Chevron U.S.A. Inc.
2410 Camino Ramon, San Ramon, California • Phone (415) 842-9500
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

Marketing Operations

D. Moller
Manager, Operations
S. L. Patterson
Area Manager, Operations
C. G. Trimbach
Manager, Engineering

November 15, 1990

Mr. Larry Seto
Alameda County Department of Health - HAZMAT Section
470 27th Street, Room 324
Oakland, California 94612

Re: Chevron Service Station #9-8139
16304 Foothill Boulevard
San Leandro, California

Dear Mr. Seto,

Please find attached the quarterly groundwater sampling report for the above site. Chevron currently has eight wells on-site and one well off site. Gradient is to the south at 0.03 ft/ft. Groundwater is found at approximately 16 ft. below grade. We currently have a groundwater remediation system installed but with the recent discovery of phase-seperated hydrocarbons, we are installing an oil/water seperator to the existing system.

The one well with phase-seperated hydrocarbons is being bailed at a rate of twice a week until our remediation system is on line(somewhere near the end of this year).

I declare under penalty of perjury that the information contained in the attached report is true and correct, and that any recommended actions are appropriate under the current circumstances, to the best of my knowledge.

If you have any questions regarding this report, please feel free to call me at (415) 842-9040.

Very Truly Yours,

Walter F. Posluszny Jr.
Environmental Engineer
Chevron U.S.A.

cc: Ms. Penny Silzer, SFBR-RWQCB, Oakland
File(CPVMC-98139R6)

QUARTERLY MONITORING REPORT
THIRD QUARTER, 1990

CHEVRON SERVICE STATION NO. 9-8139
16304 Foothill Boulevard
San Leandro, California

October 1990

Prepared for

CHEVRON USA, INC.

Prepared by

CHEMICAL PROCESSORS, INC.

950 B Gilman Street
Berkeley, California 94710

Project No. 1158

CHEMICAL PROCESSORS, INC.

Northern California Division

CHEMPRO SM

A Burlington Environmental Inc. Company

October 4, 1990
Project No. 1158

Mr. Walt Posluszny
Chevron USA, Inc.
2410 Camino Ramon
San Ramon, CA 94583-0804

Re: QUARTERLY MONITORING REPORT
Third Quarter, 1990
Chevron Service Station No. 9-8139
16304 Foothill Boulevard
San Leandro, California

Dear Mr. Posluszny:

Chemical Processors, Inc. (Chempro) is pleased to submit the following quarterly monitoring report for Chevron USA, Inc. (Chevron) Service Station No. 9-8139, located at 16304 Foothill Boulevard in San Leandro, California. The groundwater monitoring and sampling was conducted by Chempro on September 6 and 7, 1990.

MONITORING ACTIVITIES

The site is occupied by an operating service station located on Foothill Boulevard in southern San Leandro, California (see Figure 1). The service station is located approximately 250 feet east of Highway 580, and 6,000 feet south of Lake Chabot. There are currently seven groundwater monitor wells located onsite and one located offsite (see Figure 2). In each well, the depth to groundwater and the presence and thickness of phase-separated hydrocarbons (PSH) were determined. Groundwater samples were collected and analyzed according to Chevron guidelines to determine the concentrations of total petroleum hydrocarbons as gasoline (TPH), benzene, toluene, ethylbenzene and total xylenes (BTEX), as well as ethylene dibromide. The monitoring and sampling procedures are presented in Appendix A. Field data sheets are presented in Appendix B.

Superior Precision Analytical, Inc., located in San Francisco, California, performed the analyses. Analytical techniques and detection limits are presented with the analytical data in Table 2.

950 Gilman Street, Suite B
Berkeley, California 94710
(415) 524-9372

RESULTS

The groundwater elevation beneath the site on September 6 and 7, 1990 ranged from 106.55 to 112.08 feet above mean sea level (see Table 1). A contour map of these data is presented in Figure 3. As shown on the contour map, the approximate groundwater flow direction is to the south, with an approximate gradient of 0.03 ft/ft.

The results of the chemical analyses are presented in Table 2. PSH was detected in monitor well MW-5 during quarterly sampling on September 7, 1990 at a thickness of 0.04 feet. On September 25, 1990, PSH was measured at a thickness of 1.3 feet. Figures 4 and 5 show isoconcentration contours for TPH and benzene, respectively. Chain-of-custody documentation is presented in Appendix C. Certified analytical results are presented in Appendix D.

Chempro appreciates the opportunity to provide Chevron with this information. Please feel free to contact us if we can provide further assistance.

Very truly yours,
CHEMICAL PROCESSORS, INC.

Felicia A Rein

Felicia A Rein
Environmental Scientist

David C. Tight

David C. Tight
Site Remediation Manager

FR/DT:ms

Attachments:
Table 1 - Groundwater Elevation Data
Table 2 - Groundwater Analyses and Analytical Techniques
Figure 1 - Regional Location Map
Figure 2 - Site Vicinity Map
Figure 3 - Groundwater Elevation Contours
Figure 4.-.TPH Isoconcentration Contours
Figure 5.-. Benzene Isoconcentration Contours
Appendix A - Groundwater Sampling and Analysis Procedures
Appendix B - Water Sample Field Data Sheets
Appendix C - Chain-of-Custody Records
Appendix D - Certified Analytical Results

Table 1
GROUNDWATER LEVEL ELEVATION DATA
Chevron Service Station No. 9-8139
16304 Foothill Blvd., San Leandro, California

Well Number	Date Sampled	TOC Elevation (ft-MSL)	Depth to Water (ft-BTOC)	PSH (ft)	Water Elevation (ft-MSL)
MW-1	3/23/90	127.09	12.92	ND	114.17
	9/6/90	127.09	14.68	ND	112.41
	9/25/90	127.09	15.01	ND	112.08
MW-2	3/23/90	125.98	12.40	ND	113.58
	9/6/90	125.98	14.85	ND	111.13
	9/25/90	125.98	14.80	ND	111.18
MW-3*	3/23/90	127.84	17.50	ND	110.34
	9/6/90	126.77	18.72	ND	108.05
	9/25/90	126.77	18.40	ND	108.37
MW-4	3/23/90	125.22	16.02	ND	109.20
	9/6/90	125.22	17.35	ND	107.87
	9/25/90	125.22	17.48	ND	107.74
MW-5	3/23/90	125.85	16.89	ND	108.96
	9/7/90	125.85	18.46	0.04	107.39
	9/25/90	125.85	19.30	1.30	106.55
MW-6	3/23/90	124.18	18.51	ND	105.67
	9/7/90	124.18	16.18	ND	108.00
	9/25/90	124.18	16.42	ND	107.76
MW-7	3/23/90	126.86	21.40	ND	105.46
	9/7/90	126.86	18.38	ND	108.48
	9/25/90	126.86	19.25	ND	107.61
MW-8	9/7/90	123.61	16.07	ND	107.54
	9/25/90	123.61	16.20	ND	107.41

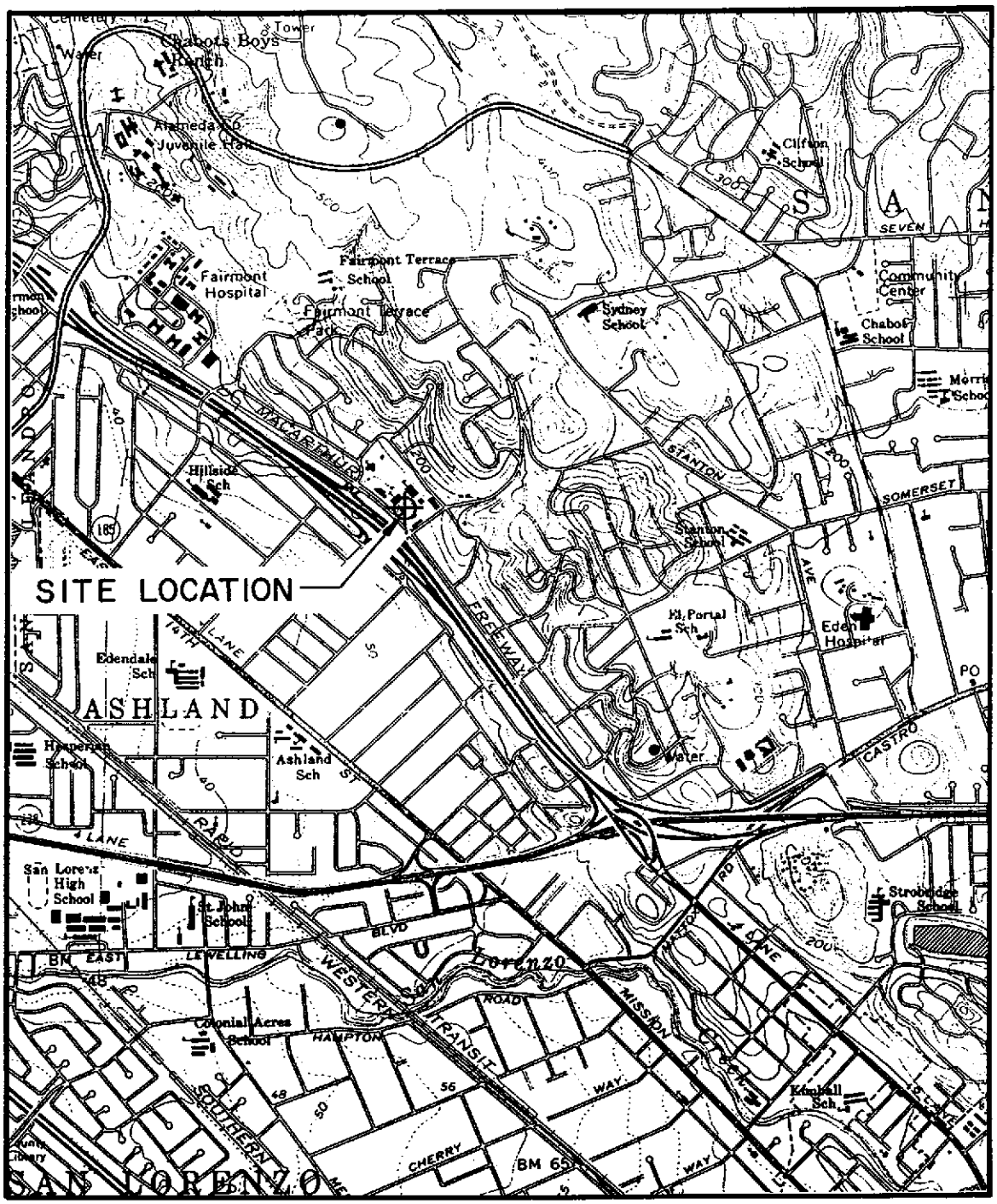
TOC: Top of casing
ft-MSL: Feet above mean sea level
ft-BTOC: Feet below top of casing
ND: Not detected
* MW-3 wellhead modified and resurveyed on 9/6/90

Table 2
GROUNDWATER ANALYSES AND ANALYTICAL TECHNIQUES
Chevron Service Station No. 9-8139
16304 Foothill Blvd, San Leandro , California

WELL DESIGNATION	SAMPLE DATE	SAMPLE NO.	TPH Gasoline	TPH Diesel	TOTAL OIL & GREASE	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	Pb	TOTAL Cr	METALS Cd	Zn	ETHYLENE DIBROMIDE
MW-1	12/5/89	WS-1SL	ND	ND	ND	ND	ND	ND	ND	ND	ND	20	20	ND
	5/24/90	WS-1SL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
	9/6/90	1WSSL	ND	NA	NA	ND	0.8	ND	0.5	NA	NA	NA	NA	ND
MW-2	12/5/89	WS-2SL	ND	ND	ND	ND	ND	ND	0.9	ND	ND	ND	10	ND
	5/24/90	WS-2SL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
	9/6/90	2WSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
MW-3	12/5/89	WS-3SL	24000	NA	NA	2400	1800	360	2600	NA	NA	NA	NA	ND
	12/5/89	WS-5SL	24000	NA	ND	2500	1900	390	2600	ND	ND	ND	40	ND
	5/24/90	WS-3SL	9000	NA	NA	2600	1700	250	1500	NA	NA	NA	NA	NA
	5/24/90	WS-4SL	10000	NA	NA	2600	1800	260	1600	NA	NA	NA	NA	NA
	9/6/90	3WSSL	3500	NA	NA	900	550	110	460	NA	NA	NA	NA	ND
MW-4	12/5/89	WS-4SL	19000	NA	NA	390	1300	460	1800	NA	NA	NA	NA	ND
	5/24/90	WS-5SL	4500	NA	NA	210	440	140	480	NA	NA	NA	NA	NA
	9/6/90	4WSSL	6000	NA	NA	680	520	170	580	NA	NA	NA	NA	ND
MW-5	5/25/90	WS-6SL	28000	NA	NA	920	1100	460	1300	NA	NA	NA	NA	2.40
	9/7/90	NA	<- - - - - - - - - - - - - PSH (approx. .5"), NOT SAMPLED- - - - - - - - - - - - - - - >											
MW-6	5/25/90	WS-7SL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
	9/7/90	6WSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
MW-7	5/25/90	WS-8SL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
	9/7/90	7WSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
	9/7/90	8WSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
MW-8	9/7/90	9WSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
EW-1***	5/25/90	WS-9SL	3900	NA	NA	260	430	64	340	NA	NA	NA	NA	0.03
RINSATE	12/5/89	RS-4SL	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	5/24/90	RS-1SL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	NA
	9/7/90	1RSSL	ND	NA	NA	ND	ND	ND	ND	NA	NA	NA	NA	ND
12/89	Detection Method		8015	8015	413.2	602	602	602	602	7420	7190	7130	7950	504
	Detection Limit (ppb		500	1000	5000	0.5	0.5	0.5	0.5	500	100	10	10	0.05
5/90	Detection Method		8015	NA	NA	602/624*	602/624*	602/624*	602/624*	NA	NA	NA	NA	504
	Detection Limit (ppb		50			0.5/2**	0.5/3**	0.5/3**	0.5/3**					0.02
9/90	Detection Method		8015	NA	NA	602	602	602	602	NA	NA	NA	NA	504
	Detection Limit (ppb		50			0.5	0.5	0.5	0.5					0.05

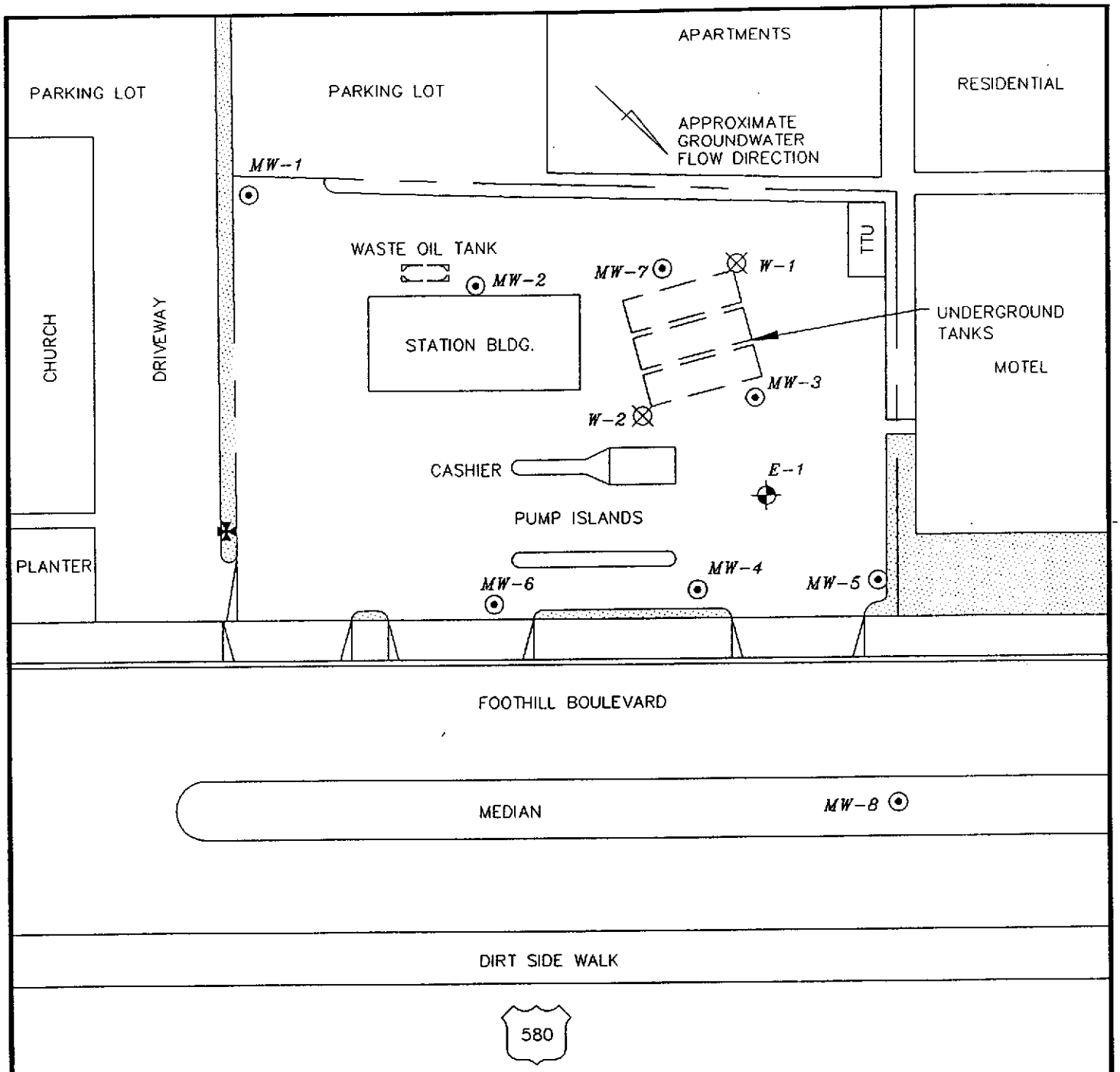
Groundwater chemistry values presented in parts per billion (ppb)
ND = Less than method detection limit
NA = No Analysis

* MW-5, MW-6, MW-7 & EW-1 were analyzed for Volatile Organics using EPA Method 8240 (624); other samples were anslyzed using EPA Method 8020 (602).
** Method Detection Limits: (602)MDL = 0.5 ppb, (624)MDL = 2, 3, 3, 3 ppb for benzene, toluene, ethylbenzene, & xylenes, respectively.
*** EW-1 will not be monitored in future quarterly monitoring activities.



NOTE: (MAP ADAPTED FROM USGS HAYWARD 7.5' QUADRANGLE)

CHEMPRO **CHEMICAL PROCESSORS, INC.** **950-B GILMAN STREET** **BERKELEY, CALIFORNIA**	Regional Location Map Chevron Service Station #9-8139 16304 Foothill Boulevard San Leandro, California	FIGURE 1 1158



EXPLANATION

- EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- OBSERVATION WELL
- BENCHMARK: RAILROAD SPIKE IN POWER POLE EL 123.23 [ALA. Co. DATUM]

N

0 20 40

SCALE IN FEET

THIRD QUARTER REPORT

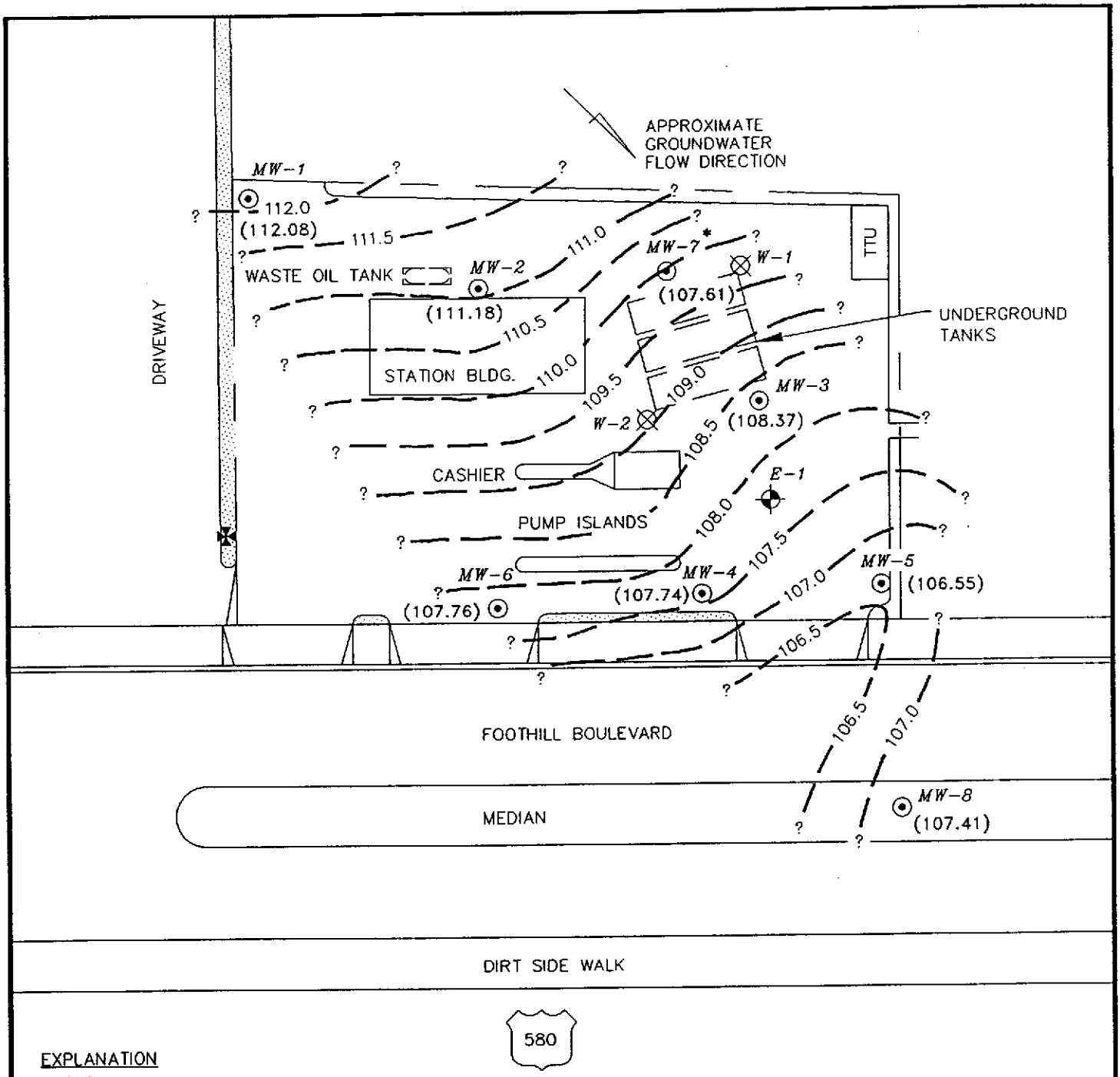
CHEMICAL PROCESSORS INC.
950 "B" Gilman Street
Berkeley, CA 94710

SITE VICINITY MAP
Chevron Service Station 9-8139
16304 Foothill Boulevard
San Leandro, California

FIGURE 2

PROJECT No. 1158

JAU 9/24/90



EXPLANATION

- EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- OBSERVATION WELL
- BENCHMARK: RAILROAD SPIKE IN POWER POLE EL 123.23 [ALA. Co. DATUM]
- (112.08) GROUNDWATER ELEVATION (FT-MSL) MEASURED ON: 9/25/90
- 109.5 GROUNDWATER CONTOUR (FT-MSL) GROUNDWATER GRADIENT 0.03 ft/ft
- * *MW-7* DATA NOT USED IN CONTOURING

N

0 20 40

SCALE IN FEET

THIRD QUARTER REPORT

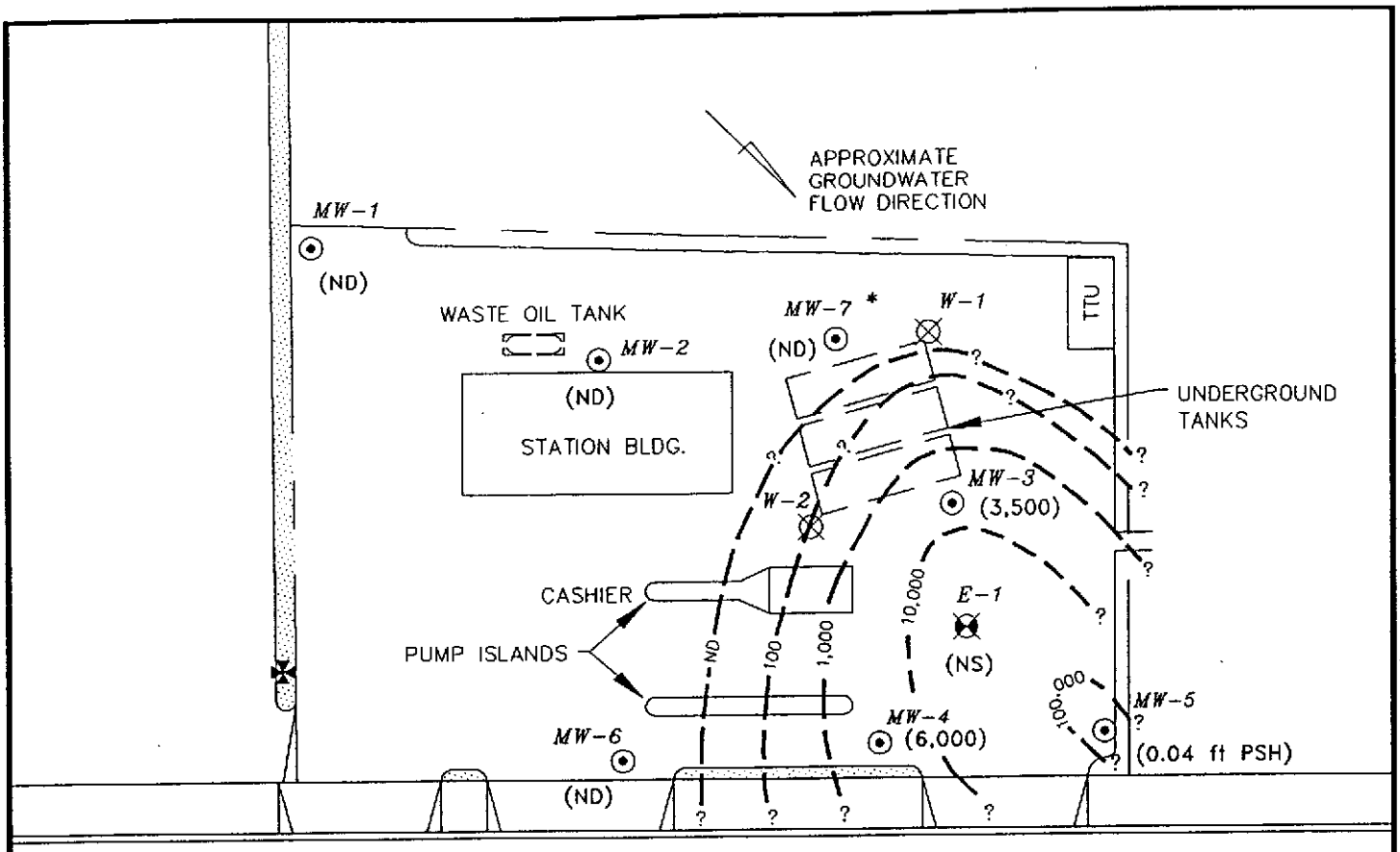
CHEMICAL PROCESSORS INC.
950 "B" Gilman Street
Berkeley, CA 94710

GROUNDWATER ELEVATION CONTOURS
Chevron Service Station 9-8139
16304 Foothill Boulevard
San Leandro, California

FIGURE 3

PROJECT No. 1158

JAU 9/24/90



EXPLANATION

- EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- OBSERVATION WELL
- BENCHMARK: RAILROAD SPIKE IN POWER POLE EL 123.23 [ALA. Co. DATUM]
- 100 — TPH (TOTAL PETROLEUM HYDROCARBONS) IN GROUNDWATER CONTOUR SAMPLES COLLECTED ON: 9/6 & 9/7/90
- ND — NOT DETECTED
- NS — NOT SAMPLED
- PSH — PHASE SEPARATED HYDROCARBONS (BENZENE CONCENTRATION IN PARTS PER BILLION)
- * — *MW-7* DATA NOT USED IN CONTOURING

580

N

0 20 40

SCALE IN FEET

THIRD QUARTER REPORT

CHEMPRO

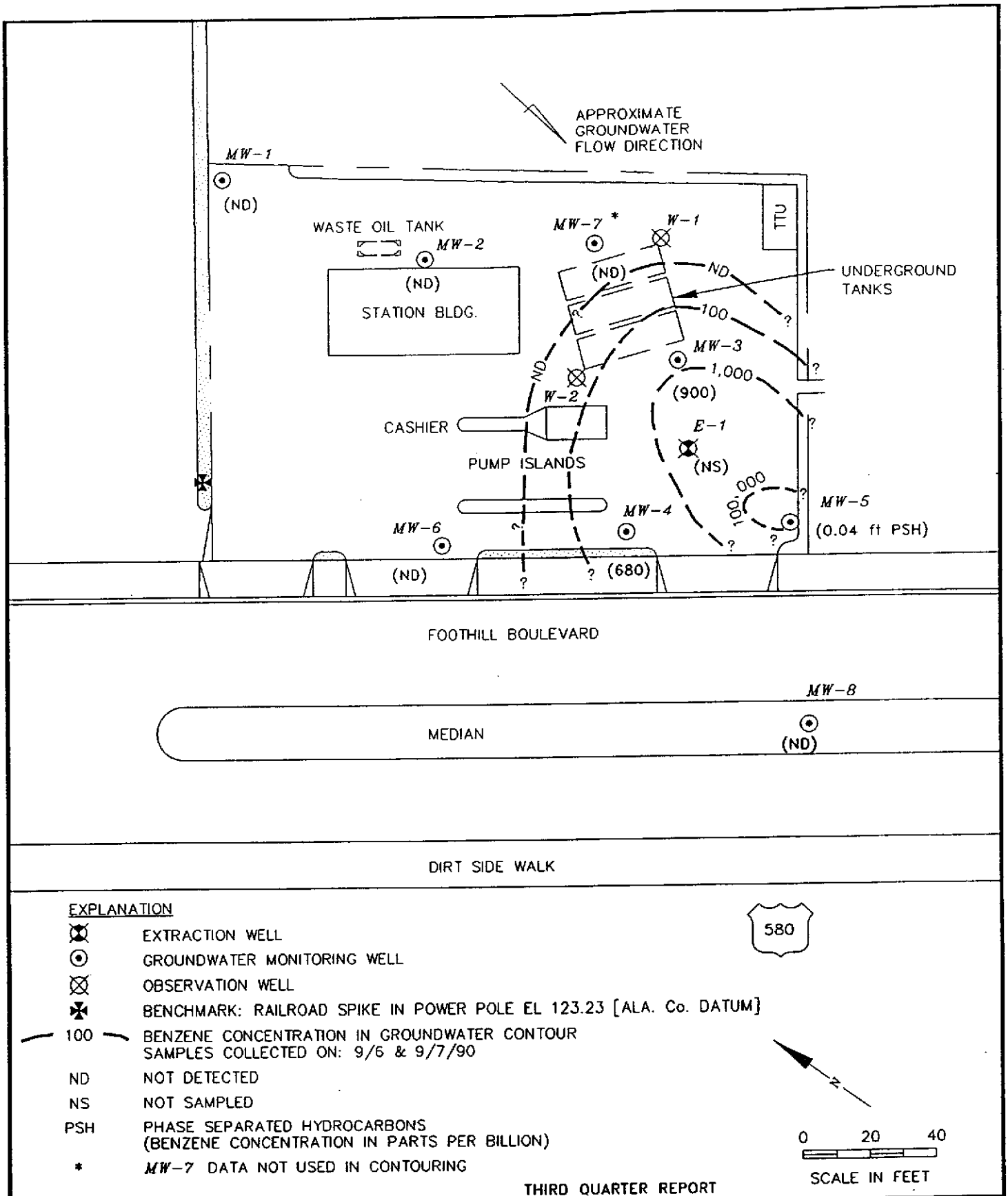
CHEMICAL PROCESSORS INC.
950 "B" Gilman Street
Berkeley, CA 94710

TPH ISOCONCENTRATION CONTOURS
Chevron Service Station 9-8139
16304 Foothill Boulevard
San Leandro, California

FIGURE 4

PROJECT No. 1158

JAU 9/21/90



EXPLANATION

- EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- OBSERVATION WELL
- BENCHMARK: RAILROAD SPIKE IN POWER POLE EL 123.23 [ALA. Co. DATUM]
- 100 — BENZENE CONCENTRATION IN GROUNDWATER CONTOUR SAMPLES COLLECTED ON: 9/6 & 9/7/90
- ND — NOT DETECTED
- NS — NOT SAMPLED
- PSH — PHASE SEPARATED HYDROCARBONS (BENZENE CONCENTRATION IN PARTS PER BILLION)
- * — MW-7 DATA NOT USED IN CONTOURING

580

N

0 20 40

SCALE IN FEET

THIRD QUARTER REPORT

CHEMICAL PROCESSORS INC.
950 "B" Gilman Street
Berkeley, CA 94710

BENZENE ISOCONCENTRATION CONTOURS
Chevron Service Station 9-8139
16304 Foothill Boulevard
San Leandro, California

FIGURE 5

PROJECT No. 1158

JAU 9/24/90

Appendix A

GROUNDWATER SAMPLING and ANALYSIS PROCEDURES

Appendix A

GROUNDWATER SAMPLING AND ANALYSIS PROCEDURES

INTRODUCTION

The sampling and analysis procedures for water-quality monitoring programs are contained in this Appendix. These procedures ensure that consistent and reproducible sampling methods are used, proper analytical methods are applied, analytical results are accurate, precise, and complete, and the overall objectives of the monitoring program are achieved.

SAMPLE COLLECTION

Sample collection procedures include equipment cleaning, water-level and total well-depth measurements, and well purging and sampling.

Equipment Cleaning

Sample bottles, caps, and septa were precleaned and provided by a Chevron-approved laboratory. All sampling containers were used only once and discarded after analysis is complete.

Before starting the sampling event, all equipment to be placed in the well or come in contact with groundwater was disassembled and cleaned thoroughly with detergent water, then steam cleaned with service station tap water, and rinsed with distilled water. Any parts that may absorb contaminants, such as plastic pump valves or bladders, were cleaned as described above or replaced.

During the sampling event the equipment used in the well was washed with detergent, steam-cleaned, and rinsed with distilled water before purging or sampling the next well. The water level sounder was washed with detergent and rinsed with distilled water before use in the each well. The rinse water is stored in 55-gallon drums onsite and will be disposed of by Chevron.

Quality Assurance Samples

To determine if the Teflon bailer used for sampling had been sufficiently decontaminated, rinsate samples were taken. One rinsate sample was collected after sampling monitor well 8 by filling the Teflon sampling bailer with distilled water and then decanting that water into the sample vials. The rinsate samples were analyzed for the same parameters that the well was sampled for (see Table 2). The samples were sent to Superior Precision Analytical (Superior Laboratory) of San Francisco, California for analysis.

Water-Level, Floating-Hydrocarbon, and Total Well-Depth Measurements

Before purging and sampling, the depth to water, floating hydrocarbon thickness, and the well total depth were measured using an oil water interface probe and an electric sounder. The electric sounder, manufactured by Slope-Indicator, Inc., is a transistorized instrument that uses a reel-mounted, two conductor, coaxial cable that connects the control panel to the sensor. Cable markings are stamped at 1-foot intervals. An engineers rule was used to measure the depths to the closest 0.01 foot. The water level was measured by lowering the sensor into the monitor well. A low current circuit is completed when the sensor contacts the water, which serves as an electrolyte. The current is amplified and fed across an indicator light and audible buzzer, signaling when water has been contacted. A sensitivity control compensates for very saline or conductive water. The oil water interface probe signals with a solid sound when it contacts phase-separated hydrocarbons. When the probe detects water, the sound changes to a beeping sound.

Floating hydrocarbon was encountered in one of the monitoring wells and therefore the groundwater in that well was not sampled. When floating product is detected at greater than 1/32-inch in thickness, a sample is not collected.

All liquid measurements were recorded to the nearest 0.01 foot in the field logbook. The groundwater elevation at each monitor well was calculated by subtracting the measured depth to water from the surveyed well-casing elevation. Well total depth was then measured by lowering the sensor to the bottom of the well. Well total depth, used to calculate purge volumes and to determine whether the well screen is partially obstructed by silt, was recorded to the nearest 0.5 foot in the field logbook.

Well Purging

Before sampling, standing water in the casing was purged from the monitor wells using a PVC hand bailer. Samples were collected from the monitor wells after a minimum of four casing volumes had been evacuated and the pH, electrical conductivity, and temperature had stabilized. In the case that the monitor well was purged until dry, the well was allowed to recover to within 80% of its static water level and sampled.

The pH, electrical conductivity, and temperature meter were calibrated each day before beginning field activities. After every well volume of groundwater removed from the monitoring well, field measurements were taken. The data is presented on the water sample field data sheets. The calibration was checked once each day to verify meter performance. All field meter calibrations were recorded in the field log book.

Groundwater generated from well-purging operations were contained for temporary storage in 55-gallon drums. All drums were labeled and stored onsite in a location designated by the station manager. The sampler recorded the following information on the drum label for each drum generated:

* Drum content (i.e., groundwater)
* Source (i.e., well identification code)
* Date generated
* Client contact
* Project number
* Name of sampler

Well Sampling

A Teflon bailer was used for well sampling. Glass bottles of at least 40 milliliters volume and fitted with Teflon-lined septa were used in sampling for volatile organics. These bottles were filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum is placed over the meniscus to eliminate air. After capping, the bottle was inverted and tapped to verify that it did not contain air bubbles. The sample containers for other parameters were filled, and capped. Duplicate sample analysis was performed on groundwater samples taken from monitor well 6 and were analyzed for the same chemical analyses.

SAMPLE HANDLING AND DOCUMENTATION

The following section specifies the procedures and documentation used during sample handling.

Sample Handling

All sample containers were labeled immediately following sample collection. Samples were kept cool with ice cubes until received by the laboratory. Ice cubes were replaced each day to maintain refrigeration. At the time of sampling, each sample was logged on a chain-of-custody record which accompanied the sample to the Superior Laboratory.

Sample Documentation

The following procedures were used during sampling and analysis to provide chain-of-custody control during sample handling from collection through storage. Sample documentation included the use of the following:

* Field logbooks to document sampling activities in the field
* Labels to identify individual samples
* Chain-of-custody record sheets for documenting possession and transfer of samples

Field Logbook

In the field, the sampler recorded the following information on the Water Sample Field Data Sheet for each sample collected:

* Project number
* Client name
* Location
* Name of sampler
* Date and time
* Pertinent well data (e.g., casing diameter, depth to water, well depth)
* Calculated and actual purge volumes
* Purging equipment used
* Sampling equipment used
* Appearance of each sample (e.g., color, turbidity, sediment)
* Results of field analyses (i.e., temperature, pH, electrical conductivity)
* General comments

The field logbooks were signed by the sampler.

Labels

Sample labels contained the following information:

* Project number
* Sample number (i.e., well designation)
* Sampler's initials
* Date and time of collection
* Type of preservative used (if any)

Sampling and Analysis Chain-of-Custody Record

The Sampling and Analysis Chain-of-Custody record, initiated at the time of sampling, contains, but is not limited to, the well number, sample type, analytical request, date of sampling, and the name of the sampler. The record sheet was signed, timed, and dated by the sampler when transferring the samples. The number of custodians in the chain of possessions were kept to a minimum. A copy of the Sampling and Analysis Chain-of-Custody record is included in Appendix C.

Appendix B

WATER SAMPLE FIELD DATA SHEETS

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 1WS SC

CLIENT: Chevron 9-8139 DATE: 9/6/90

LOCATION: San Leandro SAMPLE POINT DESIGNATION: MW-1

SAMPLER: D.A. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 2.15 / 4 vol

DEPTH OF WELL (feet): 27.35' ACTUAL PURGE VOL. (gal.): 2.15 / 4 vol

DEPTH TO WATER (feet): 14.68'

length of H_2O column: 12.67

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
1200	2.15	N/A	N/A	N/A	Fairly CLEAR	
	4.30	* →	Purged dry	After 4 gl.		
	6.45					CLOUDY
	8.60					SEDIMENTS

ODOR: NONE

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: * ph meter probe too dirty to calibrate. Tried cleaning w/ HCl and TSP; still not able to calibrate. New probe needed. Purged vol dry after 4 vol (26.0'); let MW-1 recover

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 2 WS SL

CLIENT: CHEVRON 9-8139 DATE: 9/6/90

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: MW-2

SAMPLER: D.A. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION Factor: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 2.6 @ 4 vol

DEPTH OF WELL (feet): 30.10' ACTUAL PURGE VOL. (gal.): 2.6/4 vol.

DEPTH TO WATER (feet): 14.85'

length of H_2O column: 15.25'

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
1115	2.6	N/A	→		H.brn/CLEAR	
	5.2					
	7.8					
	10.4					

ODOR: NONE

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER

__ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: * NEED NEW pH METER PROBE

let WELL RECOVER till Depth to H_2O WAS 17.7'

THEN SAMPLED

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 3 WS SL

CLIENT: Chevron 9-8139 DATE: 9/6/90

LOCATION: San Leandro SAMPLE POINT DESIGNATION: MW-3

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 1.14 @ 4 vol

DEPTH OF WELL (feet): 25.45 ACTUAL PURGE VOL. (gal.): 1.5 / 4 vol

DEPTH TO WATER (feet): 18.72

Length of H_2O column: 6.73

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
2:15	1.5	N/A	N/A	N/A	Hydrocarbon	
	3.0					
	4.5					
	6.0					

ODOR: Medium odor

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: * Well purged dry at 5 gl. (18.85')
1st well recovery 80% Samples at 4:20

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 4 WS SC

CLIENT: CHEVRON 9-8139 DATE: 9/6/90

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: MW-4

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 3.79 @ 4 vol.

DEPTH OF WELL (feet): 22.00' ACTUAL PURGE VOL. (gal.): 1

DEPTH TO WATER (feet): 17.35'

length of H_2O column: 4.65'

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
300	1	N/A	N/A	N/A	Fairly Clear	
	2					
	3	(X)				
	4					

ODOR: Slight ODOR

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: * NOTE: Well purged dry after @ 3.5 gl Sample when recovery reaches 1878 (500ml)

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: DLM MW-5 WS SL

CLIENT: CHEVRON 9-8139 DATE: 9-7-1990

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: MW5

SAMPLER: D.S. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): .8738 gal

DEPTH OF WELL (feet): 23.60' ACTUAL PURGE VOL. (gal.): 1.0 gal

DEPTH TO WATER (feet): 18.46'

Length of H_2O column: 5.14

5.14
.17
.8738

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
1240	1	——→		Free Product	V. lt. tan	
	2					
	3					
1302	4					

ODOR: Heavy odor

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: Note: ~1/2" free floating product in well; bailed 4 well volumes to remove free product; did not sample.

10.11

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 6 WS 52

CLIENT: Chevron 9-8139 DATE: 9/7/1990

LOCATION: San Leandro SAMPLE POINT DESIGNATION: MW6

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 2.14'

DEPTH OF WELL (feet): 28.82 ACTUAL PURGE VOL. (gal.): 2.25'

DEPTH TO WATER (feet): 16.18'

length of H_2O column: 12.64'

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
1130	2.25'	N/A			lt. tan	
1135	4.50					
1140	6.75					
1145	9.00					

(8)

ODOR: NONE

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER

__ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: ~~pH~~ ph meter not functioning properly. Let well recover until depth to H_2O is 18.71 before sampling. Bailed 4 volumes for a total of (9) gallons

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 7 WS SL

CLIENT: Chevron 9-8139 DATE: 9/7/1990

LOCATION: San Leandro SAMPLE POINT DESIGNATION: MW-6 (Duplicate)

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch ___ 4 inch ___ 6 inch ___ OTHER Conversion Factor: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): _____

DEPTH OF WELL (feet): _____ ACTUAL PURGE VOL. (gal.): _____

DEPTH TO WATER (feet): _____

Length of H_2O column:

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
____	____	N/A	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____
____	____	____	____	____	____	____

ODOR: _____

PURGE METHOD

___2" BLADDER PUMP ___BAILER (Teflon) ___WELL WIZARD ___DEDICATED

___SUBMERSIBLE PUMP X BAILER (PVC) ___CENTRIFUGAL PUMP ___OTHER _____

___PERISTALTIC PUMP ___DIPPER ___PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

___2" BLADDER PUMP X BAILER (Teflon) ___WELL WIZARD ___DEDICATED

___SURFACE SAMPLER ___BAILER (PVC) ___DIPPER ___OTHER _____

___PERISTALTIC PUMP ___SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: _____

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 8 WS SC

CLIENT: CHEVRON 9-8139 DATE: 9/7/1990

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: MW-7

SAMPLER: D.A. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 1.28

DEPTH OF WELL (feet): 25.90 ACTUAL PURGE VOL. (gal.): 1.3

DEPTH TO WATER (feet): 18.38

length of H_2O column: 7.52

7.52 x .17 = 1.2784

1.02 (80% of above)

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
2pm	1.3		N/A		H bkm	
2:05	2.6					
2:10	3.9					
2:15	4.2 gal					

ODOR: NONE

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: purged 4 volumes for total of 4.2 gal

* (ph meter screwed; well just purged)

- well recovering slow between purges

- well should recover to @ least 19.88' before sampling

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: DH MW-9 WS SL

CLIENT: CHEVRON 9-8139 DATE: 9/7/1990

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: MW-8

SAMPLER: O.A. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): 2.5

DEPTH OF WELL (feet): 30.65' ACTUAL PURGE VOL. (gal.): 5.0 gal/VOL

DEPTH TO WATER (feet): 16.07'

length of H_2O column: 15.58'

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
11:00	2.5 ~~5.0~~	~~7~~ 7.5	.90	78.3		
11:20	5.0 ~~10.0~~	7.3	.79	72.3		
11:25	7.5 ~~15.0~~	~~7.55~~	.79	72.5		
11:30	10.0 ~~20.0~~	8.3	.80	71.8		
11:35	12.5 ~~25.0~~	10.53	~~2.21~~ 2.11	72.3		
11:40	15.0	11.3	2.21 2.21	72.5		
11:45	17.5	11.8	4.05	73.5		
ODOR: 11:50	20.0	10.72	4.21	73.0		
	22.5	—	4.80	71.1		
11:55	25.0	—	PURGE METHOD 6.41	73.1		

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER

__ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: PH NOT WORKING

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 1 RS SL

CLIENT: Chevron 9-8139 DATE: 9/7/1990

LOCATION: San Leandro SAMPLE POINT DESIGNATION: N/A

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION Factor: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): _____

DEPTH OF WELL (feet): _____ ACTUAL PURGE VOL. (gal.): _____

DEPTH TO WATER (feet): _____

length of H_2O column:

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
		N/A				

ODOR: _____

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: _____

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: 1 TB SL

CLIENT: CHEVRON 9-8139 DATE: 9-6-1990

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: N/A

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): _____

DEPTH OF WELL (feet): _____ ACTUAL PURGE VOL. (gal.): _____

DEPTH TO WATER (feet): _____

length of H_2O column:

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
	N/A					

ODOR: _____

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: _____

WATER SAMPLE FIELD DATA SHEET

PROJECT NO.: 1158 SAMPLE ID.: Z TB SL

CLIENT: CHEVRON 9-8139 DATE: 9-7-1990

LOCATION: SAN LEANDRO SAMPLE POINT DESIGNATION: N/A

SAMPLER: O.D. LAMB

GROUND-WATER X OTHER (NR) _____

CASING DIAMETER: 2 inch X 3 inch __ 4 inch __ 6 inch __ OTHER CONVERSION FACTOR: .17

CASING ELEVATION (feet/MSL): _____ CALCULATED PURGE VOL. (gal.): _____

DEPTH OF WELL (feet): _____ ACTUAL PURGE VOL. (gal.): _____

DEPTH TO WATER (feet): _____

length of H_2O column:

FIELD MEASUREMENTS

TIME	VOLUME (gal.)	PH (units)	E.C. (umhos/cm @ 25°C)	TEMPERATURE (°F)	COLOR (visual)	OTHER
		N/A				

ODOR: _____

PURGE METHOD

__ 2" BLADDER PUMP __ BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SUBMERSIBLE PUMP X BAILER (PVC) __ CENTRIFUGAL PUMP __ OTHER _____

__ PERISTALTIC PUMP __ DIPPER __ PNEUMATIC DISPLACEMENT PUMP

SAMPLE METHOD

__ 2" BLADDER PUMP X BAILER (Teflon) __ WELL WIZARD __ DEDICATED

__ SURFACE SAMPLER __ BAILER (PVC) __ DIPPER __ OTHER _____

__ PERISTALTIC PUMP __ SUBMERSIBLE PUMP

WELL INTEGRITY: _____

REMARKS: _____

Appendix C

CHAIN-OF-CUSTODY RECORDS

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

Chevron Facility Number: 9-8139
Consultant Release Number: 2492270
Consultant Project Number: 1158
Consultant Name: CHEMPRO
Address: 950 'B' Gilman St., Berkeley, CA.
Fax Number: (415) 524-7439
Project Contact (Name): Felicia Rein
(Phone): (415) 524-9372

Chevron Contact (Name): Walt Posluzny
(Phone): (415) 842-9040
Laboratory Name: SUPERIOR
Contract Number:
Samples Collected by (Name): D.A.L.
Collection Date: 9/6/90 & 9/7/90
Signature:

Sample Number	Lab Number	Number of Containers	Matrix S=Soil W=Water A=Air C=Charcoal	Type G=Grab C=Composite	Time	Sample Preservation	Iced	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline	Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel	503 Oil and Grease	Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602	Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624	Total Lead DHS-Luft	EDB DHS-AB 1803				Remarks
								Analyses To Be Performed										
BSL		3 (DAL)	W	G	8:30	HCL	Y	X			X							
SSL		6	W	G	3:45	HCL/NONE	Y	X			X			X				
WSSL		6	W	G	4:10	HCL/NONE	Y	X			X			X				
WSSL		6	W	G	4:20	HCL/NONE	Y	X			X			X				
WSSL		6	W	G	5:00	HCL/NONE	Y	X			X			X				
	SAMPLES FOR				9/7/1990													
TBSL		1	W	G	10:30	HCL	Y	X			X							
~~WSSL~~	(DAL)	~~6~~	~~W~~	~~G~~	N/A	~~HCL/NONE~~	~~Y~~	~~X~~	(DIL)		~~X~~	(AIR)		~~X~~			(NO Sample)	FREE Product
WSSL		6	W	G	2:45	HCL/NONE	Y	X			X			X				
SSL		4	W	G	1:48	HCL	Y	X			X							
WSSL		6	W	G	3:00	HCL/NONE	Y	X			X			X				
WSSL		6	W	G	3:30	HCL/NONE	Y	X			X			X				
WSSL		6	W	G	2:00	HCL/NONE	Y	X			X			X				

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	CHEMPRO	9/6/90 5:40		CHEMPRO	9-6-90 5:40
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	CHEMPRO	9-7-90, 8am		CHEMPRO	9-7-1990
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
	CHEMPR			678 (COURIER)	9-10-90 1247

Turn Around Time (Circle Choice): 24 Hrs, 48 Hrs, 5 Days, 10 Days

Cecilia G. Joaquin 9-10-90 5:00pm

RAS-5136 (6-89)
Printed in U.S.A.

Appendix D

CERTIFIED ANALYTICAL RESULTS

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 10993
CLIENT: Chempro
CLIENT JOB NO.: 1158

DATE RECEIVED: 09/10/90
DATE REPORTED: 09/18/90

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
10993- 1	ITBSL	09/06/90	09/14/90
10993- 2	IWSSL	09/06/90	09/14/90
10993- 3	2WSSL	09/06/90	09/14/90
10993- 4	3WSSL	09/06/90	09/14/90
10993- 5	4WSSL	09/06/90	09/14/90
10993- 6	2TBSL	09/07/90	09/14/90
10993- 8	6WSSL	09/07/90	09/14/90
10993- 9	IRSSL	09/07/90	09/14/90
10993-10	7WSSL	09/07/90	09/14/90
10993-11	8WSSL	09/07/90	09/14/90

Laboratory Number:	10993 1	10993 2	10993 3	10993 4	10993 5
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	3500	6000
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	900	680
TOLUENE:	ND<0.5	0.8	ND<0.5	550	520
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	110	170
XYLENES:	ND<0.5	0.5	ND<0.5	460	580

Laboratory Number:	10993 6	10993 8	10993 9	10993 10	10993 11
ANALYTE LIST	Amounts/Quantitation Limits (ug/L)				
OIL AND GREASE:	NA	NA	NA	NA	NA
TPH/GASOLINE RANGE:	ND<50	ND<50	ND<50	ND<50	ND<50
TPH/DIESEL RANGE:	NA	NA	NA	NA	NA
BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
TOLUENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
ETHYL BENZENE:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
XYLENES:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 10993
CLIENT: Chempro
CLIENT JOB NO.: 1158

DATE RECEIVED: 09/10/90
DATE REPORTED: 09/18/90

Lab Number	Customer Sample Identification	Date Sampled	Date Analyzed
10993-12	9WSSL	09/07/90	09/14/90

Laboratory Number: 10993
12

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

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I · SAN FRANCISCO, CA 94124 · PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

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

QA/QC INFORMATION
SET: 10993

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 = <15%
MS/MSD Average Recovery = 90%: Duplicate RPD = 1

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; %Diff 8020 = <15%
MS/MSD Average Recovery = 93%: Duplicate RPD = 7

Richard Srna, Ph.D.
Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

CERTIFICATE OF ANALYSIS

LABORATORY NO.: 10993
CLIENT: Chempro
CLIENT JOB NO.: 1158

DATE RECEIVED: 09/10/90
DATE REPORTED: 09/18/90

ANALYSIS FOR ETHYLENE DIBROMIDE
by EPA Method 504

LAB #	Sample Identification	Concentration (ug/L)
2	IWSSL	ND<0.05
3	2WSSL	ND<0.05
4	3WSSL	ND<0.05
5	4WSSL	ND<0.05
8	6WSSL	ND<0.05
10	7WSSL	ND<0.05
11	8WSSL	ND<0.05
12	9WSSL	ND<0.05

ug/L - parts per billion (ppb)

Minimum Detection Limit for EDB in water = 0.05 ug/l

QAQC Summary: MS/MSD average recovery = 90 %
RPD = 2 %

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Laboratory Director