



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

Operations

February 27, 1993

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

**Re: Former Chevron Service Station #9-0019
210 Grand Avenue, Oakland, CA**

Dear Ms. Eberle:

Enclosed is the Groundwater Monitoring and Sampling Activities report dated January 19, 1993, prepared by our consultant Groundwater Technology, Inc. for the above referenced site. As indicated in the report, groundwater samples collected from all wells were analyzed for total petroleum hydrocarbons as gasoline (TPH-G), and BTEX. Benzene was detected only in monitor wells MW-4, MW-5, and MW-6 at concentrations of 0.7 ppb, 8,400 ppb, and 0.7 ppb, respectively. Groundwater samples collected from monitor wells MW-3 and MW-5 were also analyzed for purgeable halocarbons (EPA Method 8010). A negligible concentration of 1,2 DCA was reported only in monitor well MW-5 at 2.9 ppb. Depth to ground water was measured at approximately 2.8 feet to 7.0 feet below grade, and the direction of flow is to the west.

Chevron will continue to monitor and sample all wells at this site on a quarterly basis. The ground water extraction system has been installed and will begin operating once Pacific Gas and Electric starts electrical service.

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

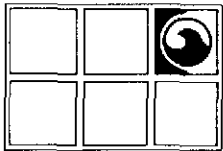
Very truly yours,
CHEVRON U.S.A. PRODUCTS COMPANY


Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Mr. Rich Hiatt, RWQCB - Bay Area
Mr. Kent O'Brien - Geraghty & Miller
Ms. B.C. Owen
Ms. Linda Hartman - CREMCO 1522/225 Bush
File (9-0019 QM2)

Jan 25 '93 J.M.M.



GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

January 19, 1993

Project No. 020302500

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

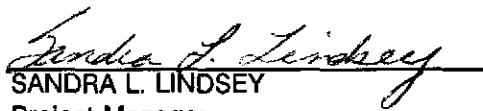
**SUBJECT: GROUNDWATER MONITORING AND SAMPLING ACTIVITIES
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA**

Dear Mr. Miller:


Groundwater Technology, Inc. presents the attached quarterly groundwater monitoring and sampling data collected on December 23, 1992. Nine groundwater monitoring wells at this site were gauged to determine depth to groundwater (DTW) and to check for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not detected in the monitoring wells. A potentiometric surface map (Figure 1) and a summary of groundwater monitoring data (Table 1) are presented in Attachments A and B, respectively. After measuring the DTW, each monitoring well was purged and sampled. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), total petroleum hydrocarbons (TPH)-as-gasoline and Purgeable Halocarbons. Results of the chemical analyses are summarized in Table 2 (Attachment C). Laboratory report and chain-of-custody record are included in Attachment D. Monitoring well purge water was transported by Groundwater Technology, Inc. to the Chevron terminal in Richmond, California for recycling.

Groundwater Technology, Inc. is pleased to assist Chevron on this project. If you have any questions or comments please call our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by


SANDRA L. LINDSEY
Project Manager

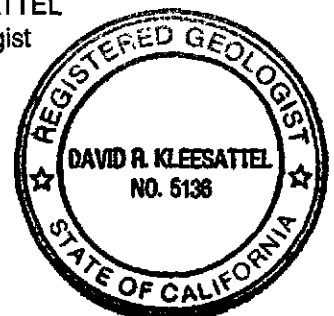
Groundwater Technology, Inc.
Reviewed/Approved by

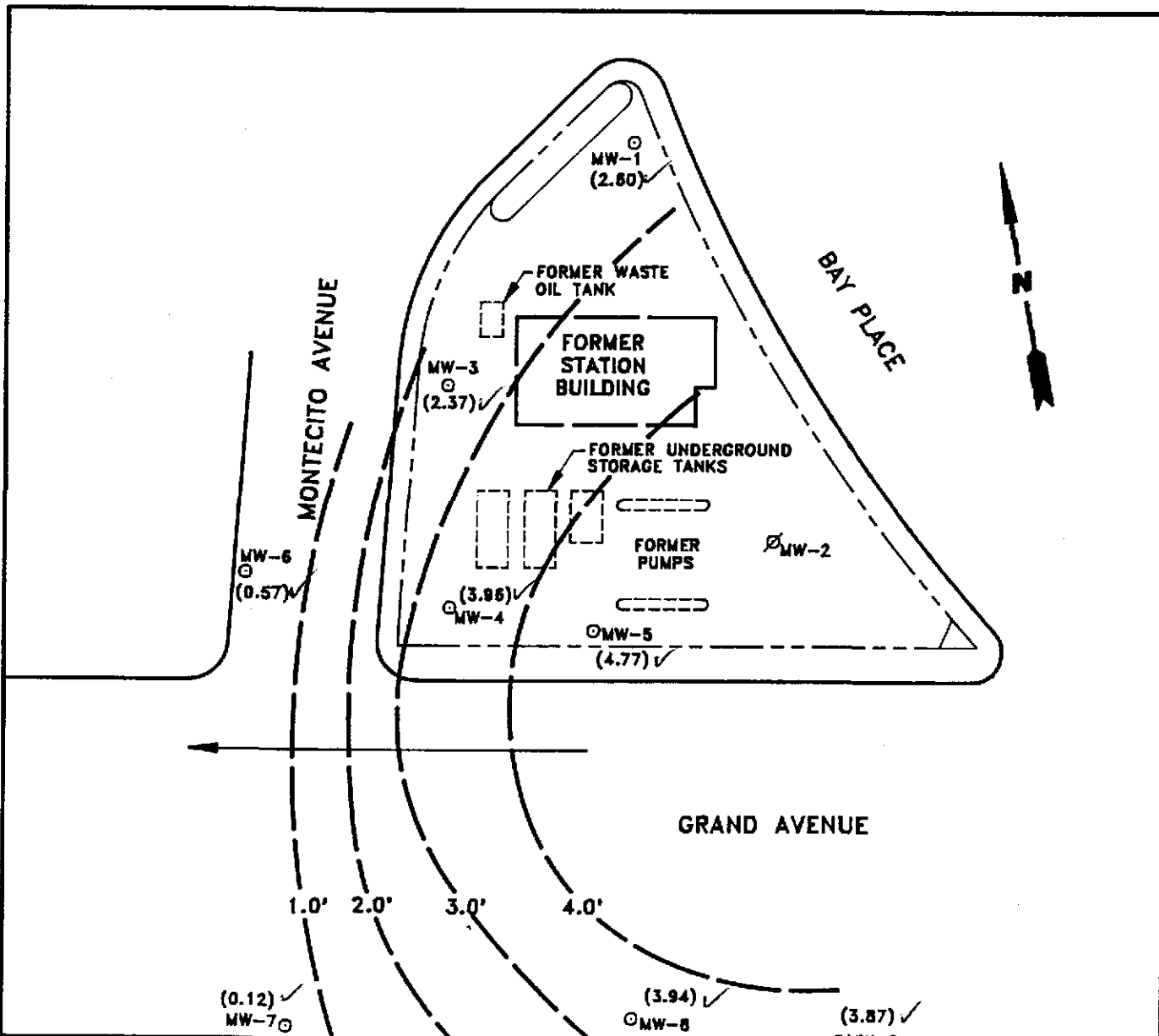

DAVID R. KLEESATTEL
Registered Geologist
No. 5136

Attachments: Attachment A - Figure 1
Attachment B - Table 1
Attachment C - Laboratory Report
Attachment D - Table 2

LR2500A2.NM

For:
John Gaines
General Manager
West Region





LEGEND

- ⊙ MONITORING WELL
- ∅ ABANDONED MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION
- - - POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION



GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 871-2387		POTENTIOMETRIC SURFACE MAP (12/23/92)	
CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION No. 9-0019		LOCATION: 210 GRAND AVENUE OAKLAND, CALIFORNIA	
REV. NO.: 0		DATE: 1/15/93	
PM <i>JBW</i>	PE/RG DRIC	DESIGNED TW	DETAILED ML
ACAD FILE: PSMD2392/SP692		PROJECT NO.: 020302500	FIGURE: 1

TABLE 1
GROUNDWATER MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

water table elev.

WELL ID/ ELEV	DATE	DTW	SPT	WTE
MW-1 9.63	03/14/89	6.74	0.0	2.89
	06/08/89	7.14	0.0	2.49
	09/14/89	7.21	0.0	2.42
	12/08/89	7.29	0.0	2.34
	03/19/90	7.00	0.0	2.63
	07/06/90	7.13	0.0	2.50
	10/03/90	7.53	0.0	2.10
	08/23/91	7.06	0.0	2.57
	11/22/91	7.47	0.0	2.16
	02/26/92	6.69	0.0	2.94
	05/22/92	6.96	0.0	2.67
	09/29/92	7.19	0.0	2.44
	12/23/92	7.03	0.0	2.60 ✓
MW-2 8.99 9.01	03/14/89	6.08	0.0	2.91
	06/08/89	5.22	0.0	3.77
	09/14/89	5.95	0.0	3.04
	12/08/89	9.25	0.0	-0.26
	03/19/90	5.92	0.0	3.07
	07/06/90	6.79	0.0	2.22
	10/03/90	---	---	---
	08/23/91	---	---	---
11/22/91	WELL DESTROYED (11/15/91)			
MW-3 8.19 8.19	03/14/89	6.02	0.0	2.16
	06/08/89	5.88	0.0	2.30
	09/14/89	6.30	0.0	1.88
	12/08/89	9.52	0.0	-1.34
	03/19/90	6.17	0.0	2.01
	07/06/90	7.52	0.0	0.67
	10/03/90	7.31	0.0	0.88
	08/23/91	5.65	0.0	2.53
	11/22/91	6.78	0.0	1.41
	02/26/92	4.65	0.0	3.54
	05/22/92	5.56	0.0	2.63
	09/29/92	6.23	0.0	1.96
12/23/92	5.82	0.0	2.37 ✓	

**TABLE 1
GROUNDWATER MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA**

WELL ID/ ELEV	DATE	DTW	SPT	WTE
MW-4 7.60 7.59	03/14/89	5.52	0.0	2.08
	06/08/89	4.19	0.0	3.41
	09/14/89	4.80	0.0	2.80
	12/08/89	4.86	0.0	2.74
	03/19/90	4.65	0.0	2.95
	07/06/90	6.42	0.0	1.17
	10/03/90	6.39	0.0	1.20
	08/23/91	4.42	0.0	3.17
	11/22/91	5.38	0.0	2.21
	02/26/92	2.65	0.0	4.94
	05/22/92	3.96	0.0	3.63
	09/29/92	4.68	0.0	2.91
	12/23/92	3.63	0.0	3.96
	MW-5 8.35	03/14/89	6.98	0.0
06/08/89		4.73	0.0	3.62
09/14/89		5.37	0.0	2.98
12/08/89		9.13	0.0	-0.78
03/19/90		5.12	0.0	3.23
07/06/90		5.81	0.0	2.54
10/03/90		6.90	0.0	1.45
08/23/91		5.05	0.0	3.30
11/22/91		6.25	0.0	2.10
02/26/92		3.00	0.0	5.35
05/22/92		4.49	0.0	3.86
09/29/92		4.85	0.0	3.50
12/23/92		3.58	0.0	4.77
MW-6 6.56		07/06/90	9.09	0.0
	10/03/90	5.78	0.0	0.78
	08/23/91	7.49	0.0	-0.93
	11/22/91	7.63	0.0	-1.07
	02/26/92	5.55	0.0	1.01
	05/22/92	6.94	0.0	-0.38
	09/29/92	6.80	0.0	-0.24
	12/23/92	5.99	0.0	0.57

TABLE 1
GROUNDWATER MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL ID/ ELEV	DATE	DTW	SPT	WTE
MW-7 4.99	07/06/90	5.85	0.0	-0.86
	10/03/90	6.25	0.0	-1.26
	08/23/91	5.50	0.0	-0.51
	11/22/91	5.73	0.0	-0.74
	02/26/92	4.84	0.0	0.15
	05/22/92	4.89	0.0	0.10
	09/29/92	5.55	0.0	-0.56
	12/23/92	4.87	0.0	0.12 ✓
MW-8 6.77	07/06/90	3.98	0.0	2.79
	10/03/90	4.73	0.0	2.04
	08/23/91	4.76	0.0	2.01
	11/22/91	5.73	0.0	1.04
	02/26/92	4.30	0.0	2.47
	05/22/92	3.66	0.0	3.11
	09/29/92	---	---	---
	12/23/92	2.83	0.0	3.94 ✓
MW-9 7.63	07/06/90	4.61	0.0	3.02
	10/03/90	5.14	0.0	2.49
	08/23/91	5.45	0.0	2.18
	11/22/91	5.48	0.0	2.15
	02/26/92	2.63	0.0	5.00
	05/22/92	4.00	0.0	3.63
	09/29/92	4.70	0.0	2.93
	12/23/92	3.76	0.0	3.87 ✓

--- = Not applicable/not sampled/not measured
DTW = Depth to water
SPT = Separate-phase hydrocarbon thickness
WTE = Water table elevation

Measurements referenced relative to mean sea level

ATTACHMENT C

TABLE 2

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS-GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO-FORM (ppb)	1,2-DCA (ppb)	F113 (ppb)	TCA (ppb)
MW-1	03/14/89	600	<0.2	<0.2	3.2	1.7	<3,000	1.0	<0.2	<20.0	<0.2
	06/08/89	<50	<0.1	<0.5	<0.1	<0.2	--	<0.5	<0.1	<20.0	<0.1
	09/14/89	<50	<0.2	<1.0	<0.2	<0.4	--	<1.0	<0.2	<1.0	0.7
	12/08/89	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	03/19/90	190	0.8	<0.3	7	3	--	<0.5	<0.5	--	<0.5
	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	10/03/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	08/23/91	150	5.0	11	3.5	10	--	<0.5	<0.5	--	<0.5
	11/22/91	86	7.2	11	2.9	13	--	<0.5	<0.5	<0.5	<0.5
	02/26/92	<50	<0.5	<0.5	<0.5	1.4	--	<0.5	<0.5	<0.5	<0.5
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	09/29/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	<0.5
12/23/92	<50 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	--	ND	ND	ND	ND
MW-2	03/14/89	<100	6.7	7.1	0.5	4.6	<3,000	<1.0	0.7	<20.0	<0.2
	06/09/89	<100	<0.2	<1.0	<0.2	<0.4	--	<1.0	<0.2	<20.0	<0.2
	09/14/89	<50	<0.2	<1.0	<0.2	<0.4	--	<1.0	<0.2	<1.0	<0.2
	12/08/89	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	03/19/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	10/03/90 ^a	--	--	--	--	--	--	--	--	--	--
	08/23/91 ^a	--	--	--	--	--	--	--	--	--	--
	11/22/91 ^f	--	--	--	--	--	--	--	--	--	--

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL- BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO- FORM (ppb)	1,2- DCA (ppb)	F113 (ppb)	TCA (ppb)
MW-3	03/14/89	<100	2.1	0.8	<0.2	2	<3,000	<1	3	<20	<0.2
	06/09/89	<100	<0.5	<1.0	<0.2	<0.4	---	<1	3.3	<20	<0.2
	09/14/89	<50	<0.2	<1.0	<0.2	<0.4	---	<1.0	2.2	<1	<0.2
	12/08/89	<50	<0.3	<0.3	<0.3	<0.6	---	<0.5	1.3	---	<0.5
	03/19/90	<50	<0.3	<0.3	<0.3	<0.6	---	0.5	1.3	---	<0.5
	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	---	<0.5	<0.5	---	<0.5
	10/03/90	<50	<0.3	<0.3	<0.3	<0.6	---	<0.5	0.83	---	<0.5
	08/23/91	220	16	22	5.5	16	---	<0.5	0.6	---	<0.5
	11/22/91	<50	<0.5	<0.5	<0.5	0.6	---	0.6	1.0	<0.5	<0.5
	02/26/92	<50	4.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.5
	09/29/92	<50	<0.5	<0.5	<0.5	<0.5	---	<0.5	<0.5	---	<0.5
	12/23/92	<50 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	---	<0.5 ✓	<0.5 ✓	ND	<0.5 ✓
MW-4	03/14/89	3,000	810	200	30	130	<3,000	<20.0	<5.0	<20	<5
	06/09/89	900	440	13	22	40	---	<20.0	<5.0	60	<5
	09/14/89	540	220	2	6.1	9.3	---	<1.0	2.3	<1	<0.2
	12/08/89	150	18	<0.3	1	<0.6	---	<0.5	1.9	---	<0.5
	03/19/90	270	50	<0.3	0.7	<0.6	---	<0.5	0.8	---	<0.5
	07/06/90	140	0.7	<0.3	0.5	<0.6	---	<0.5	0.79	---	<0.5
	10/03/90	180	<0.3	<0.3	2	<0.6	---	<0.5	0.5	---	<0.5
	08/23/91	400	9.9	6.8	3.1	7.1	---	<0.5	<0.5	---	<0.5
	11/22/91	130	3.4	1.3	3.5	6	---	<0.5	<0.5	<0.5	<0.5
	02/26/92	520	15	2.7	6.1	8.6	---	<0.5	<0.5	<0.5	<0.5
	05/22/92	460	20	2.8	5	6.9	---	<0.5	<0.5	<0.5	<0.5
	09/29/92	160	1.1	1.7	0.8	2.8	---	<0.5	<0.5	---	<0.5
	12/23/92	110 ✓	0.7 ✓	0.5 ✓	0.9 ✓	1.7 ✓	---	ND	ND	ND	ND

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS-GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO-FORM (ppb)	1,2-DCA (ppb)	F113 (ppb)	TCA (ppb)
MW-5	03/14/89	20,000	6,600	1,600	270	1,100	<3,000	<100	<20	<20	<20
	06/09/89	15,000	>2,800	270	240	640	—	<20	28	<20	<5
(D)	06/09/89	12,000	5,100	300	240	700	—	<200	<50	<20	<50
	09/14/89	15,000	>730	>320 ^b	>290 ^b	440	—	<10	<2	<20	<2
(D)	09/14/89	15,000	3,300	450	490	730	—	<100	<20	100	<20
(T)	09/14/89	16,000	3,100	550	400	690	—	<50	<10	<50	<10
	12/08/89	20,000	4,600	640	390	1,300	—	<0.5	27	—	<0.5
	03/19/90	25,000	6,500	1,200	450	2,200	—	<0.5	10	—	0.7
	06/06/90	30,000	5,600	890	210	1,400	—	<0.5	<0.5	—	<0.5 ^c
	10/03/90	29,000	6,000	790	270	1,500	—	<0.5	<0.5	—	<0.5 ^d
	08/23/91	36,000	6,100	1,200	460	2,600	—	<0.5	3.9	—	<0.5 ^e
	11/22/91	21,000	8,000	1,500	530	2,600	—	<0.5	3.9	<0.5	<0.5 ^m
	02/26/92	43,000	14,000	1,600	640	4,700	—	<0.5	2.0	<0.5	<0.5
	05/22/92	72,000	18,000	8,100	920	10,000	—	<0.5	6.8	<0.5	<0.5
	09/29/92	54,000	14,000	1,400	740	8,100	—	<0.5	4.4	—	<0.5
	12/23/92	38,000 ✓	8,400 ✓	910 ✓	530 ✓	5,300 ✓	—	<0.5	2.9	—	<0.5
MW-6	07/06/90	210	<0.3	<0.3	3	7	—	<0.5	<0.5	—	<0.5
	10/03/90	320	<0.3	0.3	1	<0.6	—	<0.5	<0.5	—	<0.5
	08/23/91	320	1.7	<0.5	2.1	<0.5	—	<0.5	<0.5	—	<0.5
	11/22/91	190	1.9	2.2	5.4	7.7	—	<0.5	<0.5	<0.5	<0.5
	02/26/92	120	2.0	1.5	3.5	5.1	—	<0.5	<0.5	<0.5	<0.5
	05/22/92	160	1.1	0.6	0.9	1	—	<0.5	<0.5	<0.5	<0.5
	09/29/92	65	0.5	1.4	0.5	0.64	—	<0.5	<0.5	—	<0.5
	12/23/92	140 ✓	0.7 ✓	0.7 ✓	0.9 ✓	2.1 ✓	—	ND	ND	ND	ND

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS-GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO-FORM (ppb)	1,2-DCA (ppb)	F113 (ppb)	TCA (ppb)
MW-7	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	<1,000	<0.5	<0.5	--	<0.5
	10/03/90	<50	<1.5	<1.5	<1.5	<3	--	<0.5	<0.5	--	<0.5
	08/23/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	<0.5
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	09/29/92	<50	<0.5	<0.5	<0.5	0.6	--	<0.5	<0.5	--	<0.5
	12/23/92	<50 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	--	ND	ND	ND
MW-8	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	<1,000	<0.5	<0.5	--	<0.5
	10/03/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	08/23/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	<0.5
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	09/29/92	--	--	--	--	--	--	--	--	--	--
	12/23/92	<50 ✓	<0.5 ✓	7.2 ✓	0.6 ✓	2.5 ✓	--	ND	ND	ND	ND
MW-9	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	<1,000	<0.5	<0.5	--	<0.5
	10/03/90	<50	<0.3	<0.3	<0.3	<0.6	--	<0.5	<0.5	--	<0.5
	08/23/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	<0.5
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5
	09/29/92	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	<0.5
	12/23/92	<50 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	<0.5 ✓	--	ND	ND	ND

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS-GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO-FORM (ppb)	1,2-DCA (ppb)	F113 (ppb)	TCA (ppb)
TRIP BLANK	12/08/89	<100	<0.1	<0.2	<0.1	<0.2	---	<0.5	<0.1	---	<0.1
	06/09/89	<50	<0.5	<0.5	<0.1	<0.2	---	<0.5	<0.1	<20.0	<0.1
	09/14/89	<50	<0.1	<0.5	<0.1	<0.2	---	<0.5	<0.1	<0.5	<0.1
	12/08/89	<50	<0.3	<0.3	<0.3	<0.6	---	4.4	<0.5	---	1.9
	03/19/90	<50	<0.3	<0.3	<0.3	<0.6	---	<0.5	<0.5	---	<0.5
	07/06/90	<50	<0.3	<0.3	<0.3	<0.6	---	<0.5	<0.5	---	<0.5
	10/03/90	<50	<0.3	<0.3	<0.3	1	---	<0.5	<0.5	---	<0.5
	08/23/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	ghl
	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	09/29/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	12/23/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---

TABLE 2
HISTORICAL GROUNDWATER ANALYTICAL RESULTS AND MONITORING DATA
CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

WELL	DATE	TPH-AS-GASOLINE (ppb)	BENZENE (ppb)	TOLUENE (ppb)	ETHYL-BENZENE (ppb)	XYLENES (ppb)	O & G (ppb)	CHLORO-FORM (ppb)	1,2-DCA (ppb)	F113 (ppb)	TCA (ppb)
BAILER	08/23/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	11/22/91	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	<0.5	g, j, k
BLANK	02/26/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---
	05/22/92	<50	<0.5	<0.5	<0.5	<0.5	---	---	---	---	---

EXPLANATION:

TPH(G) = Total Petroleum Hydrocarbons as gasoline
O&G = Oil and Grease
1,2-DCA = 1,2-Dichloroethane
F113 = Trichlorotrifluoroethane (Freon 113)
TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene
ppb = Parts per billion
--- = Not analyzed/not applicable
(D) = Duplicate sample
(T) = Triplicate sample

NOTES:

Data prior to 5/22/92 was taken from a report prepared by Sierra Environmental Services dated March 13, 1992.

a = Well obstructed during site demolition.
b = Saturated column.
c = 1,2-Dichloropropane was detected at 1.2 ppb.
d = 1,2-Dichloropropane and trichloroethane were detected at 2 ppb and 0.74 ppb, respectively.
e = 1,2-Dichloropropane was detected at 0.9 ppb.
f = Well destroyed November 15, 1991.
g = Bromodichloromethane was detected at 2.4 ppb.
h = Dibromochloromethane was detected at 2.4 ppb.
i = Bromoform was detected at 4.8 ppb.
j = Dibromochloromethane was detected at 2.2 ppb.
k = Bromoform was detected at 4.8 ppb.
l = TCE was detected at 1.0 ppb.
m = 1,2-Dichloropropane was detected at 0.8 ppb.



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GROUNDWATER TECHNOLOGY, INC.
Attn: Sandra Lindsey

Project 020302500.061004
Reported 01/07/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
87512- 1	TB-LB	12/23/92	01/05/93 Water
87512- 3	MW7	12/23/92	01/05/93 Water
87512- 4	RBMW8	12/23/92	01/05/93 Water
87512- 5	MW8	12/23/92	01/05/93 Water
87512- 7	MW9	12/23/92	01/05/93 Water
87512- 9	MW3	12/23/92	01/05/93 Water
87512-11	MW1	12/23/92	01/05/93 Water
87512-13	MW6	12/23/92	01/05/93 Water
87512-15	MW4	12/23/92	01/06/93 Water
87512-17	MW5	12/23/92	01/06/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 87512- 1 87512- 3 *MW7* 87512- 4 87512- 5 *MW8* 87512- 7 *MW9*

Gasoline:	ND<50	ND<50 ✓	ND<50	ND<50 ✓	ND<50 ✓
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	7.2 ✓	ND<0.5 ✓
Ethyl Benzene:	ND<0.5	ND<0.5 ✓	ND<0.5	0.6 ✓	ND<0.5 ✓
Xylenes:	ND<0.5	ND<0.5 ✓	ND<0.5	2.5 ✓	ND<0.5 ✓
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 87512- 9 *MW3* 87512-11 *MW1* 87512-13 *MW6* 87512-15 *MW4* 87512-17 *MW5*

Gasoline:	ND<50 ✓	ND<50 ✓	140 ✓	110 ✓	38000 ✓
Benzene:	ND<0.5 ✓	ND<0.5 ✓	0.7 ✓	0.7 ✓	8400 ✓
Toluene:	ND<0.5 ✓	ND<0.5 ✓	0.7 ✓	0.5 ✓	910 ✓
Ethyl Benzene:	ND<0.5 ✓	ND<0.5 ✓	0.9 ✓	0.9 ✓	530 ✓
Xylenes:	ND<0.5 ✓	ND<0.5 ✓	2.1 ✓	1.7 ✓	5300 ✓
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



Superior Precision Analytical, Inc.

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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

Page 2 of 2
QA/QC INFORMATION
SET: 87512

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	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	97/91	6%	70-130
Benzene:	200 ng	97/91	6%	70-130
Toluene:	200 ng	103/96	7%	70-130
Ethyl Benzene:	200 ng	110/102	8%	70-130
Xylenes:	600 ng	106/99	7%	70-130

Richard Srna, Ph.D.
Nancy A. Nelson for
Laboratory Director

Certified Laboratories



Superior Precision Analytical, Inc.

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GROUNDWATER TECHNOLOGY, INC.
Attn: Sandra Lindsey

Project 020302500.061004
Reported 07-January-1993

EPA METHOD 8010

Sample preparation by Purge and Trap (EPA SW-846 Method 5030) and Chromatographic analysis using an electrolytic conductivity detector (EPA SW-846 Method 8010).

Chronology

Laboratory Number 87512

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
MW7	12/23/92	12/23/92	/ /	12/31/92		3
MW8	12/23/92	12/23/92	/ /	01/01/93		5
MW9	12/23/92	12/23/92	/ /	01/01/93		7
MW3	12/23/92	12/23/92	/ /	01/01/93		9
MW1	12/23/92	12/23/92	/ /	01/01/93		11
MW6	12/23/92	12/23/92	/ /	01/01/93		13
MW4	12/23/92	12/23/92	/ /	01/01/93		15
MW5	12/23/92	12/23/92	/ /	01/01/93		17



Superior Precision Analytical, Inc.

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GROUNDWATER TECHNOLOGY, INC.
Attn: Sandra Lindsey

Project 020302500.061004
Reported 04-January-1993

EPA METHOD 8010

Laboratory Number	Sample Identification	Matrix
87512- 3	MW7	Water
87512- 5	MW8	Water
87512- 7	MW9	Water
87512- 9	MW3	Water
87512-11	MW1	Water

RESULTS OF ANALYSIS

Laboratory Number:	87512- 3	87512- 5	87512- 7	87512- 9	87512-11
	MW7	MW8	MW9	MW3	MW1

F113

Chloromethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Vinyl Chloride:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Bromomethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chloroethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Trichlorofluoromethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,1-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Dichloromethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
c-1,2-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,1-Dichloroethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
t-1,2-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chloroform:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,1,1-Trichloroethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Carbon tetrachloride:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,2-Dichloroethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Trichloroethene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,2-Dichloropropane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Bromodichloromethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
c-1,3-Dichloropropene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
t-1,3-Dichloropropene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,1,2-Trichloroethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Tetrachloroethene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Dibromochloromethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Chlorobenzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Bromoform:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,1,2,2-Tetracl-ethane:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,3-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,4-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
1,2-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L



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GROUNDWATER TECHNOLOGY, INC.
Attn: Sandra Lindsey

Project 020302500.061004
Reported 07-January-1993

EPA METHOD 8010

Laboratory Number	Sample Identification	Matrix
87512-13	MW6	Water
87512-15	MW4	Water
87512-17	MW5	Water

RESULTS OF ANALYSIS

Laboratory Number: 87512-13 *MW6* 87512-15 *MW4* 87512-17 *MW5*

Chloromethane:	ND<0.5	ND<0.5	ND<0.5
Vinyl Chloride:	ND<0.5	ND<0.5	ND<0.5
Bromomethane:	ND<0.5	ND<0.5	ND<0.5
Chloroethane:	ND<0.5	ND<0.5	ND<0.5
Trichlorofluoromethane:	ND<0.5	ND<0.5	ND<0.5
1,1-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5
Dichloromethane:	ND<0.5	ND<0.5	ND<0.5
c-1,2-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5
1,1-Dichloroethane:	ND<0.5	ND<0.5	ND<0.5
t-1,2-Dichloroethene:	ND<0.5	ND<0.5	ND<0.5
Chloroform:	ND<0.5	ND<0.5	ND<0.5
1,1,1-Trichloroethane:	ND<0.5	ND<0.5	ND<0.5
Carbon tetrachloride:	ND<0.5	ND<0.5	ND<0.5
1,2-Dichloroethane:	ND<0.5	ND<0.5	2.9
Trichloroethene:	ND<0.5	ND<0.5	ND<0.5
1,2-Dichloropropane:	ND<0.5	ND<0.5	ND<0.5
Bromodichloromethane:	ND<0.5	ND<0.5	ND<0.5
c-1,3-Dichloropropene:	ND<0.5	ND<0.5	ND<0.5
t-1,3-Dichloropropene:	ND<0.5	ND<0.5	ND<0.5
1,1,2-Trichloroethane:	ND<0.5	ND<0.5	ND<0.5
Tetrachloroethene:	ND<0.5	ND<0.5	ND<0.5
Dibromochloromethane:	ND<0.5	ND<0.5	ND<0.5
Chlorobenzene:	ND<0.5	ND<0.5	ND<0.5
Bromoform:	ND<0.5	ND<0.5	ND<0.5
1,1,2,2-Tetracl-ethane:	ND<0.5	ND<0.5	ND<0.5
1,3-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5
1,4-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5
1,2-Dichlorobenzene:	ND<0.5	ND<0.5	ND<0.5

Concentration: ug/L ug/L ug/L



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EPA METHOD 8010 Quality Assurance and Control Data - Water Laboratory Number 87512

Compound	Method		Average Spike Recovery (%)	Limits (%)	RPD (%)	Spike Level (ug/L)
	Blank (ug/L)	PQL (ug/L)				
Chloromethane:	ND<0.5	0.5				
Vinyl Chloride:	ND<0.5	0.5				
Bromomethane:	ND<0.5	0.5				
Chloroethane:	ND<0.5	0.5				
Trichlorofluoromethane:	ND<0.5	0.5				
1,1-Dichloroethene:	ND<0.5	0.5	95	80-120	2	20
Dichloromethane:	ND<0.5	0.5				
c-1,2-Dichloroethene:	ND<0.5	0.5				
1,1-Dichloroethane:	ND<0.5	0.5				
t-1,2-Dichloroethene:	ND<0.5	0.5				
Chloroform:	ND<0.5	0.5				
1,1,1-Trichloroethane:	ND<0.5	0.5				
Carbon tetrachloride:	ND<0.5	0.5				
1,2-Dichloroethane:	ND<0.5	0.5				
Trichloroethene:	ND<0.5	0.5	79	80-120	0	20
1,2-Dichloropropane:	ND<0.5	0.5				
Bromodichloromethane:	ND<0.5	0.5				
c-1,3-Dichloropropene:	ND<0.5	0.5				
t-1,3-Dichloropropene:	ND<0.5	0.5				
1,1,2-Trichloroethane:	ND<0.5	0.5				
Tetrachloroethene:	ND<0.5	0.5				
Dibromochloromethane:	ND<0.5	0.5				
Chlorobenzene:	ND<0.5	0.5	102	80-120	1	20
Bromoform:	ND<0.5	0.5				
1,1,2,2-Tetracl-ethane:	ND<0.5	0.5				
1,3-Dichlorobenzene:	ND<0.5	0.5				
1,4-Dichlorobenzene:	ND<0.5	0.5				
1,2-Dichlorobenzene:	ND<0.5	0.5				
Spike Average Recovery:			92%	80-120	1%	

Definitions:

ND = None Detected
PQL = Practical Quantitation Limits
QC File # = 87512

RPD = Relative Percent Recovery

Nancy A. Nelson for
Senior Chemist

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

Chain-of-Custody-Record

<p>Chevron U.S.A. Inc. P.O. BOX 5004 San Ramon, CA 94583 FAX (415)842-9591</p>	<p>Chevron Facility Number <u>9-0019</u> Facility Address <u>210 Grand Avenue, Oakland</u> Consultant Project Number <u>020302500.061004</u> Consultant Name <u>Groundwater Technology, Inc.</u> Address <u>4057 Port Chicago Hwy, Concord, Ca 94520</u> Project Contact (Name) <u>Ms. Sandra L. Lindsey</u> (Phone) <u>671-2387</u> (Fax Number) <u>685-9148</u></p>	<p>Chevron Contact (Name) <u>Mr. Mark Miller</u> (Phone) <u>510-842-8134</u> Superior Analytical Laboratory Name _____ Laboratory Release Number <u>448-2030</u> Samples Collected by (Name) <u># Hector MERRINO</u> Collection Date <u>12-23-92</u> Signature <u>[Signature]</u></p>
---------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Sample Number	Lab Sample Number	Number of Containers	Matrix A = Air S = Soil W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Lead (Yes or No)	Analyses To Be Performed										Remarks		
								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)					
RB-UR	1	1	W	G		HCl		X												
PMW7	2	1																		
MW7	3	4						X			X									
PMW7																				
PMW8	4	1						X												
MW8	5	4						X			X									
PMW9	6	1						X												
MW9	7	4						X			X									
PMW3	8	1						X												
MW3	9	4						X			X									
PMW1	10	1						X												
MW1	11	4						X			X									
PMW6	12	1						X												
MW6	13	4						X			X									

Please Initial: RM

Samples Stored in ice. [initials]

Appropriate containers. [initials]

Samples preserved. [initials]

VOA's without headspace. [initials]

Comments: [initials]


Relinquished By (Signature) <u>[Signature]</u>	Organization <u>GTI</u>	Date/Time <u>12-23-92</u>	Received By (Signature) <u>[Signature]</u>	Organization <u>[Blank]</u>	Date/Time <u>[Blank]</u>	Turn Around Time (Circle Choice) <input type="checkbox"/> 24 Hrs. <input type="checkbox"/> 48 Hrs. <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input checked="" type="checkbox"/> As Contracted
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature) <u>K Vanegas</u>		Date/Time <u>12-23 5:30</u>	

Chain of Custody and Analysis Request

Section I

Consultant Groundwater Technology
 Address 4057 Portchicago Hwy
CA Loma CA 94520
 Phone No 671-2387 Fax No. 685-9148
 Project Manager Sandra Lindsey
 Alternate Contact Tim Watchers
 Project No. 020302500 P.O. No. _____

Turn Around Time
 (circle one)
 Same Day 72 Hrs
 24 Hrs 48 Hrs
Normal 5 Day

Superior Precision Analytical, Inc.

 P.O. Box 1545
 Martinez, California 94553
 Martinez 1 (510) 229-1512 Martinez 2 (510) 229-0166
 San Francisco (415) 647-2081

Sampler: Hector M. G. W. D.
 Regulatory Agency: _____

Section II: Analysis Request

Laboratory Sample Identification	Matrix S = Soil A = Air W = Water	mod 8015 - Gas	mod 8015 - BTEX	mod 8015 - Diesel	8010	8240	CAM17	TCLP Metals:	Metals:	418.1 - TPH by IR	O & G	PCBs	Date Sampled	Time Sampled	Number of Containers	Preservative (yes or no)	Sampling Remarks			
																	<input type="checkbox"/> Bio-remediation	<input type="checkbox"/> Underground storage tank	<input type="checkbox"/> Monitoring	<input type="checkbox"/> Recent Contamination
1 RBMW4	W																			
2 MW4			X		X															
3 RBMUS																				
4 MWS	W		X		X															
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Please initial:
 Samples Stored in ice _____
 Appropriate containers _____
 Samples preserved _____
 VOAs without headspace _____
 Comments: 2/4/2

Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____
Relinquished by _____ Organization _____	Date/Time _____	Received by _____ Organization _____	Date/Time _____
Relinquished by _____ Organization _____	Date/Time _____	Received by <u>R. Vanegas</u> Organization <u>Superior</u>	Date/Time <u>12-23-92 5:30</u>

Lab please initial the following:
 Samples Stored in Ice _____
 Appropriate Containers _____
 Samples Preserved _____
 VOAs without Headspace _____
 Comments _____