



WEISS ASSOCIATES

Geologic and Environmental Services

Fax: 415-547-5043

Phone: 415-547-5420

5500 Shellmound Street, Emeryville, CA 94608

August 1, 1990

Walter F. Posluszny Jr.
Chevron USA
P.O. Box 5004
San Ramon, CA 94583-0804

Re: Operating Chevron Service Station #90260
21995 Foothill Boulevard
Hayward, California
WA Job #4-310-01

Dear Mr. Posluszny:

Weiss Associates (WA) collected ground water samples from eight of ten monitoring wells on July 3, 1990, as part of the quarterly ground water monitoring program at Chevron Service Station #90260 in Hayward, California (Figure 1). All ground water samples contained benzene, ethylbenzene and xylenes above the California Department of Health Services (DHS) maximum contaminant levels (MCLs) and toluene above the DHS recommended action level for drinking water. Total petroleum hydrocarbons as gasoline (TPH-G) in the sample from well MW-11 (Figure 2) is at a historical high.

GROUND WATER SAMPLING

Personnel: David Charles and Darren Green

WA Position: Environmental Technicians

Date of sampling: July 3, 1990

Monitoring/other wells sampled: MW-4, MW-5, MW-6, MW-7, MW-9, MW-11, MW-12, MW-13

- Wells not sampled due to presence of free-floating hydrocarbons: MW-8
- Wells not sampled this quarter in accordance with the modified sampling frequency program: MW-10

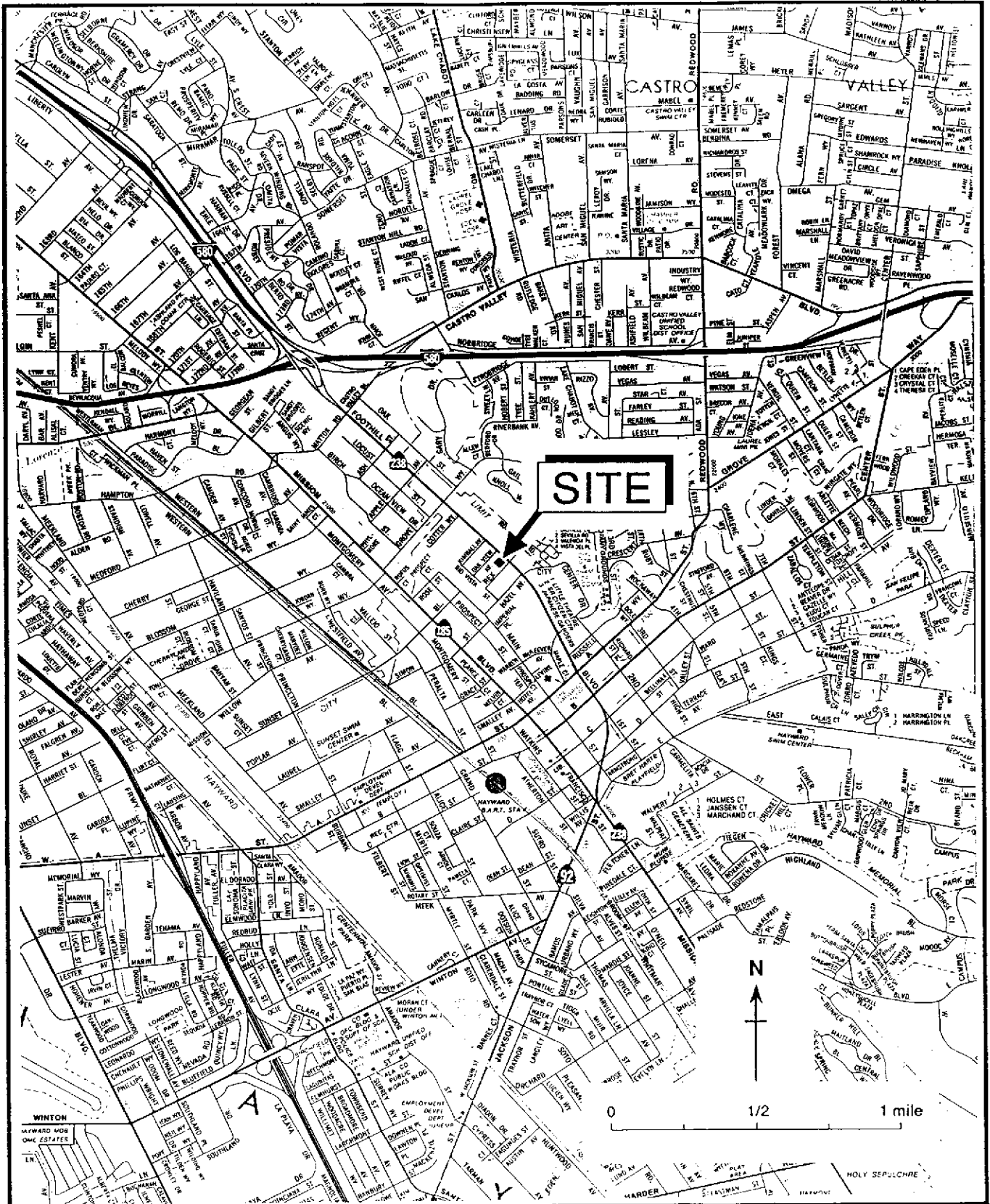


Figure 1. Site Location Map - Chevron Service Station #90260, 21995 Foothill Blvd., Hayward, California

EXPLANATION

⊙ MW-4

Monitoring well

87.15

Ground water elevation,
feet above mean sea level

— 87.0

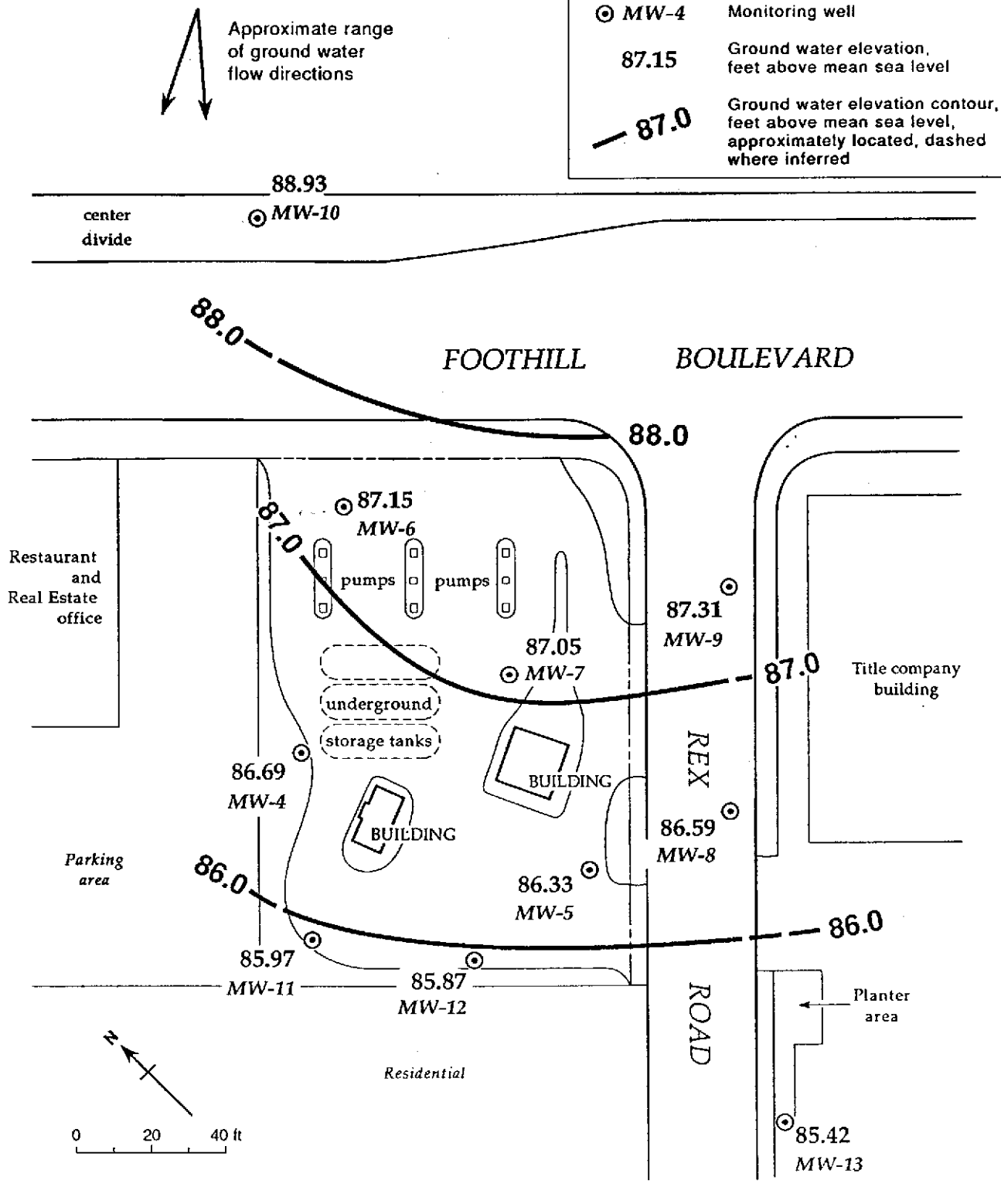
Ground water elevation contour,
feet above mean sea level,
approximately located, dashed
where inferred

Figure 2. Ground Water Elevation Contours - July 3, 1990 - Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California



Method of purging wells:

- Dedicated PVC bailers.

Volume of water purged prior to sampling:

- All wells were purged of about three well-casing volumes, approximately 5 to 18 gallons each.

Method of ground water sample collection:

- Drawn through sampling port on side of dedicated PVC bailers.

Method of containing ground water samples:

- 40 ml glass, volatile organic analysis (VOA) vials, preserved with hydrochloric acid and contained in protective foam sleeves.

All samples were refrigerated and transported under chain-of-custody to the analytical laboratory.

Water samples transported to:

- Superior Analytical Laboratory, Inc., Martinez, California.

Samples were received by the laboratory on July 3, 1990.

Quality assurance/quality control:

- A travel blank was submitted for analysis.
- An equipment blank was not necessary because all bailers are dedicated to specific wells.

Water sample collection records and chain-of-custody forms are included as Attachments A and B, respectively.



GROUND WATER ELEVATIONS

Water levels were measured in: all wells on July 3, 1990.

Direction of ground water flow: southwestward to west-southwestward

Water levels and ground water elevations are presented in Table 1. Ground water elevation contours are plotted on Figure 2.

- The ground water flow direction is generally consistent with historical results.
- The water elevation in well MW-10 has dropped about 0.6 ft since last quarter.
- All other water elevations are generally consistent with previous results.
- The thickness of free-floating hydrocarbons in well MW-8 has decreased from 0.30 ft to about 0.04 ft since last quarter.

CHEMICAL ANALYSES

The ground water samples were analyzed for:

- TPH-G by modified EPA Method 8015.
- Benzene, ethylbenzene, toluene and xylenes (BETX) by EPA Method 8020.

Samples were analyzed by the laboratory on July 12 and 13, 1990. The results are presented in Table 2 and the analytic reports are included as Attachment C. Isoconcentration contour maps of TPH-G and benzene in ground water are included as Figures 3 and 4 respectively.

TABLE 1. Ground Water Elevation Data, Chevron Service Station #90260, 21995
Foothill Boulevard, Hayward, California

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-4	6/15/88	100.75	12.92	---	87.83
	9/27/88		14.22	---	86.53
	1/05/89		13.20	---	87.55
	4/06/89		12.32	---	88.43
	6/28/89		14.25	---	86.50
	10/03/89		14.75	---	86.00
	1/04/90		14.75	---	86.00
	4/03/90		13.81	---	86.94
	7/03/90		14.06	---	86.69
MW-5	6/15/88	99.97	12.30	---	87.67
	9/27/88		13.25	---	86.72
	1/05/89		12.70	---	87.27
	4/06/89		12.22	---	87.75
	6/28/89		13.81	---	86.16
	10/03/89		14.27	---	85.70
	1/04/90		14.31	---	85.66
	4/03/90		13.50	---	86.47
	7/03/90		13.64	---	86.33
MW-6	6/15/88	101.43	13.51	---	87.92
	9/27/88		14.56	---	86.87
	1/05/89		13.48	---	87.95
	4/06/89		12.60	---	88.83
	6/28/89		14.58	---	86.85
	10/03/89		13.03	---	88.40
	1/04/90		15.08	---	86.35
	4/03/90		14.06	---	87.37
	7/03/90		14.28	---	87.15
MW-7	6/15/88	100.91	12.57	---	88.34
	9/27/88		13.60	---	87.31
	1/05/89		12.98	---	87.93
	4/06/89		12.34	---	88.57
	6/28/89		14.08	---	86.83
	10/03/89		14.53	---	86.38
	1/04/90		14.49	---	86.42
	4/03/90		13.66	---	87.25
	7/03/90		13.86	---	87.05

-- Table 1 continues on next page --

TABLE 1. Ground Water Elevation Data, Chevron Service Station #90260, 21995
Foothill Boulevard, Hayward, California (continued)

Well ID	Date	Top-of-Casing Elevation (ft above msl)	Depth to Water (ft)	Thickness of Floating Hydrocarbons (ft)	Water Elevation (ft above msl)
MW-8	1/05/89	99.67	12.02	---	87.65
	4/06/89		11.78	---	87.89
	6/28/89		13.40	---	86.27
	10/03/89		13.84	0.11	85.91*
	1/04/90		13.99	0.10	85.77*
	4/03/90		13.07	0.30	86.36*
	7/03/90		13.11	0.04	86.59*
MW-9	1/05/89	101.15	12.63	---	88.52
	4/06/89		12.46	---	88.69
	6/28/89		14.04	---	87.11
	10/03/89		14.61	---	86.54
	1/04/90		14.59	---	86.56
	4/03/90		13.75	---	87.40
	7/03/90		13.84	---	87.31
MW-10	1/05/89	102.36	12.64	---	89.72
	4/06/89		11.38	---	90.98
	6/28/89		13.64	---	88.72
	10/03/89		13.85	---	88.51
	1/04/90		13.75	---	88.61
	4/03/90		12.86	---	89.50
	7/03/90		13.43	---	88.93
MW-11	6/28/89	99.97	14.33	---	85.64
	10/03/89		14.61	---	85.36
	1/04/90		14.55	---	85.42
	4/03/90		13.82	---	86.15
	7/03/90		14.00	---	85.97
MW-12	6/28/89	99.64	14.10	---	85.54
	10/03/89		14.30	---	85.34
	1/04/90		14.35	---	85.29
	4/03/90		13.59	---	86.05
	7/03/90		13.77	---	85.87
MW-13	6/28/89	98.47	13.22	---	85.25
	10/03/89		13.54	---	84.93
	1/04/90		13.64	---	84.83
	4/03/90		12.95	---	85.52
	7/03/90		13.05	---	85.42

* = Ground water elevation corrected for free-floating hydrocarbons by the formula: Ground Water Elevation = Top-of-casing elevation - Depth to ground water + (0.8 x hydrocarbon thickness)

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California

Sample ID	Sample Date	Analytic Method	Analytical Lab	TPH-G	B	E	T	X	EDC	EDB	VOCs
-----parts per billion (µg/L)-----											
MW-4	02/05/88	8015/602	B&C	88,000	24,000	1,700	19,000	10,000	---	---	---
	06/15/88	8015/602	B&C	95,000	45,000	2,100	30,000	17,000	---	---	---
	09/27/88	524.2/8240	CCAS	500,000	41,000	<5,000	27,000	16,000	<5,000	<5,000	---
	09/27/88*	524.2/8240	CCAS	88,000	1,200	1,600	4,100	12,000	270	230	---
	01/05/89	8015/8020	SAL	64,000	41,000	2,700	29,000	14,000	---	---	---
	06/28/89	8015/8020	SAL	110,000	34,000	2,400	24,000	13,000	---	---	---
	10/03/89	8015/8020	SAL	240,000	36,000	3,200	31,000	19,000	---	---	---
	01/04/90	8015/8020	SAL	130,000	33,000	2,400	28,000	14,000	---	---	---
	04/03/90	8015/8020	SAL	110,000	41,000	2,900	32,000	17,000	---	---	---
	07/03/90	8015/8020	SAL	180,000	32,000	2,600	30,000	15,000	---	---	---
MW-5	02/05/88	8015/602	B&C	80,000	16,000	2,600	15,000	17,000	---	---	---
	06/15/88	8015/602	B&C	77,000	42,000	2,500	38,000	16,000	---	---	---
	09/27/88	524.2/8240	CCAS	470,000	39,000	<5,000	32,000	16,000	<5,000	<5,000	---
	09/27/88*	524.2/8240	CCAS	48,000	1,800	1,600	3,500	10,000	410	420	---
	01/05/89	8015/8020	SAL	82,000	44,000	2,400	37,000	14,000	---	---	---
	06/28/89	8015/8020	SAL	80,000	36,000	2,400	24,000	13,000	---	---	---
	10/03/89	8015/8020	SAL	240,000	40,000	2,600	35,000	15,000	---	---	---
	01/04/90	8015/8020	SAL	130,000	37,000	2,400	31,000	13,000	---	---	---
	04/03/90	8015/8020	SAL	120,000	41,000	2,500	33,000	14,000	---	---	---
	07/03/90	8015/8020	SAL	200,000	28,000	1,800	25,000	10,000	---	---	---
MW-6	02/05/88	8015/602	B&C	53,000	5,100	2,100	4,400	14,000	---	---	---
	06/15/88	8015/602	B&C	33,000	9,200	520	5,500	20,000	---	---	---
	09/27/88	524.2/8240	CCAS	17,000	2,200	1,700	2,800	5,100	130	<10	---
	01/05/89	8015/8020	SAL	37,000	5,000	2,200	3,400	10,000	---	---	---
	06/28/89	8015/8020	SAL	80,000	7,000	2,000	4,100	9,700	---	---	---
	10/03/89	8015/8020	SAL	110,000	8,500	2,600	5,100	14,000	---	---	---
	01/04/90	8015/8020	SAL	59,000	5,200	2,000	2,600	11,000	---	---	---
	04/03/90	8015/8020	SAL	31,000	6,600	2,200	2,600	12,000	---	---	---
	07/03/90	8015/8020	SAL	66,000	5,800	2,000	2,900	9,800	---	---	---
MW-7	02/05/88	8015/602	B&C	81,000	34,000	2,400	36,000	16,000	---	---	---
	06/15/88	8015/602	B&C	77,000	40,000	1,400	41,000	24,000	---	---	---
	09/27/88	524.2/8240	CCAS	30,000	9,700	400	8,900	4,100	2,600	<10	---
	01/05/89	8015/8020	SAL	96,000	36,000	2,800	38,000	16,000	---	---	---
	06/28/89	8015/8020	SAL	110,000	31,000	2,600	30,000	16,000	---	---	---
	10/03/89	8015/8020	SAL	230,000	34,000	2,400	34,000	15,000	---	---	---
	01/04/90	8015/8020	SAL	150,000	41,000	2,400	40,000	15,000	---	---	---
	04/03/90	8015/8020	SAL	100,000	31,000	2,100	28,000	16,000	---	---	---
	07/03/90	8015/8020	SAL	190,000	30,000	1,800	27,000	13,000	---	---	---
MW-8	10/27/88	524.2/8240	CCAS	190,000	27,000	2,200	43,000	15,000	<500	<500	---
	01/05/89	8015/8020	SAL	87,000	24,000	3,000	39,000	15,000	---	---	---
	06/28/89	8015/8020	SAL	120,000	22,000	2,900	35,000	16,000	---	---	---
	10/03/89 ^b	---	---	---	---	---	---	---	---	---	---
	01/04/89 ^b	---	---	---	---	---	---	---	---	---	---
	04/03/90 ^b	---	---	---	---	---	---	---	---	---	---
	07/03/90 ^b	---	---	---	---	---	---	---	---	---	---

--Table 2 continues on next page--

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California

Sample ID	Sample Date	Analytic Method	Analytical Lab	TPH-G	B	E	T	X	EDC	EDB	VOCs
-----parts per billion (µg/L)-----											
MW-9	10/27/88	524.2/8240	CCAS	50,000	2,000	2,000	9,900	14,000	<500	<500	---
	01/05/89	8015/8020	SAL	55,000	670	3,400	8,900	16,000	---	---	---
	06/28/90	8015/8020	SAL	100,000	510	2,600	4,500	13,000	---	---	---
	10/03/89	8015/8020	SAL	130,000	540	3,200	8,000	17,000	---	---	---
	01/04/90	8015/8020	SAL	83,000	600	2,600	4,600	14,000	---	---	---
	04/03/90	8015/8020	SAL	52,000	1,600	3,100	5,400	16,000	---	---	---
	07/03/90	8015/8020	SAL	100,000	520	3,200	5,400	16,000	---	---	---
MW-10	10/27/88	524.2/8240	CCAS	<500	26	<5	13	<5	<5	<5	---
	01/05/89	8015/8020	SAL	<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
	06/28/89	8015/8020	SAL	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	10/03/89	8015/8020	SAL	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/90	8015/8020	SAL	<50	0.5	<0.5	1.1	1.7	---	---	---
	04/03/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/03/90 ^c	---	---	---	---	---	---	---	---	---	---
MW-11	06/28/89	8015/8240	SAL	60,000	36,000	2,500	13,000	12,000	---	---	ND
	10/03/89	8015/8020	SAL	14,000	4,200	240	1,400	1,300	---	---	---
	01/04/90	8015/8020	SAL	82,000	33,000	2,000	11,000	10,000	---	---	---
	04/03/90	8015/8020	SAL	78,000	35,000	2,300	12,000	12,000	---	---	---
	07/03/90	8015/8020	SAL	140,000	32,000	2,100	12,000	10,000	---	---	---
MW-12	06/28/89	8015/8240	SAL	55,000	30,000	2,900	21,000	19,000	---	---	ND
	10/03/89	8015/8020	SAL	170,000	30,000	2,700	23,000	15,000	---	---	---
	01/04/90	8015/8020	SAL	110,000	24,000	2,300	19,000	12,000	---	---	---
	04/03/90	8015/8020	SAL	89,000	41,000	3,300	28,000	17,000	---	---	---
	07/03/90	8015/8020	SAL	170,000	27,000	2,200	20,000	12,000	---	---	---
MW-13	06/28/89	8015/8240	SAL	54,000	12,000	1,900	10,000	15,000	---	---	ND
	10/03/89	8015/8020	SAL	120,000	10,000	2,300	10,000	15,000	---	---	---
	01/04/90	8015/8020	SAL	87,000	6,800	2,000	10,000	12,000	---	---	---
	04/03/90	8015/8020	SAL	53,000	12,000	2,900	14,000	17,000	---	---	---
	07/03/90	8015/8020	SAL	90,000	8,400	2,000	11,000	11,000	---	---	---
Bailer Blank	01/05/89	8015/8020	SAL	<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
Trip Blank	01/05/89	8015/8020	SAL	<1,000	<0.3	<0.3	<0.3	<0.3	---	---	---
	10/03/89	8015/8020	SAL	<500	<0.5	<0.5	<0.5	<0.5	---	---	---
	01/04/89	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	04/03/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
	07/03/90	8015/8020	SAL	<50	<0.5	<0.5	<0.5	<0.5	---	---	---
DHS MCLs	-	-	-	NE	1	680	100 ^a	1,750	0.5	0.02	V

--Table 2 continues on next page--

TABLE 2. Analytic Results for Ground Water, Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California (continued)

Abbreviations:

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
E = Ethylbenzene
T = Toluene
X = Xylenes
EDC = 1,2-dichloroethane
EDB = Ethylene dibromide
VOCs = Volatile Organic Compounds
--- = Not analyzed
DHS MCLs = Department of Health Services Maximum Contaminant Level
^a = DHS Recommended Action Level for Drinking Water
NE = DHS action level not established
V = DHS action levels vary, depends on compound
ND = Not detected at detection limits of 500 to 2,000 ppb
* = Samples from MW-4 and MW-5 were analyzed a second time after the holding time expired to confirm the anomalously high TFHC reported in the original analysis. Although the samples were preserved with NaHSO₄ and refrigerated, the second analysis was not conducted until 52 days after sample collection.
^b = Not sampled due to the presence of free-floating product in the well
^c = Well not sampled this quarter in accordance with the modified sampling frequency program.

Analytical Laboratory:

B&C = Brown and Caldwell Laboratories of Emeryville, California
CCAS = Central Coast Analytical Services of San Luis Obispo, California
SAL = Superior Analytical Laboratory of San Francisco and Martinez, California

Analytic Method:

524.2/8240 = Fuel Fingerprint Analysis - EPA Method 524.2/8240, Total Fuel and Aromatic Volatile Hydrocarbons (GC/MS)
602 = EPA Method 602, Aromatic Volatile Hydrocarbons (GC)
8015 = Modified EPA Method 8015, TPH-G
8020 = EPA Method 8020, BETX

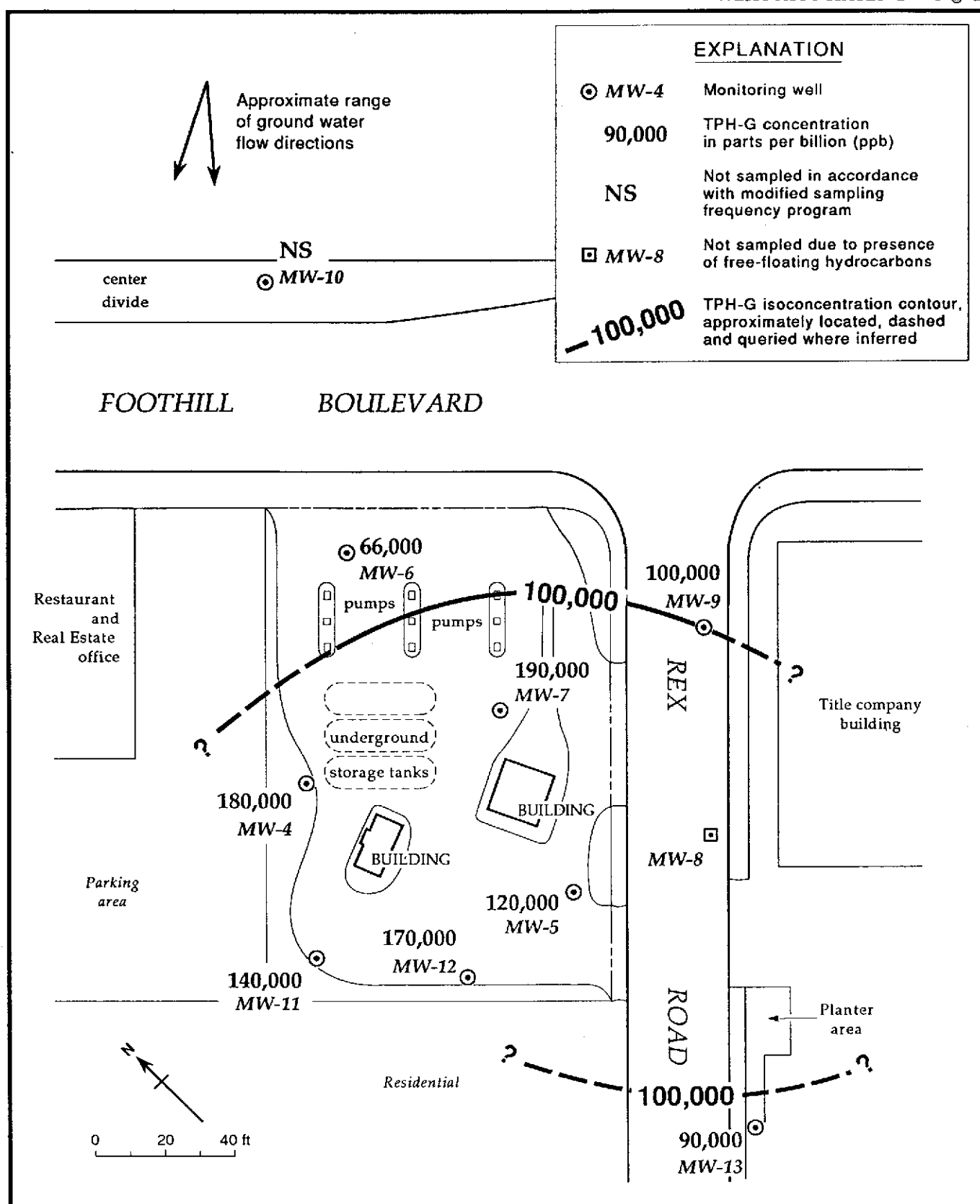


Figure 3. TPH-G in Ground Water Isoconcentration Contours - July 3, 1990 - Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California

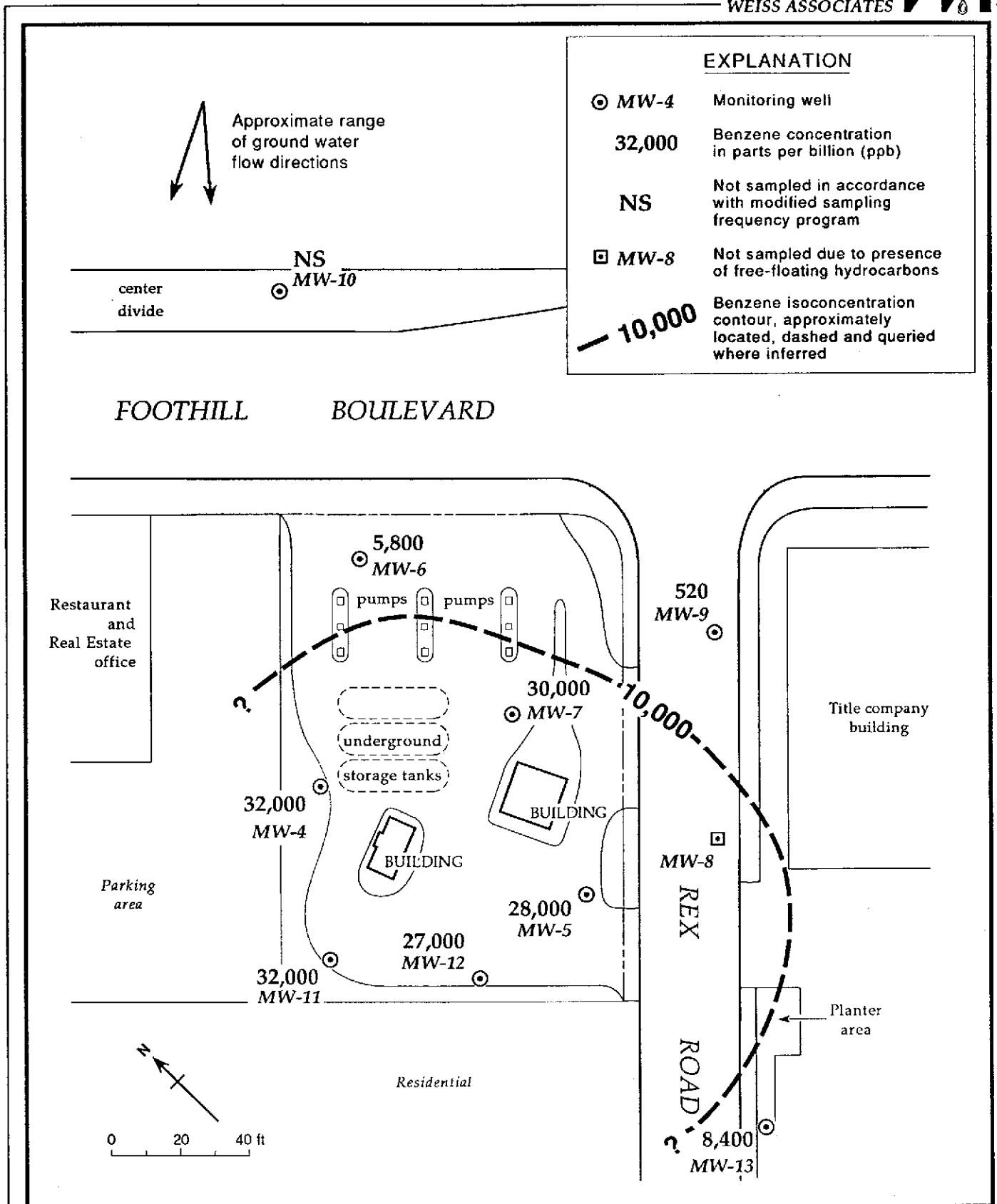


Figure 4. Benzene in Ground Water Isoconcentration Contours - July 3, 1990 - Chevron Service Station #90260, 21995 Foothill Boulevard, Hayward, California

Walter F. Posluszny Jr.
August 3, 1990

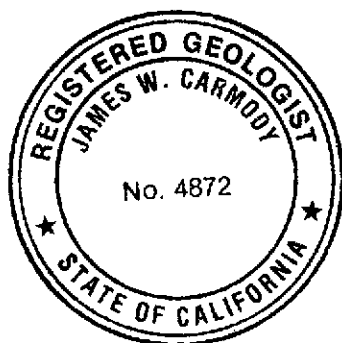
13

WEISS ASSOCIATES 

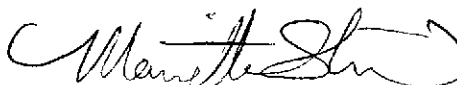
Discussion of analytic results of ground water for this quarter:

- All ground water samples contained BETX above the DHS MCLs and the recommended action level for drinking water.
- TPH-G concentrations in samples from all wells are at their highest since October 1989 and TPH-G in the sample from well MW-11 is at a historical high.

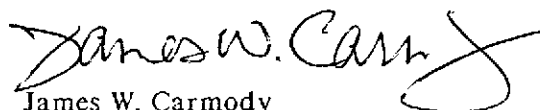
We appreciate the opportunity to provide hydrogeologic consulting services to Chevron and trust that this report meets your needs. If you have any questions, please call Mariette Shin or Jim Carmody.



Sincerely,
Weiss Associates



Mariette M. Shin
Staff Geologist



James W. Carmody
Senior Project Hydrogeologist

MMS/JWC:jg

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Attachments: A - Water Sample Collection Records
 B - Chain-of-Custody Form
 C - Analytic Reports

**ATTACHMENT A
WATER SAMPLE COLLECTION RECORDS**



WATER SAMPLING DATA

Well Name MW-4 Date 7/3/90 Time of Sampling 0928
 Job Name CITEV-HAYWARD Job Number 4-310-01 Initials D.C.
 Sample Point Description M (M = Monitoring Well)
 Location IN REDWOOD PLANTER BY MARLBORO SIGN

WELL DATA: Depth to Water 14.06 ft (static pumping) Depth to Product - ft.
 Product Thickness - Well Depth 21.6 ft (spec) Well Depth 22.74 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 8.68 ft = volume 5.66 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 16.98 gal.

EVACUATION METHOD: Pump # and type N/A Hose # and type -
 Bailer# and type 3" X 36" PVC Dedicated YES (Y/N)
 Other -

Evacuation Time: Stop 0938 1003
 Start 0730 0959
 Total Evacuation Time 12 min.
 Total Evacuated Prior to Sampling 18 gal.
 Evacuation Rate 1.5 gal. per minute

Depth to Water during Evacuation - ft. - time
 Depth to Water at Sampling N/A ft. - time
 Evacuated Dry? NO After - gal. Time -
 80% Recovery = -
 % Recovery at Sample Time - Time -

Formulas/Conversions

r = well radius in ft.
 h = ht of water col in ft.
 $\text{vol. in cyl.} = \pi r^2 h$
 7.48 gal/ft^3
 $V_2'' \text{ casing} = 0.163 \text{ gal/ft}$
 $V_3'' \text{ casing} = 0.367 \text{ gal/ft}$
 $V_4'' \text{ casing} = 0.653 \text{ gal/ft}$
 $V_{4.5}'' \text{ casing} = 0.826 \text{ gal/ft}$
 $V_6'' \text{ casing} = 1.47 \text{ gal/ft}$
 $V_8 \text{ casing} = 2.61 \text{ gal/ft}$

CHEMICAL DATA: Meter Brand/Number

Calibration: 4.0 7.0 10.0

Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal)

SAMPLE: Color MED. GREY Odor STRONG
 Description of matter in sample: SUSPENDED/DISSOLVED GREY SILT
 Sampling Method: FROM DED. BLR. PORT
 Sample Port: Rate - gpm Totalizer - gal.
 Time -

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
2	070-4	W/CV	40mL	N	Y	HCL	8015/662	N	SAL

¹ Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined

² = Volume per container; ³ = Filtered (Y/N); ⁴ = Refrigerated (Y/N)

⁵ Turn-around [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-5 Date 7-3-90 Time of Sampling 10:20
 Job Name Chemcon/Hyground Job Number 4-310-01 Initials DTC
 Sample Point Description M (M = Monitoring Well)
 Location LOT

WELL DATA: Depth to Water 13.64 ft (static, pumping) Depth to Product NA ft.
 Product Thickness NA Well Depth 18.5 ft (spec) Well Depth 18.64 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 5 ft. = volume 3.2 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 9.8 gal.

EVACUATION METHOD:

Pump # and type NA Hose # and type NA

Bailer# and type 3x3 pvc Dedicated Y (Y/N)

Other NA

Evacuation Time: Stop 916 943 957

Start 910 941 955

Total Evacuation Time 10

Total Evacuated Prior to Sampling 10 gal.

Evacuation Rate 1 gal. per minute

Depth to Water during Evacuation NA ft. NA time

Depth to Water at Sampling 13.95 ft. 10.23 time

Evacuated Dry? No After NA gal. Time NA

80% Recovery = NA

% Recovery at Sample Time NA Time NA

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft³

V_2 casing = 0.163 gal/ft

V_3 casing = 0.367 gal/ft

V_4 casing = 0.653 gal/ft

$V_{4.5}$ casing = 0.826 gal/ft

V_6 casing = 1.47 gal/ft

V_8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number NA

Calibration: 4.0 7.0 10.0

Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)

SAMPLE: Color Grey Cloudy

Odor Mild

Description of matter in sample: Sandy Grey Silt

Sampling Method: decanted from side port 3x3 pvc bailer

Sample Port: Rate mgpm Totalizer NA gal.

Time

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Rcf ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>2</u>	<u>060-5</u>	<u>W/V</u>	<u>9cmil</u>	<u>n</u>	<u>y</u>	<u>1tel</u>	<u>8015/602</u>	<u>n</u>	<u>SAL</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-6 Date 7/2/90 Time of Sampling 0.2. 0912-81105
 Job Name CHEV-HAYWARD Job Number 4-310-01 Initials B.C.
 Sample Point Description M (M = Monitoring Well)

Location FRONT OF PUMP ISLANDS

WELL DATA: Depth to Water 14.28 ft (static) pumping) 0839 Depth to Product — ft.
 Product Thickness — Well Depth 16.5 ft (spec) Well Depth 16.99 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 2.31 ft. = volume 0.2. 1.51 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 4.50 gal.

EVACUATION METHOD: Pump # and type NONE Hose # and type —
 Bailer # and type 3"x36" PVL Dedicated YES (Y/N)
 Other —

Evacuation Time: Stop 0916 0955 1037
 Start 0914 0954 1036
 Total Evacuation Time 4 min.
 Total Evacuated Prior to Sampling 5.0 gal.
 Evacuation Rate 1.25 gal. per minute

Depth to Water during Evacuation — ft. — time
 Depth to Water at Sampling N/A ft. — time
 Evacuated Dry? NO After 2 gal. Time 0.2. 0.0
 80% Recovery = —
 % Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.
 h = ht of water col in ft.
 $\text{vol. in cyl.} = \pi r^2 h$
 7.48 gal/ft^3
 V_2 " casing = 0.163 gal/ft
 V_3 " casing = 0.367 gal/ft
 V_4 " casing = 0.653 gal/ft
 $V_{4.5}$ " casing = 0.826 gal/ft
 V_6 " casing = 1.47 gal/ft
 V_8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration: — 4.0 7.0 10.0
 Measured: SC/μmhos pH T°C Time Volume Evacuated (gal)

SAMPLE: Color NONE Odor LT. TO MODERATE
 Description of matter in sample: SMALL AMT. OF FINE SUSPENDED SILT
 Sampling Method: FROM PED. BLR. PORT.
 Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
2	070-6	w/cv	40mL	N	Y	HCL	8015/602	N	SAL

¹ Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined

² = Volume per container; ³ = Filtered (Y/N); ⁴ = Refrigerated (Y/N)

⁵ Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-7 Date 7-3-90 Time of Sampling 1147
 Job Name Chevron Hayward Job Number 4-310-01 Initials DTC
 Sample Point Description M (M = Monitoring Well)
 Location LOT

WELL DATA: Depth to Water 13.86 ft (static, pumping) Depth to Product NA ft.
 Product Thickness NA Well Depth 17.6 ft (spec) Well Depth 1831 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 4.95 ft. = volume 2.9 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 8.7 gal.

EVACUATION METHOD: Pump # and type NA Hose # and type NA
 Bailer# and type 3K3 pvc Dedicated Y (Y/N)
 Other NA

Evacuation Time: Stop 0924 0958 1041 1100 1130
 Start 0924 0957 1038 1059 1127
 Total Evacuation Time 8 min
 Total Evacuated Prior to Sampling 8.7 gal.
 Evacuation Rate 1.1 gal. per minute

Depth to Water during Evacuation - ft. - time
 Depth to Water at Sampling N/A ft. - time
 Evacuated Dry? NO After - gal. Time -
 80% Recovery = -
 % Recovery at Sample Time - Time -

Formulas/Conversions

r = well radius in ft.
 h = ht of water col in ft.
 $\text{vol. in cyl.} = \pi r^2 h$
 7.48 gal/ft^3
 V_2 " casing = 0.163 gal/ft
 V_3 " casing = 0.367 gal/ft
 V_4 " casing = 0.653 gal/ft
 $V_{4.5}$ " casing = 0.826 gal/ft
 V_6 " casing = 1.47 gal/ft
 V_8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration:	4.0	7.0	10.0	
Measured:	SC/ μ mhos	pH	T°C	Time

Volume Evacuated (gal.)

SAMPLE: Color NONE Odor LT.
 Description of matter in sample: SMALL AMT. SUSPENDED SILT
 Sampling Method: FROM PORT ON DED. BLR.
 Sample Port: Rate - gpm Totalizer - gal.
 Time -

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>2</u>	<u>070-7</u>	<u>W/CEV</u>	<u>40mL</u>	<u>N</u>	<u>Y</u>	<u>HCL</u>	<u>8015/602</u>	<u>N</u>	<u>SAL</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

5 = Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-9 Date 7-3-90 Time of Sampling 10:40
 Job Name Chloron/HANNA Job Number 4-310-01 Initials PTB
 Sample Point Description M (M = Monitoring Well)
 Location LOT

WELL DATA: Depth to Water 13.84 ft (static, pumping) Depth to Product NA ft.
 Product Thickness NA Well Depth 91.2 ft (spec) Well Depth 991 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 5.36 ft. = volume 3.5 gal.
III Casing Volumes to be Evacuated. Total to be evacuated 10.5 gal.

EVACUATION METHOD: Pump # and type NA Hose # and type NA
 Bailer # and type 3X3 PVC Dedicated X (Y/N)
 Other NA

Evacuation Time: Stop 9:30 9:47 10:00 10:30
 Start 9:25 9:45 9:58 10:20
 Total Evacuation Time 11 min
 Total Evacuated Prior to Sampling 11 gal.
 Evacuation Rate 1 gal. per minute

Depth to Water during Evacuation NA ft. NA time
 Depth to Water at Sampling 16.82 ft. 10:39 time
 Evacuated Dry? No After NA gal. Time NA
 80% Recovery = NA
 % Recovery at Sample Time NA Time NA

Formulas/Conversions

r = well radius in ft.
 h = ht of water col in ft.
 $\text{vol. in cyl.} = \pi r^2 h$
 7.48 gal/ft^3
 V_2 " casing = 0.163 gal/ft
 V_3 " casing = 0.367 gal/ft
 V_4 " casing = 0.653 gal/ft
 $V_{4.5}$ " casing = 0.826 gal/ft
 V_6 " casing = 1.47 gal/ft
 V_8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration: 4.0 7.0 10.0

Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)

SAMPLE: Color DARK GRAY / Light Gray Odor Moderate

Description of matter in sample: Clay Heavy silt black smd

Sampling Method: decanted from side port of 3x3 PVC bailer

Sample Port: Rate NA gpm Totalizer NA gal.
 Time

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>2</u>	<u>060-9</u>	<u>W/V</u>	<u>10 ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>8015/602</u>	<u>N</u>	<u>SAL</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

5 = Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-11 Date 7/3/90 Time of Sampling 1045
 Job Name CHEV-HAYWARD Job Number 4-310-01 Initials O.C.
 Sample Point Description M (M = Monitoring Well)

Location BY DUMPSTER ENCLOSURE

WELL DATA: Depth to Water 14.00 ft (static, pumping) Depth to Product — ft.
 Product Thickness — Well Depth — ft (spec) Well Depth 17.64 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 5.64 ft. = volume 3.68 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 11.04 gal.

EVACUATION METHOD:

Pump # and type N/A Hose # and type —
 Bailer # and type 3" x 36" PVC Dedicated YES (Y/N)
 Other —

Evacuation Time: Stop 0949 1008

Start 0946 1005

Total Evacuation Time 6 min.

Total Evacuated Prior to Sampling 11.05 gal.

Evacuation Rate 1.8 gal. per minute

Depth to Water during Evacuation — ft. — time

Depth to Water at Sampling N/A ft. — time

Evacuated Dry? NO After — gal. Time —

80% Recovery = —

% Recovery at Sample Time — Time —

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft³

V_2 " casing = 0.163 gal/ft

V_3 " casing = 0.367 gal/ft

V_4 " casing = 0.653 gal/ft

$V_{4.5}$ " casing = 0.826 gal/ft

V_6 " casing = 1.47 gal/ft

V_8 casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number

Calibration: — 4.0 — 7.0 — 10.0

Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal)

SAMPLE: Color LT. GREY Odor STRONG

Description of matter in sample: VERY FINE SUSPENDED SILT - SMALL AMT.

Sampling Method: PORT ON DED. BLR.

Sample Port: Rate — gpm Totalizer — gal.
 Time —

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
2	076-11	W/CV	40mL	N	Y	HCL	8015/602	N	SAL

1 Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Caps Codes: PT = Plastic, Teflon lined

2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-12 Date 7-3-90 Time of Sampling 1130
 Job Name Chewon Hoppers Job Number 9510-01 Initials ATP
 Sample Point Description M (M = Monitoring Well)
 Location LOT

WELL DATA: Depth to Water 13.77 ft. (static/pumping) Depth to Product NA ft.
 Product Thickness NA Well Depth 16.67 ft. (spec) Well Depth 18.67 ft. (sounded) Well Diameter 4 in.
 Initial Height of Water in Casing 2.9 ft. = volume 1.8 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 5.6 gal.

EVACUATION METHOD: Pump # and type NA Hose # and type NA
 Bailer # and type SR3 pc Dedicated Y (Y/N)
 Other NA

Evacuation Time: Stop 1157
 Start 1112
 Total Evacuation Time 5
 Total Evacuated Prior to Sampling 7 gal.
 Evacuation Rate 1.4 gal. per minute

Depth to Water during Evacuation NA ft. NA time
 Depth to Water at Sampling 15.31 ft. 1124 time
 Evacuated Dry? NO After NA gal. Time NA
 80% Recovery = NA
 % Recovery at Sample Time NA Time NA

Formulas/Conversions

r = well radius in ft.
 h = ht of water col in ft.
 $\text{vol. in cyl.} = \pi r^2 h$
 7.48 gal/ft^3
 $V_2'' \text{ casing} = 0.163 \text{ gal/ft}$
 $V_3'' \text{ casing} = 0.367 \text{ gal/ft}$
 $V_4'' \text{ casing} = 0.653 \text{ gal/ft}$
 $V_{4.5}'' \text{ casing} = 0.826 \text{ gal/ft}$
 $V_6'' \text{ casing} = 1.47 \text{ gal/ft}$
 $V_8 \text{ casing} = 2.61 \text{ gal/ft}$

CHEMICAL DATA: Meter Brand/Number NA
 Calibration: 4.0 7.0 10.0
 Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)

SAMPLE: Color Grey Cloudy Odor MILD
 Description of matter in sample: CLAY SILT SAND
 Sampling Method: Decanted from 3x3pc bailer side pwr.
 Sample Port: Rate NA gpm Totalizer NA gal.
 Time

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
2	060-12	W/V	90ml	N	Y	HCl	8015/602	N	SAL

¹ Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

² = Volume per container; ³ = Filtered (Y/N); ⁴ = Refrigerated (Y/N)

⁵ Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:



WATER SAMPLING DATA

Well Name MW-13 Date 7-3-90 Time of Sampling 1025
 Job Name Leveon Highway Job Number 4-310-01 Initials DTG
 Sample Point Description M (M = Monitoring Well)
 Location LOT

WELL DATA: Depth to Water 13.05 ft (static/pumping) Depth to Product NA ft.
 Product Thickness NA Well Depth 17.77 ft (spec) Well Depth 17.84 ft (sounded) Well Diameter 4 in
 Initial Height of Water in Casing 4.79 ft = volume 3.1 gal.
3 Casing Volumes to be Evacuated. Total to be evacuated 9.3 gal.

EVACUATION METHOD:

Pump # and type NAHose # and type NABailer# and type 3x3 pvcDedicated Y

(Y/N)

Other NAEvacuation Time: Stop 9:39 452Start 9:35 450Total Evacuation Time 6Total Evacuated Prior to Sampling 10 gal.Evacuation Rate 1.6 gal. per minuteDepth to Water during Evacuation NA ft. NA timeDepth to Water at Sampling 15.00 ft. 1007 timeEvacuated Dry? NO After NA gal. Time NA80% Recovery = NA% Recovery at Sample Time NA Time NA

Formulas/Conversions

 r = well radius in ft. h = ht of water col in ft.vol. in cyl. = $\pi r^2 h$ 7.48 gal/ft³V_{2"} casing = 0.163 gal/ftV_{3"} casing = 0.367 gal/ftV_{4"} casing = 0.653 gal/ftV_{4.5"} casing = 0.826 gal/ftV_{6"} casing = 1.47 gal/ftV_{8"} casing = 2.61 gal/ftCHEMICAL DATA: Meter Brand/Number NACalibration: 4.0 7.0 10.0Measured: SC/ μ mhos pH T°C Time Volume Evacuated (gal.)SAMPLE: Color Cloudy GreyOdor MILDDescription of matter in sample: CLAY some SiltSampling Method: drawn from side port of 3x3 pvc bailerSample Port: Rate NA gpm Totalizer NA gal.

Time

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
<u>Z</u>	<u>060-13</u>	<u>W/V</u>	<u>46ml</u>	<u>N</u>	<u>Y</u>	<u>HCl</u>	<u>8015/002</u>	<u>N</u>	<u>SAL</u>

1 Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

2 = Volume per container; 3 = Filtered (Y/N); 4 = Refrigerated (Y/N)

5 Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

TRIP BLANK

WEISS ASSOCIATES



WATER SAMPLING DATA

Well Name 060-21 Date 7-3-90 Time of Sampling 1035
Job Name Chapman Highway Job Number 4-310-01 Initials DTG
Sample Point Description M (M = Monitoring Well)
Location LOT

WELL DATA: Depth to Water _____ ft (static, pumping) Depth to Product _____ ft.
Product Thickness _____ Well Depth _____ ft (spec) Well Depth _____ ft (sounded) Well Diameter _____ in
Initial Height of Water in Casing _____ ft. = volume _____ gal.
Casing Volumes to be Evacuated. Total to be evacuated _____ gal.

EVACUATION METHOD:

Pump # and type _____ Hose # and type _____
Bailer # and type _____ Dedicated _____ (Y/N)
Other _____

Evacuation Time: Stop _____

Start _____

Total Evacuation Time _____

Total Evacuated Prior to Sampling _____ gal.

Evacuation Rate _____ gal. per minute

Depth to Water during Evacuation _____ ft. _____ time

Depth to Water at Sampling _____ ft. _____ time

Evacuated Dry? _____ After _____ gal. Time _____

80% Recovery = _____

% Recovery at Sample Time _____ Time _____

Formulas/Conversions

r = well radius in ft.

h = ht of water col in ft.

vol. in cyl. = $\pi r^2 h$

7.48 gal/ft³

V_{2"} casing = 0.163 gal/ft

V_{3"} casing = 0.367 gal/ft

V_{4"} casing = 0.653 gal/ft

V_{4.5"} casing = 0.826 gal/ft

V_{6"} casing = 1.47 gal/ft

V_{8"} casing = 2.61 gal/ft

CHEMICAL DATA: Meter Brand/Number _____

Calibration: _____ 4.0 _____ 7.0 _____ 10.0

Measured: _____ SC/ μ mhos _____ pH _____ T°C _____ Time _____ Volume Evacuated (gal.) _____

SAMPLE: Color _____ Odor _____

Description of matter in sample: _____

Sampling Method: _____

Sample Port: Rate _____ gpm Totalizer _____ gal.
Time _____

# of Cont.	Sample ID	Cont. Type ¹	Vol ²	Fil ³	Ref ⁴	Preservative (specify)	Analytic Method	Turn ⁵	LAB
2	060-21	W/R	40ml	n	y	HCl	8015 / 602	n	SAL

¹ Sample Type Codes: W = Water, S = Soil, Describe Other

Container Type Codes: V = VOA/Teflon Septa, P = Plastic, C or B = Clear/Brown Glass, Describe Other

Cap Codes: PT = Plastic, Teflon lined;

² = Volume per container; ³ = Filtered (Y/N); ⁴ = Refrigerated (Y/N)

⁵ Turnaround [N = Normal, W = 1 week, R = 24 hour, HOLD (spell)]

ADDITIONAL COMMENTS, CONDITIONS, PROBLEMS:

**ATTACHMENT B
CHAIN-OF-CUSTODY FORM**

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319
DOHS #220

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

LABORATORY NO.: 81150
CLIENT: Weiss Associates
CLIENT JOB NO.: 4-310-01

DATE RECEIVED: 07/03/90
DATE REPORTED: 07/16/90

Page 1 of 2

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
81150- 1	070-4	07/03/90	07/13/90
81150- 2	070-5	07/03/90	07/12/90
81150- 3	070-6	07/03/90	07/12/90
81150- 4	070-7	07/03/90	07/13/90
81150- 5	070-9	07/03/90	07/13/90
81150- 6	070-11	07/03/90	07/13/90
81150- 7	070-12	07/03/90	07/13/90
81150- 8	070-13	07/03/90	07/13/90
81150- 9	070-21	07/03/90	07/12/90

Laboratory Number:	81150	81150	81150	81150	81150
	1	2	3	4	5

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	180000	200000	66000	190000	100000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	32000	28000	5800	30000	520
TOLUENE:	30000	25000	2900	27000	5400
ETHYL BENZENE:	2600	1800	2000	1800	3200
XYLENES:	15000	10000	9800	13000	16000

Laboratory Number:	81150	81150	81150	81150
	6	7	8	9

ANALYTE LIST	Amounts/Quantitation Limits (ug/L)			
OIL AND GREASE:	NA	NA	NA	NA
TPH/GASOLINE RANGE:	140000	170000	90000	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA
BENZENE:	32000	27000	8400	ND<0.5
TOLUENE:	12000	20000	11000	ND<0.5
ETHYL BENZENE:	2100	2200	2000	ND<0.5
XYLENES:	10000	12000	11000	ND<0.5

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORY, INC.

1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

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
Diesel by Modified EPA SW-846 Method 8015
Gasoline by Purge and Trap: EPA Method 8015/5030
ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020

Page 2 of 2
QA/QC INFORMATION
SET: 81150

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:

Duplicate RPD NA

Minimum Detection Limit in Water: 5000ug/L

Modified EPA Method 8015 for Extractable Hydrocarbons:

Minimum Quantitation Limit for Diesel in Water: 1000ug/L

Daily Standard run at 200mg/L: %Diff Diesel = NA

MS/MSD Average Recovery = NA: Duplicate RPD = NA

8015/5030 Total Purgable Petroleum Hydrocarbons:

Minimum Quantitation Limit for Gasoline in Water: 50ug/L

Daily Standard run at 2mg/L: %Diff Gasoline = 12%

MS/MSD Average Recovery = 99%: Duplicate RPD = 4%

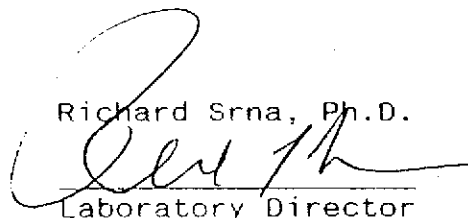
8020/BTXE

Minimum Quantitation Limit in Water: 0.50ug/L

Daily Standard run at 20ug/L: %Diff = <15%

MS/MSD Average Recovery = 96%: Duplicate RPD = <2%

Richard Srna, Ph.D.



Laboratory Director

OUTSTANDING QUALITY AND SERVICE