associates in January 2001. At that time a scaled down version of the above RM Associates workplan was submitted to the Regional Water Quality Control Board.