MAY 1 0 2001



May 7, 2001

3164 Gold Camp Drive Suite 200 Rancho Cordova, CA 95670-6021 U.S.A. 916/638-2085 FAX: 916/638-8385

Mr. Tom Bauhs Chevron Products Company P.O. Box 6004 San Ramon, California 94583-0904

Subject: Interim Corrective Action Plan

Former Chevron Service Station No. 9-7127

I-580 and Grant Line Road

Tracy, California

Delta Project No. DG97-127

Dear Mr. Bauhs:

Please find enclosed the Delta Interim Corrective Action Plan for the subject site. This report presents a summary of assessment activities and proposes remediation and additional assessment activities at the site. Delta recommends that a copy of this report be forwarded to the following:

Eva Chu Alameda County Health Care Services 1131 Harbor Bay Parkway, Suite 250 Alameda, Ca 94502-6577

If you have questions or comments regarding this report, please contact me at (916) 638-2765.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Benjamin I. Heningburg

Project Manager

BIH (Rpt001.7127.doc)

Enclosures

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Delta Project No. DG97-127

May 7, 2001

Prepared For:

Mr. Tom Bauhs Chevron Products Company P.O. Box 6004 San Ramon, CA 94583

Prepared By:

DELTA ENVIRONMENTAL CONSULTANTS, INC.

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California Registered Civil Engineer No. 057461

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FORMER CHEVRON SERVICE STATION NO. 9-7127

I-580 AND GRANTLINE ROAD

TRACY, CALIFORNIA

DELTA PROJECT NO. DG97-127

1.0 INTRODUCTION

1.1 Purpose

Delta Environmental Consultants, Inc. (Delta) has been authorized by Chevron Products Company (Chevron) to review investigative work conducted at former Chevron Service Station No. 9-7127, located at I-580 and Grantline Road, Tracy, Alameda County, California (Figure 1) and to prepare an Interim Corrective Action Plan (ICAP). The ICAP objective is to delineate the vertical extent of residual concentrations of petroleum hydrocarbons in the subsurface and propose remedial actions. The ICAP was prepared in response to the Alameda County Health Care Services (ACHCS) letter dated February 5, 1999 requesting that the vertical extent of the contamination plume be defined and implement measures to reduce the total pollutant mass in groundwater. These issues must be addressed before the subject site can be categorized as a "low risk" groundwater case. A copy of the ACHCS letter is included in Appendix A.

2.0 BACKGROUND INFORMATION

2.1 Site Description

The site is located in a small basin near the intersection of I-580 and Grantline Road, Tracy, California. The site is at an approximate elevation of 326 feet above mean sea level with the surrounding topography sloping towards the site. The site is bounded on the North by I-580 and to the South, East and West by ranch property. A USGS topographic map with the site centered on the map is presented in Figure 1. A map illustrating the site vicinity is shown in Figure 2. The site is currently a vacant lot. The locations of former USTs and site features are illustrated in Figure 3.

2.2 Site History

Petroleum hydrocarbon contaminants related to the operation of product storage and dispensing systems at the site were first reported in October 1987 during a Soil Vapor Containment Assessment conducted by E. A. Engineering Service and Technology (EA) as part of a soil vapor investigation.

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Soil vapor samples were collected from 13 on-site locations and two off-site locations at depths of

from 3 to 12 feet below surface grade (bsg). Soil vapor assessment results were reported in the EA

report dated November 13, 1987. Analytical results for soil samples are included in Appendix B.

Sample locations are illustrated on Figure 3.

In December 1987, Kleinfelder, Inc. (Kleinfelder) drilled soil borings (B-1 through B-7) on site. Soil

samples were collected from each boring and analyzed for benzene, toluene, ethylbenzene and total

xylenes (BTEX) and, total petroleum hydrocarbons (TPH) as gasoline. Soil boring analytical results

indicated that petroleum hydrocarbon constituents were present in the subsurface. Analytical results for

soil samples are included in Appendix B. Sample locations are illustrated on Figure 3.

During the same period of the soil boring installations, Kleinfelder conducted a well survey to identify

documented water supply wells in the vicinity of the site. Three water supply wells were identified

within a ½ mile radius of the site. The first is located approximately ½ mile southeast of the site and is

not expected to be impacted by site conditions. The second well is located approximately 300 yards

uphill (upgradient) of the site. This well was reported as damaged in 1980 and is not used. An onsite

domestic well, believed to have an approximate depth of 90 feet below surface grade (bsg), with the

bottom 20 feet screened, is located along the eastern boundary of the property. During 1989,

Kleinfelder collected and analyzed water samples from a tap fed by the onsite domestic well.

Analytical results for domestic well water samples are included in Appendix C.

In May 1989, Gettler-Ryan Inc. installed a carbon adsorption treatment system on the domestic well due

to low concentrations of benzene detected in previous domestic well water samples and performed

subsequent sampling of the treated water. The analytical results were and continue to be reported to

Chevron and are included in Appendix C.

In April 1991, five underground storage tanks (UST) including two 10,000-gallon gasoline tanks, one

6,000-gallon gasoline tank, one 1,000 gallon used oil tank and one 750 gallon heating oil tank were

removed. Each tank was constructed of fiberglass. No holes were observed in any of the tanks.

Over-excavation of the tank basin and piping trenches was conducted. Soil samples were collected

beneath the tanks and product lines. Soil generated from the excavation activities was aerated until

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concentrations were reduced to less than 10 parts per million (ppm). The aerated soil, along with clean

overburden, was used to backfill the excavation. Analytical results for soil samples and sample

locations are included in the Geostrategies Inc. report dated August 1989.

In December 1992, Pacific Environmental Group (PEG) drilled soil boring (B-1) south of the former

tank complex to a depth of 22 feet bsg, to evaluate the lateral and vertical extent of soil contamination.

Groundwater was not encountered in B-1. In Addition, groundwater monitoring wells (MW-1 through

MW-3) were installed to approximately 37 feet bsg. Soil sample data for B-1 and MW-1 are included

in Appendix B. Soil samples were not analyzed from boring locations MW-2 and MW-3. Groundwater

sample data for MW-2 and MW-3 are included in Appendix C. Groundwater was not sampled from

MW-1 due to the presence of separate-phase hydrocarbons (SPH). Monitoring well and soil boring

locations are illustrated in Figure 3. Soil boring logs and well construction details are included in

Appendix D.

From December 1992 to November 1993, PEG sampled the domestic well on a weekly basis.

Groundwater has been sampled on a regular basis since February 1994. Cumulative groundwater data

for monitoring wells are included in Appendix C.

In May 1993, PEG drilled soil borings B-2 through B-4 to approximately 37 and 25 feet bsg,

respectively. Soil borings B-2 and B-4 were converted to groundwater monitoring wells (MW-4/B2 and

MW5/B-4). Soil samples were not analyzed from boring locations MW-4/B-2 and B-3. Soil sample

data for MW-5/B-4 is included in Appendix B. Analytical results for groundwater "grab" samples for

MW-4/B2, MW5/B-4 and B-3 are included in Appendix C. Monitoring well and soil boring locations

are illustrated on Figure 3. Soil boring logs and well construction details are included in Appendix D.

In October 1995, PEG installed groundwater monitoring wells MW-6 through MW-8 to approximately

30, 24 and 40 feet bsg, respectively. Soil sample data for MW-6 through MW-8 is included in

Appendix B. Analytical results for groundwater "grab" samples for MW-6 through MW-8 are included

in Appendix C. Monitoring well locations are illustrated on Figure 3. Soil boring logs and well

construction details are included in Appendix D.

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In August 1997, a revised Risk Based Corrective Action (RBCA) -Tier 2 Assessment was completed for

the site. The assessment indicated that groundwater ingestion could pose a human health risk. In

August 1998, oxygen-releasing compound was installed in MW-1, MW-3 and MW-4. In May 1999,

RRM, Inc. conducted an evaluation of groundwater conditions at the site and surveyed water supply

wells within a 1/2 mile radius.

2.3 Regional Geology and Hydrogeology

The subject site is located within a small basin in the eastern foothills of the Diablo Range in eastern

Alameda County, California. The Diablo Range is a northwest-southeast trending range of

mountains bounded to the west by the flatlands of the San Francisco Bay area and to the east by San

Joaquin Valley. Site elevation is approximately 326 feet above mean sea level.

Approximately 6 to 17 feet of Quaternary alluvial fan fluvial deposits overly bedrock. Bedrock in

the vicinity of the site belongs to two formations, the Upper Cretaceous Panoche Formation and the

Miocene Neroly Formation (Bishop, 1970). The Panoche Formation was not encountered during

drilling activities but has been mapped to the northwest and west of the site. The Neroly Formation

has been described as a marine blue to gray sandstone, which is pebbly in some locations (Dibblee,

1980). The nearest surface water is a surface water catch basin approximately 200 feet east of the

site. The direction of groundwater flow in the vicinity of the site is inferred to be toward north based

on the depth to water measurements recorded from monitoring wells.

2.4 Site Geology

Based on a review of boring logs, the subsurface materials encountered at the site primarily consist

of sand to clay-fill to depths of 6 to 17 feet bsg. Fill and alluvium thicken to the south. Fill and

alluvial deposits are underlain by predominantly sandstone bedrock extending to the total depth

explored of approximately 40 feet bsg. Boring logs for each boring advanced at the site are included

in Appendix B. Geologic cross-sections have been prepared using the soil boring logs to illustrate

the subsurface soil. A cross-section location map showing the trace of cross-sections A-A', B-B' and

C-C' is included as Figure 4. Geologic cross-sections A-A', B-B' and C-C' are illustrated in

Figures 5, 6 and 7 respectively.

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2.5 Site Hydrogeology

Depth to groundwater data has been collected quarterly since February 1994. Measurements indicate a range from as shallow as 9.80 feet bsg in MW-6 to as deep as 31.70 feet bsg in MW-1. The average depth to water over the last four events has been approximately 20 feet bsg. The water-bearing unit at the site consists predominately of sandstone. Cumulative depth to water measurements for the site are included in Appendix C.

3.0 SITE INVESTIGATIVE RESULTS

3.1 Distribution of Petroleum Hydrocarbons in Soil

During October 1987, soil vapor samples were collected from 13 on-site locations and two off-site locations at depths of 3 to 12 feet bsg. Soil vapor samples were field screened for petroleum hydrocarbons by a Photovac 10S50. Field screening of soil vapor samples did not detect concentrations of any petroleum hydrocarbons in soil vapor samples V1, V8 through V12, V14 and V15. Soil vapor samples V1/B through V7 and V13 reported benzene ranging from 1 parts per million (ppm) in V3/B to 3,200 ppm in V4 and detected hydrocarbons ranging from 10 ppm in V9 to 28,500 ppm in V4.

In December 1987, soil borings B-1 through B-7 were drilled on site. Borings B-1 through B-4 were drilled to 10, 20, 14 and 15 feet bsg, respectively. Borings B-5 through B-7 were drilled to 5 feet bsg. Concentrations of petroleum hydrocarbons were not detected above laboratory reporting limits in samples collected from B-1 and B6. Soil samples B-2 through B-4, B-6 and B-7 reported benzene concentrations ranging from 0.001 ppm (B2) to 19 ppm (B4) and TPH as gasoline ranging from 0.5 ppm (B5) to 2,300 ppm (B4). During April 1991, soil samples AF, AOP, BF, BOP, CF and COP were collected beneath the former gasoline storage tank pit. Soil samples WoM, FoM and 15 were collected beneath the former waste oil and fuel oil tank pit. Soil samples 1, 5, 8, 10, 11, 12, 13 and 14 were collected beneath former product line locations. Soil samples Aop, BF, Bop, CF, Cop, 1, 8, 10, 11, 12 and 14 reported benzene ranging from 0.005 ppm in 14 to 30 ppm Cop. Concentrations of TPH as gasoline were reported in soil samples AF, Aop, BF, CF, 1, 5, 8, 10, 11, 12, 13, 14 and FoM ranging from 1.0 ppm (Aop) to 4,000 ppm (AF).

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Tracy, California Page 6

Between December 1992 and October 1995, PEG collected soil samples from boring locations B-1,

MW-1, M5/B4 and MW-6 through MW-8. Laboratory analyses results did not detect concentration of

analytes above the laboratory reporting limits in soil samples collected at locations MW-5/B4 and

MW-6 through MW-8. Benzene concentrations were reported in sample MW1 at 21 ppm.

Concentrations of TPH as gasoline were reported in samples from B-1 and MW-1 at 4.0 ppm and

8,100 ppm, respectively.

Based on a review of soil analytical results to date, impacted soil appears to be confined to just above

the groundwater table capillary fringe in the vicinity of the former gasoline UST basin.

3.2 Soil Sampling Analysis

During October 1987, soil vapor samples were collected from 13 on-site locations and two off-site

locations at depths of 3 to 12 feet bsg. Soil vapor samples were field screened for petroleum

hydrocarbons by a Photovac 10S50. Soil vapor screening results are included in Appendix B.

In December 1987, soil borings B-1 through B-7 were drilled on site. Soil samples were collected from

each boring and analyzed for BTEX by EPA Method 8020 and total petroleum hydrocarbons (TPH) as

gasoline by EPA Method 8015 Modified. Cumulative soil sample analytical results are included in

Appendix B.

During April 1991, soil samples AF, AOP, BF, BOP, CF and COP were collected beneath the former

gasoline storage tank pit. Soil samples WoM, FoM and 15 were collected beneath the former waste

oil and fuel oil tank pit. Soil samples 1, 5, 8, 10, 11, 12,13 and 14 were collected beneath the former

product line locations. Soil samples collected during tank removal activities were analyzed for

BTEX, TPH as gasoline and total lead. Additionally, soil samples WoM and FoM were analyzed for

TPH as diesel, total oil and grease, volatile organic compounds and metals

Between December 1992 and October 1995, PEG collected soil samples from boring locations B-1,

MW-1, M5/B4 and MW-6 through MW-8. Soil samples were analyzed for BTEX and TPH as

gasoline. Cumulative soil sample analytical results are included in Appendix B.

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 7

3.3 Monitoring Well Construction

Eight groundwater monitoring wells are currently associated with the site. Monitoring wells MW-1 through MW-3 and MW-6 are installed on site. Monitoring wells MW-4, MW-5, MW-7 and MW-8 are installed off site. Monitoring well MW-1 is constructed of 4-inch diameter Schedule 40 PVC casing. Monitoring wells MW-2 through MW-8 are constructed of 2-inch diameter Schedule 40 PVC casing. The total depths of the wells range from approximately 25 to 40 feet bsg. Wells screens vary in length from 14 to 20 feet. Wells are screened with 0.020-inch machine slotted casing. The well annular space is filled with a Lonestar (type) No. 3 sand, which extends from the base of the screen section to one foot above the top of screen with a one-foot bentonite seal overlaying the filter pack. The remaining annulus is filled with a neat cement grout to within six inches of the surface. The surface of each well is completed with a traffic rated well box set in concrete. Well completion diagrams are included in Appendix D.

3.4 Groundwater Sampling

Groundwater samples collected from monitoring wells MW-1 through MW-8 have been analyzed for BTEX and TPH as gasoline by EPA Method 8015 Modified and methyl tertiary butyl ether (MTBE) by EPA Method 8020. Additionally, samples from monitoring wells have been analyzed for bio-parameters (alkalinity, nitrate, sulfate phosphate and ferrous iron). Cumulative groundwater analytical results are included in Appendix C.

3.5 Groundwater Flow Direction and Hydraulic Gradient

Depth to groundwater at the site has ranged from 9.80 to 31.70 feet below the tops of the well casings. During the most recent groundwater monitoring event conducted on October 31, 2000, depth to groundwater was measured in MW-1 through MW-8. A groundwater elevation contour map was constructed from the measured depth to water and surveyed casing elevations and is included as Figure 8. Groundwater elevation contours indicate an inferred groundwater flow direction towards the north with a hydraulic gradient of 0.09. Historical data indicates previous groundwater flow to be towards the northeast. Depth to groundwater at the site has decreased significantly in all wells since monitoring began in February 1994.

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 8

3.6 Distribution of Petroleum Hydrocarbons in Groundwater

Quarterly groundwater monitoring and analyses conducted on October 31, 2000 reported detectable concentrations of benzene in samples from MW-3 and MW-4 at 25,700 parts per billion (ppb) in MW-3 and 224 ppb in MW-4. Concentrations of TPH as gasoline in groundwater samples collected from MW-3 and MW-4 were reported at 110,000 ppb (MW-3) and 672 ppb (MW-4). Detectable concentrations of MTBE were reported in groundwater samples collected from MW-3 and MW-6 at 1,680 ppb (MW-3) and 5.08 ppb (MW-6).

3.6.1 Separate Phase Petroleum Hydrocarbons

During each groundwater sampling event conducted at the site, the possible presence of separate phase hydrocarbons (SPH) and hydrocarbon sheens are examined. On October 31, 2000 the presence of SPH was measured in MW-1 and was found to have a thickness of 0.81.

3.6.2 Dissolved Phase Petroleum Hydrocarbons

Based on groundwater sample analytical results to date, it appears that concentrations of dissolved petroleum hydrocarbons beneath the site are primarily downgradient (north) of the former dispenser island and gasoline UST basin locations. A trend of increased groundwater elevations beneath the site may have contributed to increased dissolved hydrocarbon concentrations from petroleum hydrocarbon impacted subsurface soil in the vicinity of MW-1, MW-3, MW-4 and MW-6.

Groundwater samples collected from domestic water supply well have reported no concentrations of any analytes above laboratory detection limits since the installation of the carbon adsorption treatment system in May 1989. Groundwater monitoring well and domestic water supply well locations are illustrated on Figure 3.

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 8

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Groundwater samples collected from domestic water supply well have reported no concentrations of any analytes above laboratory detection limits since the installation of the carbon adsorption treatment system in May 1989. Groundwater monitoring well and domestic water supply well locations are illustrated on Figure 3.

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 9

4.0 PROPOSED REMEDIAL OPTIONS AND ADDITIONAL INVESTIGATION

4.1 Domestic Well Destruction

Based on soil boring logs of wells installed within a ½ mile radius of the site and quarterly depth to groundwater measurements of onsite wells, it appears that the approximate location of the water-bearing zone beneath this site is between 10 and 40 feet bsg. The construction details of the on site domestic supply well are unknown. Henings Brothers Drilling Company of Modesto, California has installed several wells in the area and believes the total depth of the well is approximately 90 feet bsg with the bottom 20 feet screened. During a telephone conversation on August 16, 2000, Blake Henings, formerly of Henings Brothers Drilling Company, stated that he has installed numerous wells in the area and that most of the domestic, industrial, municipal and irrigation wells were installed with 20 to 25 foot sanitary seals. He also stated that Mr. Joe Jess (adjacent property owner) has always had a tough time locating groundwater in this area and that groundwater beneath this basin location is probably a perched zone of surface water seeps and seasonal recharge. He said that he has drilled many test wells in the area to 600 feet bsg without encountering groundwater. His comments are supported by the California Department of Water Resources water well drillers reports of wells installed within a ½ mile radius of the subject site.

Based on the above information, it appears that the groundwater in the aquifer beneath the site is a perched zone overlying a confining bedrock. It is our understanding that the domestic well may be constructed with a 20 to 25 feet sanitary seal. Using this data, it appears that approximately 45 to 50 feet of non-perforated well casing and 20 feet of perforated well casing is exposed to the perched water zone. It appears that groundwater from this perched zone could potentially be drawn down the unsealed portion of the annulus where it would then be pulled through the filter pact and casing screen via a well pump.

We propose destroying this well by pressure grouting. The steel casing in the well will be perforated using a mechanical perforator from 90 feet to 10 feet bsg. Following perforation of the casing, the bottom 25 feet of the well (90 feet to 65 feet bsg) will be filled with neat cement grout. The grout will be allowed to set and cure for a 24-hour period. Following placement and curing of the bottom plug, the casing will be filled with neat cement grout to within 18 inches of surface grade. The area

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 10

will be excavated to 5 feet bsg, the casing cut at 5 feet bsg and a cement cap poured. A California Department of Water Resources well driller report outlining destruction activates will be filed.

4.2 Separate Phase Petroleum Hydrocarbon

Delta proposes monthly visits to the site for the purpose of hand bailing SPH present in MW-1. A product interface probe will be used to determine the thickness of SPH present before and after each SPH bailing event. In between the SPH bailing events, a passive product skimmer will be placed in MW-1 to capture SPH present in the well and the passive skimmer will be emptied at the beginning of each site visit. SPH thickness will be tabulated to track and calculate total SPH removal from MW-1. Upon completion of the proposed SPH removal, historical total SPH removed from the site will be estimated.

5.0 CONCLUSIONS/RECOMMENDATIONS

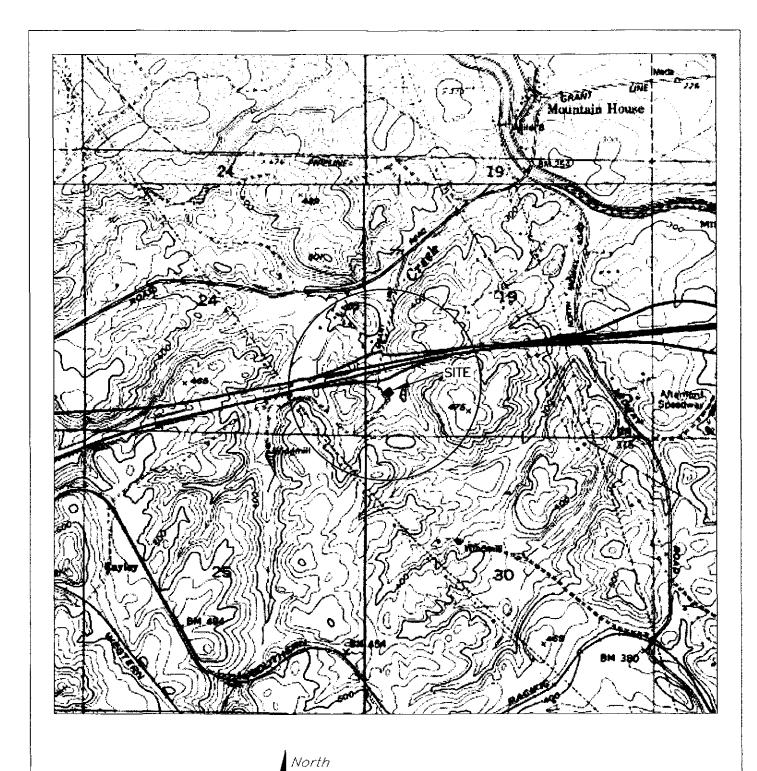
Based on the information available to Delta to date, the following conclusions are presented:

- The vertical extent of the plume appears to be confined to a perched zone between 10 and 40 feet bsg and the annulus of the 8-inch domestic well to a depth of approximately 90 feet bsg.
- The source of SPH appears to be the subsurface soil in the vicinity of the UST basin. To remove the SPH in MW-1, it is proposed that MW-1 be hand bailed on a monthly basis.
- Groundwater flow direction is towards the north and northeast.
- Groundwater sample analytical results for monitoring wells MW-1, MW-3, MW-4 and MW-6 as well as depths to groundwater indicate that dissolved petroleum hydrocarbons are increasing with increased groundwater elevation. It appears that residual petroleum hydrocarbons still impact the soil in the vicinity of the former UST basin.
- We recommend the destruction of the onsite domestic well.
- We recommend the hand bailing SPH from MW-1 on a monthly basis for two consecutive quarters and then revaluating the SPH thickness.
- Following the destruction of the domestic well and hand bailing of MW-1, we will evaluate this site for a "Low Risk" groundwater case closure using RBCA.

Former Chevron Facility No. NO. 9-7127 I-580 and Grant Line Road Tracy, California Page 11

6.0 LIMITATIONS

The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
MIDWAY, CA
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1980



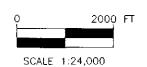


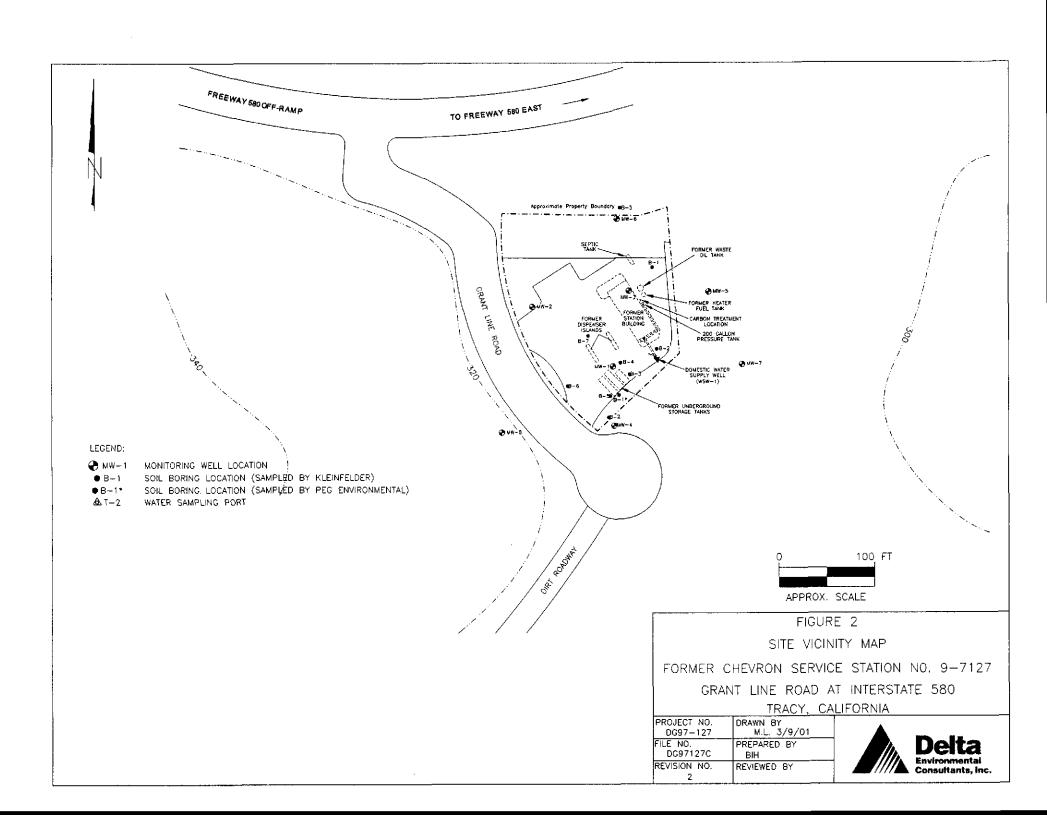
FIGURE 1

SITE LOCATION MAP

FORMER CHEVRON SERVICE STATION NO. 9-7127 GRANT LINE ROAD AT INTERSTATE 580 TRACY, CALIFORNIA

	PROJECT NO.	DRAWN BY
	DG97-127	M.L. 8/30/00
	FILE NO.	PREPARED BY
i	DG97127A	BIH
	REVISION NO.	REVIEWED BY





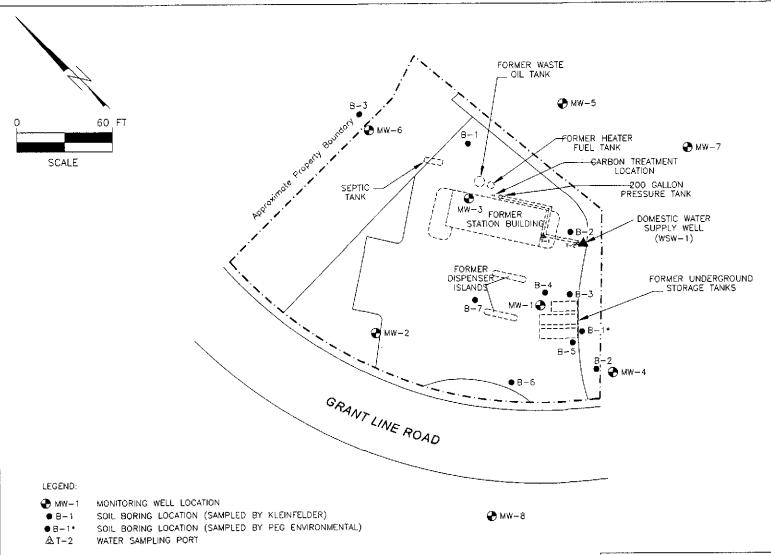


FIGURE 3 SITE MAP

FORMER CHEVRON SERVICE STATION NO. 9-7127 GRANT LINE ROAD AT INTERSTATE 580 TRACY, CALIFORNIA

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FILE NO.	PREPARED BY
DG97127B	BIH _
REVISION NO.	REVIEWED BY
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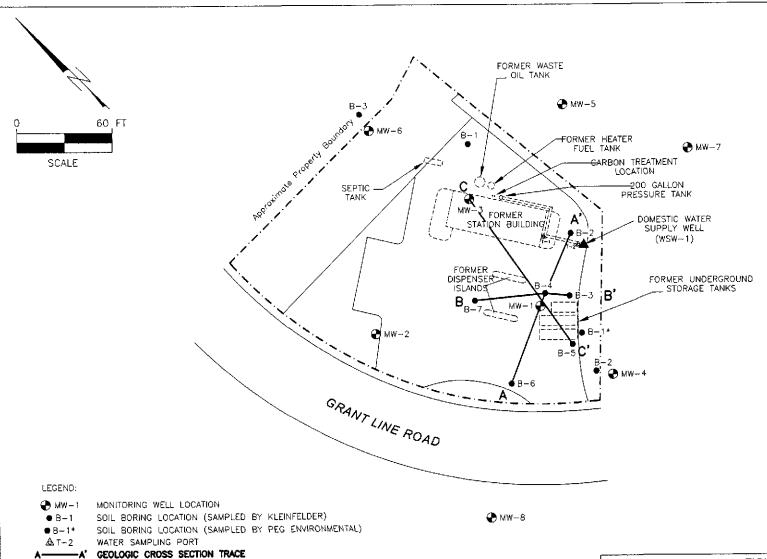


FIGURE 4

GEOLOGIC CROSS SECTION LOCATION MAP

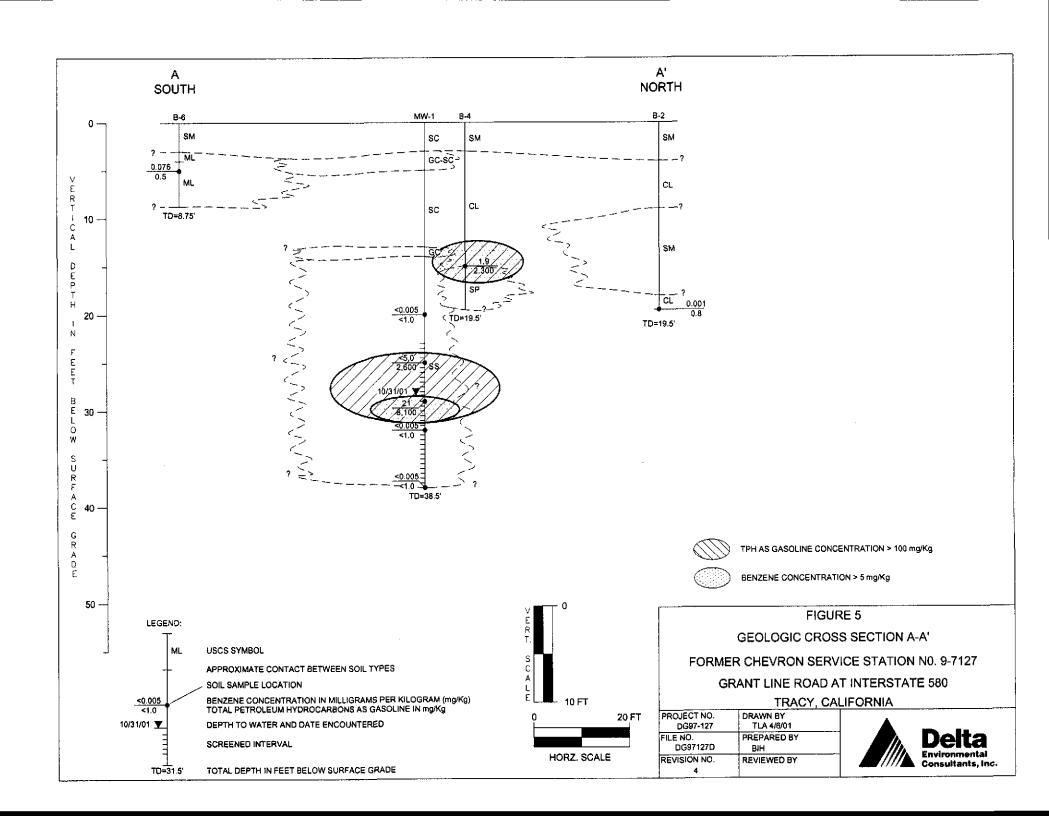
FORMER CHEVRON SERVICE STATION NO. 9-7127

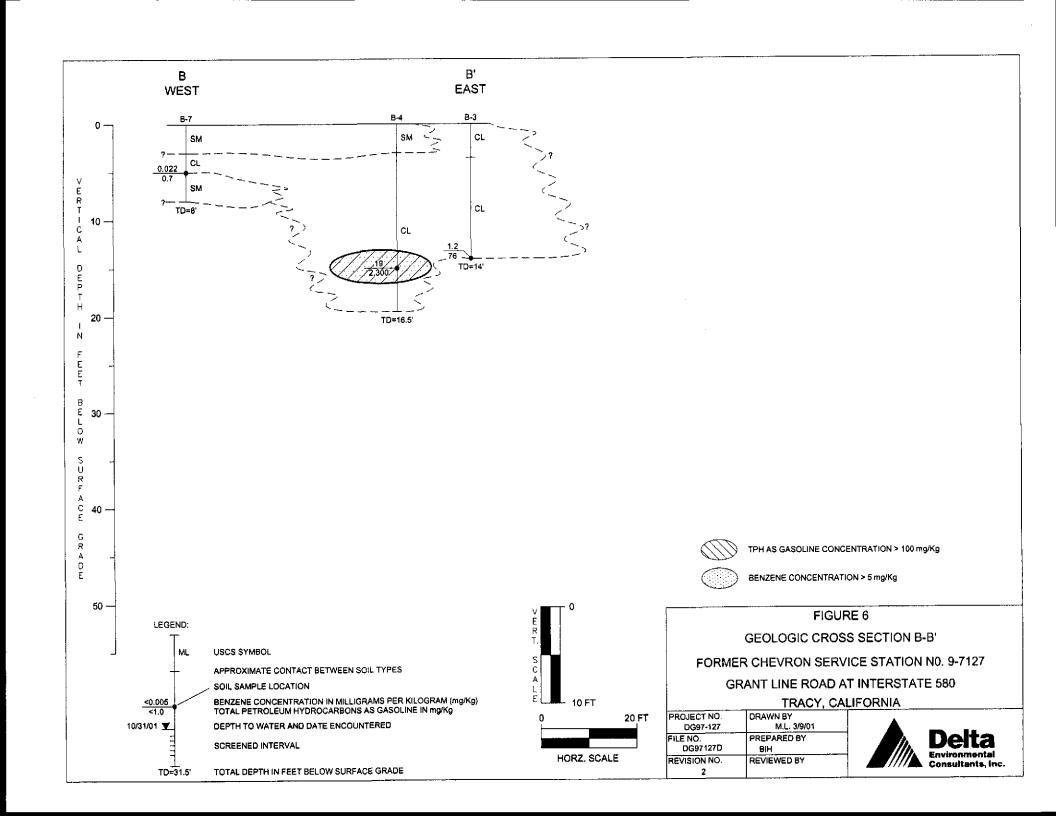
GRANT LINE ROAD AT INTERSTATE 580

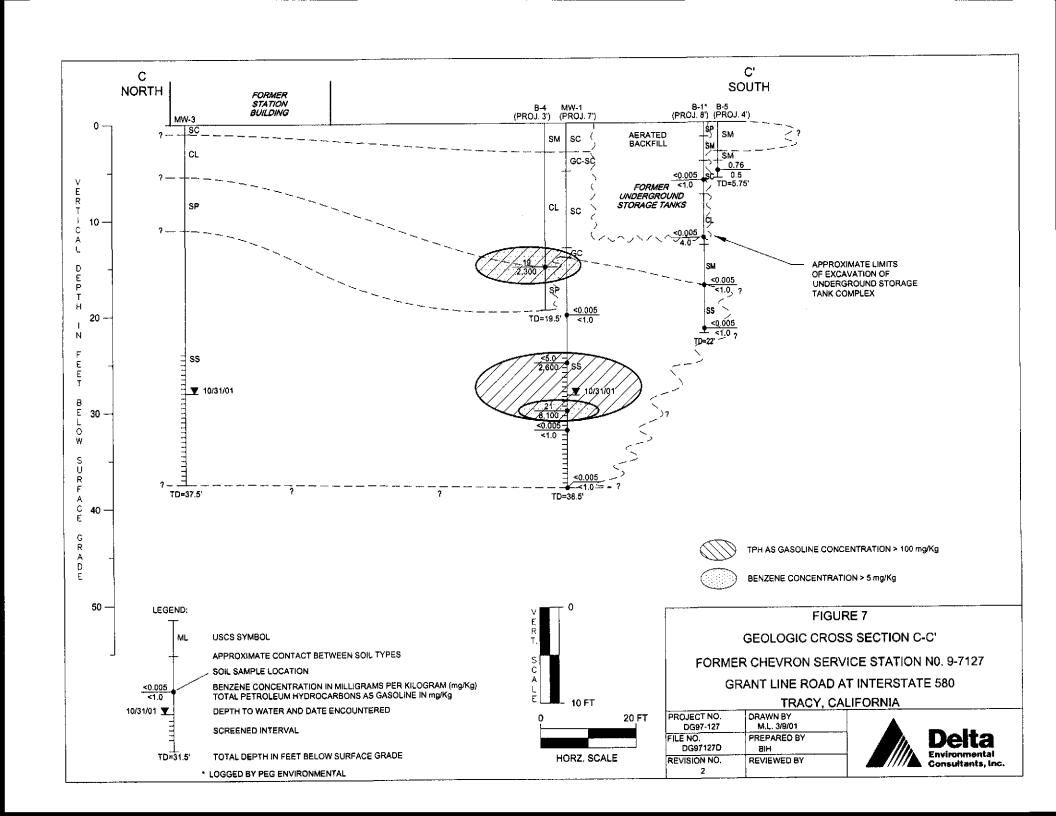
TRACY, CALIFORNIA

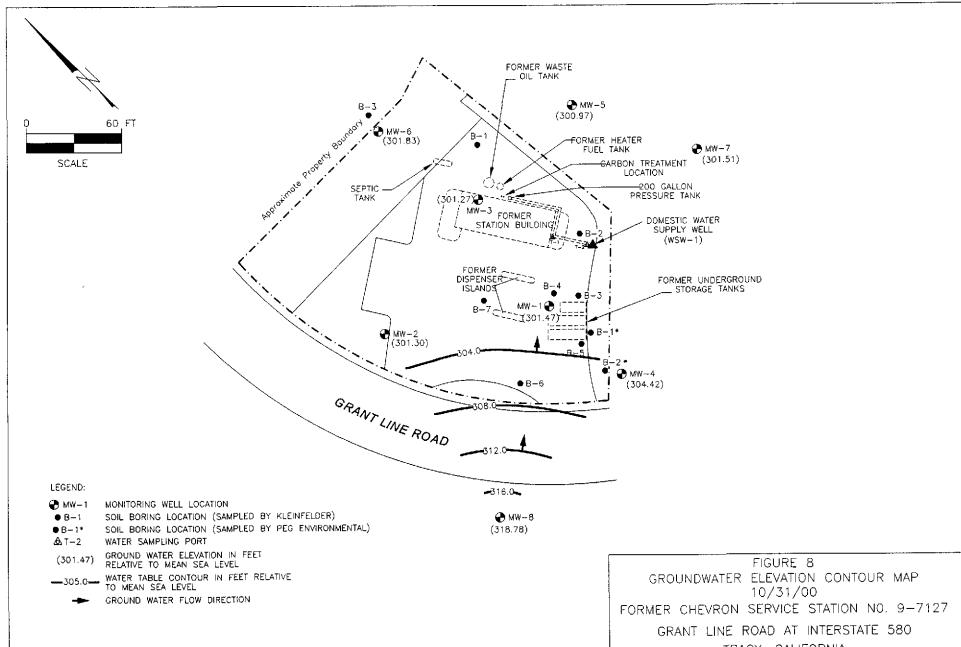
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TRACY, CALIFORNIA

F	PROJECT NO. DG97~127	DRAWN 8Y M.L. 3/9/01
F	ILE NO. DG97127B	PREPARED BY BIH
R	EVISION NO.	REVIEWED BY



APPENDIX A

Alameda County Health Care Services Letter Dated February 5, 1999

AGINO DAVID J. KEARS, Agency Virecto



P.R.B.

74

StID 4100

February 5, 1999

Mr. Phil Briggs Chevron, Building L P.O.Box 5004 San Ramon, CA 94583-0804 ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 (510) 337-9335 (FAX)

Statio

RE:

Vertical Extent of Groundwater Contamination at the Former Chevron Service Station at I-580 and Grant Line Road, Tracy, CA

Dear Mr. Briggs:

I have completed the review of the case file for the above referenced site to determine what issues may need to be addressed before the site can be designated a low risk groundwater case. There appears to be two criteria that does not meet the Central Valley RWQCB's guidance for no further action at a leaking underground storage tank site (the draft Appendix B is enclosed). The two issues that need further interpretation or characterization are:

1. No existing water supply wells, deeper aquifers, surface waters or other receptors are threatened by pollutants remaining in the aquifer.

The onsite domestic well contained detectable levels of benzene (up to 6.4ppb) in 1987 and 1989 (see attached table). It is assumed this well is constructed and screened deeper than the onsite groundwater monitoring wells. It must be verified that groundwater contamination has not impacted the deeper aquifer. Therefore, the vertical extent of the contaminant plume must be determined.

2. The total pollutant mass remaining in the groundwater is decreasing at predicted rates and neither creates, nor threatens to create, a risk to human health and safety or future beneficial uses(s) of the aquifer.

Onsite groundwater monitoring wells MW-1 and MW-3 continues to contain measurable free product or a heavy sheen. Recent benzene levels were at 24,000ppb. Active remediation appears necessary to reduce the total pollutant mass in groundwater.

A workplan and/or discussion to address the above issues should be submitted to this office for review within 60 days of the date of this letter, or by April 9, 1999. If you have any questions, I can be reached at (510) 567-6762.

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Hazardous Materials Specialist

enclosures

chvrontracy12

TABLE 1

SUMMARY OF SOIL VAPOR MONITORING DATA CHEVRON SERVICE STATION #7127 TRACY, CALIFORNIA

*==========	********		:::::::::::::::::::::::::::::::::::::::		************
		PRIOR TO			DETECTED
SAMPLE	SAMPLE	BENZENE(1)	BENZENE	TOLUENE	HYDROCARBONS
LOCATION	DEPTH	(ppm)	(ppm)	(ppm)	(ppm)
********	:========				**********
V1	3	<5	<1	<1	<5
V1/B	5	3700	650	3200	7500
V1/C	8	18000	600	2800	26000
V2	5	130	<5	30	160
v 3	3	10	5	10	30
V3/8	5	<5	1	10	15
٧4	3	20000	3200	5200	28500
V4/B	5	120	130	1900	2000
v 5	5	1	<1	<5	₹ 5
V5/B	7	620	40	<1	750
V6	5	1150	540	160	7300
v7	5	1300	<5	< 5	1400
vs.	3	<1 ·	<1	<1	<1
V8/8	8	<1	<1	<1	<1
V9	8	1	<1	~ <10	10
V10	8	<1	< 1	<1	<1
V11	5	<1	<1	<1	<1
V12	8	<1	<1	<1	<1
V13	12	20	<1	<1	25
V15	8	<1	<1	<1	<1
V15	12	<1	<1	<1	<1
BLANK	ИA	<0.1	<0.1	<0.1	на
BLANK	NA	<0.1	<0.1	<0.1	NА
BLANK	лА	79.1			
Detection Lis		0.5	0.5		

NA = Not Applicable ppm = parts per million

(1) Quantification based on the volt-second:ppm response ratio for benzene. Source: EA Engineering, Science, and Technology, Inc. report dated 11/13/87

(Note: See Plate 2 for sampling point locations.)

TABLE Z

SUMMARY OF SOILS ANALYTICAL DATA CHEVRON SERVICE STATION #7127 TRACY, CALIFORNIA

	=======================================		*========		**************	****
SAMPLE	SAMPLE	BENZENE	TOLUENE	TOTAL XYLENES	ETHYLBENZENE	TPH
ID	DEPTH*	(bbm)	(bbu)	(bbu)	(ppm)	(bbu)
	**********		*********	:=#################	= 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
B1-10	10	ND	ND	ОИ	NO	ND
B2-20	20	0.001	ND	4	0.003	0.8
B3-14	14	1.2	0.680	2	0.8	76
84-15	15	19	85	140	28	2300
35-5	5	0.076	0.007	0.030	0.002	0.5
36-5	5	ОИ	ND	ND	HD	ND
B7-5	5	0.022	0.003	0.024	0.046	0.7
Detection						
Limit	0.5	0.5	0.5	0.5	1	

TPH = Total Petroleum Hydrocarbons

* Feet below ground surface

ppm = parts per million

Benzene, Toluene, Total Xylenes and Ethylbenzene concentrations converted from ppb to ppm.

SOURCE: Subsurface Environmental Investigation, January 6, 1988; Kleinfelder Inc.

(Note: See Plate 3 for boring locations.)

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

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

SAMPLE		TYPE &							Parts	Per Milli	on or Par	llion		
DEPTH IN FT. BELOW GRADE	DICTATED BY	FOR THE SAMPLE	Sample Matrix	Date Sampled	BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HOTE, LABORATORY	LABORATORY SAMPLE T D	TPH AS	BEN-	TOL-	ETHYL BEN-	xx-	TOTAL
14.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	15								LEAD
13.5	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	14	SEQUOIA	104-0737	1.0	0.0070	ND 4 I	0.0050		13 9.1
14.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	6	SEQUOIA	104-0739	5200	20	200			
14.0	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	13	SEQUOIA	104-0736	ND	0.0070	0.016	0.012		80 7.7
12.5	LIA	SIDEWALL	SOIL	04/04/91	910404-G-1	17	SEOUOYA	104-0740						- ·
15.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	12	SEQUOIA							
13.0	ELECTIVE ELECTIVE	CONFIRM CONFIRM	SOIL SOIL	04/16/91 04/16/91	910416-V-1 910416-V-1	11 12	SEQUOIA SEQUOIA	104-2649 104-2650	16 710	0.0090	0.014	0.021	0.17	14 3.6 8.1
LINE/DI	SPENSER PU	1P ISLAND		i.				· · · · · · · · · · · · · · · · · · ·						
2.5 4.0 4.0 4.0	LIA LIA LIA LIA	INTRFACE INTRFACE INTRFACE INTRFACE	SOIL SOIL SOIL	04/04/91 04/04/91 04/04/91 04/04/91	910404-G-1 910404-G-1 910404-G-1 910404-G-1	#1 #10 #11 #12	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-0734 104-0743 104-0744 104-0745	1200 3.3 750	3,3 0,20 12	33	17 0.060	86 0.16 110	17 7.7 9.5 6.9
13.0 14.0 15.0 13.0	ELECTIVE ELECTIVE ELECTIVE	CONFIRM CONFIRM CONFIRM	SOIL SOIL SOIL SOIL	04/16/91 04/16/91 04/16/91 04/16/91	910416-V-1 910416-V-1 910416-V-1 910416-V-1	15 18 . 113 . 114	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-2653 104-2656 104-2661 104-2662	220 33 11 9.2	ND 0.085 ND 0.0050	0.80 0,24 0,047	1.7 0.27 0.044	1.3 10 1.5 0.31 0.13	6.9 2.6 6.1 6.1 3.6
	DEPTH IN FT. BELOW GRADE 14.0 13.5 14.0 14.0 12.5 15.0 13.0 15.0 2.5 4.0 4.0 4.0 13.0 13.0	DEPTH SAMPLING IN FT. LOCATION BELOW BY 14.0 STANDARD 13.5 LIA 14.0 STANDARD 14.0 LIA 12.5 LIA 15.0 STANDARD 13.0 ELECTIVE LINE/DISPENSER PUN 2.5 LIA 4.0 LIA 4.0 LIA 4.0 LIA 4.0 LIA 13.0 ELECTIVE 13.0 ELECTIVE 13.0 ELECTIVE 14.0 LIA 15.0 ELECTIVE 14.0 LIA 15.0 ELECTIVE	DEPTH SAMPLING METHOD IN FT. LOCATION FOR THE SEAP LY OBTAINED OBTAINED 14.0 STANDARD INTRFACE 13.5 LIA SIDEWALL 14.0 STANDARD INTRFACE 14.0 LIA SIDEWALL 12.5 LIA SIDEWALL 15.0 STANDARD INTRFACE 13.0 ELECTIVE CONFIRM CONFIRM 2.5 LIA INTRFACE 4.0 LIA INTRFACE	DEPTH SAMPLING METHOD IN FT. LOCATION FOR THE BELOW DICTATED SAMPLE SAMPLE GRADE BY SAMPLE SAMPLE 14.0 STANDARD INTRFACE SOIL 14.0 STANDARD INTRFACE SOIL 14.0 LIA SIDEWALL SOIL 12.5 LIA SIDEWALL SOIL 15.0 STANDARD INTRFACE SOIL 15.0 STANDARD INTRFACE SOIL 15.0 ELECTIVE CONFIRM SOIL CLINE/DISPENSER PUMP ISLAND 2.5 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL 4.0 LIA INTRFACE SOIL	DEPTH SAMPLING METHOD IN FT. LOCATION FOR THE SAMPLE DATE OBTAINED SAMPLE OBTAINED SAMPLE DATE GRADE BY OBTAINED SAMPLE SAMPLED 14.0 STANDARD INTRFACE SOIL 04/04/91 14.0 STANDARD INTRFACE SOIL 04/04/91 14.0 LIA SIDEWALL SOIL 04/04/91 12.5 LIA SIDEWALL SOIL 04/04/91 15.0 STANDARD INTRFACE SOIL 04/04/91 15.0 STANDARD INTRFACE SOIL 04/04/91 15.0 STANDARD INTRFACE SOIL 04/04/91 15.0 ELECTIVE CONFIRM SOIL 04/16/91 CLINE/DISPENSER PUMP ISLAND 2.5 LIA INTRFACE SOIL 04/04/91 4.0 LIA INTRFACE SOIL 04/04/91 13.0 ELECTIVE CONFIRM SOIL 04/04/91 14.0 ELECTIVE CONFIRM SOIL 04/04/91 14.0 ELECTIVE CONFIRM SOIL 04/04/91 14.0 ELECTIVE CONFIRM SOIL 04/16/91 14.0 ELECTIVE CONFIRM SOIL 04/16/91 15.0 ELECTIVE CONFIRM SOIL 04/16/91 15.0 ELECTIVE CONFIRM SOIL 04/16/91 15.0 ELECTIVE CONFIRM SOIL 04/16/91	DEPTH SAMPLING METHOD IN FOR THE BELOW DICTATED SAMPLE SAMPLE SAMPLE SAMPLE SAMPLED I.D. 14.0 STANDARD INTRFACE SOIL 04/04/91 910404-G-1 13.5 LIA SIDEWALL SOIL 04/04/91 910404-G-1 14.0 STANDARD INTRFACE SOIL 04/04/91 910404-G-1 14.0 LIA SIDEWALL SOIL 04/04/91 910404-G-1 12.5 LIA SIDEWALL SOIL 04/04/91 910404-G-1 15.0 STANDARD INTRFACE SOIL 04/04/91 910404-G-1 15.0 ELECTIVE CONFIRM SOIL 04/16/91 910416-V-1 15.0 ELECTIVE CONFIRM SOIL 04/16/91 910404-G-1 4.0 LIA INTRFACE SOIL 04/04/91 910404-G-1	DEPTH SAMPLING METHOD FOR THE BELOW DICTATED SAMPLE CHAIN OF CHAIN OF CHAIN OF CUSTODY SAMPLE DATE CUSTODY DATE DATE CUSTODY SAMPLE DATE CUSTODY SAMPLE DATE CUSTODY DATE DATE CUSTODY SAMPLE DATE CUSTODY DATE CUSTODY SAMPLE DATE CUSTODY DATE CUSTODY SAMPLE DATE CUSTO	DEPTH SANDLING METHOD FOR THE DATE CUSTODY SAMPLE DOHS HATE DOHS HATE CUSTODY SAMPLE DOHS HATE DATE CUSTODY SAMPLE DOHS HATE DOH	DEPTH	DEPTH SAMPLING METHOD INTERACE SOIL O4/04/91 910404-G-1 14 SEQUOIA 104-0736 ND	DEPTH SAMPLING METHOD FOR THE SAMPLE DATE CUSTODY SAMPLE DONS HOFFL LABORATORY SAMPLE D. 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standard - The location conformed to established (professional or regulatory) definitions for the type of sample being collected. Example: a standard RWQCB interface sample.

⁻ 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.	SAMPLE Depth	SAMPLING	TYPE 6 METHOD			BTS										
GIVEN THIS SAMPLE AREA	IN FT. BELOW GRADE	LOCATION DICTATED BY	FOR THE SAMPLE OBTAINED	SAMPLE MATRIX	DATE SAMPLED	CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOMS MATE LABORATORY	LABORATORY SAMPLE I.D.	TPK CAS	TANK Ben-	TOL- UENE	ethyl Ben- Zene	XY- Lehes	TOTAL LEAD	
WoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	18	AIOUQ32	104-0741	ND	ИD	ND	HD	ND	3,3	
FoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	19	SEQUOIA	104-0742	170	МО	ND	DN	2.7	. 1.7	
115	18.0	ELECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	415	SEQUOIA	104-2663	ИD	ИD	DM	ND	סא	6.1	
STOCK	6-12* 6-12* 6-12* 6-12*	RWQCB RWQCB RWQCB	DISCRETE DISCRETE DISCRETE DISCRETE	SOIL SOIL SOIL SOIL	04/04/91 04/04/91 04/04/91 04/04/91	910404-G-1 910404-G-1 910404-G-1 910404-G-1	#30 #31 #32 #33	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-0763 104-0764 104-0765 104-0766	ир Он Он Он	00 00 00 00	00 00 00 00	HD 00 HD	ND ND ND	2.6 4.1 5.9 2.5	

TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

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

I.D.	SAMPLE		TYPE 6												
GIVEN THIS SAMPLE AREA	DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	METHOD FOR THE SAMPLE OBTAINED	SAMP LE MATRIX	DATE SAMPLED	BTS CHAIN OF CUSTODY I,D.	BTS SAMPLE I.D.	NAME OF DOMS HMTL LABORATORY	LABORATORY SAMPLE I.D.	TPH AS GAS	BEN-	TOL- OENE	ethyl Ben- Zene	TENE: XX-	TOTAL LEAD
WoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	8	SEQUOIA	104-0741	ND	ND	ND -	ND	NO	3.3
FoH	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	19	SEQUOIA	104-0742	170	ND	ND	ND	2.	1.7
115	18.0	£LECTIVE	CONFIRM	SOIL	04/16/91	910416-V-1	115	SEQUOIA	104-2663	ND	ND	ND	ND	ND	6.1
STOCK	6-12* 6-12* 6-12* 6-12*	RWQCB RWQCB RWQCB RWQCB	DISCRETE DISCRETE DISCRETE DISCRETE	SOIL SOIL SOIL	04/04/91 04/04/91 04/04/91 04/04/91	910404-G-1 910404-G-1 910404-G-1 910404-G-1	630 631 632 633	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-0763 104-0764 104-0765 104-0766	ND ND ND	ND ND ND ND	NO ND ND ND	00 00 00 00	ND ND ND	2.6 4.1 5.9 2.5
I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE 6 METHOD FOR THE SAMPLE OBTAINED	BAMPLE MATRIX	DATE SAMP LED;	BTS CHAIN OF CUSTODY 1.D.	BTS SAMPLE I.D.	NAME OF DOMS HATL LABORATORY	LABORATORY SAMPLE_1.D	TPH-	KBF	TOTAL OIL	PPB EPA 8010 COMPOUNDS		
WoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	18	SEQUOIA	104-0741	ND	ŀ	ND		ND	
FoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	19	SEQUOIA	104-0742	NC)	ND		ND	
STOCK	6-12* 6-12* 6-12* 6-12*	RWQCB RWQCB RWQCB RWQCB	DISCRETE DISCRETE DISCRETE DISCRETE	SOIL SOIL SOIL SOIL	04/04/91 04/04/91 04/04/91 04/04/91	910404-G-1 910404-G-1 910404-G-1 910404-G-1	130 131 132 133	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-0763 104-0764 104-0765 104-0766	NC NC		ND ND ND ND	•	ND ND ND ND	
I.D. GIVEN THIS SAMPLE AREA	SAMPLE DEPTH IN FT. BELOW GRADE	SAMPLING LOCATION DICTATED BY	TYPE 4 METHOD FOR THE SAMPLE OBTAINED	SAMPLE HATRIX		BTS CHAIN OF CUSTODY I.D.	BTS SAMPLE I.D.	NAME OF DOHS HATL LABORATORY	LABORATORY SAMPLE I.D.	CADN		CHRONIUM	reyd M	ZINC	NICKEL
WoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	18	SEQUOIA	104-0741	4.	8	7.9	3.3	23	10
FoM	11.0	STANDARD	INTRFACE	SOIL	04/04/91	910404-G-1	19	SEQUOIA	104-0742	2.	2	4.4	1.7	13	8.5
STOCK	6-12* 6-12* 6-12* 6-12*	RWQCB RWQCB	DISCRETE DISCRETE DISCRETE DISCRETE	SOIL	04/04/91 04/04/91 04/04/91 04/04/91	910404-G-1 910404-G-1	#30 #31 #32 #33	SEQUOIA SEQUOIA SEQUOIA SEQUOIA	104-0763 104-0764 104-0765 104-0766	3. 2. 5. 2.	8 2	8.4 7.9 18 5.9	2.6 4.1 5.9 2.5	22 25 42 21	9.7 15 16 11

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

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 12.5 17.5 21.5	ND 4.0 ND ND	ND ND ND ND	ND ND 0.014 0.013	ND ND ND ND	ND 0.015 0.025 0.018
MW-1	12/08/92	19 24 29 30.5 38.5	ND 2,600 8,100 ND ND	ND <5.0* 21 : ND ND	0.0056 79 560 ND 0.013	ND 30 150 ND ND	0.0079 200 840 ND 0.024
Detection Limits:		1.0	0.005	0.005	0.005	0.005	

ppm = Parts per million

ND = Not detected

March 22, 1993

^{*} Elevated method reporting limit.

Table 1 Soil Analytical Data Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)

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

Boring Number	Date Sampled	Sample Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
MW-5/B-4	05/25/93	10 15	ND ND	ND ND	ND ND	ND ND	ND ND
SPOILS	05/25/93	N/A	ND	ND	ND	ND	ND
Detection L	mits:		1.0	0.005	0.005	0.005	0.015

ppm = Parts per million

ND = Not detected

N/A = Not applicable

Table 1 Soil Analytical Data Total Petroleum Hydrocarbons (TPPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7107 Grant Line Road at Interstate 580 Tracy, California

	Sample		TPPH as			Ethyl-	
Well	Depth	Date _	Gasoline	Benzene	Toluene	benzene	Xylenes
Number	(feet)	Sampled	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
MW-6	9.5	10/27/95	ND	ND	ND	ND	ND
i	14.5	•	ND	ND	ND	ND	ND
	29.5		ND	ND	ND	. ND	ND
MW-7	10.5	10/24/95	ND	ND	МD	ND	ИĎ
	14.5		ND	ND	ND	ND	ND
	24.5		ND	ND	ND	ND	ND
MW-8	24.5	10/25/95	ND	ND	ND	ND	ND
	29.5		ND	ND	ND	ND	ND
	39.5		ND	ND	ND	ND	ND:
TPPH	= Total pur	geable petro	leum hydroc	arbons			
ppm	= Parts per	million					
NO	= Not deter	ted					

TABLE 3

SUMMARY OF GROUND-WATER ANALYTICAL DATA CHEVRON SERVICE STATION #7127 TRACY, CALIFORNIA

**********		31==========			88888888888888888888	E3883335423
SAMPLE	SAMPLING	BENZENE	TOLUENE	TOTAL XYLENES	ETHYLBEXZENE	TPH
DATE	POINT	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
311177111000			=======================================		*****	********
12/21/87	Y-1	2	ND	DK	ND	ЯT
01/05/88	1-2	4	ND	ОК	DN	ти
01/08/88	T-2	1	ОМ	NO	ND	нт
01/08/88	T-2	1.1	DK	NO	ND	NT
01/21/88	Well	МО	DK	но	ND	NT
02/19/88	T-1	ND	NO	ОМ	ND	ND
02/19/88	T-1	ND	ND	ИО	מא	ND
02/19/88	Well	ND	СИ	NO	ND	ND
02/19/88	TB	, ND	DM	ND	ND	GN
03/14/89	Well #	3.7	0.8	: ~ NT	NT	מא
03/14/89	Well *	ND	ND	סא	NT	ND
03/14/89	T-2 #	2.7	0.4	NT	HT	ND
03/14/89	T-2 *	ND	ND	NT	NT	ND
03/14/89	T-3 #	1_4	0.4	NT	NT	GM
03/14/89	T-3 *	ND	ND	NT	NT	ИD
03/14/89	TB *	DH	ND	דא	NT	NO
04/05/89	Well *	7	3	ND	NT	GN
04/05/89	Well #	6.4	2.3	1	NT	ND
04/05/89	T-2 *	6	3	3	нT	ND
04/05/89	T-2 #	5	1.5	0.7	NT	CH
04/05/89	T-3 *	2	CM	СИ	NT	CH
04/05/89	T-3 #	2.3	0.6	ОК	NT	ND
04/05/89	TB#	ND	\ HD	0.6	NT	ND
Detection Lim	nit	0.5	0.5	0.5	0.5	1

TB = Trip Blank

(Note: See Plate 4 for sampling point locations.)

NT = not tested

ppm = parts per million

ppb = parts per billion

^{*} Analyzed by Ned-Tox Associates, Inc.

[#] Analyzed by Clayton Environmental Consultants, Inc.

Well = samples collected from domestic well-head.

TABLE 1 ANALYTICAL RESULTS OF WATER SAMPLES CHEVRON, TRACY

concentrations in µg/l (ppb)

Sample Location	Sample Date	Purge Well <u>Volumes</u>	TPH as Gasoline	Benzene	Total <u>Xviene</u>	Toluene	Ethyl <u>Benzene</u>
Wellhead	3-14-89	3	ND (ND)	ND (3.7)	ND (ND)	ND (0.8)	ND (ND)
*** •••••••••••••••••••••••••••••••••••	4-5-89	Ö	ND	ND	ND	ND	ND
	1003	3	ND	ND	ND	ND	ND
		6	ND (ND)	7.0 (6.4)	ND (1.0)	3.0 (2.3)	ND (ND)
	4-28-89	5	NT	5.0	ND	2.0	ND .
	5-18-89	5	NT	ND	ND	ND	ND —
Tap-2	3-14-89	3	ND (ND)	ND (2.7)	ND	ND (0.4)	ND
(T-2)	4-5-89	Õ	ND	ND	ND	ND	ND
(1-2)	- 5-65	3	ND	ND	ND	ND	ND
		6	ND (ND)	6.0 (5.0)	3.0 (0.7)	3.0 (1.5)	ND (ND)
	4-28-89	5	NT	4.0	ND	2.0	ND
	5-18-89	5	NT	ND	ND	ND	ND
	2 14 90	2	ND (ND)	ND (1.4)	ND	ND (0.4)	 ND (ND)
Tap-3	3-14-89 4-5-89	3	ND (ND)	ND (1.1)	ND	ND `	ND
(T-3)	4-3-69	0 3	ND	ND	ND	ND	ND
		6	ND (ND)	2.0 (2.3)	ND (ND)	ND (0.6)	ND (ND)
	4-28-89	5 .	NT (IID)	1.0	ND `	ND	ND
	5-18-89	5	NT	ND	ND	ND	ND
Tours	3-14-89		ND	ND	ND	ND	ND
Travel	4-5-89	•	ND (ND)	_		ND (ND)	ND (ND)
Blank	4-28-89	-	NT (ND)	ND	ND	ND	ND
	5-18-89	•	NT	ND	ND	ND	ND
Detection	0				20101	0.5 (0.2)	0.5 (0.2)
Limit	•	•	100 (50)	0.5 (0.4)	2.0 (0.4)	0.5 (0.3)	05 (03)

ND = Not detected at or above laboratory limits of detection NT = Compound not tested for in specific sampling round

Results and detection limits of duplicate analyses are shown in parentheses

Duplicate analyses were performed by Clayton Environmental. All other analyses were performed by Med-Tox Associates.

TABLE 2 GENERAL DRINKING WATER PARAMETERS CHEVRON, TRACY

concentrations in $\mu g/l$ (ppb)

Parameter	Wellhead Sample	Detection Limit
Fecal Coliform (MPN)	ND	2.2
Nitrate - Nitrogen (mg/l)	12	0.1
Total Organic Carbon (mg/l)	1.2	1
Total Suspended Solids (mg/l)	4	2
General Minerals (mg/l)		
Bicarbonate Alkalinity ¹ Carbonate Alkalinity ¹ Hydroxide Alkalinity ¹ Calcium Chloride Copper Iron Magnesium Manganese pH (Standard units) Sodium Sulfate Conductivity (umhos/cm) Total Dissolved Solids Hardness ¹ Zinc	2,000 ND ND 41 150 0.005 0.02 33 0.005 7.9 160 77 1,100 600 240 0.012	2 2 2 0.1 0.1 0.005 0.01 0.005 NA 0.01 0.5 20 10 0.3 0.003

mg CaCO₃/l Not detected at or above laboratory detection limits ND

NA Not applicable

TABLE 4

SUMMARY OF GROUND-WATER AVALYTICAL DATA AFTER TREATMENT CHEVRON SERVICE STATION #7127 TRACY, CALIFORNIA

				====================================	*********	
SAMPLE	SAMPLING	BENZENE	TOLUENE	TOTAL XYLENES	ETHYLBENZENE	TPH
DATE	POINT	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
		**********	========	*************		
08/05/89	A	DM	NO	ND	ND	ND
08/05/89	В	ND	NO	HD	ND	ОK
08/05/89	С	ND	NO	ND	NO	NO
08/05/89	Well	ND	NO	СИ	DK	NO
08/05/89	ŤB	Ю	ND	ακ	NO	CK
08/11/89	A	NO.	NO	סא	NO	NO
08/11/89	В	ND	ND	Ю	ND	ND
08/11/89	C	ND	ND	СМ	МО	ND
08/11/89	¥ell	ND	HD	ND	NO	ND
08/11/89	TB	NO	ND	ОИ	ND	HD
	*			ND.	ND	ND
08/18/89	A	ND	ND	ND :	ND	ND
08/18/89	B	NO	ND	ND	ND	ND
08/18/89	С	NO .	NO	ND	ND	ND
08/18/89	Well	ND	ON	ND	אט סא	ND
08/18/89	18	ND	ND	ND	AU	AD
08/25/89	A	ND	МО	ND	ND	סא
68/25/89	B	ND	NO	ND	ND	NO
08/25/89	С	NO	CN	GK	ND	ND
08/25/89	Well	ND	ND	ND	МО	NO
08/25/89	18	HD	ND	В	ND	OK
05/30/89	A	ND	ND	ND	си	HD
08/30/89	8	ND	סא	ND	פא	ДĶ
08/30/89	c	ND .	. NO	ND	ND	GM
08/30/89	Well	ND	, HD	NO	DK	CN
08/30/89	TB	ND	ND	DM	ND	ND
Detection						
limit		50.	0.5	1.	1.	3.
		******	**======	****	**********	======================================

T3 = Trip Blank

ppm = parts per million ppb = parts per billion

Source: Gettler-Ryan Sampling Reports 5/89 through 8/89

Note: Well is also referred to as sample point D in G-R Sampling Reports.

(Note: See Plates 5 and 6 for sampling location.)

Table 1 Water Well 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

Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
12/10/92	ND	ND	ND	ND	ND
01/07/93	ND	ND	ND	ND	ND
01/22/93	ND	ND	ND	ND .	ND
01/29/93	ND	ND	3	ND	2
02/04/93	ND	ND	ND	ND	ND
02/12/93	- ND	ND	ND	ND	ND
02/19/93	ND	ND	ND -	ND	ND
02/26/93	ND	ND	ND	ND	ND
03/04/93	ND	ND	ŃĎ	ND	ND
03/11/93	ND	ND	ND	ND	ND -
03/19/93	ND ·	8.0	ND	ND	ND
03/25/93	ND	ND	ND	ND .	ND
04/01/93	ND	ND	ND	ND	ND
04/08/93	ND	ND	ND	ND	ND
04/15/93	ND.	ND	ND	ND	ND
04/23/93	ND	ND	ND	ND	ND
04/29/93	ND	ND	ND	ND	ND
05/07/93	ND	ND	ND	ND	ND
05/13/93	ND	ND	ND	ND	ND
05/20/93	ND	ND	ND	ND	ND
05/21/93	ND	Ν̈́D	ND	ND	ND
06/04/93	ND	ÑD	ND	ND	ND
06/11/93	ND	ND	ND	ND	ND
06/18/93	ND	ND	ND	ND	ND
06/24/93	ND	ND	ND	ND	ND
07/01/93	ND	ND	ND	ND	ND
07/08/93	ND	ND	ND	ND	ND
07/16/93	ND	ND	ND	ND	ND
07/23/93	ND	ND	ND	ND	ND
07/29/93	ND	ND	ND	ND	ND
08/05/93	ND	ND	ND	ND	ND

November 22, 1993

Table 1 (continued) Water Well 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

Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
08/12/93	ND	ND	ND	ND	ND
08/19/93	ND	ND	ND	ND	ND
08/26/93	ND	ND	ND	ND	ND
09/02/93	ND	ND	ND	ND	ND
09/09/93	ND	ND	ND]	ND	ND
09/17/93	ND	ND	ND	ND ·	ND
09/23/93	ND	ND	ND]	ND .	ND
10/01/93	ND	ND	ND	ND	ND
10/07/93	ND	, ND	ND	ND	ND
10/15/93	ND	ND	ND	ND	ND
10/21/93	ND	ND	ND	ND	ND
10/28/93	ND	ND	ND	ND	ИD
11/05/93	ND	ND	ND	ND	ND
11/12/93	ND	ND	. ND	ND	ND
Detection					
Limits:	50	0.5	0.5	0.5	0.5

ppb = Parts per billion

ND = Not detected at or above limit of detection

^{*} The trip blank (TB-1) also contained detectable xylenes at 0.9 ppb.

Table 1 Groundwater Elevation Data

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

Well Number	Sample Date	Well Elevation (feet)	Depth to Water (feet, TOC)	Groundwater Elevation (feet)
MW-1	12/28/92	329.18	30.78*	299.09*
MW-2	12/28/92	327.22	28.59	298.63
MW-3	12/28/92	329.26	30.69	298.57

TOC = Top of casing

Elevations relative to bench mark 477-R at 309.20 feet, USC & GS datum.

^{*} Separate-phase hydrocarbons (1.67 feet) were reported; level measured represents the top of liquid.

Table 3 Groundwater 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

Well Number	Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2	12/28/92	ND	ND	ND	ND	0.6*
MW-3	12/28/92	19,000	8,900	660	380	720
Detection	Limits:	50	0.4	0.3	0.3	0.4

ppb = Parts per billion

ND = Not detected at or above limit of detection

^{*} The trip blank (TB-1) also contained detectable xylenes at 0.9 ppb.

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

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

Boring Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
(Grab Sample) MW-4/B-2	05/21/93	ND	12	2	ND	1
B-3	05/21/93	96	1	, 0.5	ND	ND
(Grab		·		;		
Sample) MW-5/B-4	05/25/93	ND	- ND	ND	ND	0.9
MW-4	05/25/93	300	56	10	0.8	-3
MW-5	05/25/93	ND	ND	ND	ND	ND
Detection L	Imits:	50	0.5	0.5	0.5	0.5

ppb = Parts per billion

ND = Not detected at or above limit of detection.

Table 2 **Groundwater Elevation and Analytical Data** Total Petroleum Hydrocarbons (TPPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7127 Grant Line Road at Interstate 5 Tracy, California

		Well	Depth to	Groundwater	TPPH as			Éthyl-	
Well Number	Date Gauged	Elevation (feet, MSL)	Water (feet,TOC)	Elevation (feet, MSL)	Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	benzene (ppb)	(ppb)
MW-6	11/22/95	312.20	13.20	299,00	ND	ND	ND	ND	ND
MW-7	11/22/95	313.36	14.15	299.21	ND	ND	ND	ND	ND
MW-8	11/22/95	329.91	30.35	299.56	ND	ND	ND	ND	ND

TPPH = Total purgeable petroleum hydrocarbons

MSL = Mean sea level

TOC = Top of casing ppb = Parts per billion ND = Not detected

Table 1 Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-7127

Former Chevron Service Station #9-712
I-580 and Grant Line Road
Tracy, California

Vertical Measurements are in feet.

V CI LICAL IVICA	asurements are	s III Ieel.										in parts per billion (pp	
DATE	TOC•	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Henzene	Toluene	Ethyl- Benzene	Xylenes	MTBE	
MW-1													
02/15/94	329.17	299.40	29.77	••			99,000	20,000	24,000	2000	9800		
04/21/94	329.17	299.32	29.85				-		••				
06/01/94	329.17	299.25	29.92				56,000	12,000	15,000	1100	5800	-	
06/28/94	329.17	299.02	30.15										
07/19/94	329.17	308.87	20.30						-				
09/02/94	329.17	298.96	30.61	0.50	••	**							
09/12/94	329.17	298.04	31.66	0.66									
10/12/94	329.17	298.70	31.70	1.54	**	**							
11/30/94	329.17	299.84	29.95	0.77									
03/09/95	329.17	299.88	29.54	0.31		**							
04/18/95	329.17	300.16	29.01		••								
05/17/95	329.17	300.08	29.09	••	-		130,000	22,000	30,000	2000	10,000	••	
06/07/95	329.17	299.93	29.24										
07/21/95	329.17	299.51	29.66							-			
08/15/95	329.17	299.30	29.87				41,000	9400	12,000	1400	7700	·	
09/07/95	329.17	299.32	29.85					b-d	**		••		
10/09/95	329.17	299.16	30.01			••			••		••	••	
11/15/95	329.17	299.29	29.88				68,000	15,000	9600	1100	5500	<2000	
12/30/95	329.17	299.18	29.99		**			••					
01/29/96	329.17	299.85	29.32			. 							
02/27/96	329.17	300.66	28.51				520	48	71	<0.5	27	28	
03/05/96	329.17	300.73	28.44					-					
04/23/96	329.17	300.97	28.20	••	••				₽**	**	••		
05/30/96	329.17	300.70	28.47		••		57,000	15,000	11,000	1100	4900	<250	
06/19/96	329.17	300.74	28.43	**	***	. **	••				**		
07/15/96	329.17	300.51	28.66										
08/27/96	329.17	300.44	28.73		*-	••	74,000	11,000	9500	790	3600	<120	
09/09/96	329.17	300.32	28.85	••									
10/28/96	329.17	300.64	28.53	**						·			
11/11/96	329.17	300.40	28.77	••	-+	••	69,000	13,000	9100	810	3200	<250	

Table 1 Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

Vertical Me	asurements ar	re in feet.	**************************************	89.800000000000000000000000000000000000				***************************************	Analytical results are in parts per billion (ppt			
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	мтве
MW-1 (con	.45								•			
05/06/97	329.17	301.05	28.12				98,000	23,000	17,000	1100	5200	<500
03/03/97	329.17	300.99	28.18		••							
11/18/97	329.17	300.44	28.73		••		58,000	19,000	9700	1100	4000	<500
05/31/98	329.17	302.14	27.03	0.05			180,000	25,000	25,000	1700	9300	19,000
05/31/98 ³	329.17	302.14	27.03	0.05								<500
03/31/98 08/12/98 ²	329.17	301.99	27.18				**					
11/23/98	329.17	301.63	27.16				131,000	14,600	23,700	1990	13,600	<200
05/11/99 ^{2,7}	329.17	301.89	27.28					41				. ==
11/24/99	329.17	301.22 ⁸	28.11	>0.2	0.26	0.26		••				
05/23/00 ¹	329.17	302.34**	27.61	0.97	0.52	0.78	NOT SAMPLE	D DUE TO TH	E PRESENCE O	F SPH.		
10/31/00	329.17	301.47**	28.35	0.81	0.2613	1.0413			HE PRESENCE		••	
XVIJ1100	04/11/	002117										
MW-2												
02/15/94	327.22	300.13	27.09				83	21	6.0	1.0	3.0	
04/21/94	327.22	299.41	27.81									· <u></u>
06/01/94	327.22	299.24	27.98				<50	1.3	0.5	<0.5	<0.5	
06/28/94	327.22	299.05	28.17								**	
07/19/94	327.22	298.87	28.35				••			~~		
09/02/94	327.22	298.70	28.52				82	13	16	3.6	14	
09/12/94	327.22	298.66	28.56									••
10/12/94	327,22	298.60	28.62				•••	**				
11/30/94	327.22	298.84	28.38			**	<50	3.6	4.5	1.0	4.5	
03/09/95	327.22	299.81	27.41									
04/18/95	327.22	300.43	26.79		••		••		*			
05/17/95	327.22	300.27	26.95	_	44		<50	<0.5	<0.5	<0.5	<0.5	**
06/07/95	327.22	300.16	27.06	٠ ـــ	 .				**			
07/21/95	327.22	299.75	27.47	-								-
08/15/95	327.22	299.65	27.57	**	44		<50	<0.5	<0.5	<0.5	<0.5	
09/07/95	327.22	298.53	28.69	ww.		**		**				
37.01170												

Table 1

Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

Vertical Me	asurements an	e in teet.			1000 400 600 600 600 600 600	75 4-1				And Area reserve are in page per critical (pps)			
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	МТВЕ	
MW-2 (con	nt)												
10/09/95	327.22	299.37	27.85										
11/15/95	327.22	299.31	27.91				<50	<0.5	<0.5	<0.5	<0.5	<5.0	
12/30/95	327.22	299.62	27.60										
01/29/96	327.22	300.06	27.16	***	**								
02/27/96	327.22	300.97	26.25		••		<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/05/96	327.22	300.52	26.70										
04/23/96	327.22	301.40	25.82					-		**			
05/30/96	327.22	301.06	26.16		,		<50	<0.5	<0.5	<0.5	<0.5	<5.0	
06/19/96	327.22	300.95	26.27		-								
07/15/96	327.22	300.76	26.46									- · · ·	
08/27/96	327.22	300.50	26.72				<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/06/96	327.22	300.42	26.80		B-0								
10/28/96	327.22	300.39	26.83				-				••		
11/11/96	327.22	300.50	26.72		**								
05/06/97	327.22	301.21	26.01				<50	<0.5	<0.5	<0.5	<0.5	<5.0	
07/27/97	327.22	300.84	26.38		•=								
11/18/97	327.22	300.72	26.50										
05/31/98	327.22	302.75	24.47	-			<50	<0.3	<0.3	<0.3	<0.6	<10	
11/23/98	327.22	302.28	24.94				SAMPLED AN						
05/11/99	327.22	302.73	24.49			-	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
05/23/00	327.22	302.19	25.03				<50	<0.50	<0.50	<0.50	<0.50	<2.5	
10/31/00	327.22	301.30	25.92	0.00	**	••			**	**			
MW-3													
02/15/94	329.28	299.41	29.87				23,000	11,000	1700	540	1000	***	
04/21/94	329.28	299.32	29.96		••	••	••						
06/01/94	329.28	299.17	30.11	**			27,000	12,000	2600	600	2200		
06/28/94	329.28	298.97	30.31		'								
07/19/94	329.28	298.78	30.50	**		**							

Table 1 Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

Vertical Meas	urements are	e in feet.						Analytical results are in parts per billion (ppu					
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE	
MW-3 (cont)													
09/02/94	329.28	298.67	30.61	**			34,000	16,000	4100	770	3000		
09/12/94	329.28	298.63	30.65	••						**			
10/12/94	329.28	298.54	30.74			**				**	. ***		
11/30/94	329.28	298.84	30.44			-	33,000	16,000	3000	740	2400		
03/09/95	329.28	299.75	29.53									**	
04/18/95	329.28	300.31	28.97										
05/17/95	329.28	300.09	29.19				27,000	10,000	760	490	1000		
06/07/95	329.28	300.04	29.24						-			•	
07/21/95	329.28	299.58	29.70										
08/15/95	329.28	299.50	29.78				39,000	13,000	2900	. 700	1700		
)9/07/95	329.28	299.42	29.86	••					••		••		
10/09/95	329.28	299.26	30.02	_	· ·			-					
11/15/95	329.28	299.22	30.06				21,000	8000	2900	430	1500	<1000	
12/30/95	329.28	299.53	29.75	-+			-		**		"		
01/29/96	329.28	300.06	29.22										
02/27/96	329.28	300.85	28.43				<2500	5000	500	220	130	710	
03/05/96	329.28	300.93	28.35	***		~~					-	**	
04/23/96	329.28	301.18	28.10						**		-		
05/30/96	329.28	300.86	28.42				37,000	13,000	7200	870	2900	<120	
06/19/96	329.28	300.77	28.51										
07/15/96	329.28	300.65	28.63									***	
08/27/96	329.28	300.38	28.90				50,000	9500	6900	740	2900	<120	
09/06/96	329.28	300.30	28.98				**					••	
10/28/96	329.28	300.30	28.98								••		
11/11/96	329.28	300.44	28.84				52,000	11,000	5500	780	3000	<250	
05/06/97	329.28	301.06	28.22	**			93,000	23,000	15,000	1400	6200	<500	
07/27/97	329.28	300.70	28.58					·	••				
11/18/97	329.28	300.58	28.70				81,000	29,000	17,000	1600	6700	<500	
05/31/98	329.28	302.60	26.68				78,000	24,000	12,000	1200	5800	1300	
05/31/98 ³	329.28	302.60	26.68									<500	

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Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

		: III toct.				Total						
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE
MW-3 (cont)											
)8/12/98 ²	329.28	302.25	27.03				••	••				
1/23/98	329.28	302.19	27.09				97,200	17,900	12,800	1200	6950	<100
05/11/99 ²	329.28	302.60	26.68			••	51,000	18,000	7800	670	3600	<2.5
)5/11/99 ³	329.28	302.60	26.68									<100
1/24/99	329.28	301.83	27.45			••	62,800	16,600	8300	900	4890	<500
)5/23/00 ¹	329.28	302.11	27.17				27,000 ⁷	14,000	12,000	940	4,600	770
10/31/00³	329.28	301.27	28.91	0.00	••	••	110,000 ¹⁰	25,700	21,300	1,300	7,320	1,680
MW-4												
05/21/93						••	<50	12	2.0	<0.5	1.0	
1/05/93							300	56	10	8.0	3.0	
2/15/94	329.44	299.54	29.90	••	••		260	47	12	2.0	4.0	
)4/21/94	329.44	299.45	29.99		••							
06/01/94	329.44	299.30	30.14				860	200	23	2.8	9.6	**
06/28/94	329.44	299.12	30.32									
07/19/94	329.44	298.94	30.50									
09/02/94	329.44	298.82	30.62				1700	250	27	6.4	15	
09/12/94	329.44	298.75	30.69					•				
10/12/94	329.44	298.69	30.75			••					**	
11/30/94	329.44	298.93	30.51				830	350	29	8.1	22	
03/09/95	329.44	299.83	29.61		••			••		••		
04/18/95	329.44	300.36	29.08									
05/17/95	329.44	300.22	29.22	••	trate		470	200	2.2	0.9	2.1	
06/07/95	329.44	300.17	29.27			••						
07/21/95	329.44	299.72	29.72					**		_		
08/15/95	329.44	299.67	29.77	٠ ــ	**		100	4.2	0.8	<0.5	<0.5	
09/07/95	329.44	299.59	29.85		-			••				**
10/09/95	329.44	299,42	30.02						wo			
11/15/95	329.44	299.39	30.05		**		270	94	9.4	0.77	4.3	27

Table 1

Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-7127

rmer Chevron Service Station #9-71
I-580 and Grant Line Road
Tracy, California

Vertical Measurements are in feet.

	isurements are					Total					uts are in parts	3.1
DATE	TOC*	GWE	DTW	SPHT	SPH	SPH	TPH-	Benzene	Toluene	Ethyl-	Xylenes	MTBE
					Removed	Removed	Gasoline			Benzene		
MW-4 (conf	b											
12/30/95	329.44	299.65	29.79									
01/29/96	329.44	300.13	29.31									
02/27/96	329.44	300.86	28.58				690	100	15	<0.5	2.0	79
03/05/96	329.44	300.89	28.55									
04/23/96	329.44	301.29	28.15									
05/30/96	329.44	301.04	28.40				700	240	4.0	0.6	3.9	<5.0
06/19/96	329.44	300.97	28.47		-							
07/15/96	329.44	300.82	28.62			••						
08/27/96	329.44	300.59	28.85	••			<50	11	<0.5	<0.5	<0.5	<5.0
09/06/96	329,44	300.52	28.92		•						٠,	
10/28/96	329.44	300.54	28.90									
11/11/96	329.44	300.66	28.78				240	57	1.4	0.7	1.8	<5.0
05/06/97	329.44	301.33	28.11				240	74	2.7	<0.5	1.6	<5.0
07/27/97	329.44	301.01	28.43			••					***	
11/18/97	329.44	300.86	28.58				270	230	3.5	1.0	1.6	<2.5
05/31/98	329.44	302.91	26.53			**	1000	450	3.4	4.5	<6.0	<20
08/12/98 ²	329.44	302.62	26.82									••
11/23/98 ⁶	329.44	305.52	23.92									••
12/23/98 ⁶	329,44	305.25	24.19									
05/11/99 ²	329.44	306.24	23.20				470	260	2.6	<0.5	4.3	35
05/11/99 ³	329.44	306.24	23.20								**	<2.0
11/24/99	329.44	306.41	23.03				2400	562	<5.0	10.7	10.4	38.1
5/23/00 ¹	329.44	305.30	24.14		4-	•	370 ⁸	470°	1.1	9.7	5.9	84
10/31/00 ¹	329.44	304.42	25.02	0.00	••		672 ¹¹	224	<5.00	<5.00	<15.0	<25.0

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127 I-580 and Grant Line Road

Tracy, California

Vertical Me	asurements an	e in feet.				Tracy, C	California			Analytical res	ults are in parts	per billion (ppb)
7 01 10 11 11						Total						
DATE	TOC*	GWE	DTW	SPHT	SPH	SPH	TPH-	Benzene	Toluene	Ethyl-	Xylenes	MTBE
					Removed	Removed	Gasoline			Benzene		
MW-5												
05/25/93							<50	<0.5	<0.5	<0.5	0.9	
11/05/93							<50	<0.5	<0.5	<0.5	<0.5	**
02/15/94	312,88	287.78	25.10				<50	<0.5	1.0	<0.5	1.0	
04/21/94	312.88	299.67	13.21			, 						-
06/01/94	312.88	299.49	13.39				<50	<0.5	<0.5	<0.5	<0.5	
06/28/94	312.88	299.15	13.73									
07/19/94	312.88	299.08	13.80	-+								
09/02/94	312.88	298.86	14.02				<50	3.2	1.8	<0.5	2.1	
09/12/94	312.88	298.85	14.03			**						-
10/12/94	312.88	298.73	14,15									
11/30/94	312.88	298.97	13.91		••		<50	<0.5	<0.5	<0.5	<0.5	
03/09/95	312.88	299.91	12.97		**	-						, ""
04/18/95	312.88	300.40	12.48									**
05/17/95	312.88	300.17	12.71			••	150	1.0	<0.5	<0.5	<0.5	
06/07/95	312.88	300.03	12.85	**								
07/21/95	312.88	299.58	13.30			**	**					
08/15/95	312.88	299.47	13.41		••	••	<50	<0.5	<0.5	<0.5	<0.5	
09/07/95	312.88	299.46	13.42									
10/09/95	312.88	299.27	13.61						•			
11/15/95	312.88	299.25	13.63				<50	<0.5	<0.5	<0.5	<0.5	<5.0
12/30/95	312,88	299.58	13.30		••						••	
01/29/96	312.88	300.13	12.75								-	* =
02/27/96	312.88	300.86	12.02		. 		<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/05/96	312.88	300.92	11.96	_					**			
04/23/96	312.88	301.11	11.77		-							
05/30/96	312.88	300.71	12.17	**			<50	<0.5	<0.5	<0.5	<0.5	<5.0
06/19/96	312.88	300.63	12.25	•								
07/15/96	312.88	300.49	12.39									
08/27/96	312.88	300.23	12.65	**			<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/06/96	312.88	300.20	12.68								***************************************	

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Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

Vertical Me	easurements a	re in feet.								Analytical res	ults are in parts	per billion (ppb)
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE
MW-5 (con	·4\											
10/28/96	312.88	300.16	12.72									
11/11/96	312.88	300.10	12.72					••				
05/06/97	312.88	300.27	12.06				<50	2.2	2.0	<0.5	1.7	<5.0
	312.88	300.49	12.39						***			
07/27/97	312.88	300.49	12.39								••	40
11/18/97					••		<50	<0.3	<0.3	<0.3	<0.6	<10
05/31/98	312.88	302.30	10.58				SAMPLED AN					
11/23/98	312.88	301.96	10.92						<0.5	<0.5	<0.5	<2.5
05/11/99	312.88	302.39	10.49	••			<50 •50	<0.5		<0.50		<2.5 <2.5
05/23/00	312.88	301.79	11.09	0.00			<50	<0.50	<0.50		<0.50	~2.D
10/31/00	312.88	300.97	11.91	0.00	••	••			••	••	••	•••
MW-6												
12/30/95	312.20	298.55	13.65									
01/29/96	312.20	300.02	12.18									
02/27/96	312.20	300.75	11.45	**			70	1.1	<0.5	<0.5	<0.5	<5.0
03/05/96	312.20	300.88	11.32							₩-		+-
04/23/96	312.20	301.08	11.12			••						**
05/30/96	312.20	300.75	11.45				60	1.3	<0.5	<0.5	0.9	<5.0
06/19/96	312.20	300.66	11.54		•					-		
07/15/96	312.20	300.44	11.76									
08/27/96	312.20	300.25	11.95				90	1.6	<0.5	<0.5	<0.5	<5.0
09/06/96	312.20	300.18	12.02			**			-			
10/28/96	312.20	300.19	12.01			••					**	
11/11/96	312.20	300.30	11.90	••			110*	<0.5	<0.5	<0.5	<0.5	<5.0
05/06/97	312.20	300.92	11.28				170	<0.5	<0.5	<0.5	<0.5	<5.0
07/27/97	312.20	300.52	11.68									
11/18/97	312.20	300.43	11.77		••		<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/31/98	312.20	302.39	9.81			••	<50	0.89	0.65	<0.3	<0.6	<10
11/23/98	312.20	UNABLET					**	**				

Table 1

Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet

Vertical Mea	isurements ar	e in feet.							***************************************	Analytical res	ults are in parts	ber omnou (bbo
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	МТВЕ
MW-6 (cont	 a											
12/23/98	312.20	301.88	10.32	***	**		66	<0.5	<0.5	<0.5	<0.5	<2.5
05/11/99	312.20	302.40	9.80	••			<50	1.9	<0.5	<0.5	<0.5	2.9
11/24/99	312.20	301.55	10.65	••	**		77.2	13.5	<0.5	<0.5	<0.5	<2.5
	312.20	301.85	10.35	0.00		••	<50	<0.50	<0.50	< 0.50	< 0.50	<2.5
05/23/00		301.83	10.37	0.00		••	<50.0	< 0.500	<0.500	<0.500	<1.50	5.08
10/31/00	312.20	301.63	10.57	0.00		-	Q010	10.000	1500 00			
MW-7												
12/30/95	313.36	300.98	12.38								~ •	
01/29/96	313.36	300.22	13.14								~-	
02/27/96	313.36	301.02	12.34			**	<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/05/96	313.36	301.01	12.35			••		**				
04/23/96	313.36	301.23	12.13									
05/30/96	313.36	300.94	12.42				<50	<0.5	<0.5	<0.5	<0.5	<5.0
06/19/96	313.36	300.79	12.57									
07/15/96	313.36	300.66	12.70									
08/27/96	313.36	300.51	12.85				<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/06/96	313.36	300.46	12.90									
10/28/96	313.36	300.52	12.84			-		. ·				
11/11/96	313.36	300.61	12.75									
05/06/97	313.36	301.22	12.14		~-		<50	<0.5	<0.5	<0.5	<0.5	<5.0
07/27/97	313.36	300.91	12.45				••				••	
11/18/97	313.36	300.82	12.54									
05/31/98	313.36	302.61	10.75				<50	<0.3	<0.3	<0.3	<0.6	<10
11/23/98	313.36	302.52	10.84				SAMPLED AN	INUALLY				**
05/11/99	313.36	302.96	10.40				<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/23/00	313.36	302.39	10.97		÷		<50	< 0.50	<0.50	<0.50	< 0.50	<2.5
10/31/00	313.36	301.51	11.85	0.00		••	••				**	

Table 1 Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

Vertical Me	asurements ar	e in teet.	2.0000000000000000000000000000000000000						description and the second second	Analytical res	ults are in parts	per billion (ppb)
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	MTBE
N. 6311 A												
MW-8	200.01	000 (1	20.00									
12/30/95	329.91	299.61	30.30	••				**	**			
01/29/96	329.91	300.35	29.56							••		
02/27/96	329.91	301.23	28.68				<50	<0.5	<0.5	<0.5	<5.0	<5.0
03/05/96	329.91	301.16	28.75			•=				••	mage dans	
04/23/96	329.91	301.66	28.25			**				••		
05/30/96	329.91	301.47	28.44				<50	<0.5	<0.5	<0.5	<0.5	<5.0
06/19/96	329.91	301.40	28.51								••	
07/15/96	329.91	301.24	28.67									***
08/27/96	329.91	300.99	28.92				<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/06/96	329.91	300.92	28.99							••		
10/28/96	329.91	300.85	29.06									
11/11/96	329.91	300.93	28.98				=#	**				
05/06/97	329.91	301.77	28.14				<50	3.6	3.1	0.7	2. 5	<5.0
07/27/97	329.91	301.36	28.55								· 	
11/18/97	329.91	301.11	28.80									
05/31/98	329.91	303.34	26.57				<50	< 0.3	<0.3	<0.3	<0.6	<10
11/23/98	329.91	302.95	26.96				SAMPLED AN	NUALLY				
05/11/99	329.91	303.43	26.48			••	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/23/00	329.91	302.82	27.09				<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/31/00	329.91	318.78	11.13	0.00				**	• ••	-4		••
SUPPLY V	WELL											
11/15/95							<50	<0.5	<0.5	<0.5	<0.5	<5.0
11/11/96			**		44		<50	<0.5	<0.5	<0.5	<0.5	<5.0
07/27/97						==	-		••			
11/18/97							<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/31/98	••											
UJ/J1/70										••		••

TABLE 1

Groundwater Monitoring Data and Analytical Results

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

Vertical Measurements are in feet.

V CHICAL IVICA	asurcincins ar	, m roct.				Total				Allarytical res	uits are in parts	er omion (ppe
DATE	TOC*	GWE	DTW	SPHT	SPH	SPH	TPH-	Benzene	Toluene	Ethyl-	Xylenes	MTBE
DAIL .	100			~~	Removed	Removed	Gasoline			Benzene		
											,	
SUPPLY W	ELL (cont)											
11/23/98				20			<50	<0.5	<0.5	<0.5	<0.5	<2.0
05/11/99	••									•-		
11/24/99						**	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/23/00						••				-		
					•							
BAILER B	LANK						-60	-O.E	A.E	<0.5	<0.5	
02/15/94		. ••					<50	<0.5	<0.5	<0.5	<0.3	.
TRIP BLA	NK											
02/15/94	**		••				<50	<0.5	<0.5	<0.5	<0.5	==
06/01/94							<50	<0.5	<0.5	<0.5	<0.5	
09/02/94	-						<50	<0.5	<0.5	<0.5	<0.5	
11/30/94					**		<50	<0.5	<0.5	<0.5	<0.5	`
05/17/95	••		++	**			<50	<0.5	<0.5	<0.5	<0.5	
08/15/95							<50	<0.5	<0.5	<0.5	<0.5	
11/15/95							<50	<0.5	< 0.5	<0.5	<0.5	<5.0
02/27/96							<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/30/96							<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/27/96	-~					••	<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
05/06/97							<50	<0.5	<0.5	<0.5	<0.5	<5.0
07/27/97												
11/18/97							<50	<0.5	<0.5	<0.5	<0.5	<2.5
,												

Table 1

Groundwater Monitoring Data and Analytical Results Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

Vertical Meas	urements ar	e in feet.								Analytical res	ults are in parts	per billion (ppb)
DATE	TOC*	GWE	DTW	SPHT	SPH Removed	Total SPH Removed	TPH- Gasoline	Benzene	Toluene	Ethyl- Benzene	Xylenes	МТВЕ
TRIP BLAN	K (cont)		•							2.2	0.6	-10
05/31/98							<50	<0.3	<0.3	<0.3	<0.6	<10
11/23/98							<50	<0.5	<0.5	<0.5	<0.5	<2.0
05/11/99							<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/23/00							<50.0	< 0.500	< 0.500	< 0.500	<0.500	<2.5
10/31/00	~*				••		<50.0	<0.500	<0.500	<0.500	<1.50	49.0

Table I

Groundwater Monitoring Data and Analytical Results

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

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 23, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing

SPH = Separate Phase Hydrocarbons

GWE = Groundwater Elevation

TPH = Total Petroleum Hydrocarbons

DTW = Depth to Water

MTBE = Methyl tertiary butyl ether

SPHT = Separate Phase Hydrocarbon Thickness

-- = Not Measured/Not Analyzed

- * TOC relative to mean sea level (msl).
- ** GWE has been corrected for the presence of SPH, correction factor = [(TOC-DTW)+(SPHT x 0.80)].
- ORCs present in well.
- ORC Installed.
- 3 Confirmation run.
- Due to the presence of Separate Phase Hydrocarbons results for EPA 8015/8020 do not represent true values for TPH-Gasoline, BTEX, or MTBE. The results were reported respectively as 24,000, 140, 830, 210,1500 and <0.05 mg/Kg.
- 5 Estimated Groundwater Elevation.
- Well was not sampled due to damaged casing and debris in well. Ground water elevation is an estimate.
- Laboratory report indicates gasoline C6-C12.
- 8 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.</p>
- Laboratory report indicates result exceeds the linear range of calibration.
- Laboratory report indicates gasoline.
- Laboratory report indicates the results for this hydrocarbon is elevated due to the presence of single analyte peak(s) in the quantitation range.
- 12 Chromatogram pattern indicates an unidentified hydrocarbon.
- 13 Product + Water.

Table 2 Groundwater Analytical Results

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

												rts per billion (ppb)
Date	Time	Volume	pН	Conduct.	Temp.	DO	ORP	Alkalinity	Nitrate	Sulfate	Phosphate	Ferrous Iron
		(gallons)		(µmhos/cm)	°C/°F	(mg/L)	(mV)	(ppm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-1												
07/27/97	14:46											
07/27/97	14:51	7.5	7.09	212.00	20.9/	2.37	-5.0	500				
07/27/97	14:56	15.0	7.11	212.00	21/	2.24	-6.0	600				
07/27/97	15:01	22.5	7.11	211.00	21.1/	2.24	-5.0	550			••	••
07/27/97	15:03	23.0	7.10	212.00	20.9/	2.25	-6.0	550	<1.0	14	<100	2.2
05/31/98	13:30											
05/31/98	13:36	9.0	6.96	1331.00	20.6/	0.15	3.2	975	**			
05/31/98	13:40	18.0	6.97	1239.00	20.2/	0.40	1.3	900				**
05/31/98	13:48	27.0	6.95	1199.00	20.5/	0.66	1.3	950	_			
05/31/98	13:50	28.0	6.97	1201.00	20.4/	0.60	2.0	950	<1.0	4.0	<10	4.1
08/12/98				••	••	0.45						
11/23/98	16:00	0.0	7.00	1706.00	16.6/						••	
05/11/99	15:45	8.0	7.60	1800.00	23.5/	0.3 (Pre)	118 (Pre)					
05/11/99	15:48	16.0	7.60	1600.00	21.3/	••	••				-	
05/11/99	15:50	24.0	7.60	1600.00	21.5/	1.5 (Post)	26 (Post)		1.7			1.5
MW-2												
07/27/97	14:01											
07/27/97	14:03	2.0	6.95	206.00	21.2/	9.83	2.1	300				
07/27/97	14:05	4.0	6.95	206.00	21.2/	9.85	3.0	350				
07/27/97	14:07	6.0	6.95	205.00	21.2/	9.93	3.0	325	••			••
07/27/97	14:09	7.0	6.95	205.00	21.2/	9.90	3.0	350	59	68	<10	0.019
05/31/98	12:34		0.70									
05/31/98	12:37	2.0	7.01	800.00	21.1/	2.16	-13	250				
05/31/98	12:40	4.0	7.03	800.00	21.1/	2.55	-10	300				44
05/31/98	12:43	6.0	7.01	795.00	21.1/	2.83	-11	275				
05/31/98	12:46	7.0	6.99	796.00	21.2/	2.80	-10	275	54	57	<10	0.11
05/11/99	12:05	3.0	7.60	1200.00	21.4/	2.2 (Pre)	107 (Pre)					
05/11/99	12:03	6.0	6.90	1100.00	21.1/						••	
05/11/99	12:08	7.0	7.00	1100.00	21.2/	2.3 (Post)	91 (Post)	290	62	59	 	0.043
66111100	12.10	7.0	7,00	1100.00	21.4-	2.3 (FUSL)	71 (FUSE)	470	Ų2	J7	4-	0.043

Table 2 Groundwater Analytical Results

Former Chevron Service Station #9-7127 I-580 and Grant Line Road

Tracy, California

						2100), Cu						irts per billion (ppb)
Date	Time	Volume (gallons)	pН	Conduct. (µmhos/cm)	Temp. °C/°F	DO (mg/L)	ORP (mV)	Alkalinity (ppm)	Nitrate (mg/L)	Sulfate (mg/L)	Phosphate (mg/L)	Ferrous Iron (mg/L)
MW-2 (cont)												
05/23/00	5:11	0.0			••							
05/23/00	5:14	2.5	6.68	937.00	/72.0		 .					
05/23/00	5:17	5.0	6.58	939.00	/71.5	••	••		••		••	
05/23/00	5:20	7.0	6.54	908.00	/71.1						•••	
MW-3												
07/27/97	14:29											
07/27/97	14:31	2.0	7.11	269.00	23/	8.75	-4.3	875		•		
07/27/97	14:33	4.0	6.95	264.00	22/	6.22	2.8	850		·	~-	
07/27/97	14:35	6.0	6.93	261.00	21.9/	6.90	4.3	850		••		••
07/27/97	14:37	7.0	6.94	262.00	21.9/	6.70	4.3	850	<1.0	<1.0	<10	2.1
05/31/98	13:13											
05/31/98	13:15	2.0	6.89	1266.00	21.1/	0.45	12.3	750	P- 474		**	
05/31/98	13:17	4.0	6.75	1155.00	21/	0.40	12.2	700				
05/31/98	13:19	6.0	6.79	1200.00	20.9/	0.38	12.1	675				. **
05/31/98	13:23	7.0	6.78	1199.00	20.9/	0.35	12.1	700	<1.0	4.0	<10	3.1
08/12/98			••		••	0.33			••			**
11/23/98	15:32	2.5	7.00	1705.00	16.6/					***		**
11/23/98	15:36	4.5	7.00	1720.00	16.4/	4-	**				***	**
11/23/98	15:40	6.5	6.90	1723.00	16.4/			-				
05/11/99	17:01	3.0	8.00	1500.00	21.4/	1.5 (Pre)	-7.0 (Pre)		+-			•
05/11/99	17:03	6.0	7.20	1700.00	21.4/							
05/11/99	17:04	9.0	7.20	1700.00	21.4/	1.5 (Post)	-19 (Post)	480	<1.0	8.8		1.5
11/24/99	11:33	2.0	6.70	1588.00	17.9/							
11/24/99	11:36	4.0	6.70	1564.00	18.3/				••			
11/24/99	11:39	6.0	6.80	1517.00	18.4/							
05/23/00	7:30	0.0		. –					-			
05/23/00	7:33	2.5	6.56	1251.00	/70.6							
05/23/00	7:36	5.0	6.53	1155.00	/70.0	**						* -
05/23/00	7:39	7.0	6.51	1137.00	/69.8			••				

1 aute 2 Groundwater Analytical Results

Former Chevron Service Station #9-7127 I-580 and Grant Line Road

Tracy, California

						Tracy, Car	понна			Analytica	al values are in pa	urts per billion (ppb)
Date	Time	Volume	pН	Conduct.	Temp.	DO	ORP	Alkalinity	Nitrate	Sulfate	Phosphate	Ferrous Iron
		(gallons)		(µmhos/cm)	°C/°F	(mg/L)	(mV)	(ppm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
MW-4												
07/27/97	14:14											
07/27/97	14:16	2.0	7.22	244.00	20.6/	8.75	-13	500	**			
07/27/97	14:18	4.0	7.21	243.00	20.6/	8.20	-13	550				
07/27/97	14:20	6.0	7.24	246.00	20.5/	8.55	-13	525			***	
07/27/97	14:22	7.0	7.22	245.00	20.6/	8.50	-13	550	80	68	<10	0.15
05/31/98	12:51											
05/31/98	12:54	3.0	7.01	1300.00	20.4/	2.83	-10	450	••			
05/31/98	12:57	6.0	6.98	1290.00	20.4/	2.82	-12	400				₩₩
05/31/98	13:00	9.0	6.90	1280.00	20,4/	2.80	-11	375				
05/31/98	13:03	10.0	6.92	1283.00	20.4/	2.80	-12	400	17	30	<10	7.4
08/12/98					••	0.82				-		
12/23/98	16:45	5.0	6.80	1062.00	9.9/							
05/11/99	15:00	1.5	7.80	1400.00	21.5/	0.3 (Pre)	148 (Pre)					
05/11/99	15:02	3.0	7.40	1500.00	20.6/	**		-	w-			
05/11/99	15:04	4.0	7.30	1500.00	20.6/	1.8 (Post)	124 (Post)	430	86	64		0.027
11/24/99	11:05	1.5	7.00	1310.00	17.8/		••			-	••	
11/24/99	11:06	2.0	6.90	1319.00	18.2/							
11/24/99	11:08	4.0									**	
05/23/00	6:48	0.0					••				••	
05/23/00	6:52	1.5	7.18	1036.00	/71.6							
05/23/00	6:56	3.0	6.24	1014.00	/69.3					••		
05/23/00	6:59	4.0	6.24	1039.00	/69.6						-	
MW-5												
07/27/97	13:15											
07/27/97	13:18	3.0	7.95	274.00	19.3/	10.45	-55	300				
07/27/97	13:20	6.0	7.92	273.00	19/	10.35	-54	350				
07/27/97	13:22	9.0	7.90	274,00	18.9/	10.30	-52	300				
07/27/97	13:24	10.0	7.91	273.00	19/	10.31	-53	300	82	100	<10	0.013
05/31/98	12:07	•										

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Groundwater Analytical Results

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

										1111117110	22 - (012000 0110 111 P-	its per bittion (ppo
Date	Time	Volume (gallons)	pH	Conduct. (µmhos/cm)	Temp. <i>°C/°F</i>	DO (mg/L)	ORP (mV)	Alkalinity (ppm)	Nitrate (mg/L)	Sulfate (mg/L)	Phosphate (mg/L)	Ferrous Iron (mg/L)
MW-5 (cont)												
05/31/98	12:09	34.5	6.85	785.00	18.9/	3.20	-25	350				
05/31/98	12:11	69.0	7.00	980.00	18.9/	3.27	-26	400	••		••	
05/31/98	12:13	13.5	7.01	981.00	18.9/	3.21	-28	400				••
05/31/98	12:15	14.0	7.00	990.00	18.8/	3.20	-28	450	35	90	<10	1.9
05/11/99	13:10	3.0	8.00	1700.00	18.9/	5.1 (Pre)	98 (Pre)					
05/11/99	13:13	6.0	7.40	1700.00	18.2/				**			**
05/11/99	13:17	9.0	7.40	1700.00	18.4/	4.6 (Post)	140 (Post)	330	62	100		<0.01
05/23/00	5:47	0.0									*-	
05/23/00	5:53	3.0	7.80	1241.00	/70.3						•-	
05/23/00	5:59	6.0	7.62	1178.00	/68.8	**	••	**				
05/23/00	6:07	9.0	7.62	1165.00	/67.4							••
MW-6												
07/27/97	13:42											
07/27/97	13:44	3.0	7.54	261.00	23.2/	11.28	-40	400				
07/27/97	13:46	6.0	7.34	232.00	19.4/	8.10	-18	450				
07/27/97	13:48	9.0	7.26	227.00	19/	8.35	-16	400				
07/27/97	13:50	10.0	7.20	228.00	19.1/	8.32	-15	400	17	27	<10	0.017
05/31/98	11:48											
05/31/98	11:51	3.0	6.98	966.00	18.7/	0.72	3.20	500				
05/31/98	11:54	6.0	6.96	970.00	18.7/	0.51	3.19	450				••
05/31/98	11.57	9.0	6.95	959.00	18.7/	0.36	3.42	400			••	
05/31/98	12:00	10.0	6.90	960.00	18.6/	0.40	3.40	450	68	51	<10	3.5
12/23/98	15:15	3.0	6.40	1038.00	15/				**			
12/23/98	15:20	6.0	6.70	980.00	15.7/	••					**	
12/23/98	15:24	9.0	6.80	964.00	15.6/							
05/11/99	14:20	3.0	7.00	· 1200.00	18.6/	0.3 (Pre)	140 (Pre)					
05/11/99	14:23	6.0	6.40	1100.00	19.3/					-		
05/11/99	14:29	9.0	6.40	1100.00	19.1/	0.4 (Post)	214 (Post)	370	52	39		0.064
11/24/99	13:13	3.0	6.00	1130.00	19.6/	••				••		

Table 2
Groundwater Analytical Results

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

										Analytical values are in parts per billion (ppb)				
Date	Time	Volume	pН	Conduct	Temp.	DO.	ORP	Alkalinity	Nitrate	Sulfate	Phosphate	Ferrous Iron		
		(gallons)		(µmhos/cm)	°C/°F	(mg/L)	(mV)	(ppm)	(mg/L)	(mg/L)	(mg/L)	(mg/L)		
MW-6 (cont)														
11/24/99	13:18	6.0	6.90	1105.00	20/							- +		
11/24/99	13:22	9.0	7.10	1114.00	20.2/									
05/23/00	8:15	0.0	••		••		**		**					
05/23/00	8:21	3.0	6.97	950.00	/66.2									
05/23/00	8:28	6.0	6.97	995.00	/65.5							**		
05/23/00	8:35	9.0	6.98	1002.00	/65.6	••								
MW-7														
07/27/97	13:02													
07/27/97	13:04	3.0	7.91	245.00	19.6/	8.95	-52	350		-	· <u></u>			
07/27/97	13:06	6.0	7.94	264.00	19.3/	9.70	-55	325						
07/27/97	13:08	9.0	7.95	266.00	19.3/	9.80	-55	350		••				
07/27/97	13:10	10.0	7.93	265.00	19.3/	9.79	-55	350	99	100	<10	0.012		
05/31/98	12:16													
05/31/98	12:18	3.0	6.85	1020.00	19.6/	3.60	-20	350		**				
05/31/98	12:20	6.0	7.25	1020,00	18.9/	3.80	-21	300				•••		
05/31/98	12:22	9.0	7.28	1000.00	18.8/	4.20	-21	350	**					
05/31/98	12:24	10.0	7.30	1001.00	18.9/	4.40	-20	325	45	85	<10	0.011		
05/11/99	12:41	3.0	6.80	1200.00	18.2/	5.2 (Pre)	95 (Pre)	·				••		
05/11/99	12:44	6.0	7.40	1400.00	18.5/					-		₩#		
05/11/99	12:48	9.0	7.40	1400.00	18.2/	5.2 (Post)	96 (Post)	300	75	86		0.14		
05/23/00	6:10	0.0				-				**				
05/23/00	6:15	3.0	8.01	1157.00	/68.8							**		
05/23/00	6:21	6.0	7.70	1158.00	/67.8		-+							
05/23/00	6:27	9.0	7.68	1136.00	67.8						. ••			

1 able 2
Groundwater Analytical Results

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

										Analytic	ai vaiues are in pa	rts per billion (ppb
Date	Time	Volume	pH	Conduct.	Temp.	DO	ORP	Alkalinity	Nitrate	Sulfate	Phosphate	Ferrous Iron
		(gallons)		(µmhos/cm)	°CPF	(mg/L)	(mV)	(ppm)	(mg/L)	(mg/L)	(mg/L)	(mg/ <u>L)</u>
MW-8												
07/27/97	12:38											
07/27/97	12:40	2.2	7.85	141.00	21.1/	9.40	-61.3	100				
07/27/97	12:42	4.6	7.84	141.00	20.8/	9.30	-48.3	150				-+
07/27/97	12:44	6.6	7.83	142.00	20.9/	9.25	-50	100		**		,
07/27/97	12:46	7.0	7.84	141.00	20.8/	9.25	-50	100	50	24	<10	0.02
05/31/98	11:18											
05/31/98	11:21	3.0	7.03	357.00	21.1/	6.58	-28	150		-		
05/31/98	11:24	6.0	7.09	381.00	20.5/	6.50	-30	200		-		••
05/31/98	11:27	9.0	7.08	373.00	20.5/	6.40	-31	175				
05/31/98	11:30	10.0	7.08	375.00	20.5/	6.41	-30	200	35	16	<1.0	0.42
05/11/99	11:20	3.0	8.00	1600.00	18.2/	6.07 (Pre)	103 (Pre)			-		
05/11/99	11:24	6.0	7.30	1200.00	18.5/							
05/11/99	11:26	8.0	7.10	1200.00	18.2/	5.44 (Post)	92 (Post)	110	42	19		0.028
05/23/00	4:23	0.0		••								,
05/23/00	4:26	2.5	7.64	4280.00	/76.2				••		₩ ₩	
05/23/00	4:29	5.0	7.39	4320.00	<i>1</i> 72.5							
05/23/00	4:32	7.5	7.27	4390.00	/71.2						**	
				·								
SUPPLY W			7.05	257.00	22.7	4.89	-53	200	48	76	<10	1.5
07/27/97	13:40		7.85	257.00								
11/23/98	15:15	1.0	7.40	1115.00	20.4	-4		••				
11/24/99	12:45		2.50	5386.00	18.8	***			***			
05/23/00							**					

Table 2

Groundwater Analytical Results

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

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 23, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

(µmhos/cm) = Micromhos per centimeter

DO = Dissolved Oxygen

(mg/L) = Milligrams per liter

ORP = Oxidation-Reduction Potential

(mV) = Millivolts

(ppm) = Parts per million

°C/°F = Degrees Celsius/Degrees Fahrenheit

Conduct. = Conductivity

Temp. = Temperature

(Pre) = Pre-purge reading

(Post) = Post-purge reading

-- = Not Measured/Not Analyzed

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using Chevron-designated disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used for all samples. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Products Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

APPENDIX D

Soil Boring Logs and Well Construction Diagrams

			Blow/ Ft.	Sample No.	uscs	Description	Wel Cons
	0					Asphalt	
	2	-	-		ML	Fill - SANDY SILT - light brown to brown, with some angular gravel, NOSC	
	4		22	-			
	6	-			a	Fill - SILTY CLAY - brownish gray, stiff, low plasticity, dry to moist, NOSC	
	8	-					
•	10		65	B1 - 10			
	12	1			SM	Gravelly SILTY SAND - gray, very dense fine grained sand, well rounded gravel up to 1/4 inch present NOSC	
1661	14		46			•	
) e b t h	16					•••	
L	18			7	a	SILTY CLAY - gray, firm, low plasticity, moist, gravel up to 1/4 inch, NOSC	
	20					Total Depth = 19 feet, 6 inches Logged By: Steve Fox Drilling Date: 12/7/87	
-	22		:				
	24		:				
	26						
	28						
	30						

KLEINFELDER

CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

BORING LOG B-1

PLATE

A2

B - 1

:	Blow/ Ft.	Sample No.	uscs	Description	Weil Const
۰, –				Asphalt	
2 -	·		SM	Fill - SILTY SAND - tan, light brown, NOSC	
4 —	24		ή α	Fill - SILTY CLAY - brownish gray, with angular gravel	
6 -					
8 –					
10	80	driven 11 inches	SM	GRAVELLY SILTY SAND - gray, very dense, fine gravelly sand, well rounded gravels up to 1/2 inch, NOSC	
12 -					
Depth (feet)	85	driven 12 inches		: 	
	14	B2 - 20	CL	SILTY CLAY - gray, firm, low plasticity, moist, well rounded gravel, slight odor.	
20				Total Depth = 19 feet, 6 inches	
22-				Logged By: Steve Fox Drilling Date: 12/7/87	
24				Auger refusal at 19 feet, 6 inches	
26		Ì			
28					
зо—					

B - 2



CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

BORING LOG B-2

PLATE

A3

O	Blow/ Ft.	Sample No.	USCS	Description	Wel Cons
U				Asphalt	·
2	-		СL	Fill - SILTY CLAY - tan	
4	26		α	Fill - SILTY CLAY - grayish brown, very stiff, dry to moist	
6	-			- some gravel present -50 ppm tip reading	
8	-				
10	44				
12	i			Augus milital at 14 feet	
φ 14 ·	12	B3- 14		- Auger refusal at 14 feet	
0 e p t h (1 e e t)				Total Depth = 14 feet Logged By: Steve Fox Drilling Date: 12/7/87	
18 '					
20 •					
22 •					
24	1			· A service of the se	
26 -					
28 -	1				
30 -					

KLEINFELDER

CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA BORING LOG B-3 PLATE

A4

B-3

i	Blow/ Ft.	Sample No.	uscs	Description	Con
0 -				Asphalt	
_			SM	Fill - SILTY SAND - light brown tan, NOSC	
2 —					
4 —		- -	CL	Fill - SILTY CLAY - grey, stiff, low plasticity, moist, slight odor	
6 —	12			- tip reading of 25 ppm on drill cuttings	
8 -				- some sand present, slight odor	
10 —	51				
12 —	3 1			,	
16			SP	- GRAVELLY SAND - gray, dense, sand fine grained, mois	
16	44	B4 - 15		gravels from 1/4 to 1/2 inch tip reading of over 2000 ppm	<u> </u>
- '				Total Depth = 19 feet, 6 inches	
18 -				Logged By: Steve Fox Drilling Date: 12/7/87	
				Drilling Date. 1217/07	1
20 —					
22 —	·				
24 -				. ****	
26 -				,	
28 -	:				
30 —					

B - 4



CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

BORING LOG B-4

PLATE

A5

	*	Blow/ Ft.	Sample No.	USCS	Description	W/ Cor
	0 -			CU	Asphalt	‡ ::
	_			SM	Fill - SILTY SAND - tan, small amount of gravel, NOSC	<u> </u> :::
	2 -			SM	SILTY SAND - gray, stiff, moist, fine-grained sand, possible fill, NOSC	
	4 -	-1	<u> </u>			
		12	B5 - 5			<u> </u>
	6 -				Total Depth = 5 feet, 8 inches Logged By: Steve Fox Drilling Date: 12/7/87	
	8 -					
	10 -					
	12 -		·			
(1001)	14 -				_	
Depth (feet)	16 -				: ~~	
	18 -					
	20 -					
	22 -	1				
	24 -	1			generally.	
	26 -				·	
	28 -					
	30 -					

. .____

B - 5



CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

A6

PLATE

PROJECT NO.

10-1782-01

BORING LOG B-5

•		Blow/ Ft.	Sample No.	uscs	Description	Cons
0 2				SM	Asphalt Fill - SILTY SAND, light brown, NOSC	
				ML	SANDY SILT - gray, low plasticity, dry to moist, NOSC	
4 6		22	B6 - 5	ML	GRAVELLY SANDY SILT - gray, hard, low plasticity, moist, NOSC	
8	-				Auger refusal at 8 feet 9 inches	
10	1				Total Depth = 8 feet 9 inches Logged By: Steve Fox Drilling Date: 12/7/87	
12	1					
⊕ 6 14 6	-					
14 14 16 00 1	_				- : -~	
18					·	
20	_					
22					-	
24	_				يحبرن	
26	_					
28	-					
30	-					

B - 6

PROJECT NO.



10-1782-01

CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

BORING LOG B-6

PLATE

A7

0 —	Blow/ Ft.	Sample No.	USCS	Description	C
0 -				Asphalt	
2 —			SM	Fill - SILTY SAND, light brown, NOSC	
4			α	Fill - SILTY CLAY with angular gravel greater than 1 inch, NOSC	
6 —	74	B7 - 5	SM	Gravelly SILTY SAND - gray, very dense, moist, NOSC	3.0.0.0
8 —				Auger refusal at 8 feet, unable to collect sample	
10 —				Total Depth = 8 feet Logged By: Steve Fox Drilling Date: 12/7/87	
12 -					
© 14 -				:	
(1 0 0 0 1) (1 0 0 0 1) (1 1 0 0 0 1) (1 1 0 0 1)					
¹⁸ -					
20 -					
22 -					
24				ga contradiction of the contra	
26 -					
28 -					
30 -					

B - 7

PROJECT NO.



10-1782-01

CHEVRON, USA - STATION 7127 GRANT LINE ROAD TRACY, CALIFORNIA

BORING LOG B-7

PLATE

A8

LOCATION MAP	PACIFIC ENVIRO	PACIFIC ENVIRONMENTAL GROUP, INC. WELL NO. MW-1			
NORTHING EASTING ELEVAT 154.6 172.9 29.18	PROJECT NO. 325-0 LOGGED BY: RWNT DRILLER: GREAT S DRILLING METHOD: SAMPLING METHOD CASING TYPE: Sch	DATE DRILLED: 12-8-92 IERRA LOCATION: Grant Line Road AIR ROTARY HOLE DIAMETER: 10" D: DRY CORE HOLE DEPTH: 39.5' 40 PVC WELL DIAMETER: 4" WELL DEPTH: 38'			
CORE BOX RUN MOISTURE CONTENT	DEPTH (FEET) RECOVERY SAMPLE INTERVAL GRAPHIC SOIL TYPE	LITHOLOGY / REMARKS			
SAND GROUT GROUT GROUT A DP 0 16 16 2 16 2 16 2 16 2 16 2 16 2 16 2	SC 1	CLAYEY SAND - FILL: dark grayish brown; low to moderate plasticy; 40% clay; 15% silt; 45% fine to medium sand; weak subangular blocky; minor angular gravel fragments; loose; no product odor. CLAYEY GRAVEL to CLAYEY SAND - FILL: dark gray; 60% clay; 10% silt; 30% medium to coarse sand with 1* angular gravel fragments throughout; minor iron oxide staining and caliche; medium dense; weak product odor. CLAYEY SAND: dark greenish gray; low to medium plasticity; 50% clay; 15% silt; 35% medium to coarse sand; granular; loose texture; paleosol odor; no product odor. SILTY GRAVEL: silica cemented 1/4 - 1 1/4* diameter rounded quartz pebbles; poor core recovery. SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1* diameter conglomeratic pebbles; minor mica; local 1/4* bandof white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor. @19*: weak product odor increasing to strong product odor at 23*.			

	PACIFIC ENVIRONMENTAL GROUP, INC. WELL MW-1 PAGE 2 OF 2				
See Page One	PROJECT NO. 325-04 LOGGED BY: DRILLER: DRILLING METHOD: SAMPLING METHOD: CASING TYPE: SLOT SIZE: GRAVEL PACK:	DATE DRILLED: LOCATION: HOLE DIAMETER:			
CORE BOX RUN MOISTURE CONTENT PID ROD (%)	DEPTH (FEET) RECOVERY SAMPLE ANALYZED GRAPHIC SOIL TYPE	LITHOLOGY / REMARKS			
5 Dp-Mst >200 22 Dp >220 T Dp =200 T	23 -	SANDSTONE (Neroly Formation): continued @23': 1/2" altered epidotized vein at 35° TCA, horizontal parting common; very strong product odor at 25' and continues with depth. @29': bedding at 80° TCA. @31': moderate product odor; equigranular sandstone. @32': poor core recovery due to saturation of sandstone; weak product odor. @38': 5" bed of subrounded conglomerate pebbles from 1/4" to 2" diameter; no product odor. @39': 1mm wide chlorite veinlets at 12° TCA. BOTTOM OF BORING AT 39.5'			

LOCATION MAP	1	PACIFIC ENVIRONMENTAL GROUP, INC. BORING NO.B-1			
NORTHING EASTING 154.6 172.9	N ELEVATION 29.18	PROJECT NO. 325-04.01 LOGGED BY: RWNT DRILLER: GREAT SIERRA DRILLING METHOD: AIR ROTARY SAMPLING METHOD: DRY CORE CASING TYPE: NA SLOT SIZE: NA GRAVEL PACK: NA CLIENT: CHEVRON DATE DRILLED: 12-9-92 LOCATION: Grant Line Road HOLE DIAMETER: 6° WELL DIAMETER: NA WELL DEPTH: NA CASING STICKUP; NA			
CONFECTION STURE MOISTURE		SOIL TYPE SOIL TYPE SOIL TYPE SOIL TYPE			
Back Filled Ms With Dp	0	SP SAND - FILL: variable color from yellow to dark yellowish brown; no plasticity; 15% clay; 15% silt; 70% fine to medium sand; subrounded; minor wood fragments; local rooted peds of gray clay; loose; no product odor. SILTY SAND - FILL: brown; low plasticity; 15% clay; 25% silt; 60% fine to medium sand; loose; subrounded gravel to 1/2" diameter; no product odor. SC CLAYEY SAND - FILL: low plasticity; dark grayish brown; 30% clay; 15-20% silt 50-55% fine to medium sand; abundant angular to 1-1/2" diameter gravel fragments; no product odor. CLAY - FILL: very dark greyish brown; low plasticity; subangular conglomeratic pebbles in dark gray sandy clay matrix; 60% clay; 20% silt; 20% fine to coarse sand; silty texture; angular coarse sand fragments throughout; rare iron oxide blebs; soft; no product odor.			
Ms W	11	SILTY SAND - FILL: grayish green; no to low plasticity; 15% silt;10% clay; 75% medium to coarse sand; subrounded coarse sand pebbles; loose; slight product odor. SANDSTONE (Neroly Formation): variable color from white to very dark gray brown; 10% clay;10% silt; 80% medium quartz and weathered mafic minerals and iron oxide altered feldspars, subangular; abundant to 1/2" clastic fragments; weak fracturing; intragranular porosity; hard; no to weak product odor. @19': very dark gray; 10% fines; 90% fine to medium sand; subangualr granular sucrosic texture; weak fracturing and alteration; dense; no to weak product odor. @20': bedding at 77° TCA. @22': moderate product odor. BOTTOM OF BORING AT 22'			

LOCATION MAP	PACIFIC ENVIRONMENTAL GROUP, INC. WELL NO. MW-2 PAGE 1 OF 2				
NORTHING EASTING ELEVATION 270.1 131.9 27.22	PROJECT NO. 325-04.01 LOGGED BY: RWNT DATE DRILLED: 12-10-92 LOCATION: Grant Line Road DRILLING METHOD: AIR ROTARY SAMPLING METHOD: DRY CORE CASING TYPE: Sch 40 PVC SLOT SIZE: 0.020" GRAVEL PACK: #2-/16 Lonestar CLIENT: CHEVRON DATE DRILLED: 12-10-92 LOCATION: Grant Line Road HOLE DIAMETER: 8" WELL DIAMETER: 2" WELL DEPTH: 36' CASING STICKUP: ~2.1				
COME BOX RUN MOISTURE CONTENT PID ROD (%)	(FEET) (FEET) SAMPLE INTERVAL GRAPHIC SOIL TYPE SOIL TYPE				
Dp Dp Dp	SC CLAYEY SAND - FILL: brown to dark brown; low plasticity; 25% clay; 15% silt; 60% medium sand; abundant subangular lithic fragments throughout; loose; no product odor. SANDSTONE (Neroly Formation): >90% fine to medium sand as subangular quartz and mafic mineral grains and weakly altered feldspar; sucrosic texture; weak alteration; moderate to hard; no product odor. @2-5.5': moderate alteration evident as iron oxide surrounding up to 10% rounded 1/4 - 1" conglomeratic pebbles; 50% pebbles from 2-3'. @5': bedding attitude at 55° TCA.				
SAND 0 0 100	@14-19': loose; unconslidated sandstone; no core recovery. 15				

	PACIFIC ENVIRONMENTAL GROUP, INC.	WELL MW-2 PAGE 2 OF 2
See Page One	PROJECT NO. 325-04.01 LOGGED BY: DRILLER: DRILLING METHOD: SAMPLING METHOD: CASING TYPE: SLOT SIZE: GRAVEL PACK: CLIENT: DATE DRIL LOCATION HOLE DIAI HOLE DEP WELL DIAI SCOT SIZE: CASING S	I: METER: TH: METER: TH:
CORE BOX RUN MOISTURE CONTENT PID ROD (%)	DEPTH (FEET) RECOVERY SAMPLE ANALYZED GRAPHIC SOIL TYPE TYPE A A A A A A A A A A A A A A A A A A A	EMARKS
O Dp-Mst O O O Mst O O O Wt O O O Wt 1	SS SANDSTONE (Neroly Formation 23 -	on to dark brown; platy fracturing; rare ; moderate hardness; TCA. brown to dark brown; platy fracturing; rare ; moderate hardness; e as described above; ess; crushed fracturing; ense parting at 76° TCA. e as described above; ess; crushed fracturing;

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LOCATION MAP	PROJECT NO. 325-04.01 LOGGED BY: RWNT DRILLER: GREAT SIERRA DRILLING METHOD: AIR ROTARY SAMPLING METHOD: DRY CORE CASING TYPE: Sch 40 PVC SLOT SIZE: 0.020* GRAVEL PACK: #2-/16 Lonestar WELL NO. MW-3 PAGE 1 OF 2 WELL DEPTH: 40-12-10-92 LOCATION: Grant Line Road HOLE DIAMETER: 8* WELL DIAMETER: 2* WELL DIAMETER: 2* WELL DEPTH: 37.5' CASING STICKUP: ~2.3				
NORTHING EASTING ELEVATI 220.3 242.3 29.26					
OD THE LEGISTAND AND STURE CONTENT PID	DEPTH (FEET) RECOVERY SAMPLE INTERVAL GRAPHIC SOIL TYPE SOIL TYPE				
SAND CROUTE 1 Dp 2 Mst 3 Dp 4 Dp 6	CLAYEY SAND - FILL: moderate plasticity; 50% clay 10% silt; 40% fine to medium sand; occasional to 3' angular lithic fragments throughout; minor roots; soft; no product odor. ②1: 3-4" asphalt layer SANDY CLAY - FILL: yellowish brown; medium plasticity; 65% clay; 10% silt; 25% fine to medium sand; subangular blocky peds; calcium carbonate and iron oxide blebs and fracture fills; in part lithified with fow hardness; minor rounded to 1" pebbles; rare manganese oxide; stiff; no product odor. SAND (Neroly Formation): black; <15% fines; 85% fine to medium, subangular, volcanically derived sand; poorly graded; massive; weathered feldspar grains; weakly oxidized; poor recovery; loose; no product odor. CONGLOMERATIC SANDSTONE (Neroly Formation matrix as sand above, but lithified in part; subround pebbles to 2" diameter; minor calcium carbonate an iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; resand matrix. @21': see next page.				

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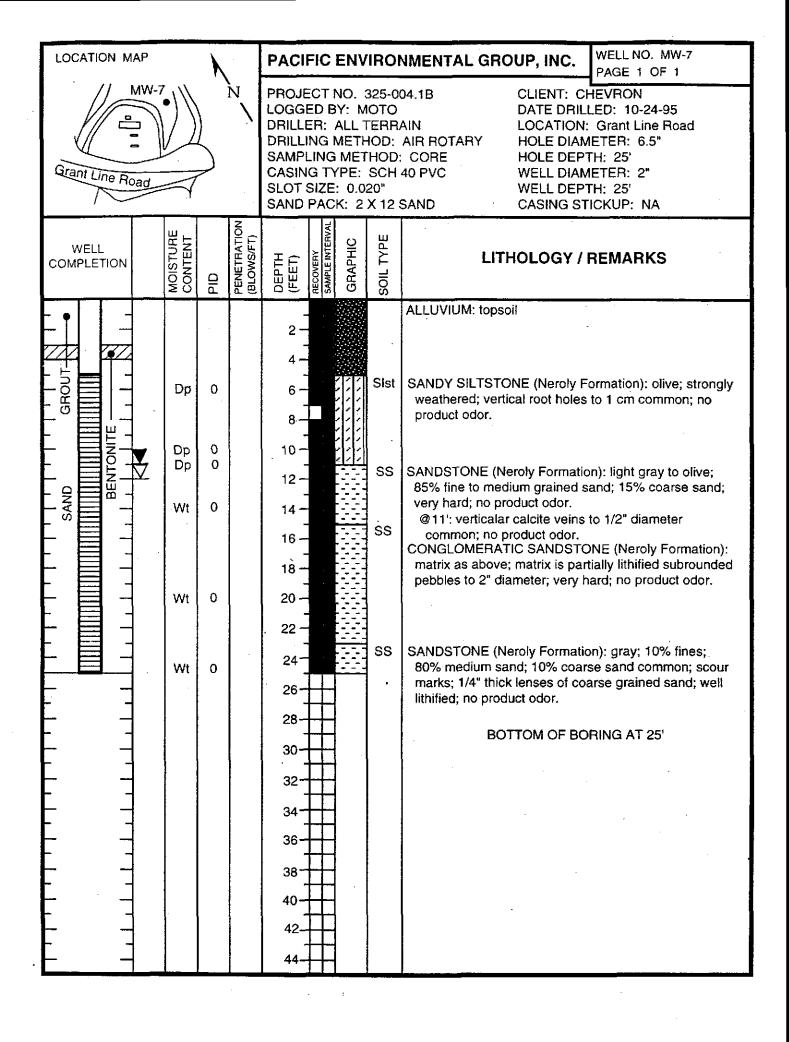
·.							PACIF	IC I	ENVI	RON	MENTAL GROUP, INC.	WELL MW-3 PAGE 2 OF 2
	See Page One					PROJECT NO. 325-04.01 LOGGED BY: DRILLER: DRILLING METHOD: SAMPLING METHOD: CASING TYPE: SLOT SIZE: GRAVEL PACK: CLIENT: DATE DRILLED: LOCATION: HOLE DIAMETER: WELL DIAMETER: WELL DEPTH: CASING STICKUP:				LED: SETER: FH: SETER: FH: FH: FH: FH: FH:		
W COMF	CORE BOX RUN MOISTURE CONTENT PID PID				DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / RI	EMARKS		
. 	OUGH -	2	8	Dp Mst- Dp	1 0	0	23 - 24 - 25 - 26 - 27 - 28 - 29 - 30 - 31 - 32 - 33 - 34 - 35 - 36 - 37 - 38 - 39 - 40 - 41 - 42 - 43 - 44 - 44 - 44 - 44 - 44 - 44			SS	SANDSTONE (Neroly Formation) subangular quartz and weathere feldspar grains fine to medium g sucrosic texture; homogeneous; to intense fracturing; weakly wean o product odor. @22-24': slight clay enriched zor subhorizontal parting. @23.5': bedding at 62° TCA with running at 77° TCA. @28': bedding at 77° TCA with s fracture perpendicular to bedding increased hardness due to cerr common along bedding planes. @30': slight product odor. @36': bedding at 55° TCA. @38': high angle fractures at 30 BOTTOM OF BORI	d mafic minerals; minor rained; 10% fines; moderate athered; low hardness; ne; brittle a perpendicular fracture similar high angle at 25° TCA; nentation; parting at 75° and 83° TCA.

WELL NO. MW-4/B-2 PACIFIC ENVIRONMENTAL GROUP, INC. LOCATION MAP PAGE 1 OF 1 CLIENT: Chevron PROJECT NO. 325-04.04 DATE DRILLED: 5-21-93 LOGGED BY: AFW LOCATION: Grant Line Road DRILLER: Great Sierra HOLE DIAMETER: 8 7/8" DRILLING METHOD: AIR MW-4/B-2 HOLE DEPTH: 37' SAMPLING METHOD: CORE WELL DIAMETER: 2" CASING TYPE: Sch 40 PVC WELL DEPTH: 37" SLOT SIZE: 0.020" Grant Line Road CASING STICKUP: 3' GRAVEL PACK: 2 X 12 Sand PENETRATION (BLOWS/FT) MOISTURE CONTENT. SOIL TYPE GRAPHIC LITHOLOGY / REMARKS WELL DEPTH (FEET) COMPLETION 5 CLAYEY SAND - FILL: dark brown; 30-40% fines; abundant lithic fragments; loose; no product odor. 2 push Dp 0 8 10 SANDSTONE (Neroly Formation): olive green >90% fine 0.1 Dp SS to medium sand; subangular quartz, lithic fragments, and 12 weakly altered feldspar; faint product odor. 14 16 18 20 22 BENTONIT 26 28 @30': as above; no product odor. 30 Wt 2.0 32 36 38: 40 42

BORING NO. B-3 PACIFIC ENVIRONMENTAL GROUP, INC. LOCATION MAP PAGE 1 OF 1 CLIENT: Chevron PROJECT NO. 325-04.04 B-3 DATE DRILLED: 5-21-93 LOGGED BY: CJM LOCATION: Grant Line Road DRILLER: Great Sierra HOLE DIAMETER: 94 mm DRILLING METHOD: AIR HOLE DEPTH: 25' SAMPLING METHOD: CORE WELL DIAMETER: NA CASING TYPE: NA WELL DEPTH: NA SLOT SIZE: NA Grant Line Road CASING STICKUP: NA GRAVEL PACK: NA PENETRATION (BLOWS/FT) MOISTURE CONTENT SOIL TYPE GRAPHIC LITHOLOGY / REMARKS WELL DEPTH (FEET) COMPLETION 吕 SANDSTONE (Neroly Formation): green; >85% coarse SS sand; subangular; lithic fragments; moderate to hard no product odor. Backfilled 0 Mst With Cement 10 12 @15": bluish/green; 90% medium to fine sand; quartz; 0 Dp no lithic fragments; moderate to hard, no product odor. 16 18 20 22 24 **BOTTOM OF BORING 25'** 26 28 30 34 36 38 40 42

WELL NO. MW-5/B-4 LOCATION MAP PACIFIC ENVIRONMENTAL GROUP, INC. PAGE 1 OF 1 MW-5/B-4 CLIENT: Chevron PROJECT NO. 325-04.04 DATE DRILLED: 5-25-93 LOGGED BY: CJM LOCATION: Grant Line Road DRILLER: Great Sierra HOLE DIAMETER: 8 7/8" DRILLING METHOD: AIR HOLE DEPTH: 25' SAMPLING METHOD: CORE WELL DIAMETER: 2" CASING TYPE: Sch 40 PVC SLOT SIZE: 0.020" WELL DEPTH: 25' Grant Line Road GRAVEL PACK: 2 X 12 SAND CASING STICKUP: 3' PENETRATION (BLOWS/FT) MOISTURE CONTENT SOIL TYPE GRAPHIC WELL LITHOLOGY / REMARKS DEPTH (FEET) COMPLETION 딢 SANDSTONE: greenish brown; 90% coarse sand; lithic SS fragments; no product odor. BENTONII 10 @10': grayish brown; 90% coarse to medium sand; 0 Mst subrounded to subangular; lithic fragments; hard to 12 very hard; no product odor. 14 0 Wt 16 18 20 22 24 26 **BOTTOM OF BORING 25'** 28 30 32 34 38 40 42 44

LOCATION MAP	<u> </u>		PACIFIC ENVIRONMENTAL GROUP, INC. WELL NO. MW-6 PAGE 1 OF 1				
Grant Line Road		N	PROJECT NO. 325-004.1B LOGGED BY: MOTO DATE DRILLED: 10-27-95 LOCATION: Grant Line Road DRILLING METHOD: AIR ROTARY SAMPLING METHOD: CORE CASING TYPE: SCH 40 PVC SLOT SIZE: 0.020" SAND PACK: 2 X 12 SAND CLIENT: CHEVRON LOCATION: Grant Line Road HOLE DIAMETER: 6.5" WELL DIAMETER: 2" WELL DEPTH: 30' CASING STICKUP: NA				
WELL COMPLETION				SOIL TYPE	LITHOLOGY / REMARKS		
SAND SAND GROUT BENTONITE — FILL III III III III III III III III II	Dp 0 Mst 0 Wt 0 Wt 0		DEPTH DE	SS	SANDSTONE (Neroly Formation): gray; 15% fines; 45% fine to coarse sand; 40% subangular to subrounded gravel to 1" diameter; hard; no product odor. @8-12': alternating 1" beds of sandstone and conglomeratic lenses; scour marks; no product odor. @13-14': coarsens downward. @18-26': dark gray; 15% fines; 85% fine to medium sand; subangular quartz and weathered mafics; alternating crossbeds of medium sand and coarse sand; no product odor. @26-30': predominately fine to medium grained sand; no product odor. BOTTOM OF BORING AT 30'		



LOCATION MAP	λ	PACIFIC ENVIRONMENTAL GROUP, INC. WELL NO. MW-8 PAGE 1 OF 1				
Grant Line Road MW-8	N	PROJECT NO. 325-004.1B LOGGED BY: MOTO DATE DRILLED: 10-24, 25, 27-95 DRILLER: ALL TERRAIN DRILLING METHOD: AIR ROTARY SAMPLING METHOD: CALMOD/CORE CASING TYPE: SCH 40 PVC SLOT SIZE: 0.020" SAND PACK: 2 X 12 SAND CLIENT: CHEVRON LOCATION: Grant Line Road HOLE DIAMETER: 6.5" WELL DIAMETER: 2" WELL DEPTH: 40' CASING STICKUP: NA				
MOISTURE CONTENT	PID PENETRATION (BLOWS/FT)	DEPTH (FEET) RECOVERY SAWRLE INTERVAL GRAPHIC SOIL TYPE	LITHOLOGY / REMARKS			
SAND SAND SAND SAND SAND SAND SAND SAND	0	SS 2 4 6 8 10 12 14 16 20 22 Sist 24 26 28 30 32 34 36 38 40 42 44	SANDSTONE (Neroly Formation): dark gray; 15% fines; 85% fine to medium subangular sand; weathered feldspars; massive; weakly oxidized; well sorted; no product odor. @10': dark bluish gray to black; no product odor. @10': light gray; 85% fine to medium sand; 15% coarse sand; subrounded to subangular; weakly altered feldspars; massive; very hard; no product odor. SANDY SILTSTONE: pinkish gray to brown; fine sandy texture; occasional mineral grain solution cavities; massive; manganese oxide common; moderate hardness; no product odor. CONGLOMERATIC SANDSTONE (Neroly Formation): grayish brown; 10% fines; 15% fine to medium sand; 75% rounded pebbles to 2" diameter; minor iron oxide staining around pebble edges; hard; no product odor. @30-33': rounded pebbles to 2" diameter recovered; no sand matrix. @33-40': conglomeratic sandstone; 10% fines; 15% medium sand; 75% rounded pebbles to 4" diameter; pebbles as volcanics and andesite common; matrix is strongly oxidized; hard; no product odor. BOTTOM OF BORING AT 40'			