PACIFIC
ENVIRONMENTAL
GROUP, INC.

June 27, 1997
Project 325-004.1E

Mr. Phil Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, California 94583-0804

FIRST UPDATE

Re: Risk-Based Corrective Action - Tier 2
Former Chevron Service Station 9-7127
Grant Line Road at Interstate 580
Tracy, California

Dear Mr. Briggs:

On behalf of Chevron Products Company, Pacific Environmental Group, Inc. (PACIFIC) has completed a Tier 2 Risk-Based Corrective Action (RBCA) evaluation for the site referenced above. The RBCA is based upon the framework presented in the American Society for Testing and Materials (ASTM), *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites, Designation: E 1739-95*. Since the site background was presented in the previous RBCA Tier 1 report (PACIFIC, June 28, 1996), for brevity, it will not be presented again.

In PACIFIC's Tier 1 RBCA evaluation, the impacted groundwater and subsurface soil representative concentrations were compared to Permissible Exposure Limits (PELs) for inhalation of benzene, ethylbenzene, toluene, and xylenes (BTEX compounds). The resulting comparison of the PELs to the representative concentrations was favorable. However in order to be as conservative as possible, a Tier 2 evaluation of the site was conducted. This letter presents those results.

METHODOLOGY

Sampling

In order to conduct the Tier 2 evaluation, site-specific data was collected in order to replace the overly conservative default values inherent in a Tier 1 evaluation. This data was collected by obtaining an outcrop sample of the Neroly Formation Sandstone from the roadcut exposure adjacent to the southwest boundary of the site. Groundwater occurs at approximately 28 feet below ground surface (bgs) in Well MW-1, and the outcrop sample is similar in lithologic character to the sandstone logged in Well MW-1

and to sandstone evident in many of the soil borings drilled on site. Therefore, the physical characteristics of the outcrop sample are reasonably representative of site conditions.

The outcrop sample was collected on November 28, 1996, and was submitted to Cooper Testing Lab, Inc., for falling head permeability, fraction of organic carbon, pH, and specific gravity testing (Attachment A). Table 1 presents the site-specific data used to calculate the Site-Specific Target Levels (SSTLs). The data obtained from the falling head permeability test (ASTM D5085) included permeability, volume of solids, volume of voids, percent porosity, and percent saturation. The initial values obtained during the test were used to calculate the Tier 2 SSTLs. The "initial" values more accurately represent actual site conditions; this is due to the fact that the initial data is collected at the start of the test when moisture content more closely resembles actual field conditions. After the initial data is obtained, the sample is saturated with water in order to determine its permeability and then the parameters are recorded again producing the "final" column.

The volumetric water and air contents of the sample were determined in cubic centimeters (cc) in the following manner for the vadose zone:

Volume of Voids x % Saturation = cc Water

42.64 cc x 0.5488 = 23.4 cc water therefore, 42.64 cc - 23.4 cc = 19.24 cc air

23.4 cc water / 92.92 total cc = 25% water content

and 19.24 cc air / 92.92 total cc = 20% air content

For the capillary fringe zone, the water and air contents were estimated to be 29% and 17%, respectively. When compared with ASTM's Tier 1 porosity value of 38%, the capillary fringe water and air contents comprise 90% and 10%, respectively. In order to be more conservative, the Tier 2 water content of the capillary zone was estimated to be 29% (approximately 63% of the porosity) while the air content of the capillary zone was estimated to be 17% (approximately 37% of the porosity). These are conservative estimates when compared with American Society for Testing and Material's (ASTM) default Tier 1 values of 0.342 water content and 0.038 air content.

The volumetric water and air contents of the possible future foundation crack were estimated to be 16% and 30%. These values, which must add up to meet the porosity, were obtained by subtracting the difference between the Tier 2 porosity value of 0.46 and the Tier 1 default of 0.38. This difference, equal to 0.08, was divided by two resulting in 0.04. The result (0.04) was then added to each of the Tier 1 default values for foundation crack water and air content values. Therefore, the Tier 1 foundation crack water content of 0.12 + 0.04 = 0.16 and the Tier 1 foundation crack air content of 0.26 + 0.04 = 0.30.

These data replace the default values generally used to calculate the Risk-Based Screening Levels for Tier 1 RBCA evaluations. The site-specific data were derived from the analytical results of the physical testing. However, some of the site-specific data, such as vadose zone depth, depth to uppermost affected soil, and gradient were obtained from soil boring logs and quarterly groundwater monitoring reports. The laboratory soil test data for the physical tests are presented as Attachment A.

Calculation of Representative Concentrations

The representative concentrations of the site were recalculated for the Tier 2 evaluation in order to include more recent data and to present a more realistic interpretation of the site. The following summaries describe the methods used to calculate the Tier 2 representative concentrations of BTEX compounds.

- **Groundwater:** The means of the BTEX compounds for the last four quarters of data (November 1995, February, May, and August 1996) were calculated. However, non-detectable concentrations were not included in the calculation in order to provide a conservative risk assessment. Table 2 presents the groundwater data used to calculate the representative concentrations for the BTEX compounds. Since the data were not normally distributed (except for ethylbenzene), they were logtransformed. The Coefficient of Variance test was performed on the data in order to determine if the data were normally distributed prior to being logtransformed. The Coefficient of Variance test is simply dividing the arithmetic standard deviation of the data set by the arithmetic average. If the resulting outcome is greater than 1, then the data are not normally distributed and must be logtransformed. However if the outcome is less than or equal to 1, then the data are normally distributed and the arithmetic mean is to be used (EPA, 1992). All of the groundwater data (except ethylbenzene concentrations) were found not to be normally distributed and, therefore, were logtransformed. The groundwater data used to calculate the representative concentrations for Tier 2 are included in Attachment B and include historical groundwater analytical concentrations.

- **Subsurface Soil:** In order to obtain a representative concentration for each BTEX compound at the site, the most recent and relevant soil data were gathered from the former area of petroleum hydrocarbon impact. The data found to be the most appropriate for use in this evaluation consisted of the soil boring data collected in December 1987 (B-2, B-3, B-4, B-5, and B-7), sidewall and interface samples collected during the removal of the underground storage tanks (USTs) in 1991 (Af, Aop, Bf, Bop, Cf, Cop), and the soil data collected during the installation of Soil Boring B-1 and Monitoring Well MW-1 in

1992. Soil data from Monitoring Wells MW-5, MW-6, MW-7, and MW-8, installed in 1993, were also considered however, since all BTEX compounds were found to be below detectable concentrations, these data were not included in the calculation of the representative concentrations. The soil samples collected during the installation of Monitoring Wells MW-2 and MW-3 were not analyzed, therefore this data was unavailable. As with the groundwater data, all concentrations below detectable concentrations were excluded from the calculation of the mean. Table 3 presents the soil data used to calculate the representative concentrations. Again, the Coefficient of Variance test was performed on the data in order to determine if the data were normally distributed. It was determined that all BTEX compound data from the subsurface soil were not normally distributed; therefore the mean representative concentrations presented here are generated through the lognormal transformation procedure. The soil data used to generate the representative concentrations are presented as Attachment C.

HUMAN HEALTH RISK EVALUATION RESULTS

Groundwater Services, Inc. (GSI) software was used to evaluate the potential risk to human health and safety from the site. Since subsurface soil and groundwater are known to be impacted with BTEX compounds, these media were evaluated as potential pathways. Therefore, inhalation of groundwater and subsurface soil vapors indoors and inhalation of groundwater and subsurface soil vapors outdoors were four of the potential pathways evaluated. The last two pathways evaluated were subsurface soil leaching to groundwater and groundwater ingestion. All pathways were evaluated for on site exposures, not off site. All Tier 2 RBCA evaluations were completed using GSI's computer modeling software.

The models used to evaluate the pathways for benzene's carcinogenic risk utilize a slope factor, also called a cancer potency factor. The slope factor is used to estimate the upper-bound probability of an individual's risk of developing cancer as a result of a lifetime exposure to a particular level of a potential carcinogen. In order to comply with the State of California's stricter cancer slope factor values, a separate SSTL was calculated for benzene using a slope factor of 0.1 $(mg/kg\text{-}day)^{-1}$ (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, April 10, 1995). The Federal slope factor is 0.029 $(mg/kg\text{-}day)^{-1}$. The California slope factor results in a more conservative calculation than does the Federal slope factor.

GROUNDWATER

Inhalation

Inhalation on site was evaluated by modeling the risk from groundwater volatilization to enclosed spaces and to ambient air. The excess lifetime risk of cancer, or target level, is the theoretical risk that one extra individual will develop cancer above the normal "background" of people who develop cancer. In general, risk assessments of residential areas use excess lifetime cancer risks of 1:1,000,000 (10^{-6}); this number correlates to one extra individual developing cancer above the normal cancer rate for 1,000,000 people. Commercial and industrial settings usually have excess lifetime cancer risks of 10^{-5} to 10^{-4}. A excess lifetime risk for cancer of 1:100,000 (10^{-5}) was used for benzene because the site is planned to become a commercial business in the near future. All other non-cancerous petroleum hydrocarbon compounds (ETX) were evaluated using a hazard quotient of 1. All exposure parameters were assumed to be commercial. The representative concentrations were then compared to the SSTLs generated by the GSI software.

Groundwater - Inhalation

Constituent of Concern	Measured Mean Concentration (mg/L)	Modeled Volatilization to Ambient Air (mg/L)	Modeled Volatilization to Indoor Air (mg/L)	Minimum SSTL Exceeded (Yes/No)
Benzene	0.32	290	0.96	No
Benzene - CA	0.32	84	0.28	Yes
Ethylbenzene	0.58	>Sol	>Sol	No
Toluene	0.59	>Sol	110	No
Xylenes	0.15	>Sol	>Sol	No

mg/L = Milligrams per liter
>Sol = Selected risk level is not exceeded for all possible dissolved levels (≤ pure component solubility).

All representative concentrations were below the applicable SSTLs at the specified risk levels except for benzene-CA for the modeled volatilization of groundwater to indoor air.

Ingestion

Ingestion was evaluated by modeling the risk for human ingestion of groundwater on site. An excess lifetime cancer risk of 1:100,000 (10^{-5}) was used for benzene because the site is to become a commercial business in the near future. All other non-cancerous petroleum hydrocarbon compounds (ETX) were evaluated using a hazard quotient of 1. All exposure parameters were assumed to be commercial. The representative concentrations were then compared to the SSTLs generated by the GSI software.

Groundwater - Ingestion

Constituent of Concern	Measured Mean Concentration (mg/L)	Modeled Ingestion (mg/L)	Minimum SSTL Exceeded (Yes/No)
Benzene	0.32	0.099	Yes
Benzene - CA	0.32	0.029	Yes
Ethylbenzene	0.58	10	No
Toluene	0.59	20	No
Xylenes	0.15	>Sol	No

mg/L = Milligrams per liter
>Sol = Selected risk level is not exceeded for all possible dissolved levels (≤ pure component solubility).

All representative concentrations were below the applicable SSTLs at the specified risk levels except for benzene.

SUBSURFACE SOIL

Inhalation

Inhalation was evaluated by modeling the risk from subsurface soil volatilization to enclosed spaces and to ambient air on site. An excess lifetime cancer risk of 1:100,000 (10^{-5}) was used for benzene because the site is planned to become a commercial business in the near future. All other non-cancerous petroleum hydrocarbon compounds (ETX) were evaluated using a hazard quotient of 1. All exposure parameters were assumed to be commercial. The representative concentrations were then compared to the SSTLs generated by the GSI software.

Subsurface Soil - Inhalation

Constituent of Concern	Measured Mean Concentration (mg/kg)	Modeled Volatilization to Ambient Air (mg/kg)	Modeled Volatilization to Indoor Air (mg/kg)	Minimum SSTL Exceeded (Yes/No)
Benzene	0.18	220	0.53	No
Benzene - CA	0.18	63	0.15	Yes
Ethylbenzene	0.48	>Res	>Res	No
Toluene	0.38	>Res	160	No
Xylenes	0.73	>Res	>Res	No

mg/kg = Milligrams per kilogram
>Res = Selected risk level is not exceeded for pure compound present at any concentration

All representative concentrations were below the applicable SSTLs at the specified risk levels except for benzene-CA for the modeled volatilization of subsurface soil to indoor air.

Soil Leaching to Groundwater

Although soil leaching to groundwater is not an exposure pathway, it could provide a source for possible groundwater ingestion. Therefore, this pathway was evaluated for the Tier 2 RBCA. Again, an excess lifetime risk for cancer of 1:100,000 (10^{-5}) was used for benzene because the site is planned to become a commercial business in the near future. All other non-cancerous petroleum hydrocarbon compounds (ETX) were evaluated using a hazard quotient of 1. All exposure parameters were assumed to be commercial. The representative concentrations were then compared to the SSTLs generated by the GSI software.

Subsurface Soil - Leaching to Groundwater

Constituent of Concern	Measured Mean Concentration (mg/kg)	Leaching to Groundwater (mg/kg)	Minimum SSTL Exceeded (Yes/No)
Benzene	0.18	0.13	Yes
Benzene - CA	0.18	0.037	Yes
Ethylbenzene	0.48	27	No
Toluene	0.38	73	No
Xylenes	0.73	>Res	No

mg/kg = Milligrams per kilogram
>Res = Selected risk level is not exceeded for pure compound present at any concentration

All representative concentrations were below the applicable SSTLs at the specified risk levels except for benzene for the modeled leaching of subsurface soil to groundwater.

RECOMMENDATIONS

Since the benzene concentrations at the site have been shown to present a slight risk to commercial workers for indoor inhalation and for groundwater ingestion with an excess lifetime cancer risk of 1:100,000 (10^{-5}), the Tier 2 was rerun using an excess lifetime cancer risk of 1:10,000 (10^{-4}). All of the benzene concentrations are below the SSTLs for the pathways evaluated above when the excess lifetime risk for cancer is decreased to 1:10,000 (10^{-4}), except for on-site groundwater ingestion. However, if the 1:100,000 (10^{-5}) excess lifetime risk for cancer is used, action needs to be taken in order to reduce or eliminate the possible exposure of future employees or customers at the site.

There are several corrective actions which could be undertaken in order to reduce the exposure to benzene; however, the most logical and cost-effective of these actions would

be to implement a risk management program for the site and any future development. Since the site is currently ranch land, there should be no risk to human health (Environmental Health Consultants, May 14, 1993) at the present time. However, PACIFIC recommends that, when the site is redeveloped commercially, a risk management plan be implemented.

The risk management plan should contain at least two provisions. The first is that in order to mitigate the risk for benzene inhalation indoors, the new building when constructed should have a vapor barrier within or beneath the floor that prevents vapors from traveling up from the soil or groundwater. This precaution should eliminate the risk from benzene for indoor air. The Tier 2 RBCA evaluation has already shown that inhaling outdoor air does not pose a risk from any BTEX compounds in the groundwater or soil.

Secondly, the existing water-supply well should be properly abandoned if it is not needed, since ingestion of benzene from groundwater has been shown to be a risk at 10^{-5} target level. Note that originally, the water-supply well was not installed as a drinking water source, but rather to operate the restrooms at the former service station. The water-supply well was recently sampled on February 19, 1997 (Attachment B), and general mineral, physical, and inorganic analyses were performed on the water obtained from the supply well. The results indicate that nitrate, specific conductance, and total dissolved solids are above drinking water standards and therefore the water is not suitable for human consumption. However, if site use depicts that non-potable water is necessary, the well may still be used, however a carbon adsorption vessel is recommended to be attached prior to resuming the use of the water-supply well. This would eliminate any potential risk from benzene for anyone ingesting the groundwater on the site, even though it is non-potable water.

Risk management plan?

And how often will carbon adsorption vessel be replaced?

CONCLUSION

PACIFIC believes that the risk at the site can be reduced and managed by limiting exposure. Abandonment of the existing extraction well, or installation of a carbon adsorption vessel to treat water from the well prior to non-potable use and a vapor barrier beneath proposed buildings should prevent or limit potential risk from the site while also allowing natural attenuation to biodegrade BTEX compounds present in soil and groundwater at the site.

This is acceptable if current property owner will agree with recommendations

Do soil gas vapor?

If you have any questions or comments on the contents of this letter, please call.

Sincerely,

Pacific Environmental Group, Inc.

Michelle Gracia

Michelle Gracia
Senior Staff Scientist

Ross W.N. Tinline
Senior Geologist
RG 5860

REFERENCES

American Society for Testing and Materials. *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites, Designation: E 1739-95.* November 1995.

California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, April 10, 1995

Chevron Products Company. *Second and Third Quarter Groundwater Monitoring Reports for 1996, Former Chevron Service Station #9-7127 Interstate 580 and Grantline Road near Tracy, California.* November 4, 1996.

Environmental Health Consultants. *Human Risk Evaluation.* May 14, 1993.

Environmental Protection Agency. *Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Addendum to Interim Final Guidance.* July 1992.

Groundwater Services, Inc. Tier 1 and Tier 2 RBCA Spreadsheet System. October 1995.

Pacific Environmental Group, Inc. *Risk-Based Corrective Action Site Evaluation Results.* June 28, 1996.

Attachments:

Table 1 - RBCA Default/Site-Specific Data
Table 2 - Groundwater Data Used to Calculate the Representative Concentrations
Table 3 - Soil Data Used to Calculate the Representative Concentrations
Figure 1 - Site Location Map
Figure 2 - Extended Site Map
Attachment A - Laboratory Soil Test Data
Attachment B - Historical Groundwater Data
Attachment C - Historical Soil Certified Analytical Reports

Table 1
RBCA Default/Site-Specific Data

Risk-Based Corrective Action - Tier 2
Former Chevron Service Station 9-7127
Grant Line Road at Interstate 580
Tracy, California

Characteristics	Default Values	Site-Specific Values
Vadose Zone		
Vadose zone thickness (ft)	9.68	28.5
Capillary zone thickness (ft)	0.164	0.5
Depth to Groundwater (ft)	9.844	29
Affected Soils		
Surficial soil depth (ft)	3.28	12
Depth to uppermost affected soil (ft)	3.28	15
Depth to base of affected soil (ft)	9.844	30
Contaminated soil area (sq. ft)	2,420	2,420
Length of affected soil parallel to assumed wind direction (ft)	49.2	49.2
Length of affected soil zone parallel to groundwater flow direction (ft)	49.2	49.2
Soil density (g/cu.cm)	1.7	1.17
Soil/Groundwater pH	6.5	7
Soil Parameters		
Foc in vadose zone	0.01	0.015
Soil porosity	0.38	0.46
Volumetric Water Content		
Capillary fringe	0.342	0.29
Vadose zone	0.12	0.26
Foundation crack	0.12	0.16
Volumetric Air Content		
Capillary fringe	0.038	0.17
Vadose zone	0.26	0.20
Foundation crack	0.26	0.3
Groundwater		
Gradient		0.004 NE
Saturated hydraulic conductivity		0.0007 cm/sec
Longitudinal dispersivity (ft)		
Transverse dispersivity (ft)		
Vertical dispersivity (ft)		
Groundwater mixing zone depth (ft)	6.56	12
Water Infiltration rate (ft/yr)	0.984	0.984
GW Darcy velocity (ft/yr)	82	
GW transport velocity (ft/yr)	216	
Foc in water zone	0.001	0.001
Building Parameters		
Building volume/area ratio (cm)	300	300
Building air exchange rate (1/s)	0.00023	0.00023
Foundation crack thickness (cm)	15	15
Foundation crack fraction	0.01	0.01

ft = feet
sq.ft = square feet
g/cu.cm = grams per cubic centimeter
NE = northeast
cm/sec = centimeters per second
ft/yr = feet per year

Table 2

Groundwater Data Used to Calculate the Representative Concentrations

Risk-Based Corrective Action - Tier 2
Former Chevron Service Station 9-7127
Grant Line Road at Interstate 580
Tracy, California

Monitoring Well	Sample Date	Benzene (mg/L)	Ethylbenzene (mg/L)	Toluene (mg/L)	Xylenes (mg/L)
MW-1	11/15/95	15	1.1	9.6	5.5
	02/27/96	0.048	ND	0.071	0.027
	05/30/96	15	1.1	11	4.9
	08/27/96	11	0.79	9.5	3.6
MW-3	11/15/95	8	0.43	2.9	1.5
	02/27/96	5	0.22	0.5	0.13
	05/30/96	13	0.87	7.2	2.9
	08/27/96	9.5	0.74	6.9	2.9
MW-4	11/15/95	0.094	0.00077	0.0094	0.0043
	02/27/96	0.1	ND	0.015	0.002
	05/30/96	0.24	0.0006	0.004	0.0039
	08/27/96	0.011	ND	ND	ND
MW-6	08/27/96	0.0016	ND	ND	ND
	05/30/96	0.0013	ND	ND	0.0009
	02/27/96	0.0011	ND	ND	ND
Logtransformed Mean =		0.32	0.58*	0.59	0.15

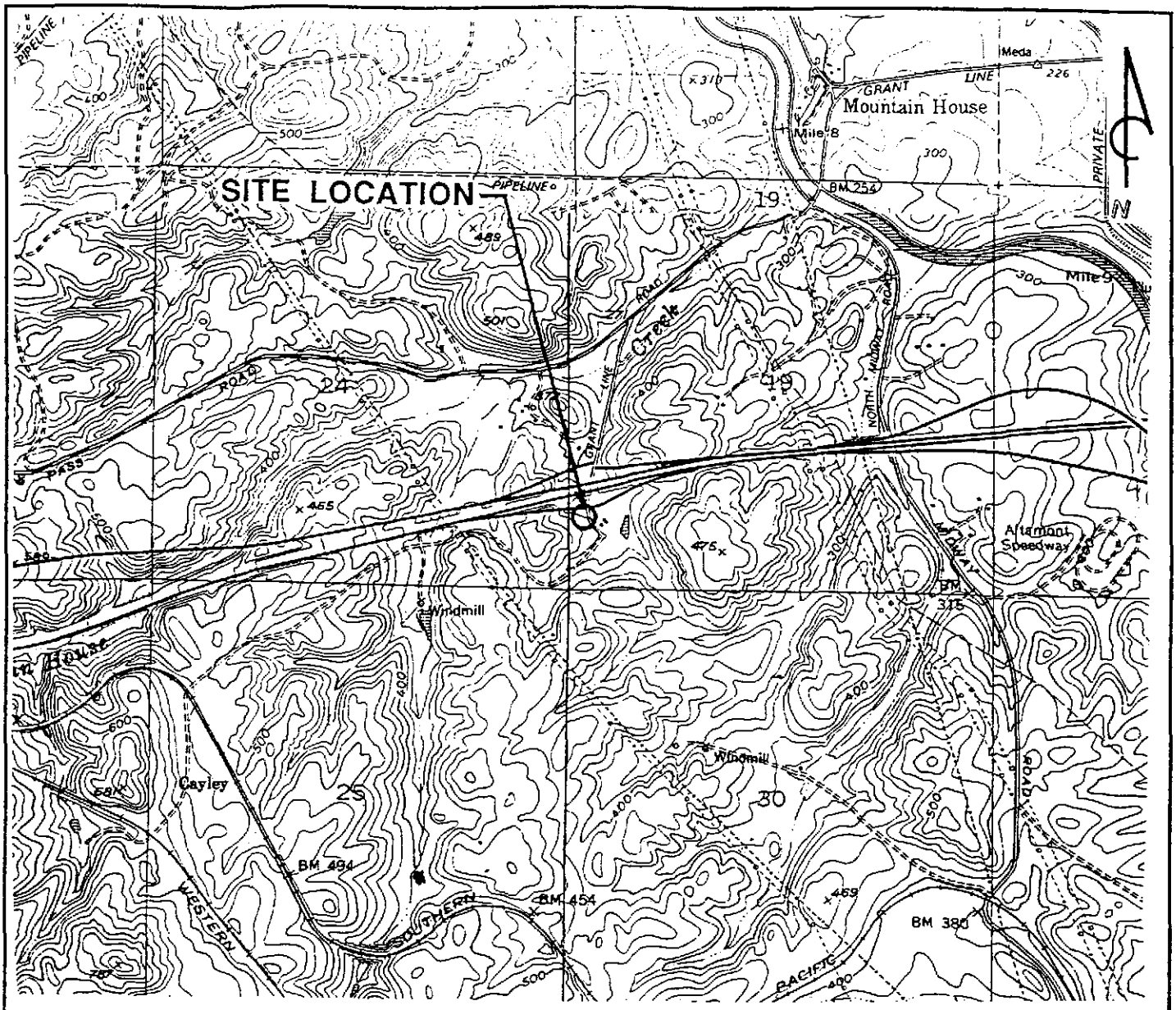
mg/L = Milligrams per liter
ND = Not detected
* = Ethylbenzene was found to be normally distributed, therefore the mean is equal to the arithmetic average.

Table 3
Soil Data Used to Calculate the Representative Concentrations

Risk-Based Corrective Action - Tier 2
Former Chevron Service Station 9-7127
Grant Line Road at Interstate 580
Tracy, California

Sample ID	Sample Date	Sample Depth (feet, bgs)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
B-2	12/01/87	20	0.001	ND	ND	4
B-3	12/01/87	14	1.2	0.8	0.68	2
B-4	12/01/87	15	19	28	85	140
B-5	12/01/87	5	0.076	0.002	0.007	0.03
B-7	12/01/87	5	0.022	0.024	0.003	0.046
Af[a]	04/04/91	14	ND	66	41	13
Aop[a]	04/04/91	14	0.007	0.005	ND	0.03
Bf[a]	04/04/91	14	20	110	220	560
Bop[a]	04/04/91	14	0.007	0.012	0.016	0.03
Cf[a]	04/04/91	13	0.018	0.014	0.013	0.046
Cop[a]	04/04/91	15	30	60	180	350
#5[b]	04/16/91	13	ND	1.7	0.8	10
#8[b]	04/16/91	14	0.085	0.27	0.24	1.5
#13[b]	04/16/91	15	ND	0.044	0.047	0.31
#14[b]	04/16/91	13	0.005	0.03	0.006	0.13
MW-1	12/08/92	19	ND	ND	0.0056	0.0079
		24	ND	30	79	200
		29	21	150	560	840
		38.5	ND	ND	0.013	0.024
B-1	12/09/92	18	ND	ND	0.014	0.025
		22	ND	ND	0.013	0.018
Logtransformed Mean =			0.18	0.48	0.38	0.73

mg/kg = Milligram per kilogram
ND = Not detected
a. Sidewall and interface samples were collected during the tank removal
b. Confirmation soil samples collected during the overexcavation of the tank removal.



QUADRANGLE LOCATION

REFERENCES:

USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: MIDWAY, CALIFORNIA
DATED: 1953 REVISED: 1980
TITLED: CLIFTON COURT FOREBAY, CALIFORNIA
DATED: 1978

SCALE IN FEET

2000 0 2000

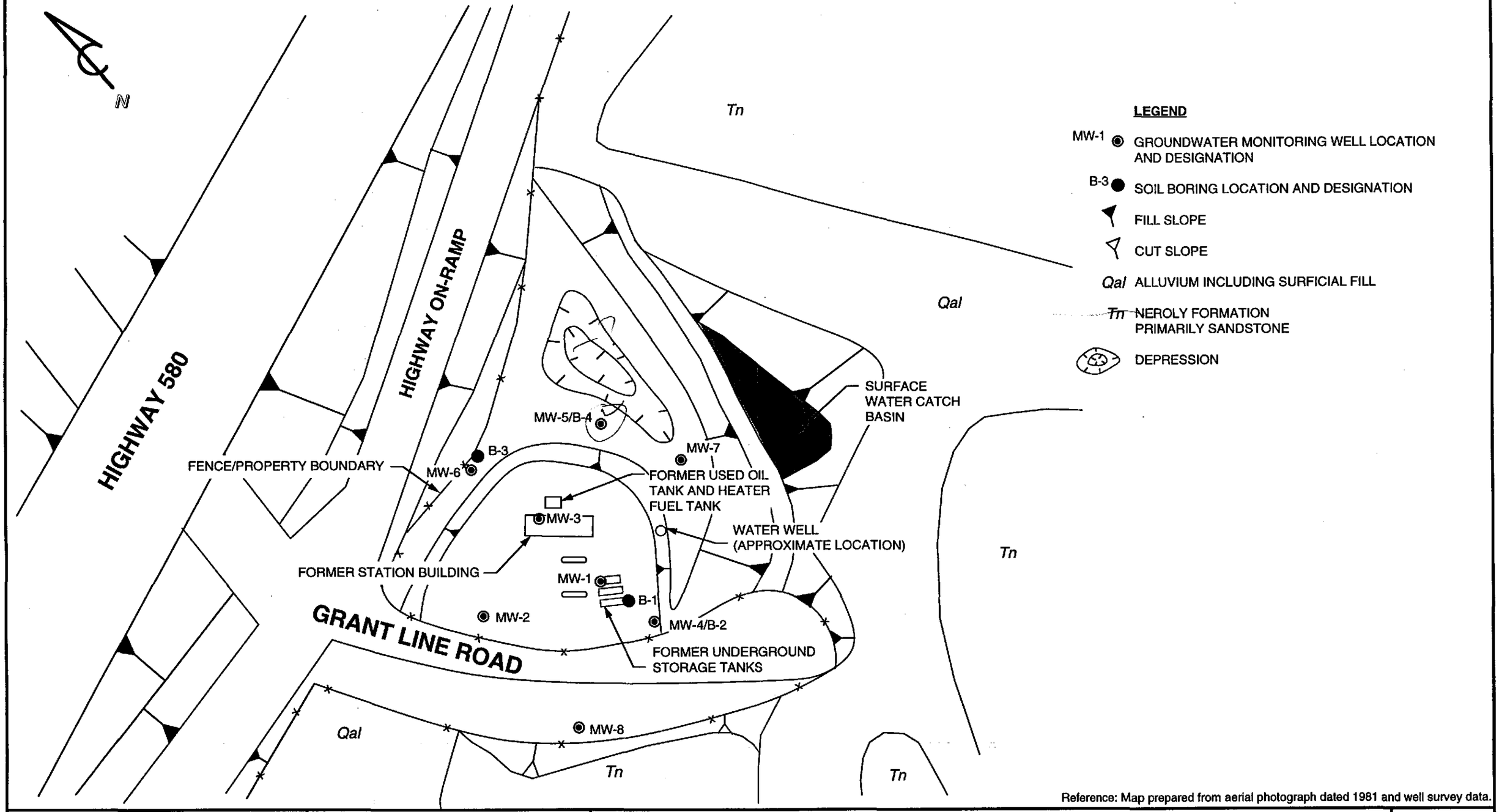
PACIFIC ENVIRONMENTAL GROUP, INC.

FORMER CHEVRON SERVICE STATION 9-7127
Grant Line Road at Interstate 580
Tracy, California

SITE LOCATION MAP

FIGURE: 1

PROJECT: 325-004.1E



Reference: Map prepared from aerial photograph dated 1981 and well survey data.

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 100 200 FEET

FORMER CHEVRON SERVICE STATION 9-7127
Grant Line Road at Interstate 580
Tracy, California

EXTENDED SITE MAP

FIGURE: **2**
PROJECT: 325-004.1E

ATTACHMENT A

LABORATORY SOIL TEST DATA

COOPER TESTING LABORATORY

COOPER TESTING LABORATORY
1951 Colony, Unit X
Mountain View, California 94043
Tel: 415 968-9472 FAX: 415 968-4228

DEC 2 1996

LETTER OF TRANSMITTAL

TO: Pacific Environmental Group
2025 Gateway Place, #440
San Jose, CA 95110
Attn: Ross Tinline

DATE: December 17, 1996

PROJECT: 325004.1E

CTL#: 226-010

ENCLOSED: Laboratory soil test data.

REMARKS:

COOPER TESTING LAB

Organic Content
ASTM D2974

Cooper Testing Lab

JOB NO.: 226-010					
CLIENT: Pacific Environmental			DATE:	12/10/96	
PROJECT 325004.1E			BY:	DC	
BORING:	OC-1				
SAMPLE:					
DEPTH, ft.:					
SOIL CLASSIFICATION: (visual)	gray brown SAND-STONE				
SOIL, ORGANICS & DISH, gm:	182.29				
SOIL & DISH, gm:	180.78				
DISH, gm:	78.95				
SOIL, gm:	101.83	0	0	0	0
SOIL & ORGANICS, gm:	103.34	0	0	0	0
% ORGANICS:	1.5	ERR	ERR	ERR	ERR

Specific Gravity
ASTM D-854

Cooper Testing Lab

Job#: 226-010 Date: 12/11/96
Client: Pacific Environmental By: DC
Project: 325004.1E

Boring:	OC-1					
Sample:						
Depth, ft.:						
Soil Classification: (visual)	gray brown SAND-STONE					
Wt. of Pycnometer Soil & Water, gm:	352.72					
Temp. centigrade:	17					
Wt. of Pycnometer & Water, gm:	316.31					
Wt. Dry Soil, gm:	56.84					
Temp. Correction Factor:	1					
Specific Gravity:	2.78	ERR	ERR	ERR	ERR	ERR

Remarks: The temperature correction factor is shown as 1 if the weight of the pycnometer is taken from the lab temperature correction curve.

Falling Head Permeability
ASTM D 5084
Cooper Testing Lab, Inc.

Job No:	226-010a	Boring:		Date:	12/11/96
Client:	Pacific Env.	Sample:	OC-1	By:	DC
Project:	325004.1E	Depth:			
Soil:	gray brown SANDSTONE				

Sample Pressures:
Cell: 70 psi Bot. Cap: 65 psi Top Cap: 65 psi Max. Hydraulic Gradient: 6

Elapsed Time (min)	Head, (cm)	Permeability cm/sec
0	28.0	Start of Test
1	20.4	6.8 x 10E-4
3	9.1	8.1 x 10E-4
5	5.0	7.4 x 10E-4
0	28.0	
2	13.0	8.3 x 10E-4
8	2.8	6.2 x 10E-4
0	28.0	
4	8.1	6.7 x 10E-4

Average Permeability: 7 x 10E-4 cm/sec

Sample Data:	Initial	Final
Height, in.:	2.00	1.95
Diameter, in.:	1.90	1.86
Area, in2:	2.84	2.72
Volume, in3:	5.67	5.30
Total Volume, cc:	92.92	86.83
Vol of Solids, cc:	50.29	50.29
Vol. of Voids, cc:	42.64	36.54
Void Ratio:	0.85	0.73
Porosity, %:	45.88	42.08
Saturation, %	54.88	95.24
Sp. Gravity:	2.78	2.78
Wet Weight, gm:	163.2	174.6
Dry Weight, gm:	139.8	139.8
Tare, gm:	0.00	0.00
Moisture, %:	16.7	24.9
Dry Density, pcf:	93.9	100.5

Remarks:

ATTACHMENT B

HISTORICAL GROUNDWATER DATA

Chevron

February 12, 1997

Chevron Products Company
6001 Bollinger Canyon Road
Building L
San Ramon, CA 94583
P.O. Box 6004
San Ramon, CA 94583-0904

Marketing – Sales West
Phone 510 842-9500

Ms. Eva Chu
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Chevron Service Station #9-7127
Interstate 580 and Grantline Road
near Tracy , California

Dear Ms. Chu:

Enclosed is the Fourth Quarter Groundwater Monitoring report for 1996, prepared by our consultant Gettler-Ryan Inc. for the above noted facility. Ground water samples were analyzed for TPH-g, BTEX and MtBE constituents.

Constituents detected in the wells were similar as in previous sampling events. Samples were not taken from monitoring wells MW-2, MW-5, MW-7 and MW-8 to comply with the new sampling program. These wells will be sampled annually starting in May 1997. The remaining wells will be sampled semi-annually starting in November 1996. The water well (supply well) will be sampled annually starting in November 1996.

Groundwater depth varied from 11.61 to 28.98 feet below grade with a direction of flow to the northeast. Groundwater levels were taken each month and the gradient and direction of flow was similar as to the quarterly sampling events. The existing water well (supply well) was sampled this quarter and all constituents were below method detection limits.

Chevron will continue to sample the wells based on the sampling program noted above. If you have any questions or comments call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. Bette Owen, Chevron

Mr. John Moody
RWQCB-Central Valley Region
3443 Routier Road
Sacramento, CA 95827-3098

Mr. Ardavan Onsori
29310 Union City Blvd.
Union City, CA 94587

Mr. & Mrs. Joe Jess
Jess Ranch
Route 5, Box 704-A
Tracy, CA 95376

Mr. Ross Tinline
Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110 (less analytical data)

GETTLER-RYAN INC.

December 16, 1996

Job #5251.80

Mr. Phil Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Fourth Quarter Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-7127
Interstate 580 and Grant Line Road
Tracy, California

Dear Mr. Briggs:

This report documents the monthly monitoring and quarterly groundwater sampling event performed by Gettler-Ryan Inc. (G-R). On November 11, 1996, field personnel were on-site to monitor eight wells (MW-1 through MW-8) and sample four wells (MW-1, MW-3, MW-4, and MW-6) and a supply well, at the Former Chevron Service Station #9-7127 located at Interstate 580 and Grant Line Road in Tracy, California.

Static groundwater levels were measured on September 6, October 28, and November 11, 1996. All wells were checked for the presence of separate-phase hydrocarbons. Separate-phase hydrocarbons were not present in any of the wells. Static water level data and groundwater elevations are presented in Table 1. Potentiometric maps are included as Figures 1, 2 and 3.

Groundwater samples were collected from the monitoring wells as specified by G-R Standard Operating Procedure - Groundwater Sampling (attached). The field data sheets are also attached. The samples were analyzed by NEI/GTEL Environmental Laboratories, Inc. Analytical results are presented in Table 1. The chain of custody document and laboratory analytical reports are attached.

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

Sincerely,

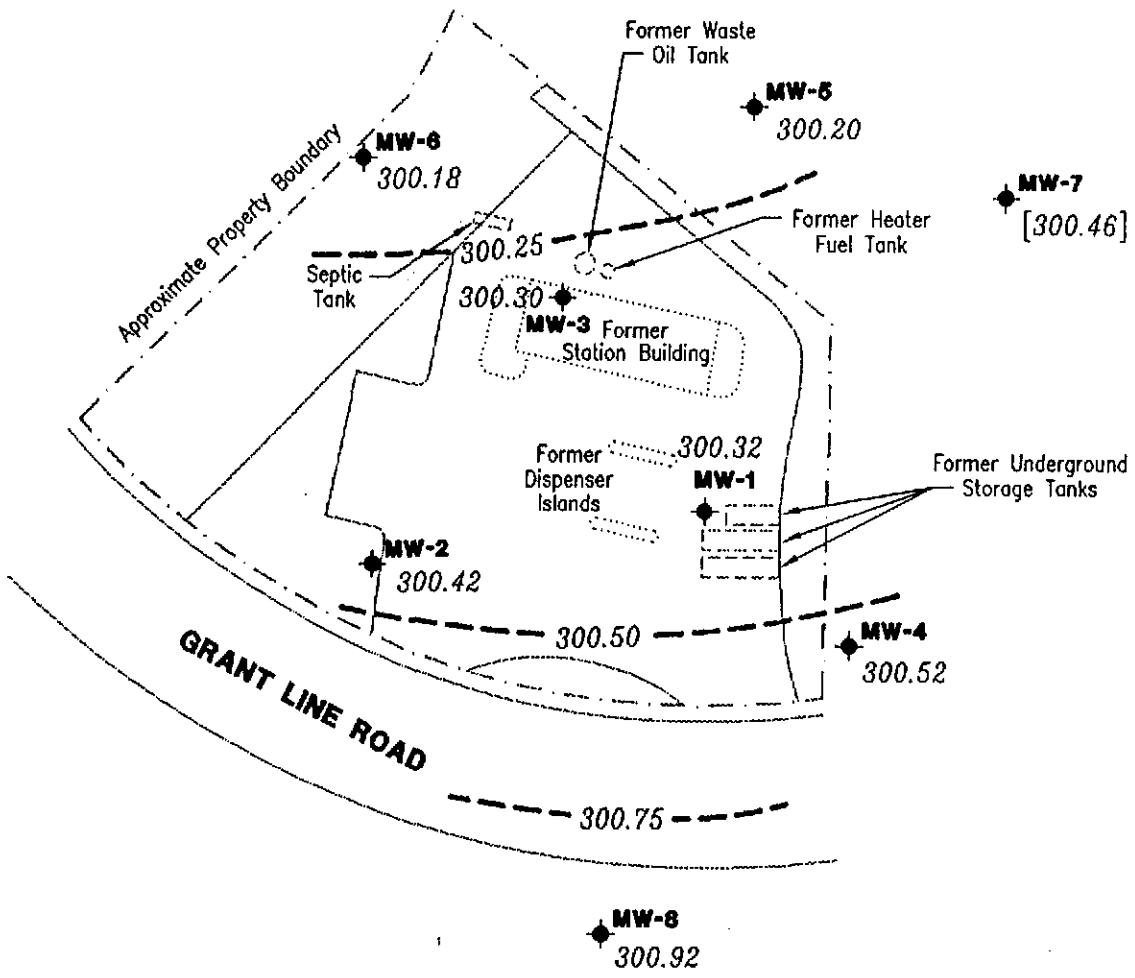
Deanna L. Harding
Project Coordinator

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

REGISTERED GEOLOGIST
Penny L. Silzer
No. 5523
STATE OF CALIFORNIA

DLH/PLS/dlh
5251.QML

Figure 1: Potentiometric Map - September 6, 1996
Figure 2: Potentiometric Map - October 28, 1996
Figure 3: Potentiometric Map - November 11, 1996
Table 1: Water Level Data and Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports



EXPLANATION

✦	Groundwater monitoring well
99.99	Groundwater elevation in feet referenced to Mean Sea Level (MSL)
99.99	Groundwater elevation contour, dashed where inferred.
[99.99]	Not used in contouring

Approximate groundwater flow direction at a gradient of 0.002 to 0.005 Ft./Ft.

N

0 60

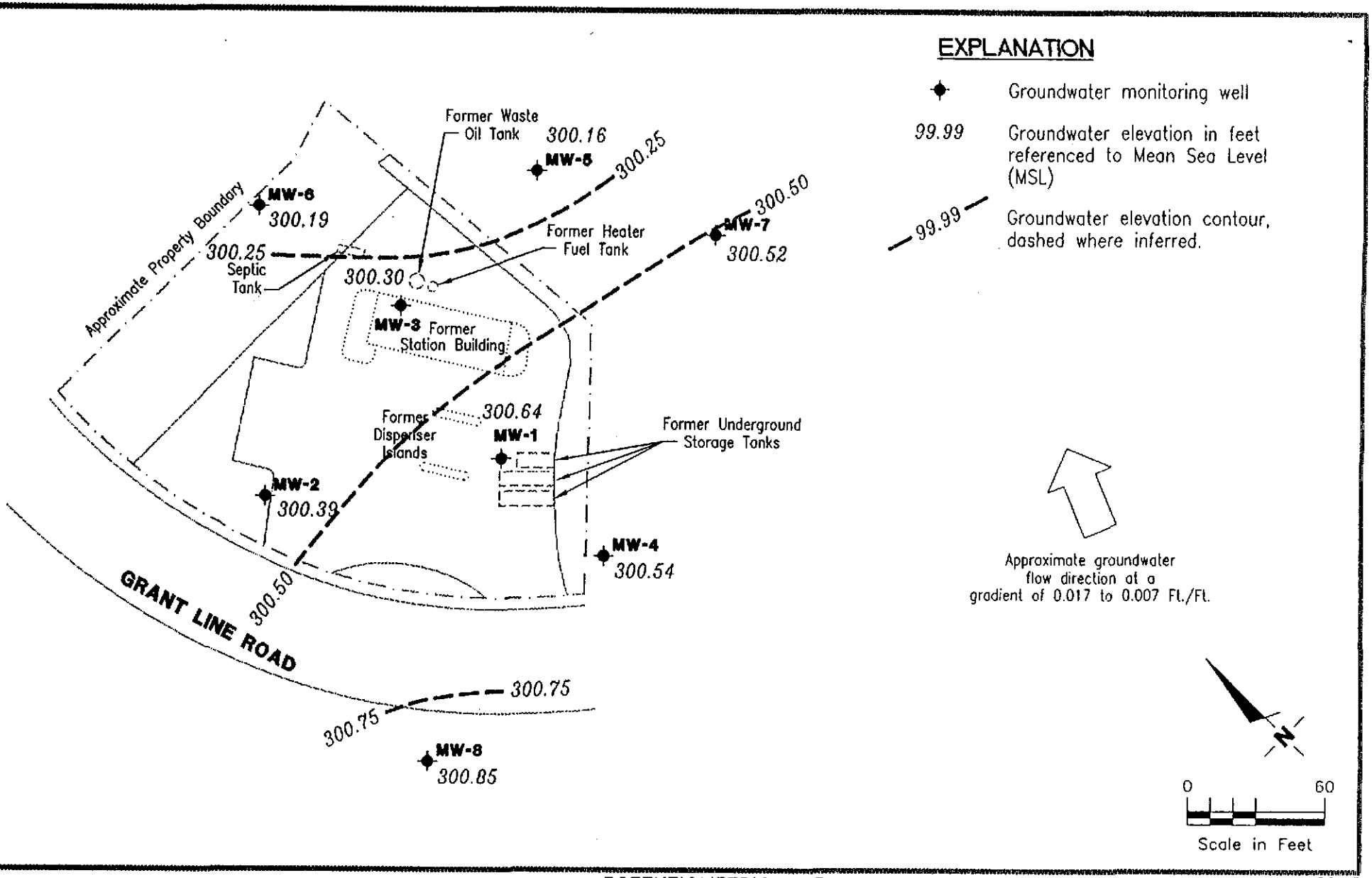
Scale in Feet

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-7127
Interstate 580 and Grant Line Road
Tracy, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5251	PB	September 6, 1996	



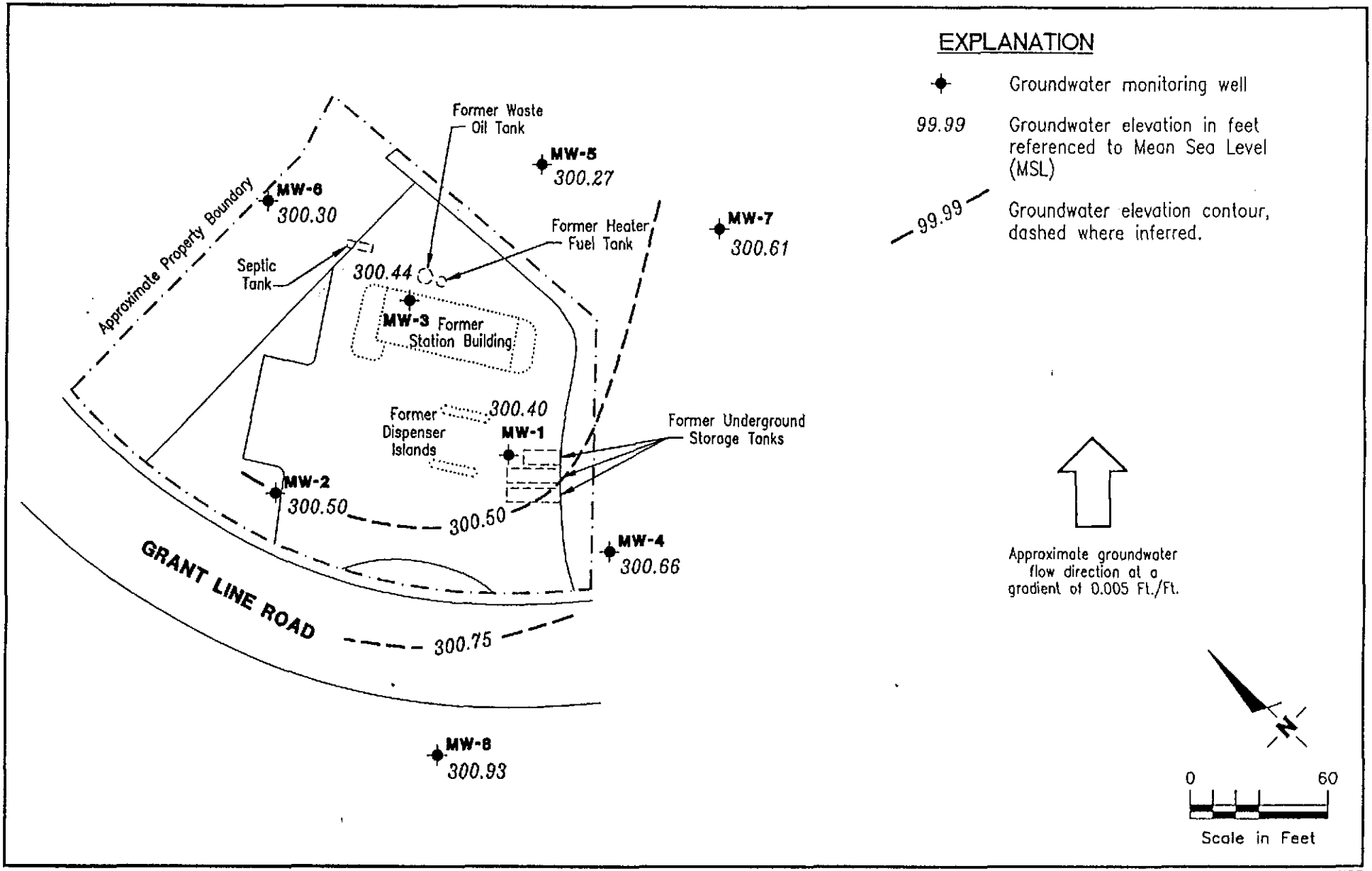
Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-7127
Interstate 580 and Grant Line Road
Tracy, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5251	PLS	October 28, 1996	



Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Former Chevron Service Station No. 9-7127
Interstate 580 and Grant Line Road
Tracy, California

FIGURE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5251	PLS	November 11, 1996	

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
MW-1/ 329.17	2/15/94	29.77	299.40	0	99,000	20,000	24,000	2,000	9,800	—
	4/21/94	29.85	299.32	0	—	—	—	—	—	—
	6/1/94	29.92	299.25	0	56,000	12,000	15,000	1,100	5,800	—
	6/28/94	30.15	299.02	0	—	—	—	—	—	—
	7/19/94	20.30	308.87	0	—	—	—	—	—	—
	9/2/94	30.61	298.96[1]	0.5	—	—	—	—	—	—
	9/12/94	31.66	298.04[1]	0.66	—	—	—	—	—	—
	10/12/94	31.70	298.70[1]	1.54	—	—	—	—	—	—
	11/30/94	29.95	299.84[1]	0.77	—	—	—	—	—	—
	3/9/95	29.54	299.88	0.31	—	—	—	—	—	—
	4/18/95	29.01	300.16	0	—	—	—	—	—	—
	5/17/95	29.09	300.08	0	130,000	22,000	30,000	2,000	10,000	—
	6/7/95	29.24	299.93	0	—	—	—	—	—	—
	7/21/95	29.66	299.51	0	—	—	—	—	—	—
	8/15/95	29.87	299.30	0	41,000	9,400	12,000	1,400	7,700	—
	9/7/95	29.85	299.32	0	—	—	—	—	—	—
	10/9/95	30.01	299.16	0	—	—	—	—	—	—
	11/15/95	29.88	299.29	0	68,000	15,000	9,600	1,100	5,500	<2,000
	12/30/95	29.99	299.18	0	—	—	—	—	—	—
	1/29/96	29.32	299.85	Sheen	—	—	—	—	—	—
	2/27/96	28.51	300.66	0	520	48	71	<0.5	27	28
	3/5/96	28.44	300.73	0	—	—	—	—	—	—
	4/23/96	28.20	300.97	0	—	—	—	—	—	—
	5/30/96	28.47	300.70	0	57,000	15,000	11,000	1,100	4,900	<250
	6/19/96	28.43	300.74	0	—	—	—	—	—	—
	7/15/96	28.66	300.51	Sheen	—	—	—	—	—	—
	8/27/96	28.73	300.44	0	74,000	11,000	9,500	790	3,600	<120
	9/9/96	28.85	300.32	0	—	—	—	—	—	—
	10/28/96	28.53	300.64	Sheen	—	—	—	—	—	—
	11/11/96	28.77	300.40	0	69,000	13,000	9,100	810	3,200	<250
MW-2/ 327.22	2/15/94	27.09	300.13	0	83	21	6	1	3	—
	4/21/94	27.81	299.41	0	—	—	—	—	—	—
	6/1/94	27.98	299.24	0	<50	1.3	0.5	<0.5	<0.5	—
	6/28/94	28.17	299.05	0	—	—	—	—	—	—
	7/19/94	28.35	298.87	0	—	—	—	—	—	—
	9/2/94	28.52	298.70	0	82	13	16	3.6	14	—

1

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<---------- ppb ---------->					
MW-2 (cont)	9/12/94	28.56	298.66	0	---	---	---	---	---	---
	10/12/94	28.62	298.60	0	---	---	---	---	---	---
	11/30/94	28.38	298.84	0	<50	3.6	4.5	1.0	4.5	---
	3/9/95	27.41	299.81	0	---	---	---	---	---	---
	4/18/95	26.79	300.43	0	---	---	---	---	---	---
	5/17/95	26.95	300.27	0	<50	<0.5	<0.5	<0.5	<0.5	---
	6/7/95	27.06	300.16	0	---	---	---	---	---	---
	7/21/95	27.47	299.75	0	---	---	---	---	---	---
	8/15/95	27.57	299.65	0	<50	<0.5	<0.5	<0.5	<0.5	---
	9/7/95	28.69	298.53	0	---	---	---	---	---	---
	10/9/95	27.85	299.37	0	---	---	---	---	---	---
	11/15/95	27.91	299.31	0	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/30/95	27.60	299.62	0	---	---	---	---	---	---
	1/29/96	27.16	300.06	0	---	---	---	---	---	---
	2/27/96	26.25	300.97	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/96	26.70	300.52	0	---	---	---	---	---	---
	4/23/96	25.82	301.40	0	---	---	---	---	---	---
	5/30/96	26.16	301.06	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	26.27	300.95	0	---	---	---	---	---	---
	7/15/96	26.46	300.76	0	---	---	---	---	---	---
	8/27/96	26.72	300.50	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	26.80	300.42	0	---	---	---	---	---	---
	10/28/96	26.83	300.39	0	---	---	---	---	---	---
	11/11/96	26.72	300.50	0	---	---	---	--	---	---
MW-3/ 329.28	2/15/94	29.87	299.41	0	23,000	11,000	1,700	540	1,000	---
	4/21/94	29.96	299.32	0	---	---	---	---	---	---
	6/1/94	30.11	299.17	0	27,000	12,000	2,600	600	2,200	---
	6/28/94	30.31	298.97	0	---	---	---	---	---	---
	7/19/94	30.50	298.78	0	---	---	---	---	---	---
	9/2/94	30.61	298.67	0	34,000	16,000	4,100	770	3,000	---
	9/12/94	30.65	298.63	0	---	---	---	---	---	---
	10/12/94	30.74	298.54	0	---	---	---	---	---	---
	11/30/94	30.44	298.84	0	33,000	16,000	3,000	740	2,400	---
	3/9/95	29.53	299.75	0	---	---	---	---	---	---
	4/18/95	28.97	300.31	0	---	---	---	---	---	---
	5/17/95	29.19	300.09	0	27,000	10,000	760	490	1,000	---
	6/7/95	29.24	300.04	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<------		ppb			------>
MW-3	7/21/95	29.70	299.58	0	---	---	---	---	---	---
(cont)	8/15/95	29.78	299.50	0	39,000[3]	13,000	2,900	700	1,700	---
	9/7/95	29.86	299.42	0	---	---	---	---	---	---
	10/9/95	30.02	299.26	0	---	---	---	---	---	---
	11/15/95	30.06	299.22	0	21,000	8,000	2,900	430	1,500	<1,000
	12/30/95	29.75	299.53	0	---	---	---	---	---	---
	1/29/96	29.22	300.06	0	---	---	---	---	---	---
	2/27/96	28.43	300.85	0	<2,500	5,000	500	220	130	710
	3/5/96	28.35	300.93	0	---	---	---	---	---	---
	4/23/96	28.10	301.18	0	---	---	---	---	---	---
	5/30/96	28.42	300.86	0	37,000	13,000	7,200	870	2,900	<120
	6/19/96	28.51	300.77	0	---	---	---	---	---	---
	7/15/96	28.63	300.65	0	---	---	---	---	---	---
	8/27/96	28.90	300.38	0	50,000	9,500	6,900	740	2,900	<120
	9/6/96	28.98	300.30	0	---	---	---	---	---	---
	10/28/96	28.98	300.30	0	---	---	---	---	---	---
	11/11/96	28.84	300.44	0	52,000	11,000	5,500	780	3,000	<250
MW-4/	5/21/93	---	---	---	<50	12	2	<0.5	1	---
	11/5/93	---	---	---	300	56	10	0.8	3	---
329.44	2/15/94	29.90	299.54	0	260	47	12	2	4	---
	4/21/94	29.99	299.45	0	---	---	---	---	---	---
	6/1/94	30.14	299.30	0	860	200	23	2.8	9.6	---
	6/28/94	30.32	299.12	0	---	---	---	---	---	---
	7/19/94	30.50	298.94	0	---	---	---	---	---	---
	9/2/94	30.62	298.82	0	1,700	250	27	6.4	15	---
	9/12/94	30.69	298.75	0	---	---	---	---	---	---
	10/12/94	30.75	298.69	0	---	---	---	---	---	---
	11/30/94	30.51	298.93	0	830	350	29	8.1	22	---
	3/9/95	29.61	299.83	0	---	---	---	---	---	---
	4/18/95	29.08	300.36	0	---	---	---	---	---	---
	5/17/95	29.22	300.22	0	470	200	2.2	0.9	2.1	---
	6/7/95	29.27	300.17	0	---	---	---	---	---	---
	7/21/95	29.72	299.72	0	---	---	---	---	---	---
	8/15/95	29.77	299.67	0	100	4.2	0.8	<0.5	<0.5	---
	9/7/95	29.85	299.59	0	---	---	---	---	---	---
	10/9/95	30.02	299.42	0	---	---	---	---	---	---
	11/15/95	30.05	299.39	0	270	94	9.4	0.77	4.3	27
	12/30/95	29.79	299.65	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------ppb---------->					
MW-4	1/29/96	29.31	300.13	0	—	—	—	—	—	—
(cont)	2/27/96	28.58	300.86	0	690	100	15	<0.5	2.0	79
	3/5/96	28.55	300.89	0	—	—	—	—	—	—
	4/23/96	28.15	301.29	0	—	—	—	—	—	—
	5/30/96	28.40	301.04	0	700	240	4.0	0.6	3.9	<5.0
	6/19/96	28.47	300.97	0	—	—	—	—	—	—
	7/15/96	28.62	300.82	0	—	—	—	—	—	—
	8/27/96	28.85	300.59	0	<50	11	<0.5	<0.5	<0.5	<5.0
	9/6/96	28.92	300.52	0	—	—	—	—	—	—
	10/28/96	28.90	300.54	0	—	—	—	—	—	—
	11/11/96	28.78	300.66	0	240	57	1.4	0.7	1.8	<5.0
MW-5	5/25/93	—	—	—	<50	<0.5	<0.5	<0.5	0.9	—
	11/5/93	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
312.88	2/15/94	25.10	287.78	0	<50	<0.5	1	<0.5	1	—
	4/21/94	13.21	299.67	0	—	—	—	—	—	—
	6/1/94	13.39	299.49	0	<50	<0.5	<0.5	<0.5	<0.5	—
	6/28/94	13.73	299.15	0	—	—	—	—	—	—
	7/19/94	13.80	299.08	0	—	—	—	—	—	—
	9/2/94	14.02	298.86	0	<50	3.2	1.8	<0.5	2.1	—
	9/12/94	14.03	298.85	0	—	—	—	—	—	—
	10/12/94	14.15	298.73	0	—	—	—	—	—	—
	11/30/94	13.91	298.97	0	<50[2]	<0.5[2]	<0.5[2]	<0.5[2]	<0.5[2]	—
	3/9/95	12.97	299.91	0	—	—	—	—	—	—
	4/18/95	12.48	300.40	0	—	—	—	—	—	—
	5/17/95	12.71	300.17	0	150	1.0	<0.5	<0.5	<0.5	—
	6/7/95	12.85	300.03	0	—	—	—	—	—	—
	7/21/95	13.30	299.58	0	—	—	—	—	—	—
	8/15/95	13.41	299.47	0	<50	<0.5	<0.5	<0.5	<0.5	—
	9/7/95	13.42	299.46	0	—	—	—	—	—	—
	10/9/95	13.61	299.27	0	—	—	—	—	—	—
	11/15/95	13.63	299.25	0	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	12/30/95	13.30	299.58	0	—	—	—	—	—	—
	1/29/96	12.75	300.13	0	—	—	—	—	—	—
	2/27/96	12.02	300.86	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/96	11.96	300.92	0	—	—	—	—	—	—
	4/23/96	11.77	301.11	0	—	—	—	—	—	—
	5/30/96	12.17	300.71	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	12.25	300.63	0	—	—	—	—	—	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<----------		ppb			---------->
MW-5	7/15/96	12.39	300.49	0	---	---	---	---	---	---
(cont)	8/27/96	12.65	300.23	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	12.68	300.20	0	---	---	---	---	---	---
	10/28/96	12.72	300.16	0	---	---	---	---	---	---
	11/11/96	12.61	300.27	0	---	---	---	---	---	---
MW-6										
312.20	12/30/95	13.65	298.55	0	---	---	---	---	---	---
	1/29/96	12.18	300.02	0	---	---	---	---	---	---
	2/27/96	11.45	300.75	0	70	1.1	<0.5	<0.5	<0.5	<5.0
	3/5/96	11.32	300.88	0	---	---	---	---	---	---
	4/23/96	11.12	301.08	0	---	---	---	---	---	---
	5/30/96	11.45	300.75	0	60	1.3	<0.5	<0.5	0.9	<5.0
	6/19/96	11.54	300.66	0	---	---	---	---	---	---
	7/15/96	11.76	300.44	0	---	---	---	---	---	---
	8/27/96	11.95	300.25	0	90	1.6	<0.5	<0.5	<0.5	<5.0
	9/6/96	12.02	300.18	0	---	---	---	---	---	---
	10/28/96	12.01	300.19	0	---	---	---	---	---	---
	11/11/96	11.90	300.30	0	110[4]	<0.5	<0.5	<0.5	<0.5	<5.0
MW-7										
313.36	12/30/95	12.38	300.98	0	---	---	---	---	---	---
	1/29/96	13.14	300.22	0	---	---	---	---	---	---
	2/27/96	12.34	301.02	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	3/5/96	12.35	301.01	0	---	---	---	---	---	---
	4/23/96	12.13	301.23	0	---	---	---	---	---	---
	5/30/96	12.42	300.94	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	12.57	300.79	0	---	---	---	---	---	---
	7/15/96	12.70	300.66	0	---	---	---	---	---	---
	8/27/96	12.85	300.51	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	12.90	300.46	0	---	---	---	---	---	---
	10/28/96	12.84	300.52	0	---	---	---	---	---	---
	11/11/96	12.75	300.61	0	---	---	---	---	---	---

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

Well ID/ TOC (ft)	Date	DTW (ft)	GWE (msl)	Product Thickness (ft)	TPH(G)	B	T	E	X	MTBE
					<———		ppb			———>
MW-8										
329.91	12/30/95	30.30	299.61	0	—	—	—	—	—	—
	1/29/96	29.56	300.35	0	—	—	—	—	—	—
	2/27/96	28.68	301.23	0	<50	<0.5	<0.5	<0.5	<5.0	<5.0
	3/5/96	28.75	301.16	0	—	—	—	—	—	—
	4/23/96	28.25	301.66	0	—	—	—	—	—	—
	5/30/96	28.44	301.47	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	6/19/96	28.51	301.40	0	—	—	—	—	—	—
	7/15/96	28.67	301.24	0	—	—	—	—	—	—
	8/27/96	28.92	300.99	0	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	9/6/96	28.99	300.92	0	—	—	—	—	—	—
	10/28/96	29.06	300.85	0	—	—	—	—	—	—
	11/11/96	28.98	300.93	0	—	—	—	—	—	—
Supply Well	11/15/95	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	11/11/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
Trip Blank										
TB-LB	2/15/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	6/1/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	9/2/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	11/30/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	5/17/95	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	8/15/95	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—
	11/15/95	—	—	—	<50	<0.50	<0.50	<0.50	<0.50	<5.0
	2/27/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	5/30/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	8/27/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	11/11/96	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	<5.0
Bailer Blank										
BB	2/15/94	—	—	—	<50	<0.5	<0.5	<0.5	<0.5	—

Table 1. Water Level Data and Groundwater Analytical Results - Former Chevron Service Station #9-7127, Interstate 580 at Grant Line Road, Tracy, California (continued)

EXPLANATION:

TOC = Top of casing elevation
(ft) = feet
DTW = Depth to water
GWE = Groundwater elevation
msl = Measurements referenced relative to mean sea level
TPH(G) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl-tertiary-butyl ether
ppb = Parts per billion
--- = Not analyzed/Not applicable

ANALYTICAL METHODS:

TPH(G) = EPA Method 8015/5030
BTEX = EPA Method 8020
MTBE = EPA Method 8020

NOTES:

All top of casing elevations were surveyed by Tronoff Land Surveying, Davis, California on November 2, 1993.

Water level elevation data and laboratory analytical results prior to May 17, 1995, were compiled from Quarterly Monitoring Reports prepared for Chevron by Sierra Environmental Services.

1 GWE corrected for the presence of free-phase hydrocarbons using: GWE = [(TOC-DTW) + (0.8)(Product Thickness)]. 0.8 is the assumed specific gravity of free-phase hydrocarbons.

2 Estimated concentration. TFT surrogate recovery demonstrated sample specific matrix effect. Benzene and Toluene are estimated values due to low recovery of (TFT) surrogate. The (BFB) surrogate had acceptable recovery. Low surrogate recovery can be attributed to sample effervescence (GTEL).

3 Laboratory reported data obtained from multiple dilutions. Dilution factor noted represents the dilution used for majority of results.

4 Laboratory report indicates hydrocarbons in the gasoline range do not match the gasoline standard pattern.

5251.tqm

GETTLER-RYAN INC.

March 17, 1997

Job #5251.80

Mr. Phil Briggs
Chevron Products Company
P.O. Box 5004
San Ramon, CA 94583

Re: Former Chevron Service Station #9-7127
Interstate 580 and Grant Line Road
Tracy, California

Dear Mr. Briggs:

The letter documents the site visit performed by Gettler-Ryan Inc. On February 19, 1997, field personnel were on site to obtain a grab sample from the "supply well" at the above referenced site. The grab sample was analyzed for California Drinking Water Standards by Sequoia Analytical and reported in Table 1. The laboratory analytical results are attached.

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

Sincerely,

Deanna L. Harding
Project Coordinator

5251dws.ltr

Table 1: Supply Well Analytical Results
Attachments: Chain of Custody Document and Laboratory Analytical Reports

Table 1

Former Chevron Service Station #9-7127
Interstate 580 & Grant Line Road
Tracy, California

SUPPLY WELL
GENERAL MINERAL, PHYSICAL & INORGANIC CHEMICAL ANALYSES
(Drinking Water Standards)
Sampled February 19, 1997

Constituent	*(Actual)* Result	Maximum Contaminant Level (MCL)	Detection Limit for Reporting
Chloride (CI)	150 mg/L	250 mg/L+	2.0 mg/L
Nitrate	46 mg/L	45 mg/L	2.0 mg/L
Specific Conductance (E.C.)	1000 μmho/cm	900μmho/cm+	1.0 μmho/cm
Total Filterable Residue @ 180 C (TDS)	670 mg/L	500 mg/L+	1.0 mg/L
Iron (Fe)	0.47 μg/L	300 μg/L	100 μg/L
Manganese (MN)	0.11 μg/L	50 μg/L	30 μg/L
Total Coliform	Absent	---	---

+ = Indicates Secondary Drinking Water Standards

mg/L = miligram per liter/parts per million
μg/L = micrgram per liter/parts per billion
μmho/cm = Micromhos/per centimeter

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Date of Report: Mar 4, 1997
Lab Name: Sequoia Analytical
Sampler Name: F. Cline
Employed by: Gettler-Ryan/Geostrategies
Sample ID No.: 9702A15 01
Date/Time Sample Collected: 2/19/97 1130
Date/Time Sample Received @ Lab: 2/20/97 1238
Date Completed: Feb 26, 1997

GENERAL MINERAL, PHYSICAL, & INORGANIC CHEMICAL ANALYSES (4/95)

System Name: Gettler-Ryan/Geostrategies
System Number: _____
Name/No. of Sample Source: Supply Well

User ID: |_H_|_E_|_N_| Station Number: |___|___|___|___|___|___|___|___|___|___|___|___|___|___|

Date/Time of Sample: |_9_|_7_|_0_|_2_|_1_|_9_|_1_|_1_|_3_|_0_| (Y Y M M D D T T T T) Laboratory Code: |_5_|_1_|_1_|_3_|

Date Analyses Completed: |_9_|_7_|_0_|_2_|_2_|_6_| (Y Y M M D D)

Submitted by: _____ Phone #: _____

MCL/Reporting Units	Constituent	Entry #	Analyses Results	DLR
mg/L	Total Hardness (as CaC03)	00900	--	--
mg/L	Calcium (Ca)	00916	--	--
mg/L	Magnesium (Mg)	00927	--	--
mg/L	Sodium (Na)	00929	--	--
mg/L	Potassium (K)	00937	--	--
Total Cations	meq/L Value: --			
mg/L	Total Alkalinity (as CaC03)	00410	--	--
mg/L	Hydroxide (OH)	71830	--	--
mg/L	Carbonate (CO3)	00445	--	--
mg/L	Bicarbonate (HC03)	00440	--	--
* mg/L +	Sulfate (S04)	00945	--	0.50
* mg/L +	Chloride (Cl)	00940	150	2.0
45 mg/L	Nitrate (NO3)	71850	46	2.0
1.4-2.4 mg/L	Fluoride (F) Temp. Depend.	00951	--	0.10
Total Anions	meq/L Value: --			
Std Units	pH (Laboratory)	00403	--	--
** µmho/cm +	Specific Conductance (E.C.)	00095	1000	1.0
*** mg/L +	Total Filterable Residue at 180 C (TDS)	70300	670	1.0
15 UNITS	Apparent Color (Unfiltered)	00081	--	--
3.0 TON	Odor Threshold at 60 C	00086	--	--
5.0 NTU	Lab Turbidity	82079	--	--
0.50 mg/L	MBAS	38260	--	--

* 250-500-600 ** 900-1600-2200 *** 500-1000-1500

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INORGANIC CHEMICALS

MCL/Reporting Units	Constituent	Entry #	Analyses Results	DLR
1000 µg/L	Aluminum (Al)	01105	--	50
6.0 µg/L	Antimony	01097	--	6.0
50 µg/L	Arsenic (As)	01002	--	2.0
1000 µg/L	Barium (Ba)	01007	--	100
4.0 µg/L	Beryllium	01012	--	1.0
5.0 µg/L	Cadmium (Cd)	01027	--	1.0
50 µg/L +	Chromium (Total Cr)	01034	--	10
1000 µg/L +	Copper (Cu)	01042	--	50
300 µg/L	Iron (Fe)	01045	0.47	100
µg/L	Lead (Pb)	01051	--	5.0
50 µg/L	Manganese (Mn)	01055	0.11	30
2.0 µg/L	Mercury (Hg)	71900	--	1.0
100 µg/L	Nickel	01067	--	10
50 µg/L	Selenium (Se)	01147	--	5.0
100 µg/L	Silver (Ag)	01077	--	10
2.0 µg/L	Thallium	01059	--	1.0
5000 µg/L	Zinc (Zn)	01092	--	50

ADDITIONAL ANALYSES

NTU	Field Turbidity	82078	--	--
C	Source Temperature	00010	--	--
	Langelier Index Source Temp.	71814	--	--
	Langelier Index at 60 C	71813	--	--
Std. Units	Field pH	00400	--	--
	Aggressiveness Index	82383	--	--
mg/L	Silica	00955	--	--
mg/L	Phosphate	00650	--	--
mg/L	Iodide	71865	--	--
	Sodium Absorption Ratio	00931	--	--
7 MFL	Asbestos (*)	81855	--	0.20
	Boron	01020	--	--
1,000 µg/L	Nitrate as N (Nitrogen)	00618	--	400
10,000 µg/L	Nitrate + Nitrite as N	A-029	--	400
1,000 µg/L	Nitrite as N (Nitrogen)	00620	--	400
200 µg/L	Cyanide	01291	--	100
mg/L	Ammonia	00612	--	--
µg/L	Lithium	01132	--	--
mg/L	Bromide	82298	--	--
mg/L	Bromate	A-027	--	--

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

\+ indicates Secondary Drinking Water Standards

* Detection Limit for Reporting Purposes

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite G
Dublin, CA 94568

Attention: Deanna Harding

Client Proj. ID: Chevron #9-7127

Lab Proj. ID: 9702E76

Sampled: 02/19/97
Received: 02/20/97
Analyzed: see below

Reported: 02/28/97

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9702E76-01				
Sample Desc : **LIQUID,Supply Well**				
Total Coliform	**P/A**	**02/20/97**	**N/A**	**Absent**

alytes reported as N.D. were not present above the stated limit of detection.

EQUOIA ANALYTICAL - ELAP #1210

ike Gregory
oject Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-7127
Matrix: Liquid
Work Order #: 9702A15 01

Reported: Mar 4, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0224976010MDC	ME0224976010MDC	ME0224976010MDC	ME0224976010MDC
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3010	EPA 3010	EPA 3010	EPA 3010
Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser
MS/MSD #:	970268406	970268406	970268406	970268406
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/24/97	2/24/97	2/24/97	2/24/97
Analyzed Date:	2/26/97	2/26/97	2/26/97	2/26/97
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
Result:	1.0	1.0	1.0	1.0
MS % Recovery:	100	100	100	100
Dup. Result:	1.0	1.0	1.0	1.0
MSD % Recov.:	100	100	100	100
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	BLK022497BS	BLK022497BS	BLK022497BS	BLK022497BS
Prepared Date:	2/24/97	2/24/97	2/24/97	2/24/97
Analyzed Date:	2/26/97	2/26/97	2/26/97	2/26/97
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	1.0 mg/L	1.0 mg/L	1.0 mg/L	1.0 mg/L
LCS Result:	1.0	1.0	1.0	1.1
LCS % Recov.:	100	100	100	110
MS/MSD LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste J
Dublin, CA 94568
Attention: Deanna Harding

Client Project ID: Chevron 9-7127
Matrix: Liquid
Work Order #: 9702A15 01

Reported: Mar 4, 1997

QUALITY CONTROL DATA REPORT

Analyte:	Conductivity	Total Dissolved Solids	Chloride	Nitrate
QC Batch#:	IN022097120100A	IN022597160100A	IN0220973000ACB	IN0220973000ACB
Analy. Method:	EPA 120.1	EPA 160.1	EPA 300.0	EPA 300.0
Prep. Method:	N.A.	N.A.	N.A.	N.A.
Analyst:	J. Saadeh	N. Le	S. Fong	S. Fong
MS/MSD #:	9702A1201	9702A1501	9702A1501	9702A1501
Sample Conc.:	460	340	150	46
Prepared Date:	2/20/97	2/25/97	2/20/97	2/20/97
Analyzed Date:	2/20/97	2/25/97	2/21/97	2/21/97
Instrument I.D.#:	MANUAL	MANUAL	INIC2	INIC2
Conc. Spiked:	1400 µmhos/cn	250 mg/L	10 mg/L	10 mg/L
Result:	1900	570	160	56
MS % Recovery:	97	92	100	100
Dup. Result:	1800	580	160	56
MSD % Recov.:	96	96	100	100
RPD:	5.4	1.7	0.0	0.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	LCS022097	LCS022597	LCS022097	LCS022097
Prepared Date:	2/20/97	2/25/97	2/20/97	2/20/97
Analyzed Date:	2/20/97	2/25/97	2/21/97	2/21/97
Instrument I.D.#:	MANUAL	MANUAL	INIC2	INIC2
Conc. Spiked:	710 µmhos/cm	500 mg/L	10 mg/L	10 mg/L
LCS Result:	680	480	9.5	9.6
LCS % Recov.:	96	96	9.5	96
MS/MSD Control Limits	75-125	75-125	75-125	75-125
LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Fax C[illegible] of Lab Report and COC to Chevron Co[illegible]ct: ☐ No

Chain-of-Custody-Record

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

Chevron Facility Number: #9-7127
Facility Address: I-580 & GRANT LINE ROAD
Consultant Project Number: 5251
Consultant Name: Gettler-Ryan
Address: 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name): Deanna Harding
(Phone): 551-7555 (Fax Number): 551-7888

Chevron Contact (Name): PHIL BRIGGS
(Phone): (510) 842-9136
Laboratory Name: SEQUOIA Service Code: 2202790
Laboratory Service Order #: 9050840
Samples Collected by (Name): Frank Cline
Collection Date: 2/19/97
Signature:

9702E76

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8015) (8020)	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)	Drinking Water Standards: EPA Method 300.1	Nitrate chloride 200.1/Iron maganese 120.1/	specific conductance	Total Coliform Bacteria e-coli	Total Dissolved Solids (TDS) 160.1	DO NOT BILL TB-LB ANALYSIS Remarks
Supply Well		5	W	G	1130	#Wls n/a	Y									X	X	X	X	X	Per the attached DFA - Thanks

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	2-19-97 1105	D. Harding	G-R Inc.	2/19/97
D. Harding	G-R	2/20/97 1045		SEQ	2/20/97 1045
	SEQ	2/20/97 1230	Received For Laboratory By (Signature)		Date/Time

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

ATTACHMENT C

HISTORICAL SOIL CERTIFIED ANALYTICAL REPORTS

TANK REMOVAL SAMPLING

April 4, 1991 / 910404-G-1

SCOPE OF REQUESTED SERVICES

In accordance with your request, our office was asked to provide field personnel who would be sent to the site for the specific purpose of obtaining environmental samples following the removal of three gasoline tanks, one waste oil tank and one fuel oil tank.

Our personnel would collect the samples, arrange for the requested analyses of the samples and maintain adequate documentation for the issuance of a formal Sampling Report. The collection of environmental samples was to be performed in accordance with the requirements of the State Water Resources Control Board, Regional Water Quality Control Board, and the specific directions of the Local Implementing Agency (LIA) inspector.

The subject site is located within the overall jurisdiction of the Regional Water Quality Control Board -- Central Valley Region (Region 5). Initial inspection and evaluation of sites in this area is customarily conducted by the local implementing agency (LIA): the Alameda County Health Agency.

EXECUTION OF THE WORK PERFORMED ON APRIL 4, 1991

Personnel were dispatched from our office and arrived at the subject site on Thursday, April 4, 1991.

Chevron USA, Inc. was represented by Mr. Gordon Johnson and Ms. Nancy Vukelich.

The local implementing agency, Alameda County Health Agency, was represented by Mr. Gil Wistar, who was present to observe the tank removal and sampling.

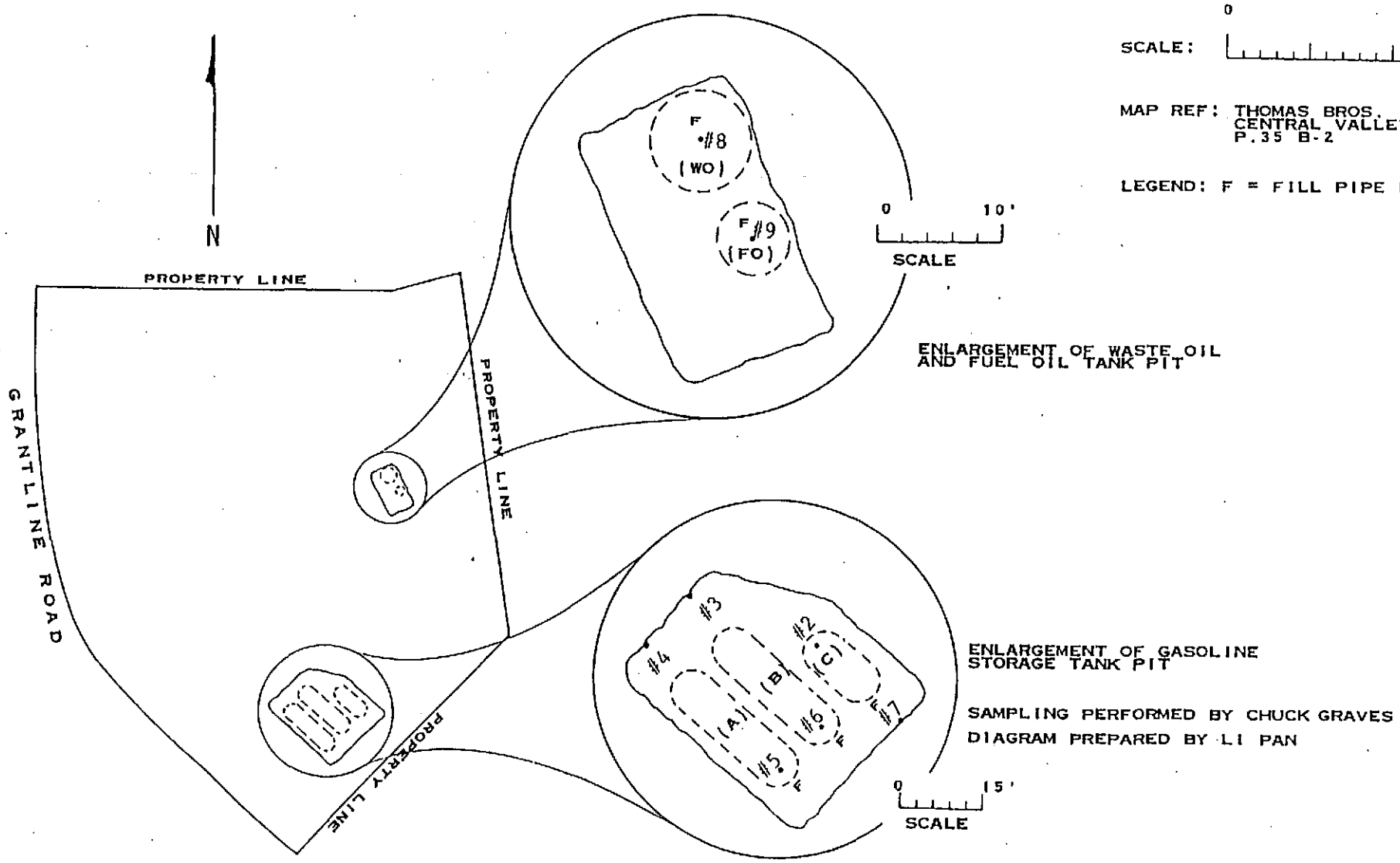
In accordance with the local regulations and the field judgment of the LIA representative, a detailed inspection of each tank was conducted following their removal from the open excavation. The tanks were visually inspected and likely failure points were probed with small pointed metal examination tools. No holes were observed in any of the tanks.

TANK I.D.	SIZE IN GALLONS	TANK CONTENT	MATERIAL OF CONSTRUCTION	INSPECTION FOUND
A	10,000	GASOLINE	FIBERGLASS	NO HOLES
B	10,000	GASOLINE	FIBERGLASS	NO HOLES
C	6,000	GASOLINE	FIBERGLASS	NO HOLES
WO	1,000	WASTE OIL	FIBERGLASS/ SPHERICAL	NO HOLES
FO	750	FUEL OIL	FIBERGLASS/ SPHERICAL	NO HOLES

TANK REMOVAL DIAGRAM

April 4, 1991 / 910404-G-1

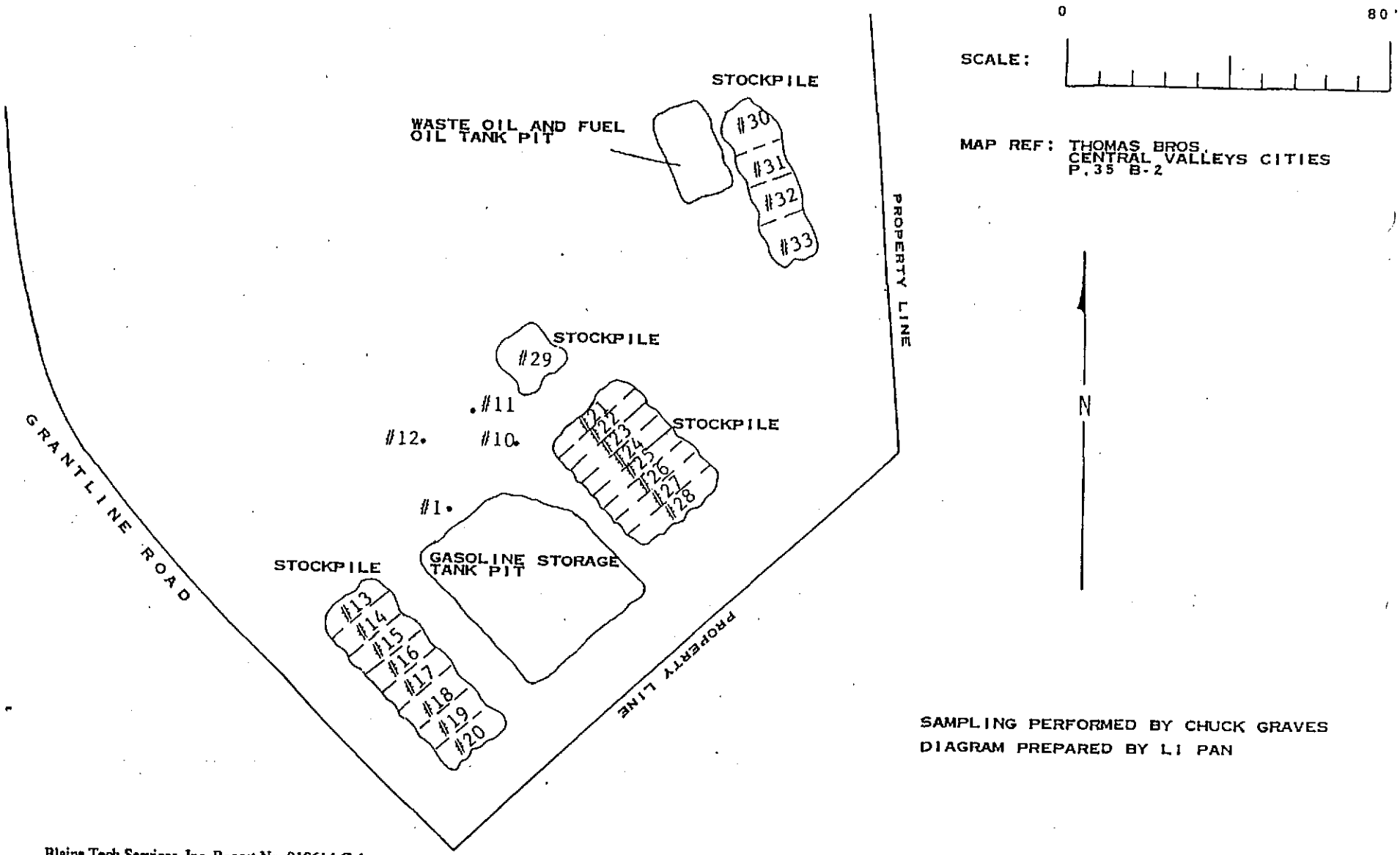
DIAGRAM ONE



TANK REMOVAL DIAGRAM

April 4, 1991 / 910404-G-1

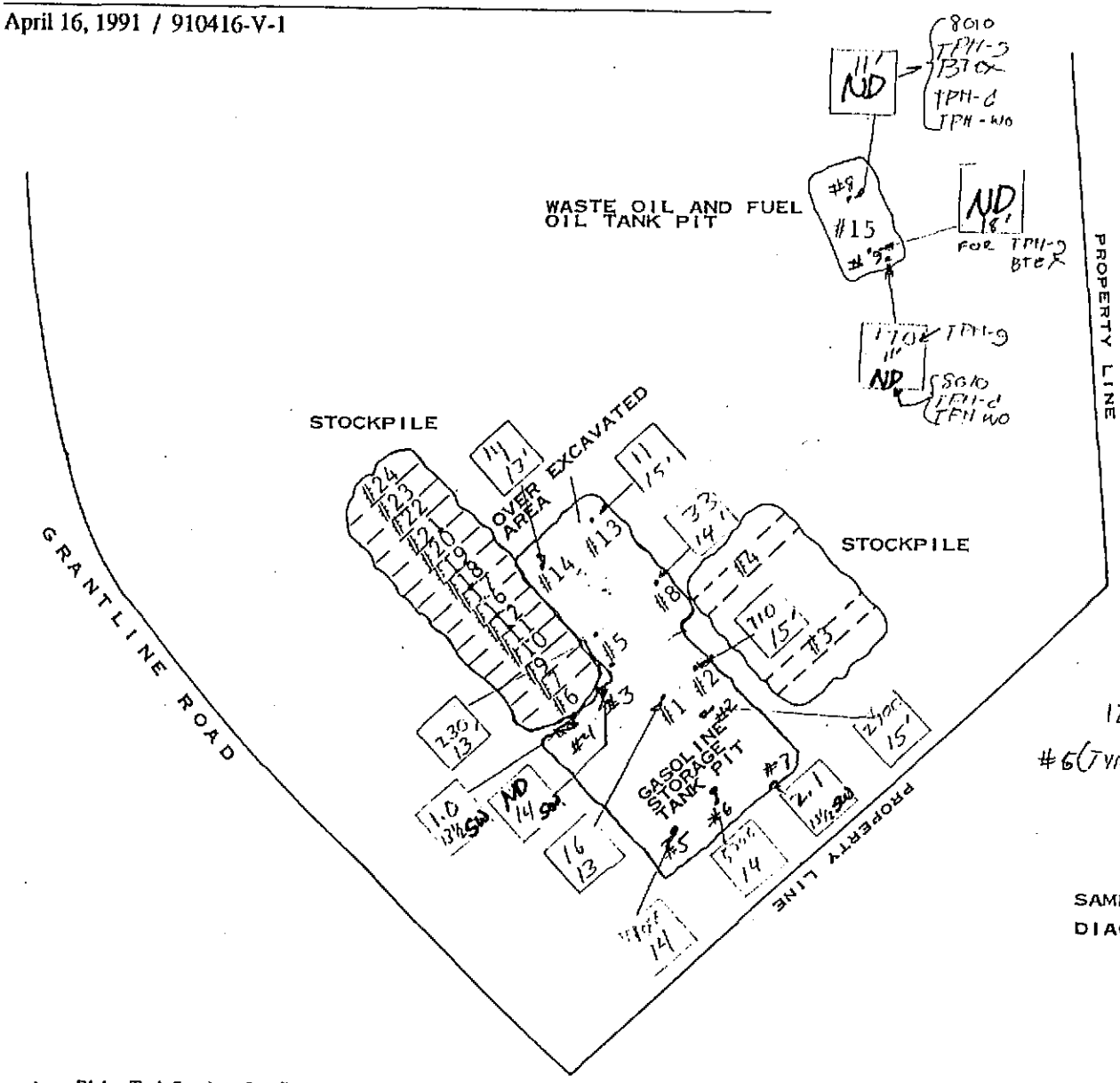
DIAGRAM TWO



SAMPLING PERFORMED BY CHUCK GRAVES
DIAGRAM PREPARED BY L.I PAN

ADDITIONAL EXCAVATION DIAGRAM

April 16, 1991 / 910416-V-1



SCALE: 0 — 80'

MAP REF: THOMAS BROS. CENTRAL VALLEY CITIES P. 35 B-2

N

1200 = TPH-g in PPM

#6 (TYPED) - Sampled 04/04/91

#6 = Sampled 04/04/91

SAMPLING PERFORMED BY FRED VAN DEN BROECK

DIAGRAM PREPARED BY LI PAN

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in Parts Per Million or Parts Per Billion

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS RMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BEN-ZENE	PPM TOL-UENE	PPM ETHYL BEN-ZENE	PPM XY-LENES	PPM TOTAL LEAD
AF	14.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#5	SEQUOIA	104-0738	4000	ND	41	66	310	13
Aop	13.5	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	#4	SEQUOIA	104-0737	1.0	0.0070	ND	0.0050	0.030	9.1
BF	14.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#6	SEQUOIA	104-0739	5700	20	220	110	560	80
Bop	14.0	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	#3	SEQUOIA	104-0736	ND	0.0070	0.016	0.012	0.030	7.7
CF	12.5	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	#7	SEQUOIA	104-0740	2.1	0.018	0.013	0.014	0.046	6.9
Cop	15.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#2	SEQUOIA	104-0735	2900	30	180	60	350	14
	13.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#1	SEQUOIA	104-2649	16	0.0090	0.014	0.021	0.17	3.6
	15.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#2	SEQUOIA	104-2650	710	0.013	0.063	0.096	0.41	8.1
PRODUCT LINE/DISPENSER PUMP ISLAND															
#1	2.5	LIA	INTRFACE	SOIL	04/04/91	910404-G-1	#1	SEQUOIA	104-0734	1200	3.3	17	17	86	17
#10	4.0	LIA	INTRFACE	SOIL	04/04/91	910404-G-1	#10	SEQUOIA	104-0743	3.3	0.20	0.043	0.060	0.16	7.7
#11	4.0	LIA	INTRFACE	SOIL	04/04/91	910404-G-1	#11	SEQUOIA	104-0744	750	12	33	19	110	9.5
#12	4.0	LIA	INTRFACE	SOIL	04/04/91	910404-G-1	#12	SEQUOIA	104-0745	15	0.23	0.19	0.26	1.3	6.9
#5	13.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#5	SEQUOIA	104-2653	220	ND	0.80	1.7	10	2.6
#8	14.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#8	SEQUOIA	104-2656	33	0.085	0.24	0.27	1.5	6.1
#13	15.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#13	SEQUOIA	104-2661	11	ND	0.047	0.044	0.31	6.1
#14	13.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#14	SEQUOIA	104-2662	9.2	0.0050	0.0060	0.030	0.13	3.6

Standard = The location conformed to established (professional or regulatory) definitions for the type of sample being collected. Example: a standard RWQCB interface sample.

LIA = The local implementing agency inspector chose a sampling location that was different from a standard (pre-defined) location.

Elective = Elective samples are not taken to comply with regulatory requirements, but to obtain information. Sampling locations may be chosen by the property owner, the contractor, a consultant, etc. The samples may or may not be analyzed.

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in Parts Per Million or Parts Per Billion

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH AS GAS	PPM BEN-ZENE	PPM TOL-UENE	PPM ETHYL BEN-ZENE	PPM XY-LENES	PPM TOTAL LEAD
WoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#8	SEQUOIA	104-0741	ND	ND	ND	ND	ND	3.3
FoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#9	SEQUOIA	104-0742	170	ND	ND	ND	2.7	1.7
#15	18.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	#15	SEQUOIA	104-2663	ND	ND	ND	ND	ND	6.1
STOCK	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#30	SEQUOIA	104-0763	ND	ND	ND	ND	ND	2.6
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#31	SEQUOIA	104-0764	ND	ND	ND	ND	ND	4.1
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#32	SEQUOIA	104-0765	ND	ND	ND	ND	ND	5.9
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#33	SEQUOIA	104-0766	ND	ND	ND	ND	ND	2.5

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM TPH-HBF DIESEL	PPM TOTAL OIL & GREASE	PPB EPA 8010 COMPOUNDS
WoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#8	SEQUOIA	104-0741	ND	ND	ND
FoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#9	SEQUOIA	104-0742	ND	ND	ND
STOCK	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#30	SEQUOIA	104-0763	ND	ND	ND
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#31	SEQUOIA	104-0764	ND	ND	ND
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#32	SEQUOIA	104-0765	2.6	ND	ND
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#33	SEQUOIA	104-0766	3.4	ND	ND

I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE & METHOD FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HMTL LABORATORY	LABORATORY SAMPLE I.D.	PPM CADMIUM	PPM CHROMIUM	PPM LEAD	PPM ZINC	PPM NICKEL
WoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#8	SEQUOIA	104-0741	4.8	7.9	3.3	23	10
FoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	#9	SEQUOIA	104-0742	2.2	4.4	1.7	13	8.5
STOCK	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#30	SEQUOIA	104-0763	3.4	8.4	2.6	22	9.7
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#31	SEQUOIA	104-0764	2.8	7.9	4.1	25	15
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#32	SEQUOIA	104-0765	5.2	18	5.9	42	16
	6-12"	RWQCB	DISCRETE	SOIL	04/04/91	910404-G-1	#33	SEQUOIA	104-0766	2.7	5.9	2.5	21	11

Standard - The location conformed to established (professional or regulatory) definitions for the type of sample being collected. Example: a standard RWQCB interface sample.

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Elective - Elective samples are not taken to comply with regulatory requirements, but to obtain information. Sampling locations may be chosen by the property owner, the contractor, a consultant, etc. The samples may or may not be analyzed.

Table 2
Soil Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7127
Highway I-580 at Grant Line Road
Tracy, California

Boring Number	Sample Date	Sample Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
B-1	12/09/92	7	ND	ND	ND	ND	ND
		12.5	4.0	ND	ND	ND	0.015
		17.5	ND	ND	0.014	ND	0.025
		21.5	ND	ND	0.013	ND	0.018
MW-1	12/08/92	19	ND	ND	0.0056	ND	0.0079
		24	2,600	<5.0*	79	30	200
		29	8,100	21	560	150	840
		30.5	ND	ND	ND	ND	ND
		38.5	ND	ND	0.013	ND	0.024
Detection Limits:			1.0	0.005	0.005	0.005	0.005

ppm = Parts per million
ND = Not detected
* Elevated method reporting limit.