Chevron

July 2, 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 Tier 2 Risk-Based Corrective Action (RBCA) evaluation that has been prepared by our consultant Pacific Environmental Group, Inc. for the above noted site. A Tier 1 RBCA evaluation has already been conducted for the site and the results indicated that it would be appropriate to conduct a Tier 2 RBCA and use site-specific data in lieu of the default values inherent to a Tier 1 evaluation.

This data was collected by obtaining a soil sample near the site that would have similar physical characteristics and would be reasonably representative of the site conditions. The sample collected was submitted to a lab where the permeability , volume of solids, volume of voids, percent porosity, percent saturation, fraction of organic carbon, pH, and specific gravity testing was determined.

The above noted site specific data along with ground water monitoring and subsurface soil data were used to recalculate the concentrations for the Tier 2 evaluation to present a more realistic interpretation of the site. All this data was utilized into the Groundwater Services, Inc. (GSI) software to evaluate the potential risk to human health and safety from the site.

Since subsurface soil and ground water are known to be impacted with BTEX constituents, these media were evaluated as potential pathways. Therefore, inhalation of ground water and subsurface soil vapors indoors and inhalation of ground water and subsurface soil vapors outdoors were four of the potential pathways evaluated. The last two pathways evaluated were subsurface soil leaching to ground water and ground water ingestion. All the Tier 2 RBCA evaluations were completed using GSI's computer modeling software.

7/18/97

ML -

Here is a revised RBCA-2. Still does not pass $10^{-5}$ but passes $10^{-4}$ risk for commercial use

I think you have the 1st RBCA performed for the site, too.

Inhalation for the site was evaluated by modeling the risk from ground water volatilization to enclosed spaces and to ambient air. All BTEX concentrations were below applicable Site Specific Target Levels (SSTLs) at the specified risk level except for benzene-CA for the modeled volatilization of ground water to indoor air.

Ingestion was evaluated by modeling the risk for human ingestion of ground water on the site. All BTEX concentrations were below the applicable SSTLs at the specified risk levels except for benzene.

Inhalation for the site was evaluated by modeling the risk from subsurface soil volatilization to enclosed spaces and to ambient air. All BTEX 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 ground water was also modeled even though it is not an exposure pathway, as it could provide a source for possible ground water ingestion. All BTEX concentrations were below the applicable SSTLs at the specified risk levels except for benzene for the modeled leaching of subsurface soil to ground water.

The benzene concentrations at the site have shown a slight risk to commercial workers for indoor inhalation and for ground water ingestion and therefore. some corrective action needs to be taken in order to reduce or eliminate the possible exposure of future employees or customers at the site.

Chevron proposes to implement a risk management plan to address these corrective action measures. The risk management plan would contain at lease two provisions. The first provision would be to reduce the risk for benzene inhalation indoors by placing a vapor barrier underneath a floor of new building constructed on the site. This vapor barrier would eliminate vapors from traveling up from the soil or ground water and should eliminate the risk from benzene for indoor air. As previously noted, inhaling outdoor air does not pose a risk from any BTEX constituents in the ground water or soil.

The second provision would be to abandoned the existing water supply if it is not needed, since ingestion of the ground water has shown to be a risk from benzene. As noted in previous correspondence, this water supply well was not installed as a drinking water well but to operate the restrooms of the former service station. Chevron also had the water supply well recently sampled and analyzed and it does not meet drinking water standards for human consumption. However, if the proposed site use indicates that non-potable water

is necessary, the supply well could still be used, but there could be possibility that someone could ingest the ground water, even though it is non-potable water. To eliminate the potential risk of someone ingesting the ground water, it is recommended that a carbon adsorption vessel be attached to the water supply well.

By providing the corrective action measures outlined above, the potential risk to onsite commercial workers or customers should be limited or prevented. Natural attentuation appears to be occurring at this site which will further reduce the potential risk from the BTEX constituents.

If you have any comments or questions to this RBCA report, call me at (510)842-9136, or contact Michelle Gracia with Pacific Environmental Group at (408)441-7500.

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 (Report not included)
Pacific Envir. Group, 2025 Gateway Place, Suite 440, San Jose, CA 95110

4/15-5:30 1.3

PACIFIC
ENVIRONMENTAL
GROUP, INC.

Date: May 13, 1997
Project: 325-004.1E

To: Ms. Eva Chu
Alameda County Health Care Services
1131 Harbor Parkway
Alameda, CA 94502

We have enclosed:

| Copies | Description |
|---|---|
| 1 | Risk-Based Corrective Action - Tier 2 |
| | Former Chevron Service Station 9-7127 |
| | Grant Line Road at Interstate 580 |
| | Tracy, California |
| | |

For your:
___ Use
___ Approval
_X_ Review
___ Information

Comments: Please find enclosed the Risk-Based Corrective Action - Tier 2 for Former Chevron Service Station 9-7127. Please notify me with any questions and comments you may have.

Ross Tinline RT.

cc: Mr Phil Briggs, Chevron Products Company

2025 Gateway Place, Suite 440, San Jose, California 95110 (408) 441-7500 FAX (408) 441-7539

PACIFIC
ENVIRONMENTAL
GROUP, INC.

May 12, 1997
Project 325-004.1E

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

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

Preliminary Risk Assessment -



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). 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 generally 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.

what about porosity

**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 mean for the last four quarters of data (November 1995, February, May, and August 1996) was calculated. However, non-detectable concentrations were not included in the calculation in order to provide a conservative risk assessment. Since the data were not normally distributed, 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.

Is this how they ~~choose~~ geo mean calculation which you don't allow, right?

need calculat

Why mean lognormally distributed

- **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 sidewall and interface samples from the removal of the underground storage tanks (USTs) in 1991 and the soil data collected during the installation of Monitoring Well MW-1 in 1992. Monitoring Well MW-5 was also considered. However, since all other pertinent soil data reported non-detectable BTEX compound concentrations, the non-detectable concentrations were not included in the calculation of 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-day)$^{-1}$ (California** Environmental Protection Agency, Office of Environmental Health Hazard Assessment, April 10, 1995). The Federal slope factor is 0.29 (mg/kg-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 | 130 | 0.61 | No |
| Benzene - CA | 0.32 | 38 | 0.17 | Yes |
| Ethylbenzene | 0.58 | >Sol | 150 | No |
| Toluene | 0.59 | >Sol | 65 | 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 | 0.29 | 220 | 0.53 | No |
| Benzene - CA | 0.29 | 63 | 0.15 | Yes |
| Ethylbenzene | 1.2 | >Res | >Res | No |
| Toluene | 2.2 | >Res | 160 | No |
| Xylenes | 4.9 | >Res | >Res | No |

mg/kg = Milligrams per kilogram
>Res = Selected risk level is not exceeded for pure compound present at any concentration
>Sol = Selected risk level is not exceeded for all possible dissolved levels (≤ pure component solubility).



Benzene Conc was used for mean?

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 | 0.29 | 0.13 | Yes |
| Benzene - CA | 0.29 | 0.037 | Yes |
| Ethylbenzene | 1.2 | 27 | No |
| Toluene | 2.2 | 73 | No |
| Xylenes | 4.9 | >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.

need construction details

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.

parameters may be above MCLs but still can be potable if treated. TDS < 3,000 .·. OK.

## CONCLUSION

PACIFIC believes that the risk at the above referenced 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.

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

Sincerely,

**Pacific Environmental Group, Inc.**

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.

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

Attachments:
Table 1 - RBCA Default/Site-Specific Data
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 | 12.5 |
| Capillary zone thickness (ft) | 0.164 | 0.5 |
| Depth to Groundwater (ft) | 9.844 | 13 |
| **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 | 0.2 |
| Foundation crack | ~~0.26~~ 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 |

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

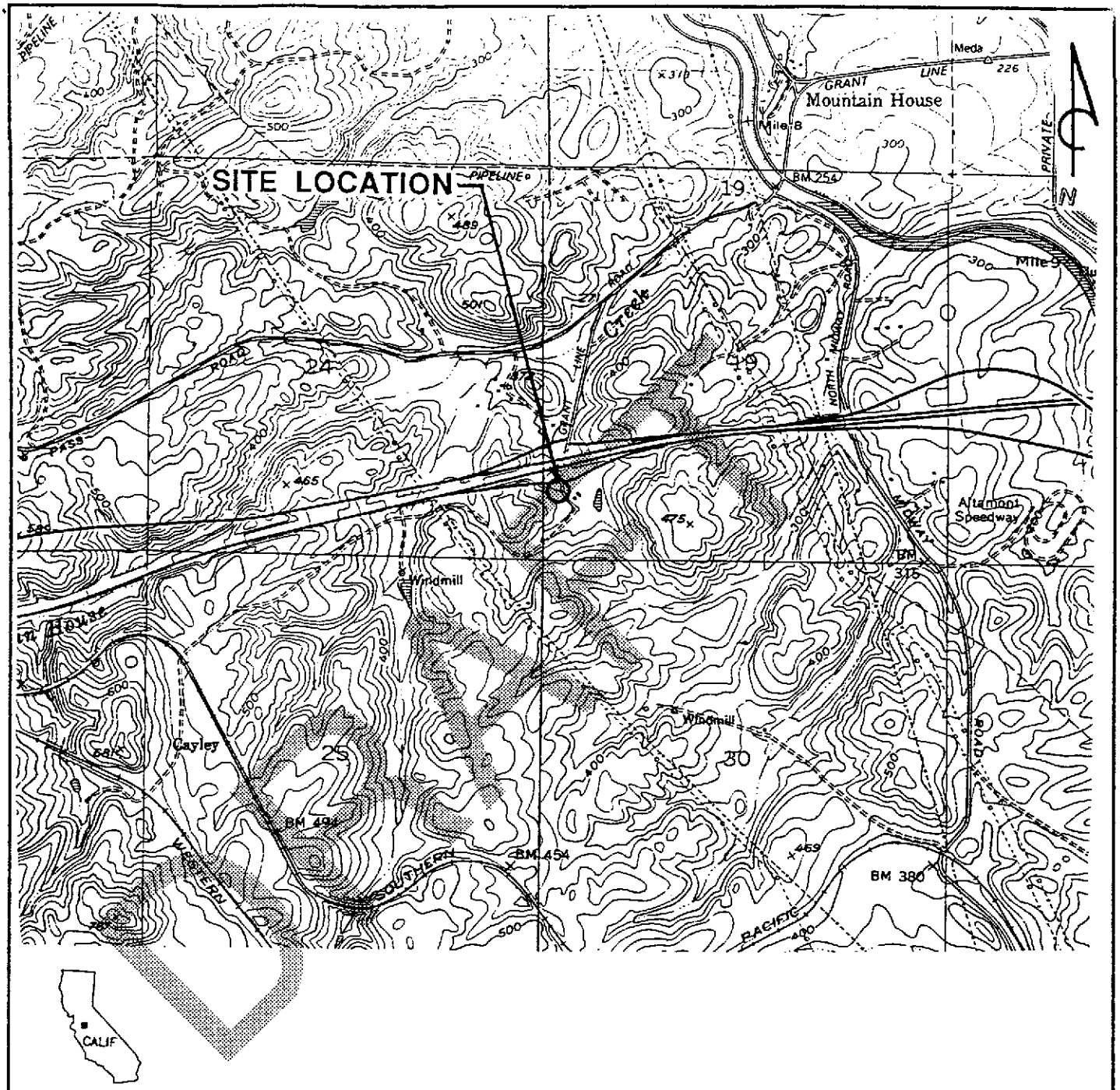
→ GW more like 29' if fill material is included — 13' is only for MW 5, 6, which is probably in uncut embankment.

how were these determined

?

Building factor

Crack factor ?




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

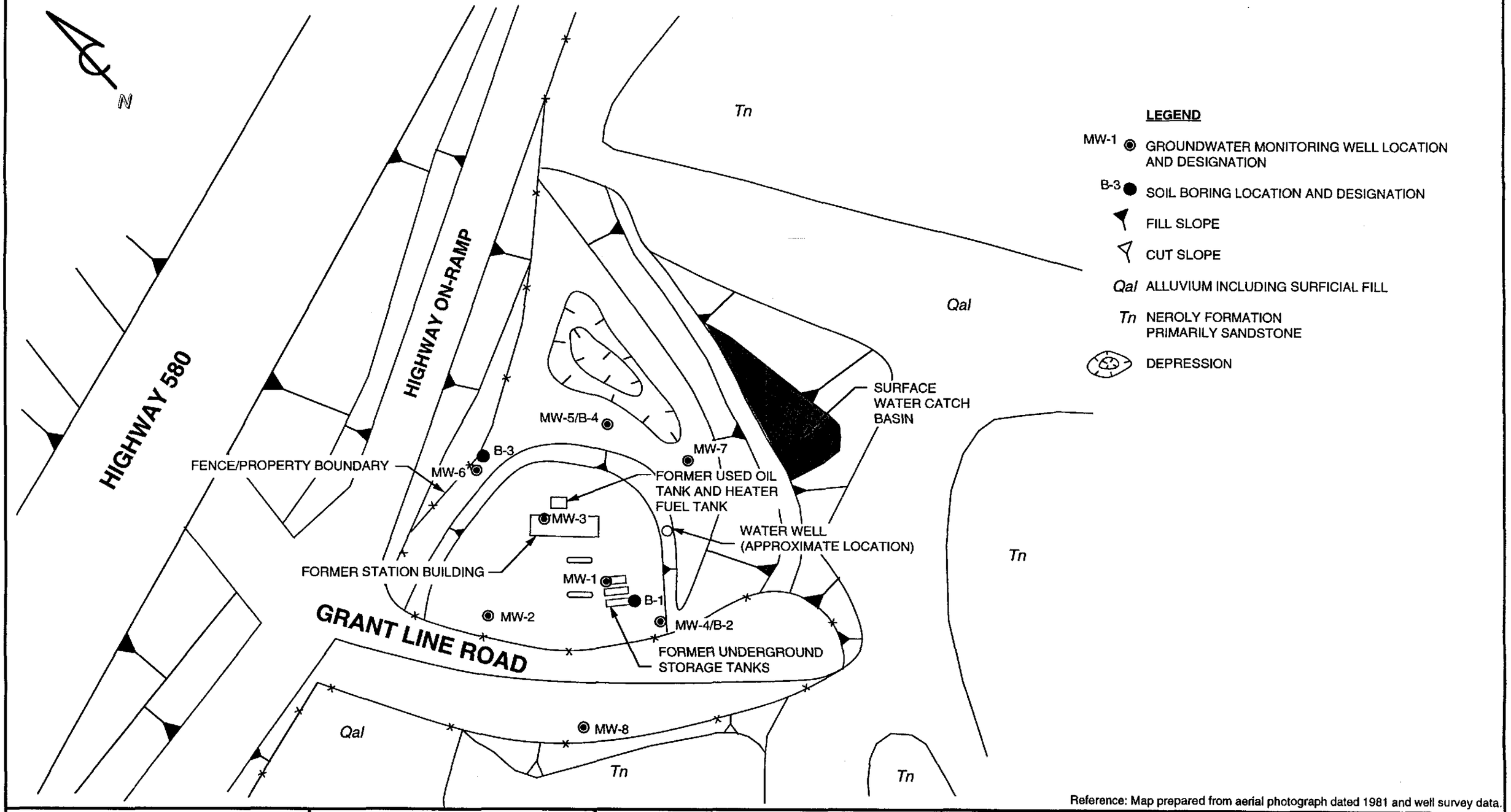
PACIFIC ENVIRONMENTAL GROUP, INC.

**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

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,

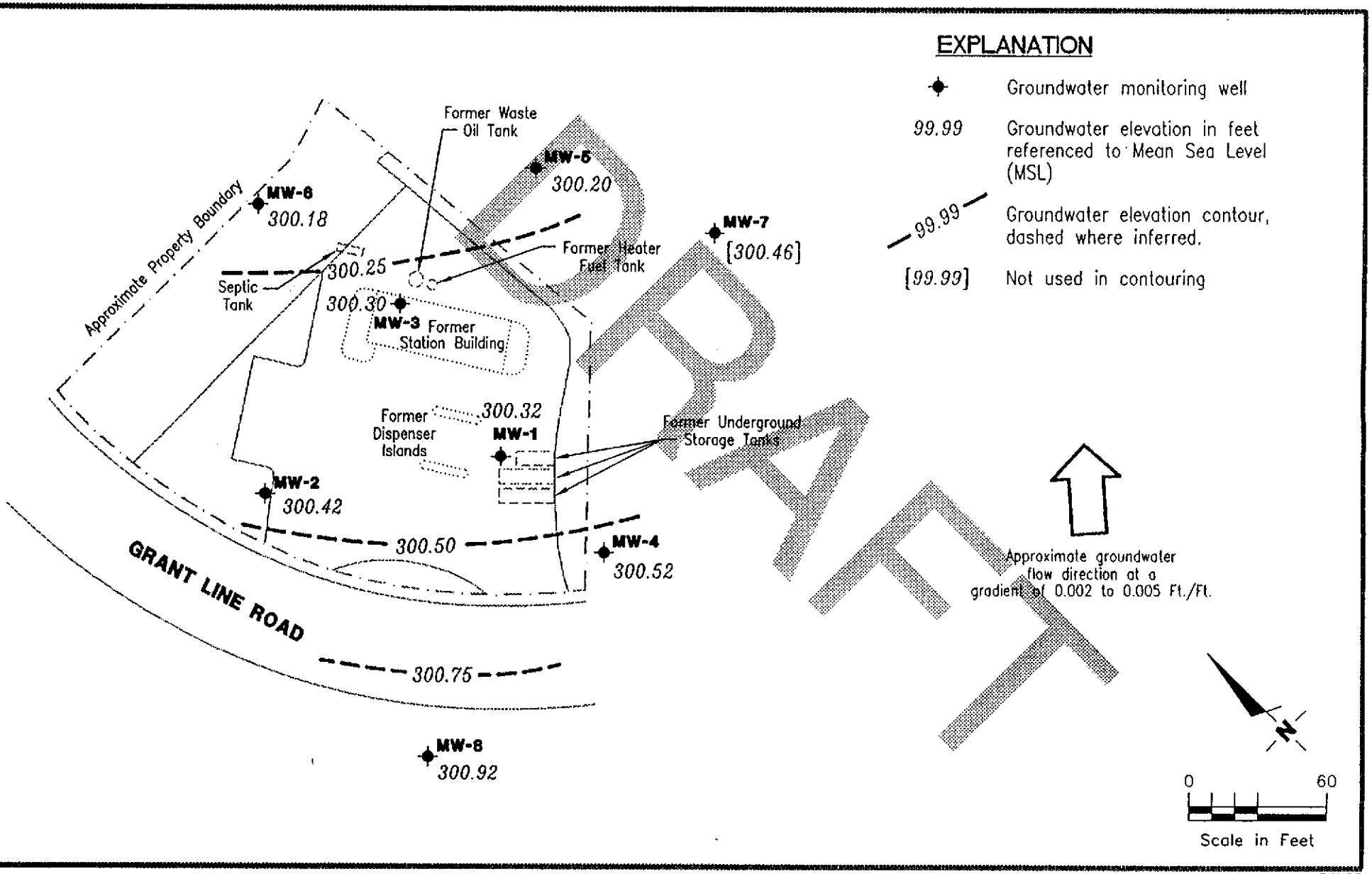
Deanna L. Harding
Project Coordinator

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



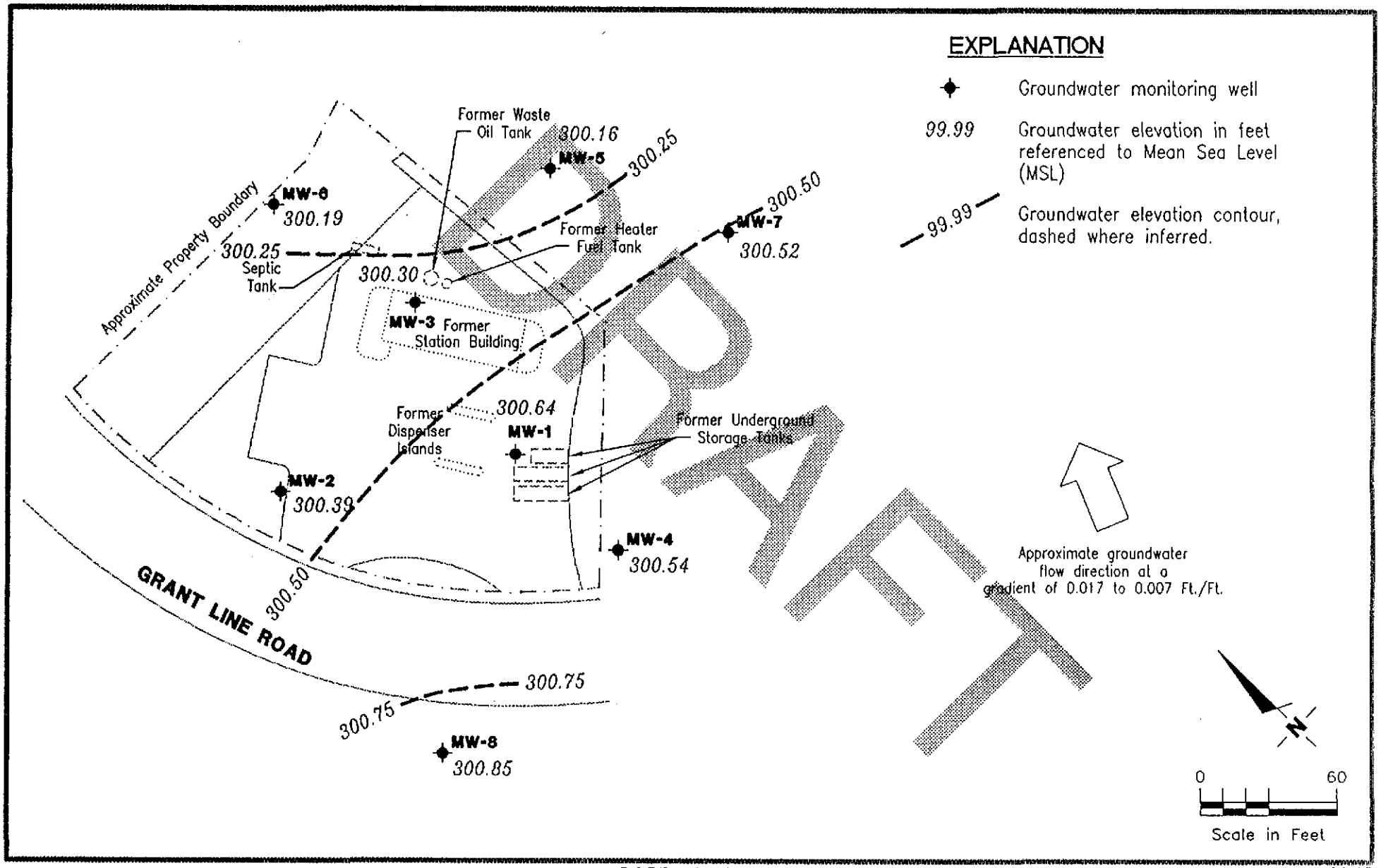

**Gettler - Ryan Inc.**

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 | | September 6, 1996 | |

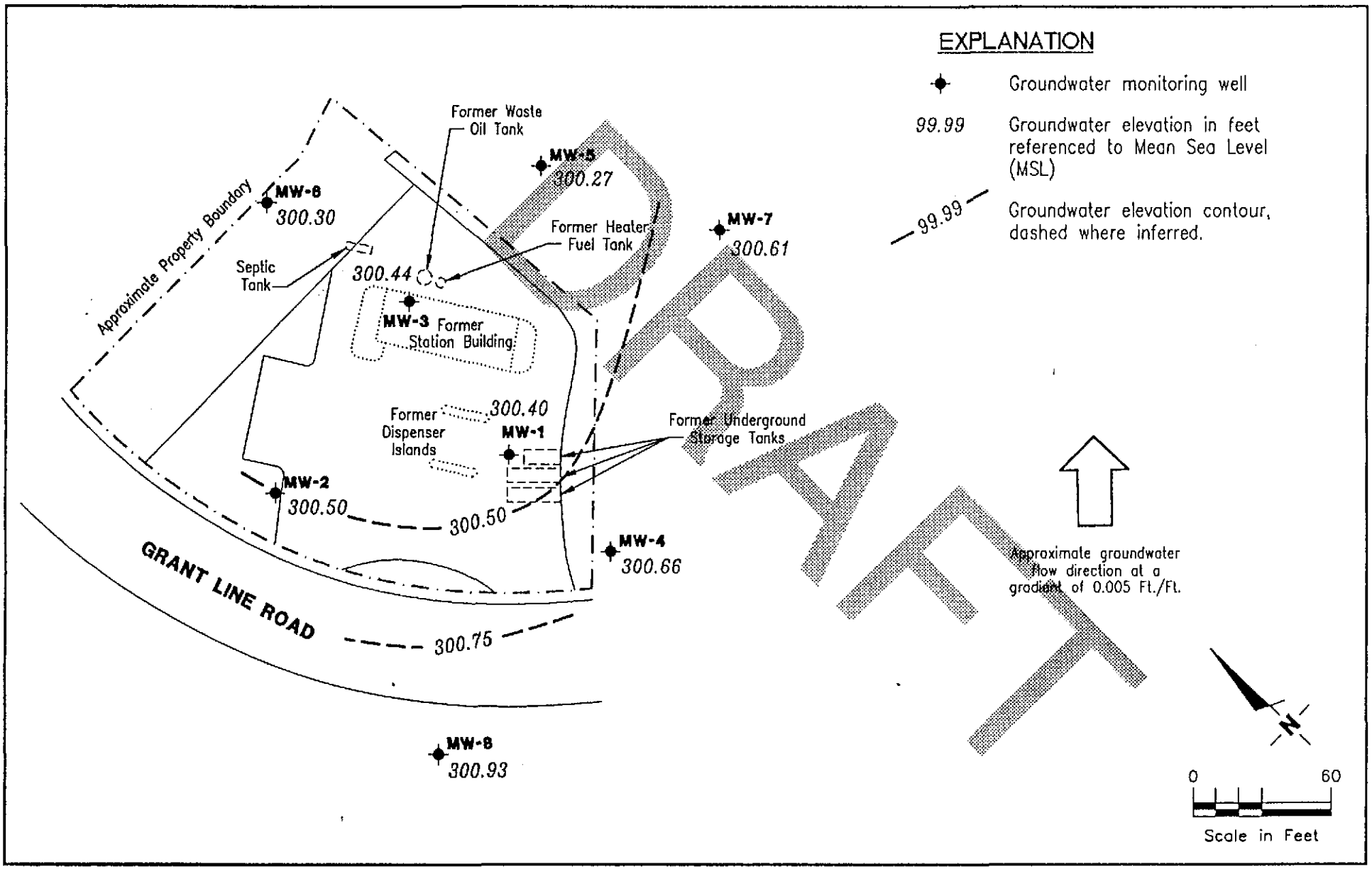



**Gettler - Ryan Inc.**
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

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 | PL | 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 | --- |

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 | — | — | — | — | — | — |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 1/17/96 | [illegible] | [illegible] | 0 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 1/5/96 | [illegible] | [illegible] | 0 | | | | | | |
| 4/24/96 | [illegible] | [illegible] | 0 | | | | | | |
| 5/30/96 | [illegible] | [illegible] | 0 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| 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 | --- | --- | --- | --- | --- | --- |



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Field Blank | | | | | | | | | | |
| FB | 9/13/94 | | | | <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 (Cl) | 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

change 0.5 for
233 Junction
under 45
1/21/97

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 Sampler Name: F. Cline Date/Time Sample Collected: 2/19/97 1130
Lab Name: Sequoia Analytical Employed by: Gettler-Ryan/Geostrategies
Date/Time Sample Received @ Lab: 2/20/97 1238
Sample ID No.: 9702A15 01 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 CaCO3) | 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 CaCO3) | 00410 | -- | -- |
| mg/L | Hydroxide (OH) | 71830 | -- | -- |
| mg/L | Carbonate (CO3) | 00445 | -- | -- |
| mg/L | Bicarbonate (HCO3) | 00440 | -- | -- |
| * mg/L + | Sulfate (SO4) | 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

Sequoia Analytical

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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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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

RECEIVED

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

Client Proj. ID: Chevron #9-7127
Lab Proj. ID: 9702E76

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

Attention: Deanna Harding

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 |



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

**SEQUOIA ANALYTICAL** - ELAP #1210

Mike Gregory
Project Manager

Fax c / of Lab Report and COC to Chevron Cc ict: ☐ 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: ZZ02790
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 (8015) w/BTEX (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 manganese 120.1/ | specific conductance | Total Coliform Bacteria e-coli | Total Dissolved Solids (TDS) 160.1 | DO NOT BILL TB-LB ANALYSIS<br>Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Supply Well | | 5 | W | G | 1130 | HNO3 to pH<2 | Y | | | | | | | | | X | X | X | X | X | Per the attached Data - Thanks |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| | G-R Inc. | 2-19-97 105 | D. Harding | G-R Inc. | 2/19/97 |
| D. Harding | G-R | 2/20/97 125 | | 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

COC-3.Dot(03/97)rtn

03/27/97 16:28 ☎510 842 8370 CHEVRON U.S.A. 007/007

# 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.

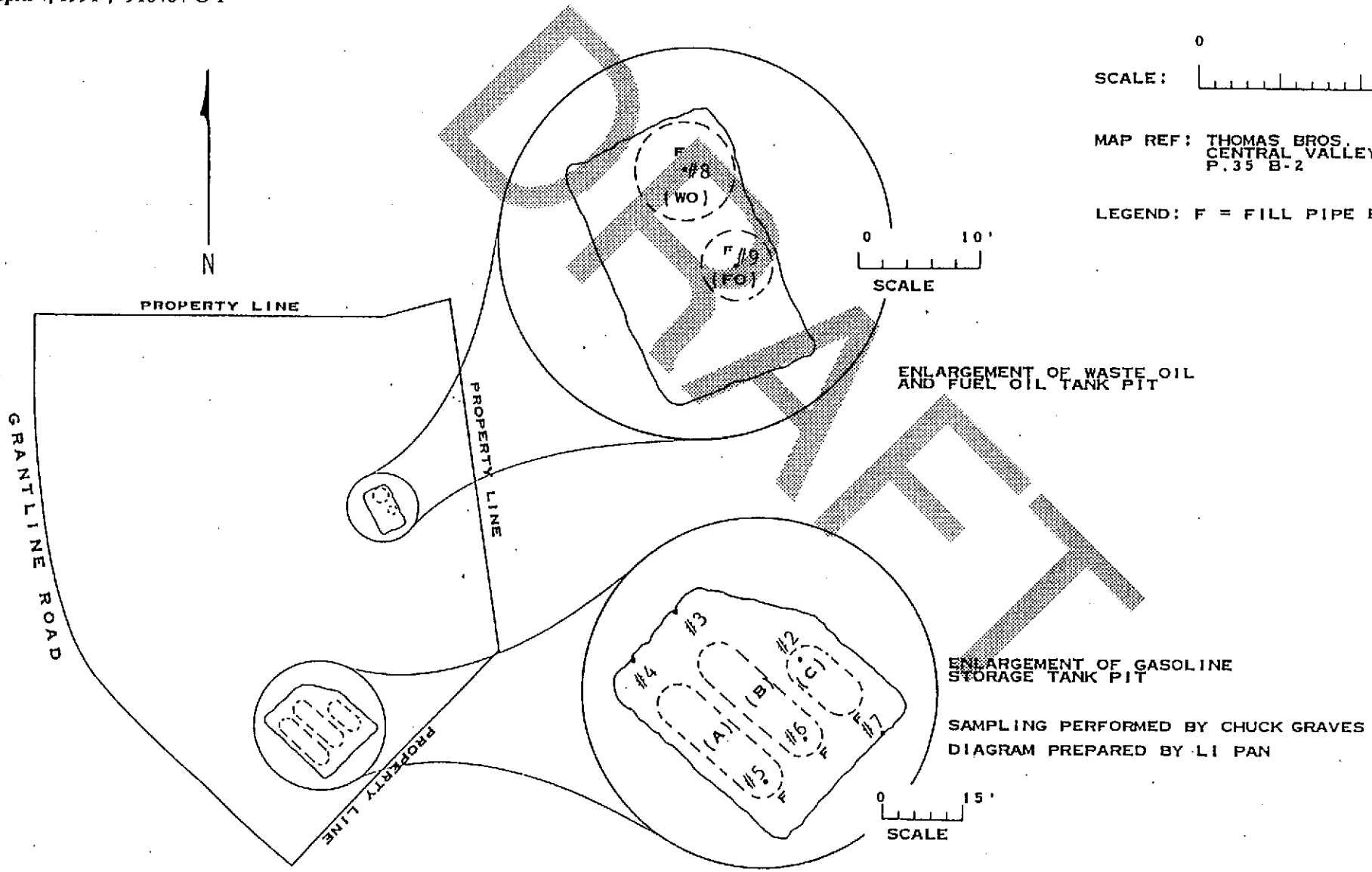
In accordance with the local regulations and the field judgment of the LIA representative, a detailed inspection of each tank was conducted following their removal from the open excavation. The tanks were visually inspected and likely failure points were probed with small pointed metal examination tools. 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

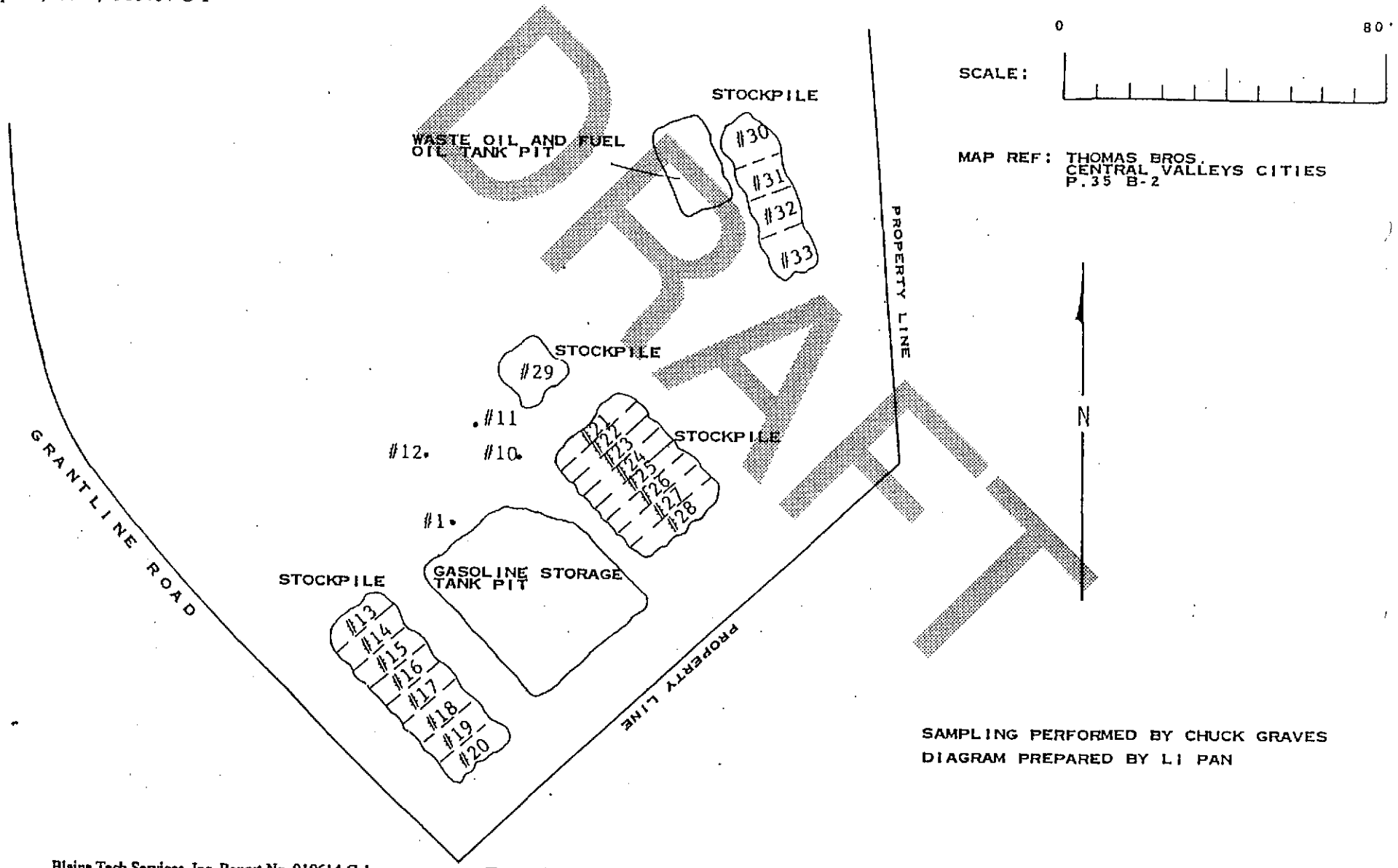
## DIAGRAM ONE



## TANK REMOVAL DIAGRAM

April 4, 1991 / 910404-G-1

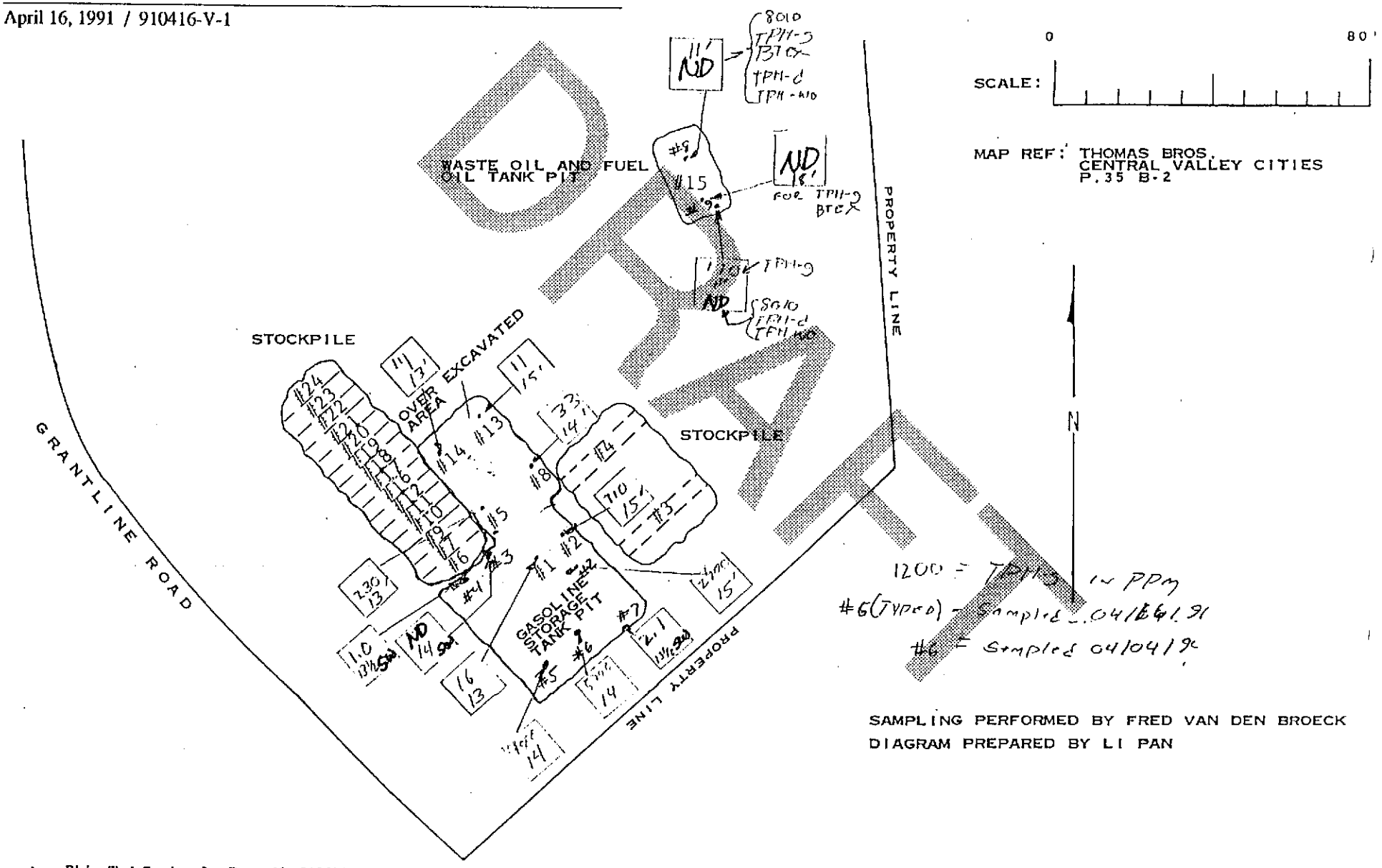
## DIAGRAM TWO




SAMPLING PERFORMED BY CHUCK GRAVES
DIAGRAM PREPARED BY LI PAN

## ADDITIONAL EXCAVATION DIAGRAM

April 16, 1991 / 910416-V-1



# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 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 | #2 | 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 | #1 | 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 BENZENE | PPM TOLUENE | PPM ETHYL BENZENE | PPM XYLENES | PPM TOTAL LEAD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WoM | 11.0 | STANDARD | INTRFACE | SOIL | 04/04/91 | 910404-G-1 | #8 | SEQUOIA | 104-0741 | ND | ND | ND | ND | ND | 3.3 |
| FoM | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WoM | 11.0 | STANDARD | INTRFACE | SOIL | 04/04/91 | 910404-G-1 | #8 | SEQUOIA | 104-0741 | ND | ND | ND |
| FoM | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WoM | 11.0 | STANDARD | INTRFACE | SOIL | 04/04/91 | 910404-G-1 | #8 | SEQUOIA | 104-0741 | 4.8 | 7.9 | 3.3 | 23 | 10 |
| FoM | 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.

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 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