Chevron

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May 15, 2007
(date)

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Facility # 9-7127

Address: Interstate 580 and Grant Line Road, Tracy, CA

I have reviewed the attached report titled Corrective Action Plan and dated May 15, 2007.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Thomas K. Bauhs
Project Manager

Enclosure: Report

CONESTOGA-ROVERS
& ASSOCIATES

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May 15, 2007

Mr. Barney Chan
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Suite 250
Alameda, California 94502

Re: **Corrective Action Plan**
Former Chevron Station 9-7127
I-580 and Grant Line Road
Tracy, California
Fuel Leak Case RO0000185

Dear Mr. Chan:

On behalf of Chevron Environmental Management Company (Chevron), Conestoga-Rovers & Associates (CRA) is submitting this *Corrective Action Plan* (CAP) for the site referenced above. Alameda County Environmental Health Services (ACEHS) requested the CAP in a letter dated February 26, 2007 (Attachment A). Presented below are summaries of the site background and characteristics, a discussion of hydrocarbon characteristics, and CRA's evaluation and recommendations for corrective action.

SITE BACKGROUND

Site Description: The site is a vacant lot located on the east side of Grant Line Road, south of Interstate 580, Tracy, California (Figure 1). The site is at an elevation of approximately 320 feet above mean sea level. Site topography is hilly and slopes toward the site. The site is bounded by Interstate 580 to the north and ranch property to the south, east and west. Chevron operated a service station at the site until April, 1991 when all underground storage tanks (USTs), dispenser islands, and associated piping were removed and the station demolished. Previous site facilities included two 10,000-gallon and one 6,000-gallon gasoline USTs, one 1,000-gallon used oil tank, one 750-gallon heating oil tank, two dispenser islands and a station building (Figure 2).

Site Geology: Soil encountered at the site consists primarily of fill (combinations of sand, silt and clay), silty clay, clayey sand, silty sand and gravel from grade to 19 feet below grade (fbg). The soil is underlain by sandstone that extends to the maximum explored depth of 40 fbg. Cross sections are included as Attachment B. Boring logs are included as Attachment C.

Groundwater Depth and Flow Direction: Groundwater has been monitored quarterly since 1994 and semi-annually since 1999. Historical data shows that measured depth to groundwater has

fluctuated from approximately 9 to 31 fbg. Groundwater flow is generally between 0.005 to 0.08 foot per foot (ft/ft) in a northerly direction. A copy of the *Groundwater Monitoring and Sampling Report Second Semi-Annual Event of 2006*, prepared by Gettler-Ryan Inc. (G-R) of Dublin, California is included as Attachment D.

PREVIOUS INVESTIGATIONS

October 1987 Soil Vapor Investigation: In October 1987, E. A. Engineering Science and Technology (EA) conducted a soil vapor investigation. Soil vapor samples were collected from 13 on-site and two off-site locations at depths ranging from 3 fbg to 12 fbg. Hydrocarbons, benzene and toluene were detected at maximum concentrations of 28,500 parts per million (ppm), 3,200 ppm and 5,200 ppm, respectively, at 3 fbg (Table 1).

December 1987 Borings: In December 1987, Kleinfelder, Inc. (Kleinfelder) advanced soil borings B-1 through B-7. Soil samples were collected and analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and total xylenes (BTEX). TPHg and BTEX were detected at maximum concentrations of 2,300 ppm, 19 ppm, 85 ppm, 28 ppm and 140 ppm, respectively, in boring B-4 at 15 fbg (Table 2).

December 1987 through December 1993 Domestic Well Monitoring: Between December 1987 and May 1989, concentrations of benzene in groundwater samples collected from the onsite water supply well ranged from 1.0 parts per billion (ppb) to 6.4 ppb. In May 1989, G-R installed a carbon adsorption treatment system on the onsite water supply wellhead. From December 1992 through November 1993, Pacific Environmental Group (PEG) sampled the well on a weekly basis. The water samples were analyzed for TPHg and BTEX. TPHg was not detected in any of the samples. Benzene was detected at a concentration of 0.8 ppb in the sample collected on March 19, 1993. Toluene and xylenes were detected at concentrations of 3 ppb and 2 ppb, respectively, in the sample collected on January 29, 1993. Groundwater analytical data for this sampling period is included as Attachment E.

April 1991 Tank, Product Piping and Dispenser Island Removal: In April 1991, two 10-000 gallon gasoline USTs, one 6,000-gallon gasoline UST, one 1,000-gallon used oil tank, one 750-gallon heating oil tank, dispenser islands and associated product piping were removed. No holes were observed in any of the tanks. Over-excavation of the tank basin and product piping trenches was conducted and soil samples were collected. TPHg and benzene were detected at maximum concentrations of 5,700 ppm and 30 ppm, respective, in the UST pit between 14 fbg and 15 fbg. No total petroleum hydrocarbons as diesel (TPHd) or total oil and grease were detected in the used oil tank or heating oil tank locations (Table 2).

December 1992 Soil Boring and Well Installation: In December 1992, PEG advanced soil boring B-1 and installed monitoring wells MW-1 through MW-3. Soil samples were collected from B-1 and MW-1 and analyzed for TPHg and BTEX. TPHg and BTEX were detected at maximum concentrations of 8,100 ppm, 21 ppm, 560 ppm, 150 ppm and 840 ppm, respectively, in MW-1 at 29 fbg (Table 2). Groundwater samples were collected from MW-2 and MW-3 on December 28, 1992 and analyzed for TPHg and BTEX. TPHg and BTEX were detected in MW-3 at concentrations of 19,000 ppb, 8,900 ppb, 660 ppb, 380 ppb and 720 ppb, respectively (Table 3). MW-1 was not sampled due to the presence of separate-phase hydrocarbons (SPH).

May 1993 Soil Boring and Well Installation: In May 1993, PEG advanced soil borings B-2 through B-4. Borings B-2 and B-4 were converted to monitoring wells MW-4 and MW-5. Soil samples were collected from MW-5/B-4 and were analyzed for TPHg and BTEX. None of the constituents analyzed were detected in any of the soil samples (Table 2). Grab-groundwater samples were collected from all three borings and analyzed for TPHg and BTEX. TPHg was detected in B-3 at a concentration of 96 ppb. Benzene, toluene and xylenes were detected at maximum concentrations of 12 ppb, 2 ppb and 1 ppb, respectively, in MW-4/B-2. Ethylbenzene was not detected in any of the groundwater samples (Table 3).

October 1995 Well Installation: In October 1995, PEG installed monitoring wells MW-6 through MW-8. Soil samples were collected and analyzed for total purgeable petroleum hydrocarbons (TPPH) and BTEX. None of the constituents analyzed were detected in any of the soil samples (Table 2).

August 1997 Assessment: In August 1997, a Risk Based Corrective Action (RBCA) Tier 2 Assessment was completed for the site. Results of the assessment indicated that groundwater ingestion could pose a risk to human health due to the elevated TPHg and benzene concentrations in MW-1, MW-3 and MW-4. The assessment also indicated that the onsite water supply well was a potential receptor for residual concentrations of petroleum hydrocarbons in the subsurface.

May 2001 Interim Corrective Action Plan: In May 2001, Delta submitted an Interim Corrective Action Plan in which Delta recommended hand bailing SPH from MW-1 on a monthly basis for two consecutive quarters and then reevaluating the SPH thickness.

April 2003 Remedial Action Plan and Feasibility Study: In April 2003, Delta Environmental Consultants, Inc. (Delta) submitted a remedial action plan and feasibility study for the site. Data from the study indicates that the groundwater beneath the site is in a perched zone overlying a confining bedrock and that the impacted soil appears to be confined to just above the groundwater table, within the capillary fringe approximately 25 to 30 fbg, in the vicinity of the former UST's.

Remedial technologies evaluated included soil excavation, soil vapor extraction (SVE), groundwater extraction and natural attenuation. Due to the depth of the source and site lithology, soil excavation and SVE were not considered viable options for the site. Delta recommended removal of SPH from MW-1 using an active mechanical oil skimmer in conjunction with natural attenuation as the most feasible remedial options for the site.

SENSITIVE RECEPTOR SURVEY

A search of Department of Water Resources records was conducted by RRM, Inc. (RRM) in April 1999. Three water supply wells were identified within a ½-mile radius of the site. The nearest well, WSW-1, is located on the eastern edge of the site. The well is approximately 90 feet deep and is screened from 70 to 90 fbg. The other two wells are located 1,550 feet and 2,850 feet southwest (crossgradient) of the site and do not appear to be at risk from site hydrocarbons. All three wells are used to provide water to livestock on the adjacent property. Well survey information is included as Attachment F. The nearest surface water is an unnamed creek located approximately 1,650 feet north to northwest (downgradient) of the site. Groundwater analytical data for downgradient well MW-6 indicates that no petroleum hydrocarbons have been detected in MW-6 since 2001, therefore, the creek does not appear to be at risk from site hydrocarbons. A survey of the area surrounding the site showed no hospitals or schools located within 2,000 feet of the site.

REMEDIAL ACTIONS PERFORMED

Soil Excavation: During the UST removal, additional excavation of the gasoline tank cavity was performed to remove impacted soil. The soil was aerated until concentrations were reduced to less than 10 ppm. The aerated soil was used to backfill the excavation.

Bioremediation: In August 1998, oxygen releasing compound (ORC) socks were installed in wells MW-1, MW-2 and MW-4. On July 17, 2001 the ORC sock in MW-1 was removed so that a passive product skimmer could be installed. No data is available as to when the remaining two ORC's were removed.

Hydrogen Peroxide Injection: On December 15, 1999, Cambria injected hydrogen peroxide into monitoring wells MW-1 and MW-3. Various concentrations of hydrogen peroxide were injected in the wells. For MW-1, ten gallons of 3.5 percent peroxide solution was injecting in the well, followed by ten gallons of 9 percent solution, ten gallons of 17.5 percent solution and eight gallons of 35 percent solution. For MW-3, ten gallons of 3.5 percent solution was injected,

followed by ten gallons of 9 percent solution and 26 gallons of 17.5 percent solution. The maximum observed temperature was 130° Fahrenheit in MW-1 and 90° Fahrenheit in MW-3.

SPH Removal: On July 17, 2001 a passive product skimmer was installed in MW-1 and seven groundwater vacuum extraction events were conducted from July 2001 through April 2002. Approximately 8,300 gallons of groundwater and 2.19 gallons of SPH were extracted from MW-1. In July, 2002 vacuum extraction of petroleum hydrocarbon impacted groundwater from MW-3 was initiated. Due to an increase in SPH thickness in MW-1, vacuum extractions from MW-1 and MW-3 were terminated in October, 2002.

In 2007, three additional batch extractions were conducted on March 22nd, April 12th, and April 25th. Approximately 5,100 gallons of groundwater were extracted from MW-1. Product thickness was measured prior to each batch extraction event. Product thickness prior to each event was 0.5 feet, 0.36 feet and 0.39 feet, respectively.

HYDROCARBON DISTRIBUTION IN SOIL

The hydrocarbon source area appears to be in the vicinity of the former USTs and dispenser islands. The highest TPHg and benzene concentrations reported during the UST, dispenser and product piping excavations were 5,700 ppm and 30 ppm, respectively, in the UST pit at 14 fbg to 15 fbg. Varying hydrocarbon concentrations have been detected in soil samples from B-3, B-4 and MW-1. The highest TPHg and benzene concentrations reported during subsurface investigations were 8,100 ppm and 21 ppm, respectively, at 29 fbg in well MW-1. None of the soil samples were analyzed for methyl tertiary butyl ether (MTBE).

Hydrocarbon Distribution in Groundwater

The table below presents the most recent groundwater monitoring and sampling results.

Table A
Groundwater Analytical Data – November 21, 2006
Former Chevron Service Station 9-7127

Well	TPHg	Benzene	MTBE
MW-1	Inaccessible – attached to belt skimmer		
MW-2	Sampled Annually		
MW-3	**27,000**	**10,000**	<5
MW-4	<50	**3**	<0.5
MW-5	Sampled Annually		
MW-6	<50	<0.5	<0.5
MW-7	Sampled Annually		
MW-8	Sampled Annually		
Supply Well	<50	<0.5	<0.5

TPHg and BTEX Distribution: SPH has historically been detected in MW-1. SPH thickness has ranged from less than 0.2 feet to 1.54 feet. SPH thickness was measured on April 25, 2007 and was 0.39 feet thick. High concentrations of TPHg and BTEX have historically been reported in MW-3. During the most recent sampling event TPHg and BTEX were detected in MW-3 at concentrations of 27,000 ppb, 10,000 ppb, 420 ppb, 650 ppb and 1,600 ppb, respectively. Lower concentrations of TPHg and BTEX have been detected in MW-4. During the last sampling event the only constituent detected in MW-4 was benzene at a concentration of 3 ppb. TPHg and BTEX have not been detected in MW-2, MW-5 and MW-7 since July 2002, in MW-6 since May 2001, in MW-8 since May 1998 and in the onsite supply well since April 1993 (Appendix D and E). TPHg and benzene isoconcentration maps are included as Figures 3 and 4.

TPHg and benzene trend graphs and degradation calculations for MW-3 indicate that concentrations are decreasing. TPHg concentrations in groundwater are anticipated to reach the Regional Water Quality Control Board (RWQCB) Water Quality Objective (WQO) of 50

micrograms per liter (µg/L) by 2051. Benzene concentrations in groundwater are anticipated to reach the RWQCB WQO of 1 µg/L by 2135. Trend graphs and degradation calculations are included as Attachment G. Degradation rates are summarized in Table B below.

MTBE Distribution: MTBE has not been detected in MW-2, MW-5 and the onsite supply well since November 1995, in MW-4 since November 2001, in MW-3 since May 2005, in MW-6 since May 2001 and in MW-7 and MW-8 since February 1996.

Table B - Summary of Estimated Attenuation Rates

Well	Analyte	Maximum Concentration (ppb)	Current Concentration (ppb)	Water Quality Objective (µg/L)	Estimation of reaching WQO (year)
MW-3	TPHg	110,000	27,000	50	2051
MW-3	Benzene	29,000	10,000	1	2135

CONSTITUENTS OF CONCERN

The focus of concern for this site is the SPH in MW-1, and high dissolved-phase TPHg and benzene concentrations in MW-3. Hydrocarbons reported in soil are at a depth which poses no significant risk to human health or indoor air. However, they may still be contributing hydrocarbons to groundwater.

Water Quality Goals and Corrective Action Alternatives

In order to maintain beneficial groundwater usage and protect human health, site specific clean-up goals are proposed. The following water quality goals will be reviewed for each remedial alternative proposed.

Water Quality Goals

Beneficial Water Use: Groundwater beneath the site is part of the San Joaquin Valley Groundwater basin, Tracy subbasin. The goal of corrective action alternatives is to protect groundwater used in the site vicinity and to minimize human health risks. Local beneficial uses are described in California's Department of Water Resources Groundwater, Bulletin 18. Beneficial groundwater in the region is listed as suitable for municipal, domestic and irrigation usage.

Water Quality Goals: As specified in the California Code of Regulations, Title 22, water designated for municipal and domestic use must not contain concentrations of chemical constituents exceeding the California maximum contaminant levels (MCL). Proposed cleanup goals for constituents of concern TPHg and benzene are 50 ppb and 1 ppb, respectively.

CORRECTIVE ACTION ALTERNATIVES

Corrective action alternatives, listed below, are evaluated to meet the above water quality goals. Site characteristics, technical feasibility and general cost are also considered.

Alternative 1. Oxygen Injection: Oxygen injection increases dissolved oxygen concentrations in groundwater and enhances biodegradation activity, which should result in a reduction of hydrocarbon concentrations. This option generally requires adequate site assessment and monitoring to confirm dissolved oxygen concentrations are increasing and hydrocarbon concentrations decreasing. SPH in MW-1 and high hydrocarbon concentrations in MW-3 preclude biodegradation from being the most effective remedial technology. As such, oxygen injection is not suggested for this site at this time.

Alternative 2. Collection and Removal: Collection and removal (batch extraction) typically is periodic events of groundwater extraction from a well or wells by bailing, pumping, or vacuum extraction. Extraction is intended to remove contaminant mass from groundwater in the area of highest concentrations. The extracted groundwater is either off-hauled after vacuum extraction or stored on-site pending disposal to a Chevron approved facility. This technology has been applied at this site previously and has been moderately effective at reducing hydrocarbon mass. A similar but more aggressive mass removal technology is recommended.

Alternative 3. Surfactant Injection: Surfactants (essentially food grade soap or detergent) work by decreasing the interfacial surface tension between oil and water, creating a micro-emulsion of oil in water. This significantly increases the mobility of residual hydrocarbons sorbed to soil during groundwater extraction and can thereby significantly enhance recovery from a well during vacuum extraction.

Ideally, the soil volume around the well can be cleared of the majority of sorbed hydrocarbon volume, leaving very low residual hydrocarbon saturation in soil pores that will not be mobile under natural conditions thereby decreasing the dissolved phase hydrocarbon concentration in groundwater.

A typical surfactant solution for remediation would consist of about 1 percent surfactant in water. The surfactants proposed are non-toxic, food grade, and biodegradable. CRA has successfully used surfactants on similar Chevron sites in the past. The general protocol for surfactant use is as follows:

The water and surfactant mixture will be gravity fed into the source zone area through a horizontal 1-inch diameter slotted PVC pipe enclosed within an infiltration trench filled with pea gravel. CRA will construct a circular infiltration trench approximately six feet deep and approximately 20 feet in diameter around MW-1. Simultaneous to mixture application through the infiltration trench, groundwater will be continuously pumped from well MW-1 into a Baker tank for temporary storage prior to discharge. Groundwater will be treated prior to discharge using two 1,000 lb carbon vessels and finally into sanitary sewer (if possible, or off-hauled to a Chevron approved disposal facility). The system will be operated for four to six weeks. Subsequently, an evaluation will be made as to the system effectiveness. The system will be re-started and again operated for four to six weeks. Treatment system operation will be stopped when hydrocarbon concentrations become asymptotic. Periodic testing of influent samples will be conducted for hydrocarbons and any remaining surfactant solution.

The efficiency of the surfactant treatment system will be evaluated by how quickly SPH thickness decreases in MW-1 and decreasing concentrations in MW-3. Monitoring wells and the onsite water supply well will be sampled weekly for one month following the treatment to monitor the extent and effectiveness of the treatment, followed by monthly sampling for two months. Any further changes in the dissolved plume will be monitored via the current quarterly groundwater monitoring program.

Potential advantages of surfactant treatment for recovering dissolved and residual phase hydrocarbons include:

- Residual hydrocarbons below the water table can be recovered
- Recovery is not restricted by hydrocarbon volatility or composition, or the thickness of the smear zone
- It is potentially an efficient, low cost, short term method to improve recovery

Attachment H includes a report entitled *Surfactant Enhanced LNAPL Recovery and Attenuation* as reference for this proposed scope of work.

Recommended Remedial Action

Based on site specific characteristics and the evaluation of corrective action alternatives, CRA recommends Alternative 3: Combination of surfactant application through infiltration trench with groundwater extraction by pumping. The source area appears to be above the groundwater table. The surfactant should flush the hydrocarbons out of the soil so it can be extracted and treated. Oxygen injection was not selected at this time because concentrations are too high.

CONCLUSION

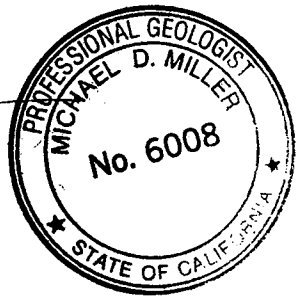
Provided the RWQCB concurs with the above action, CRA will prepare a work plan.

Please contact Laura Heberle at (916) 677-3407 ext 113 if you have any questions or comments.

Sincerely,
Conestoga-Rovers & Associates

Laura Heberle
Project Geologist

Michael Miller P.G. #6008
Senior Project Geologist



Figures:
1 – Vicinity Map
2 – Site Plan
3 – TPHg Isoconcentration Map
4 – Benzene Isoconcentration Map

Tables:
1 – Historical Soil Vapor Sample Results
2 – Historical Soil Sample Results
3 – Historical and Grab-Groundwater Results

Attachments:
A – Regulatory Letter
B – Cross Sections
C – Boring Logs
D – Groundwater Monitoring and Sampling Report
E – Water Supply Well Groundwater Analytical Data
F – Well Survey Data
G – Trend Graphs and Degradation Calculations
H – Surfactant Enhanced LNAPL Recovery and Attenuation Report

cc: Mr. Tom Bauhs, Chevron Environmental Management Company, P.O. Box 6012, Room K2204, San Ramon, CA 94583

Ms.Vera Fischer, Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive, Suite 200, Rancho Cordova, CA 95670-6114

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

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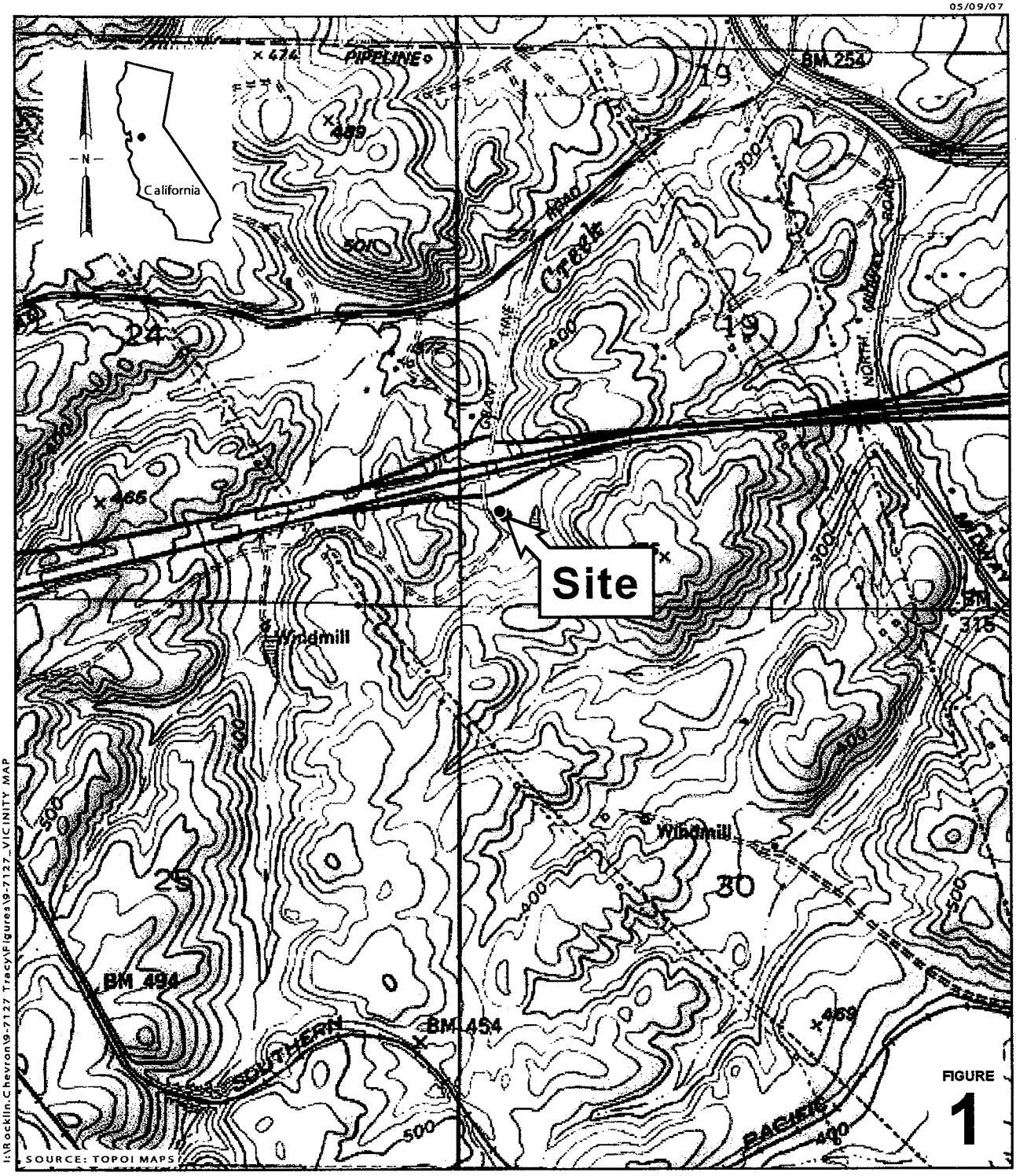

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FIGURE
1

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

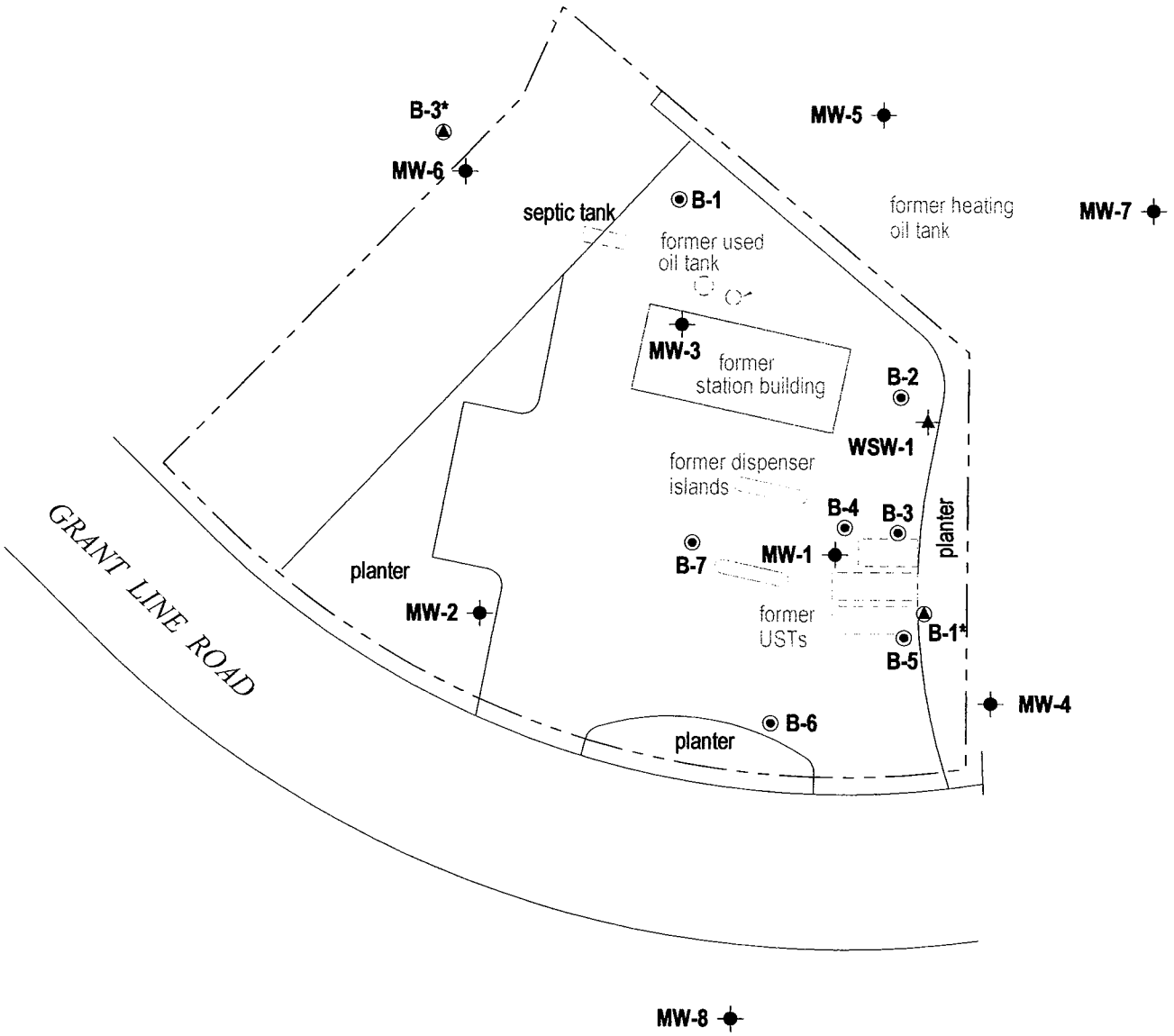
Former Chevron Station 9-7127

Grant Line Road at Interstate 580

Tracy, California

CONESTOGA-ROVERS
& ASSOCIATES

Vicinity Map



EXPLANATION

MW-1	Monitoring well location
WSW-1	Water Supply Well (Livestock)
B-1	Soil boring location (Kleinfelder)
B-1*	Soil boring location (PEG Environmental)

0 25 50

Scale (ft)

FIGURE

2

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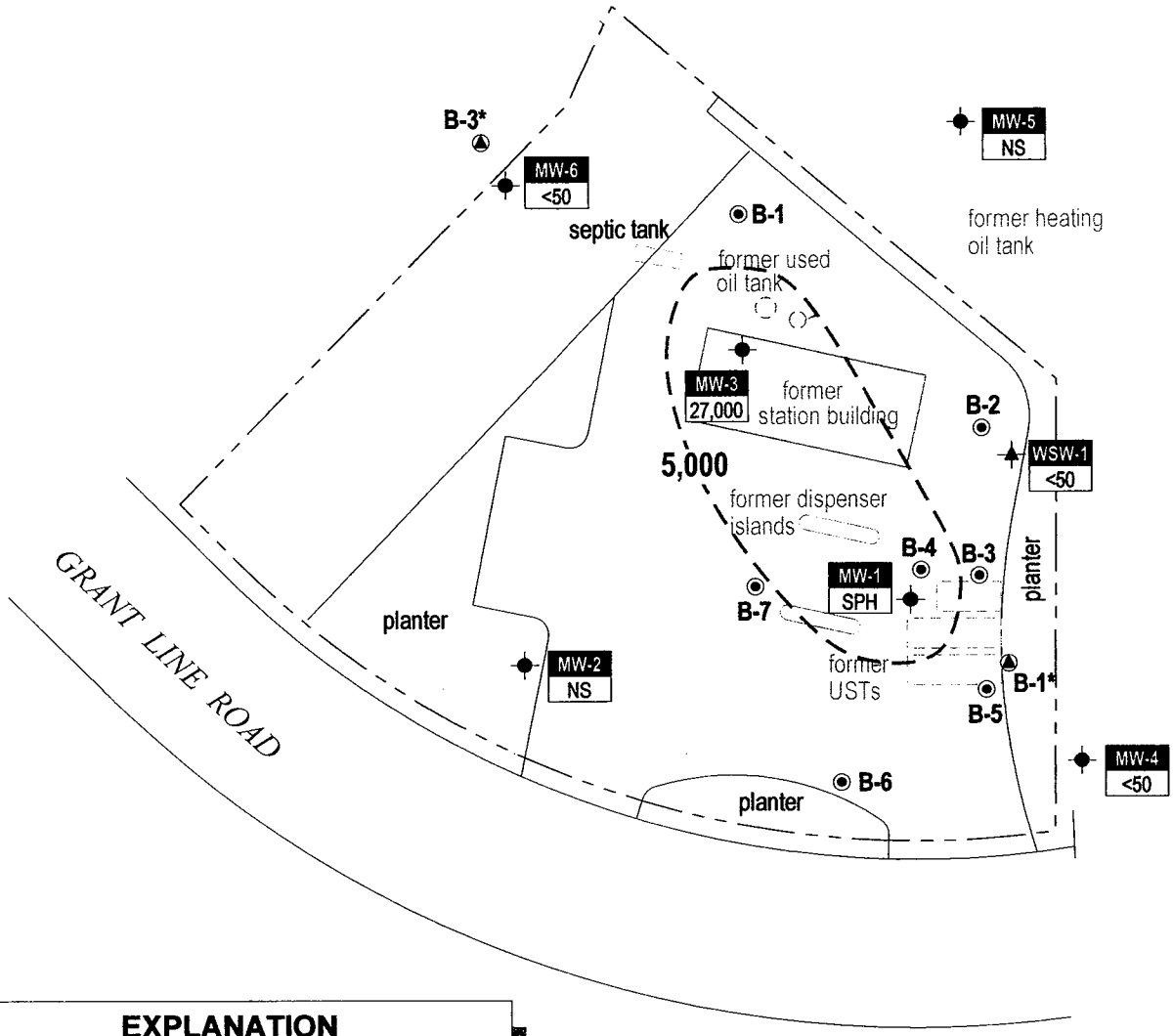
Former Chevron Service Station No. 9-7127

Grant Line Road at Interstate 580

Tracy, California

CONESTOGA-ROVERS & ASSOCIATES

Site Plan



EXPLANATION

MW-1	Monitoring well location
WSW-1	Water Supply Well (Livestock)
B-1	Soil boring location (Kleinfelder)
B-1*	Soil boring location (PEG Environmental)
X.X	TPHg concentration contour, dashed where inferred
Well ID	Well designation
TPHg	TPHg concentrations are in micrograms per liter (µg/L)
SPH	Separate phase hydrocarbons
NS	Not sampled

0 25 50

Scale (ft)

FIGURE

3

I:\Rdata\Chevron\9-7127 Tracy\Figures\9-7127_4Q06 TPHg.DWG

Former Chevron Service Station No. 9-7127

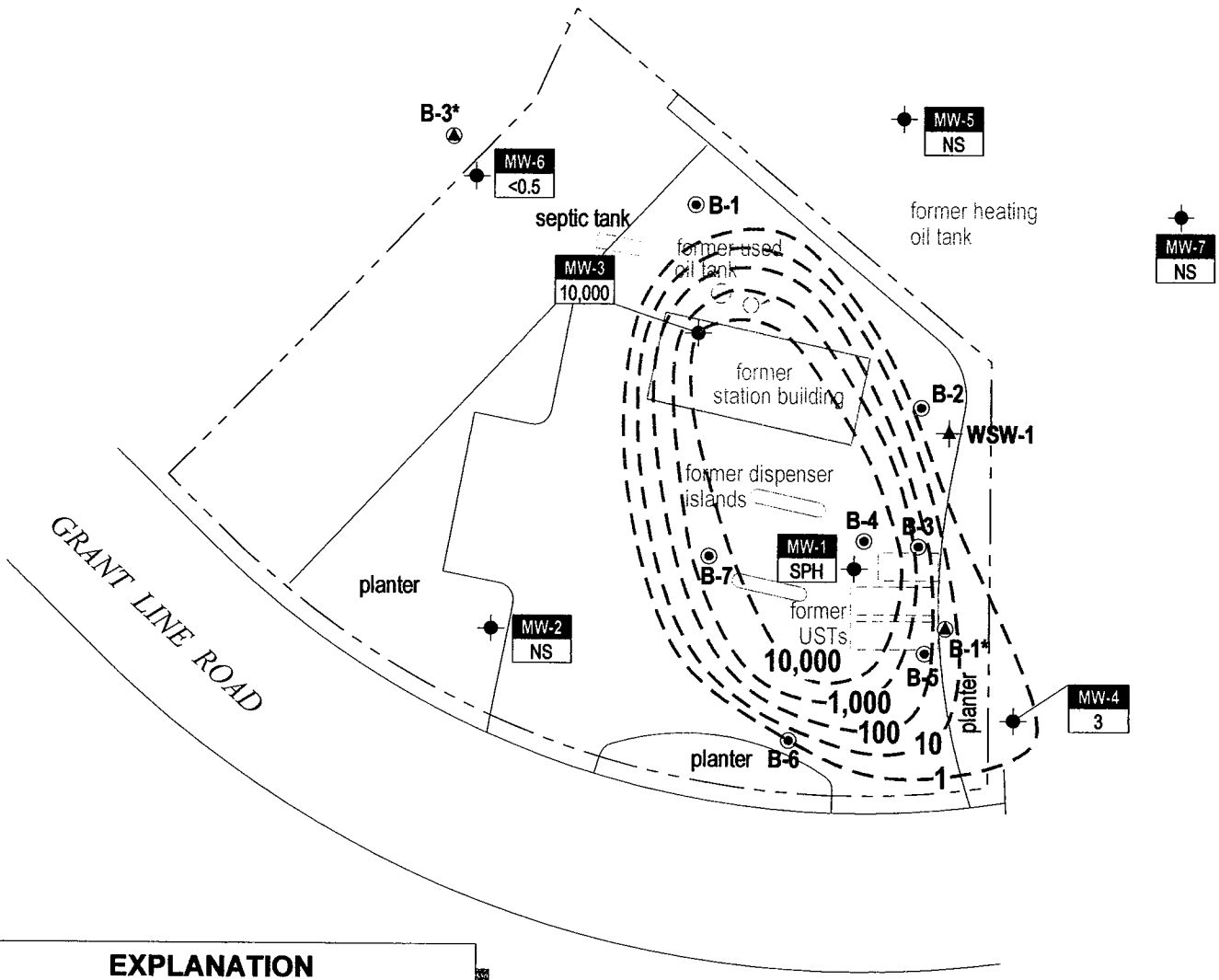
Grant Line Road at Interstate 580

Tracy, California

CONESTOGA-ROVERS & ASSOCIATES

TPHg Isoconcentration Map

November 21, 2006



EXPLANATION

MW-1	Monitoring well location
WSW-1	Water Supply Well (Livestock)
B-1	Soil boring location (Kleinfelder)
B-1*	Soil boring location (PEG Environmental)
X.X	Benzene concentration contour, dashed where inferred
Well ID / Benz	Well designation / Benzene concentrations are in micrograms per liter (µg/L)
SPH	Separate phase hydrocarbons
NS	Not sampled

0 25 50

Scale (ft)

FIGURE

4

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Former Chevron Service Station No. 9-7127

Grant Line Road at Interstate 580

Tracy, California

CONESTOGA-ROVERS & ASSOCIATES

Benzene Isoconcentration Map

November 21, 2006

Conestoga-Rovers & Associates

Table 1
Historical Soil Vapor Sample Results

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

Sample ID	Depth (fbg)	Date Sampled	Benzene	Toluene	Detected Hydrocarbons
			Concentrations in ppm		
V1	3	11/13/1987	<1	<1	<5
V1/B	5	11/13/1987	650	3,200	7,500
V1/C	8	11/13/1987	600	2,800	20,000
V2	5	11/13/1987	<5	30	160
V3	3	11/13/1987	5	10	30
V3/B	5	11/13/1987	1	10	15
V4	3	11/13/1987	3,200	5,200	28,500
V4/B	5	11/13/1987	130	1,900	2,000
V5	5	11/13/1987	<1	<5	<5
V5/B	7	11/13/1987	40	<1	750
V6	5	11/13/1987	540	160	7,300
V7	5	11/13/1987	<5	<5	1,400
V8	3	11/13/1987	<1	<1	<1
V8/B	8	11/13/1987	<1	<1	<1
V9	8	11/13/1987	<1	<10	10
V10	8	11/13/1987	<1	<1	<1
V11	5	11/13/1987	<1	<1	<1
V12	8	11/13/1987	<1	<1	<1
V13	12	11/13/1987	<1	<1	25
V14	8	11/13/1987	<1	<1	<1
V15	12	11/13/1987	<1	<1	<1

Abbreviations:

fbg = feet below grade

ppm = parts per million

<x = not detected above x ppm

Table 2
Historical Soil Sample Results
Former Chevron Service Station #9-1727, Grant Line Road @ Interstate 580, Tracy, CA

Well ID	Total Drilled Depth (fbg)	Date Sampled	TPHg (ppm)	Benzene (ppm)	Tuolene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	TPHHg (ppm)	TPHd (ppm)	TOG (ppm)	EPA 8010 Compounds (ppb)	Cadium (ppm)	Chronium (ppm)	Zinc (ppm)	Nickel (ppm)	Lead (ppm)
Boring Sampling Results																
B1*	10	1/6/1988	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
B2*	20	1/6/1988	0.8	0.001	<0.5	0.003	4	--	--	--	--	--	--	--	--	--
B3*	14	1/6/1988	76	1.2	0.680	0.8	2	--	--	--	--	--	--	--	--	--
B4*	15	1/6/1988	2,300	19	85	28	140	--	--	--	--	--	--	--	--	--
B5*	5	1/6/1988	0.5	0.076	0.007	0.002	0.03	--	--	--	--	--	--	--	--	--
B6*	5	1/6/1988	<1	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
B7*	5	1/6/1988	0.7	0.022	0.003	0.046	0.024	--	--	--	--	--	--	--	--	--
B-1**	7	12/9/1992	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	12.5	12/9/1992	4	<0.005	<0.005	<0.005	0.015	--	--	--	--	--	--	--	--	--
	17.5	12/9/1992	<1.0	<0.005	0.014	<0.005	0.025	--	--	--	--	--	--	--	--	--
	21.5	12/9/1992	<1.0	<0.005	0.013	<0.005	0.018	--	--	--	--	--	--	--	--	--
Tank Removal Sampling Results																
AF	14	4/4/1991	4,000	ND	41	66	310	--	--	--	--	--	--	--	--	13
Aop	13.5	4/4/1991	1	0.0070	ND	0.005	0.03	--	--	--	--	--	--	--	--	9.1
BF	14	4/4/1991	5,700	20	220	110	560	--	--	--	--	--	--	--	--	80
Bop	14	4/4/1991	ND	0.0070	0.016	0.012	0.03	--	--	--	--	--	--	--	--	7.7
CF	12.5	4/4/1991	2.1	0.018	0.013	0.014	0.046	--	--	--	--	--	--	--	--	6.9
Cop	15	4/4/1991	2,900	30	180	60	350	--	--	--	--	--	--	--	--	14
	13	4/16/1991	16	0.0090	0.014	0.021	0.17	--	--	--	--	--	--	--	--	3.6
	15	4/16/1991	710	0.013	0.063	0.096	0.41	--	--	--	--	--	--	--	--	8.1

Table 2
Historical Soil Sample Results
Former Chevron Service Station #9-1727, Grant Line Road @ Interstate 580, Tracy, CA

Well ID	Total Drilled Depth (fbg)	Date Sampled	TPHg (ppm)	Benzene (ppm)	Tuolene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	TPHHg (ppm)	TPHd (ppm)	TOG (ppm)	EPA 8010 Compounds (ppb)	Cadium (ppm)	Chronium (ppm)	Zinc (ppm)	Nickel (ppm)	Lead (ppm)
Product Line / Dispenser Pump Island Sampling Results																
#1	2.5	4/4/1991	1,200	3.3	17	17	86	--	--	--	--	--	--	--	--	17
#10	4	4/4/1991	3.3	0.20	0.043	0.06	0.16	--	--	--	--	--	--	--	--	7.7
#11	4	4/4/1991	750	12	33	19	110	--	--	--	--	--	--	--	--	9.5
#12	4	4/4/1991	15	0.23	0.19	0.26	1.3	--	--	--	--	--	--	--	--	6.9
#5	13	4/16/1991	220	ND	0.80	1.7	10	--	--	--	--	--	--	--	--	2.6
#8	14	4/16/1991	33	0.085	0.24	0.27	1.5	--	--	--	--	--	--	--	--	6.1
#13	15	4/16/1991	11	ND	0.047	0.044	0.31	--	--	--	--	--	--	--	--	6.1
#14	13	4/16/1991	9.2	0.0050	0.0060	0.03	0.13	--	--	--	--	--	--	--	--	3.6
Used Oil Tank Sampling Results																
WoM	11	4/4/1991	ND	ND	ND	ND	ND	--	ND	ND	ND	4.8	7.9	23	10	3.3
Heating Oil Sampling Results																
FoM	11	4/4/1991	170	ND	ND	ND	2.7	--	ND	ND	ND	2.2	4.4	13	8.5	1.7
Monitoring Well Sampling Results																
MW-1	19	12/8/1992	<1.0	<0.005	0.0056	<0.005	0.008	--	--	--	--	--	--	--	--	--
	24	12/8/1992	2,600	<5.0	79	30	200	--	--	--	--	--	--	--	--	--
	29	12/8/1992	8,100	21	560	150	840	--	--	--	--	--	--	--	--	--
	30.5	12/8/1992	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	38.5	12/8/1992	<1.0	<0.005	0.013	<0.005	0.024	--	--	--	--	--	--	--	--	--

Table 2
Historical Soil Sample Results
Former Chevron Service Station #9-1727, Grant Line Road @ Interstate 580, Tracy, CA

Well ID	Total Drilled Depth (fbg)	Date Sampled	TPHg (ppm)	Benzene (ppm)	Tuolene (ppm)	Ethyl-Benzene (ppm)	Total Xylenes (ppm)	TPHHg (ppm)	TPHd (ppm)	TOG (ppm)	EPA 8010 Compounds (ppb)	Cadium (ppm)	Chronium (ppm)	Zinc (ppm)	Nickel (ppm)	Lead (ppm)
MW-5/B-4	10	5/25/1993	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
	15	5/25/1993	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--	--	--
MW-6	9.5	10/27/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	14.5	10/27/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	29.5	10/27/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-7	10.5	10/24/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	14.5	10/24/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	24.5	10/24/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
MW-8	24.5	10/25/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	29.5	10/25/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--
	39.5	10/25/1995	--	ND	ND	ND	ND	ND	--	--	--	--	--	--	--	--

Abbreviations and Methods:

fbg = feet below grade
ppm = parts per million
ppb = parts per billion
TPHg = Total petroleum hydrocarbons as gasoline
TPPHg = Total purgeable petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TOG = Total oil and grease
<x = not detected above x ppm
-- = not analyzed
* Borings advanced by Kleinfelder
** Borings advanced by Pacific Environmental Group
ND = Not detected above laboratory detection limits

Conestoga-Rovers & Associates

Table 3

Historical and Grab-Groundwater Data

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

Sample ID	Date Sampled	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	TPPHg
			Concentrations in ppb				
MW-2	12/28/1992	ND	ND	ND	ND	0.6	--
MW-3	12/28/1992	19,000	0.4	0.3	0.3	0.4	--
MW-4/B-2 (Grab Sample)	5/21/1993	<50	12	2	<0.5	1	--
B-3 (Grab Sample)	5/21/1993	96	1	0.5	<0.5	<0.5	--
MW-5/B-4 (Grab Sample)	5/25/1993	<50	<0.5	<0.5	<0.5	0.9	--
MW-6	11/22/1995	ND	ND	ND	ND	ND	ND
MW-7	11/22/1995	ND	ND	ND	ND	ND	ND
MW-8	11/22/1995	ND	ND	ND	ND	ND	ND

Abbreviations:

ppb = parts per billion

TPHg = Total petroleum hydrocarbons as gasoline

TPPHg = Total Purgeable petroleum hydrocarbons as gasoline

ND = not detected above laboratory detection limits

<x = not detected above x mg/kg

-- = not analyzed

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT A

Regulatory Letter

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

February 26, 2007

Mr. Dana Thurman
Chevron Environmental Management Co.
P.O. Box 6012, Rm K2236
San Ramon, CA 94583

Mr. Ardavan Onsori
9310 Union City Blvd.
Union City, CA 94587

Dear Messrs. Thurman and Onsori:

Subject: Fuel Leak Case RO0000185, Chevron #9-7127, 0 I-580 & Grant Line Rd., Tracy, CA 95376

Alameda County Environmental Health (ACEH) staff has reviewed the file for the subject site and determined that additional remediation will be required to progress this site towards case closure. The ineffectiveness of the belt skimmer in MW-1 and the consistent elevated TPHg and BTEX concentrations in MW-3 indicate that the current approach ie free product removal and natural attenuation cannot successfully remediate the site. The petroleum concentrations in MW-3 appear to be the result of the plume originating from the free product in the area of MW-1. Although a risk-based closure may have been considered in the past, we do not believe closure can be achieved without additional remediation. We have the following technical comments and request you submit the technical report requested below.

TECHNICAL COMMENTS

1. Feasibility Study/Interim Corrective Action Plan- As discussed the prior 4/03 FS/CAP recommended free product removal from MW-1 and natural attenuation. Additions of ORC and vacuum extraction from wells MW-1 and MW-3 were also done yet they have not significantly reduced the petroleum contamination at the site. We, therefore request that you evaluate additional corrective actions and submit a new FS/CAP using current available technologies. You should evaluate each considered action based upon its cost and ability to reach clean-up goals in a reasonable time frame. Please include your proposed clean-up goals in your report.

TECHNICAL REPORT REQUEST

Please submit your FS/CAP to our office by March 30, 2007.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at barney.chan@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

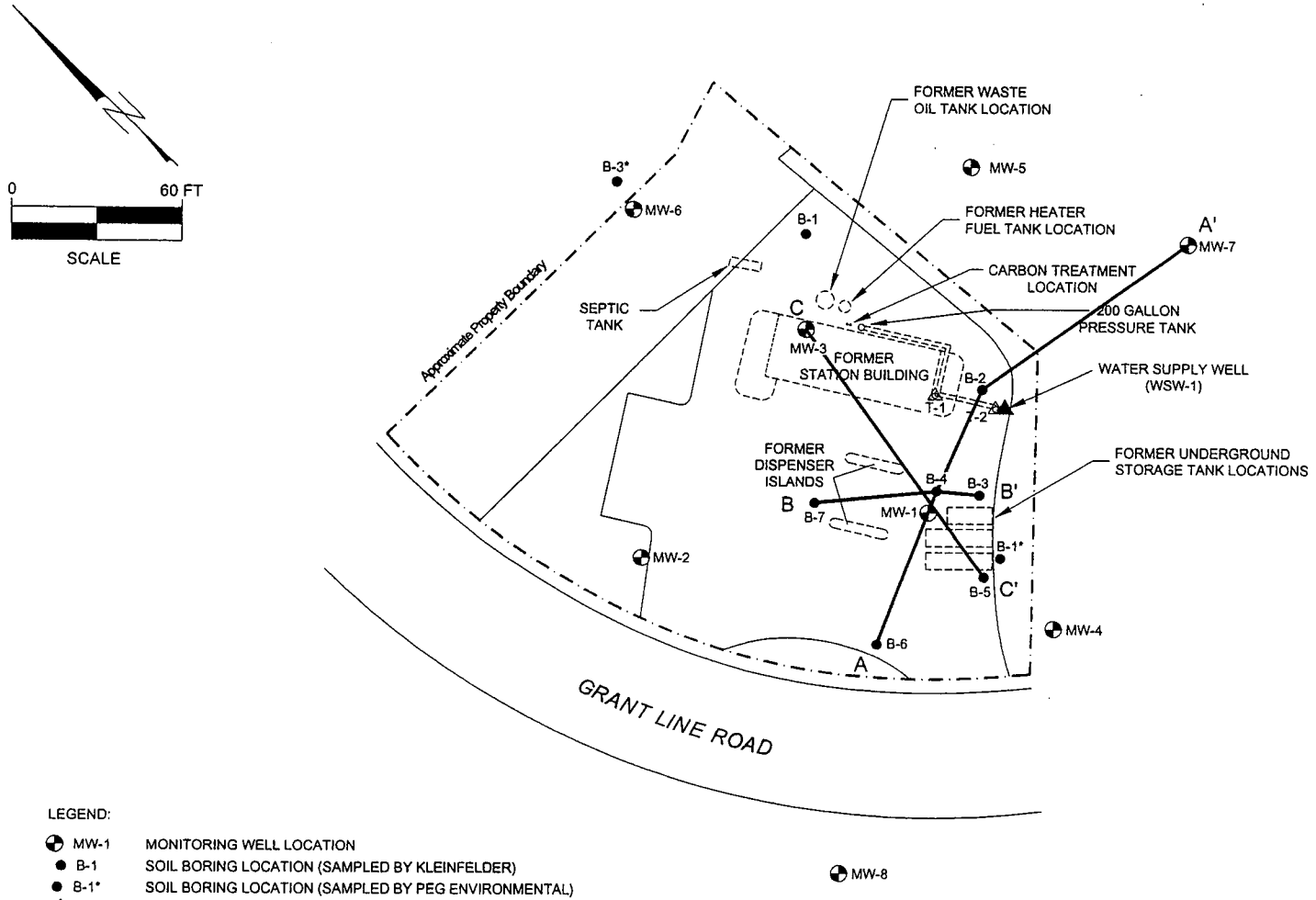
cc: files, D. Drogos
Ms. Laura Heberle, Cambria Environmental, 2000 Opportunity Drive, Suite 110, Roseville, CA 95678
Ms. Christyl Escarda, Central Valley RWQCB, 11020 Sun Center Drive, Ste. 200, Rancho Cordova, CA 95670-6114

2_26_07 I580 Grant Line Rd

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT B

Cross Sections



LEGEND:

MW-1	MONITORING WELL LOCATION
B-1	SOIL BORING LOCATION (SAMPLED BY KLEINFELDER)
B-1*	SOIL BORING LOCATION (SAMPLED BY PEG ENVIRONMENTAL)
T-2	WATER SAMPLING PORT
A——A'	GEOLOGIC CROSS SECTION TRACE

FIGURE 4

GEOLOGIC CROSS SECTION LOCATION MAP

FORMER CHEVRON SERVICE STATION N0. 9-7127
GRANT LINE ROAD AT INTERSTATE 580
TRACY, CALIFORNIA

PROJECT NO. DG97-127	DRAWN BY M.L. 4/1/03
FILE NO. DG97127B	PREPARED BY BIH
REVISION NO. 7	REVIEWED BY

Delta Environmental Consultants, Inc.

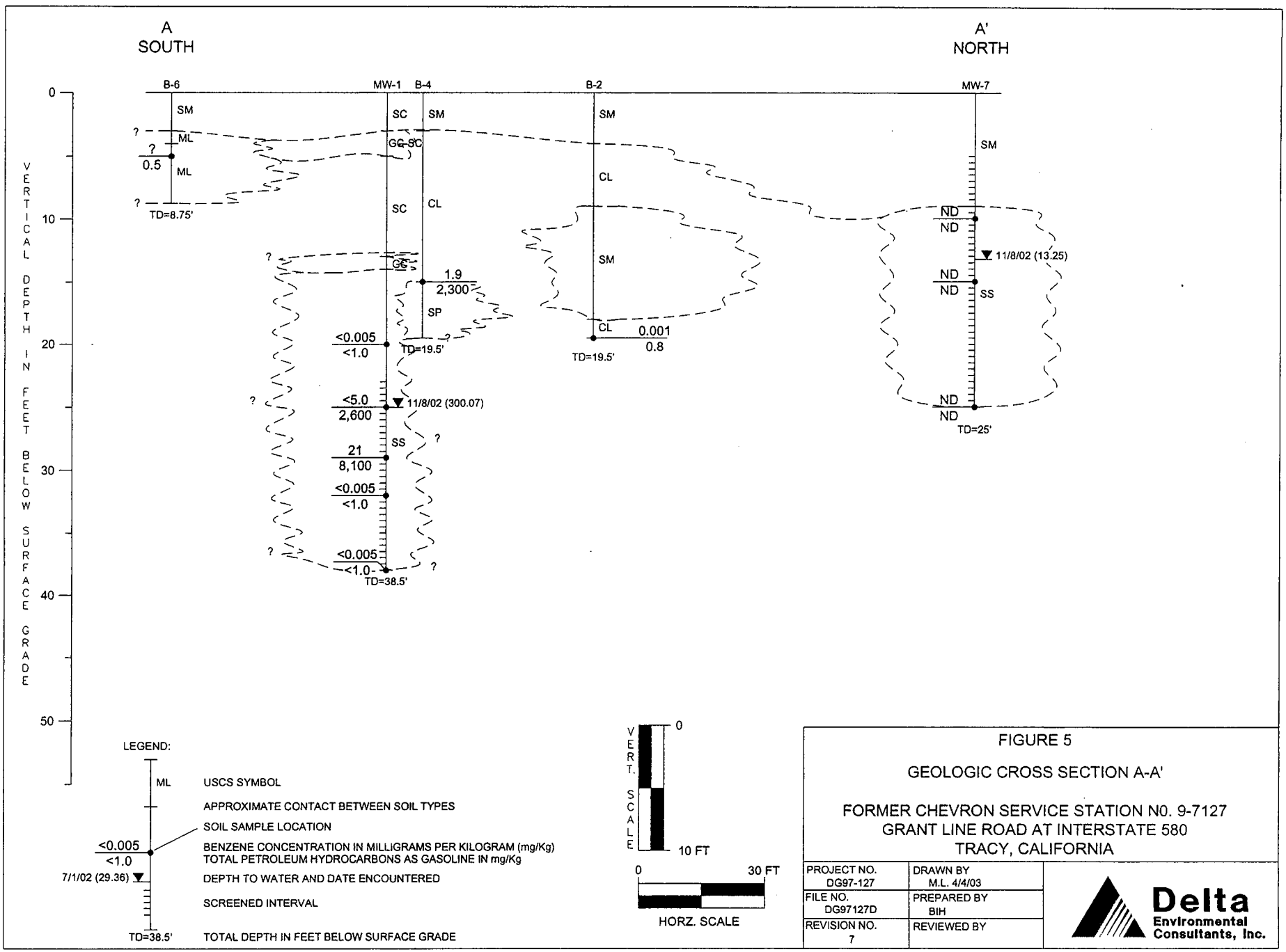


FIGURE 5

GEOLOGIC CROSS SECTION A-A'

FORMER CHEVRON SERVICE STATION N0. 9-7127
GRANT LINE ROAD AT INTERSTATE 580
TRACY, CALIFORNIA

PROJECT NO. DG97-127	DRAWN BY M.L. 4/4/03
FILE NO. DG97127D	PREPARED BY BIH
REVISION NO. 7	REVIEWED BY

Delta Environmental Consultants, Inc.

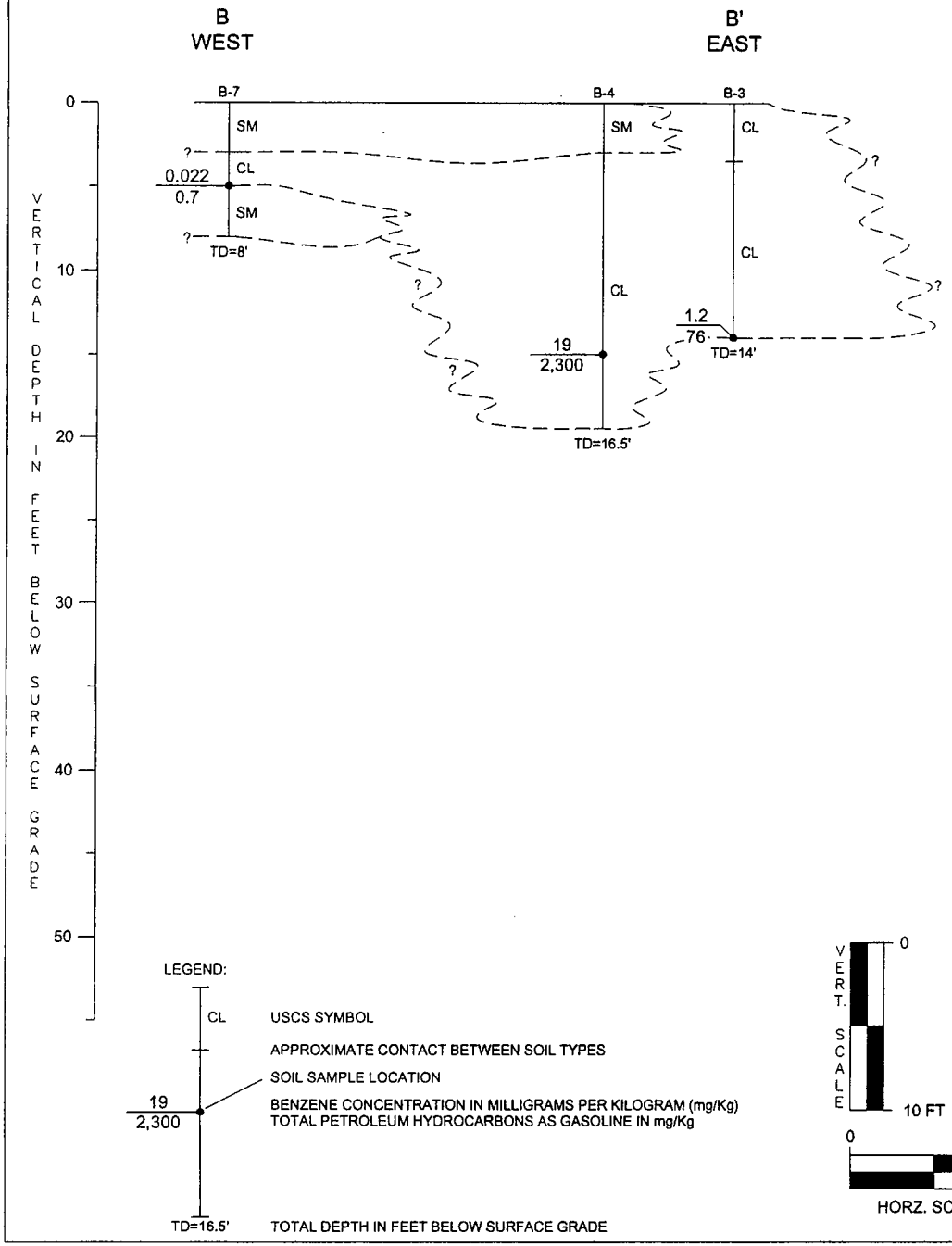


FIGURE 6

GEOLOGIC CROSS SECTION B-B'

FORMER CHEVRON SERVICE STATION N0. 9-7127
GRANT LINE ROAD AT INTERSTATE 580
TRACY, CALIFORNIA

PROJECT NO. DG97-127	DRAWN BY M.L. 4/1/03
FILE NO. DG97127D	PREPARED BY BIH
REVISION NO. 4	REVIEWED BY

Delta Environmental Consultants, Inc.

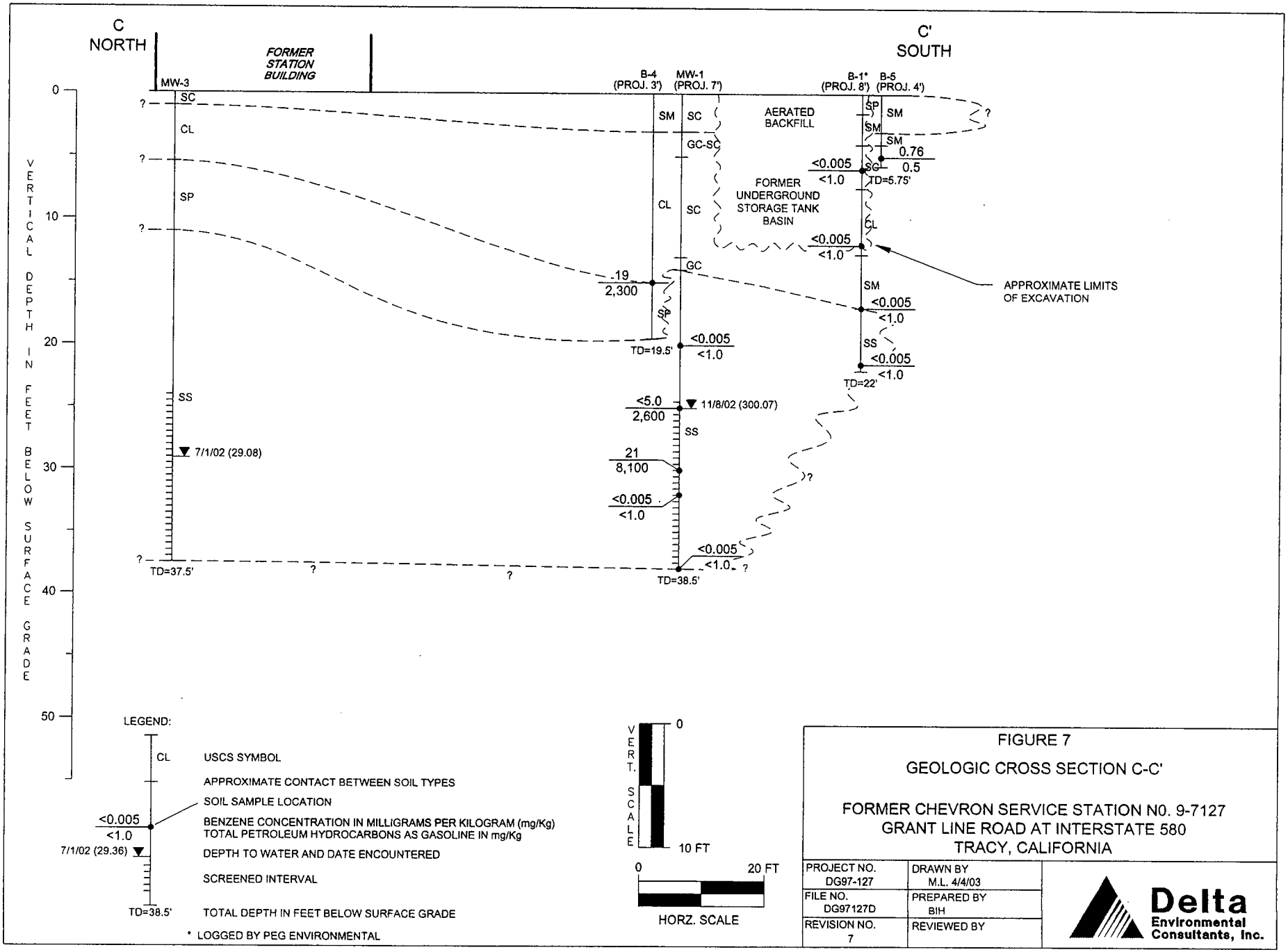


FIGURE 7

GEOLOGIC CROSS SECTION C-C'

FORMER CHEVRON SERVICE STATION N0. 9-7127
GRANT LINE ROAD AT INTERSTATE 580
TRACY, CALIFORNIA

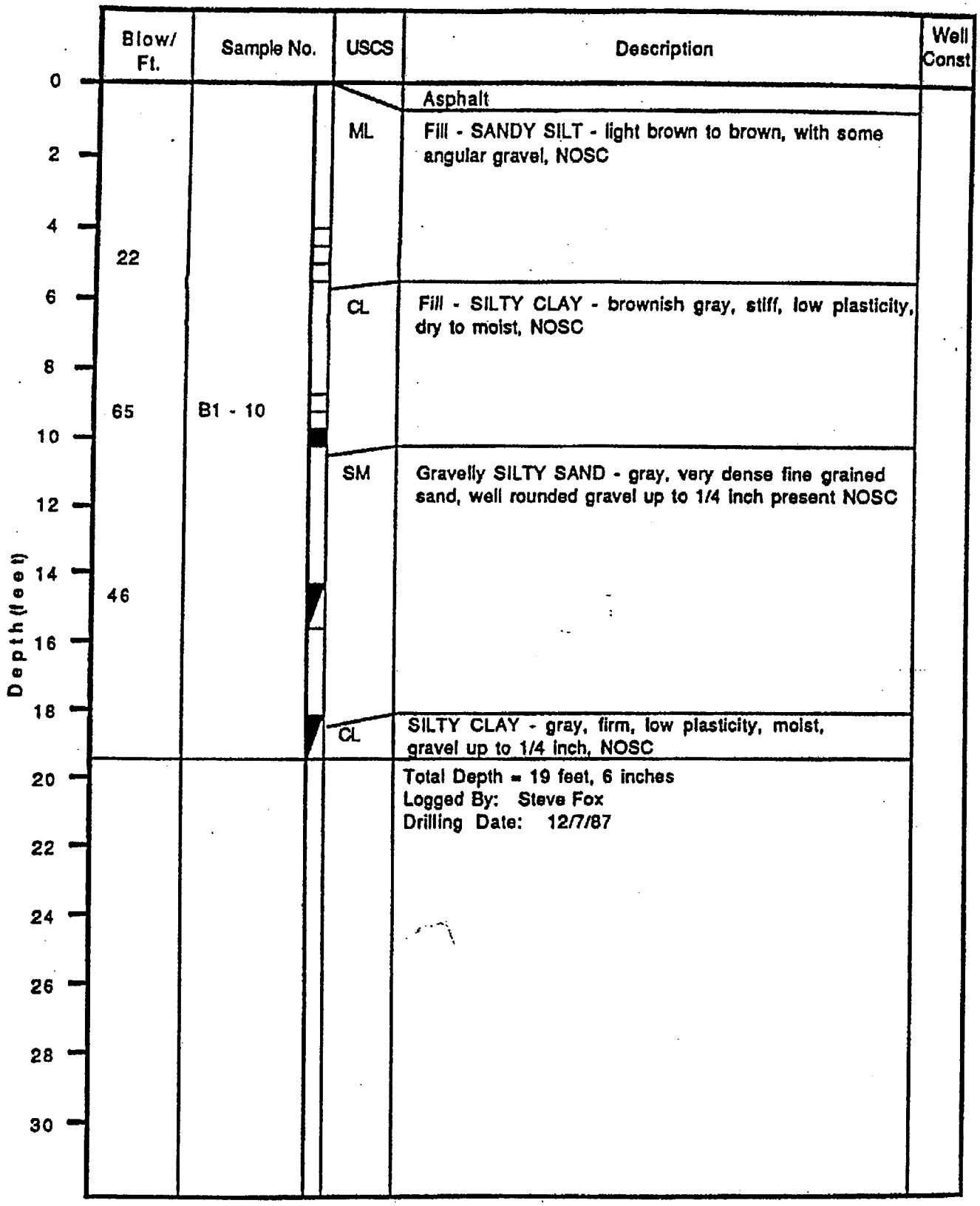
PROJECT NO. DG97-127	DRAWN BY M.L. 4/4/03
FILE NO. DG97127D	PREPARED BY BIH
REVISION NO. 7	REVIEWED BY

Delta Environmental Consultants, Inc.

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT C

Boring Logs



B - 1

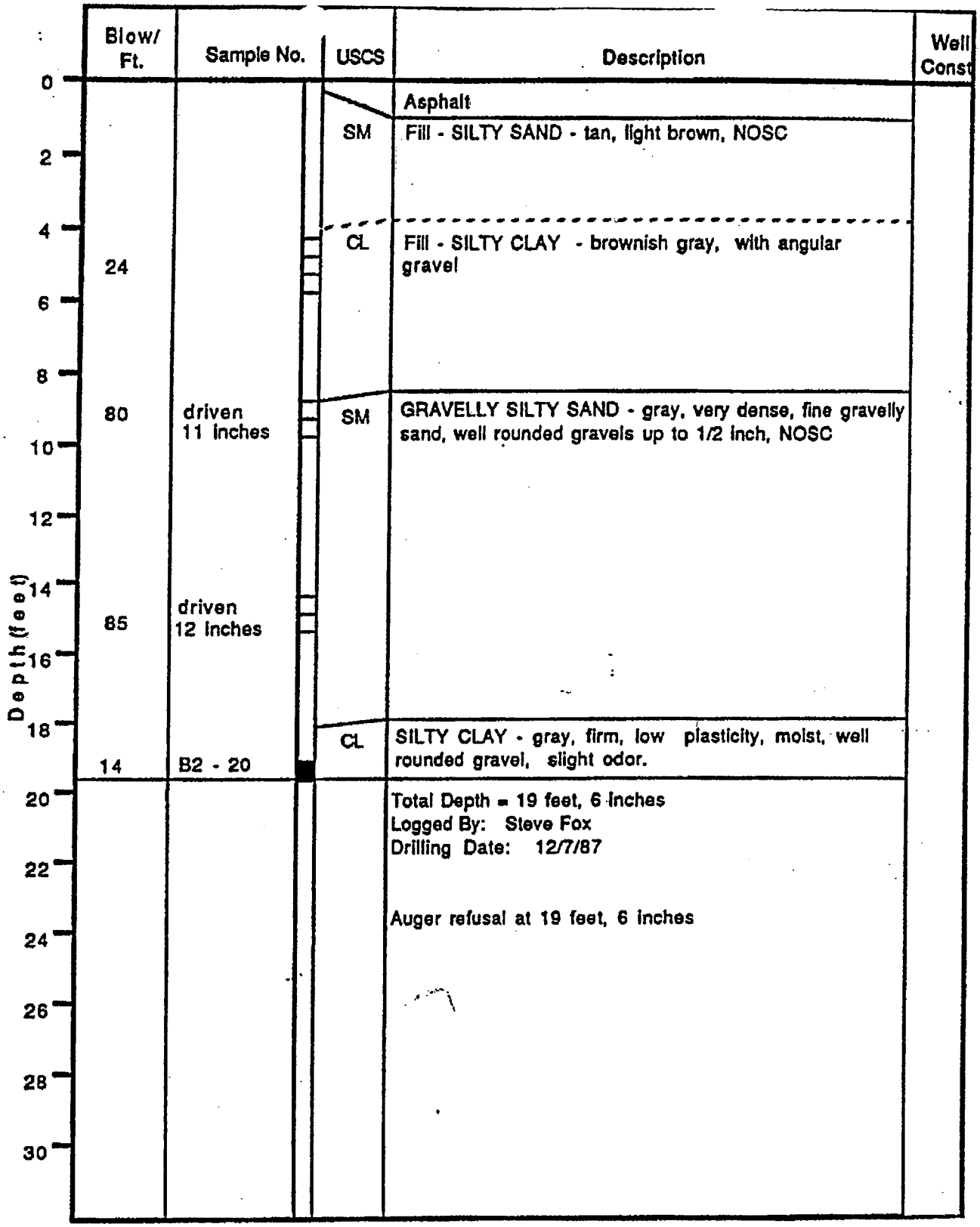
KLEINFELDER

PROJECT NO. 10-1782-01

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

BORING LOG B-1

PLATE
A2



B - 2

KLEINFELDER

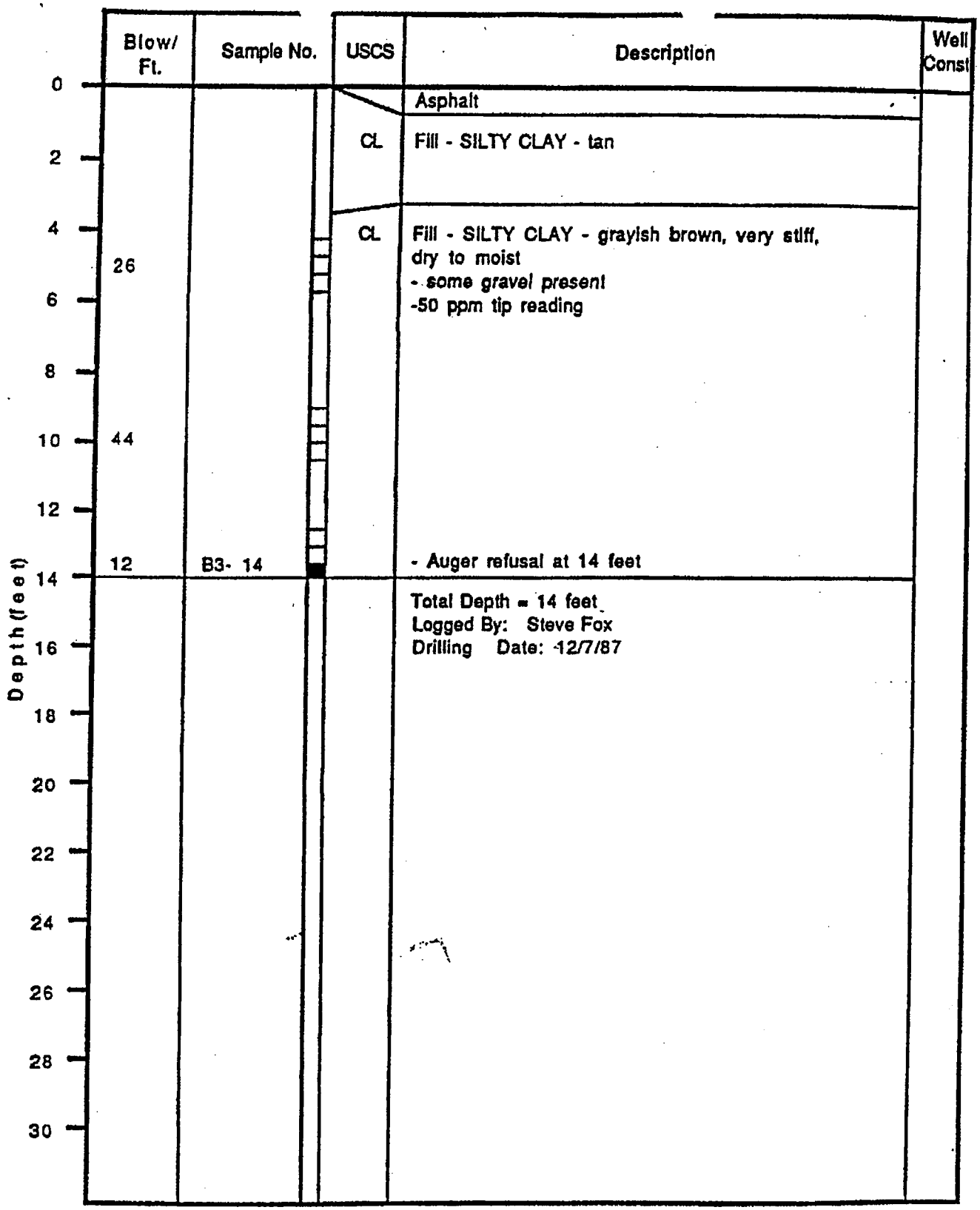
PROJECT NO. 10-1782-01

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

BORING LOG B-2

PLATE

A3



B-3

KLEINFELDER

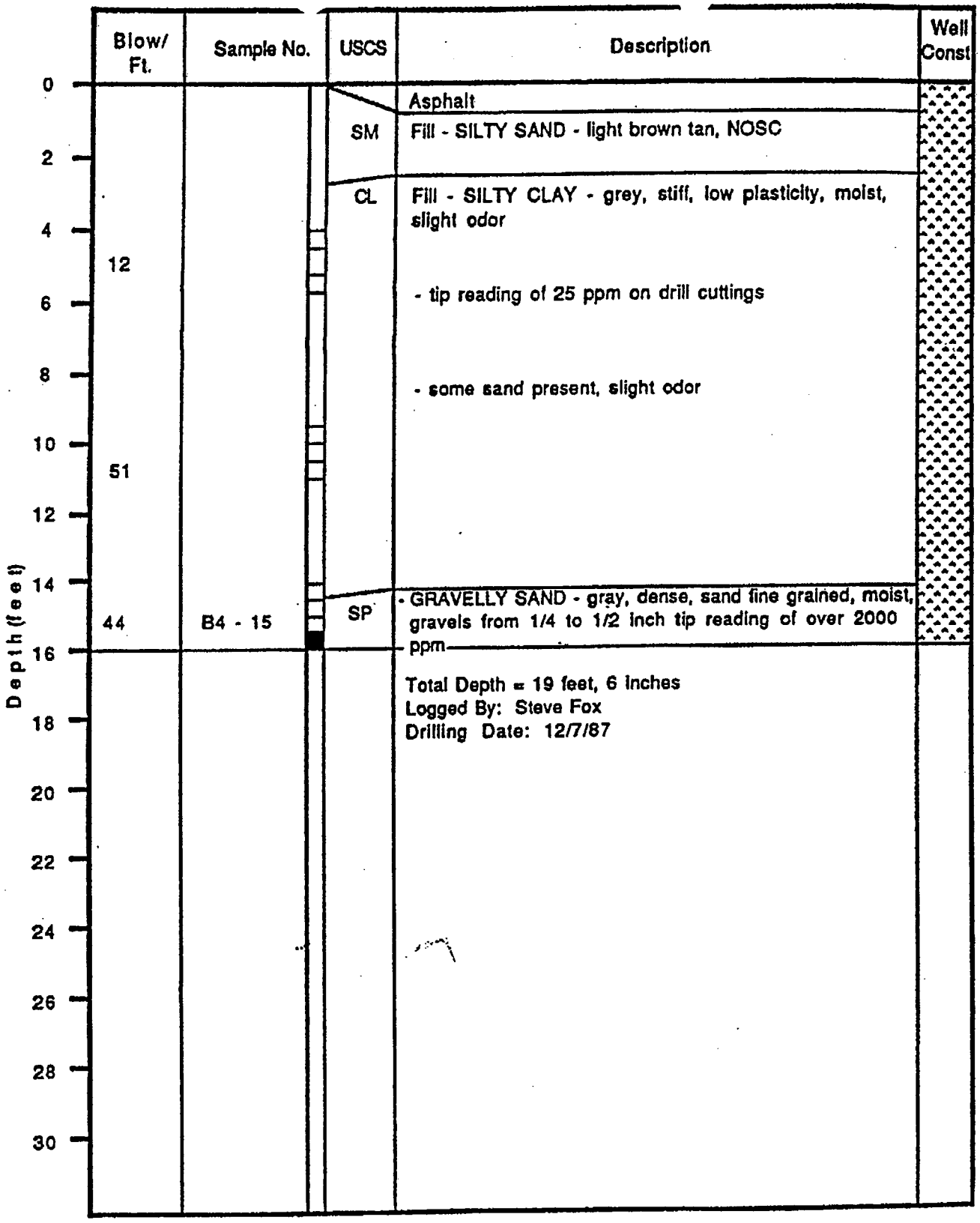
PROJECT NO. 10-1782-01

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

BORING LOG B-3

PLATE

A4



B - 4

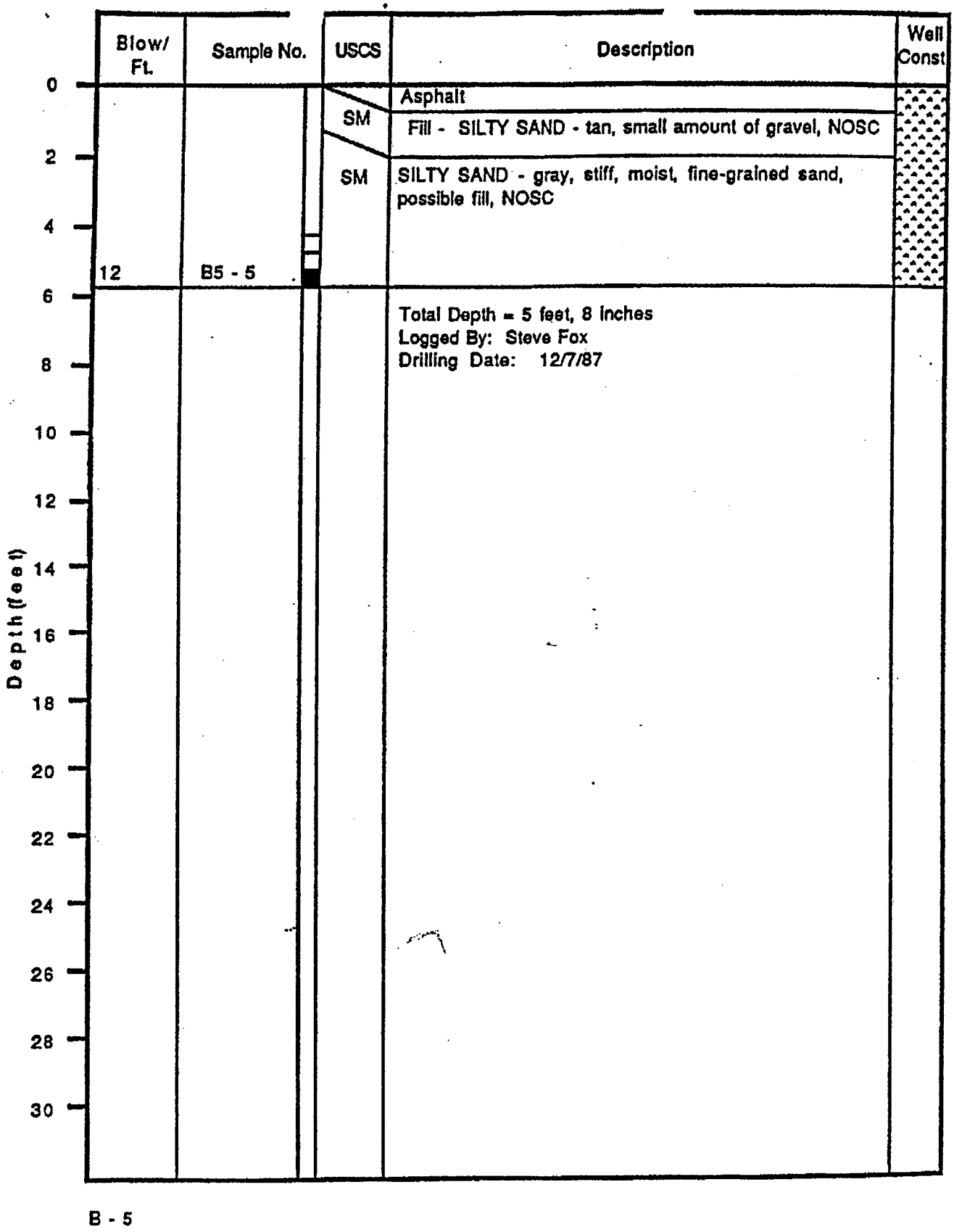
KLEINFELDER

PROJECT NO. 10-1782-01

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

BORING LOG B-4

PLATE
A5



B - 5

KLEINFELDER

PROJECT NO. 10-1782-01

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

BORING LOG B-5

PLATE

A6

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

B - 6

KLEINFELDER

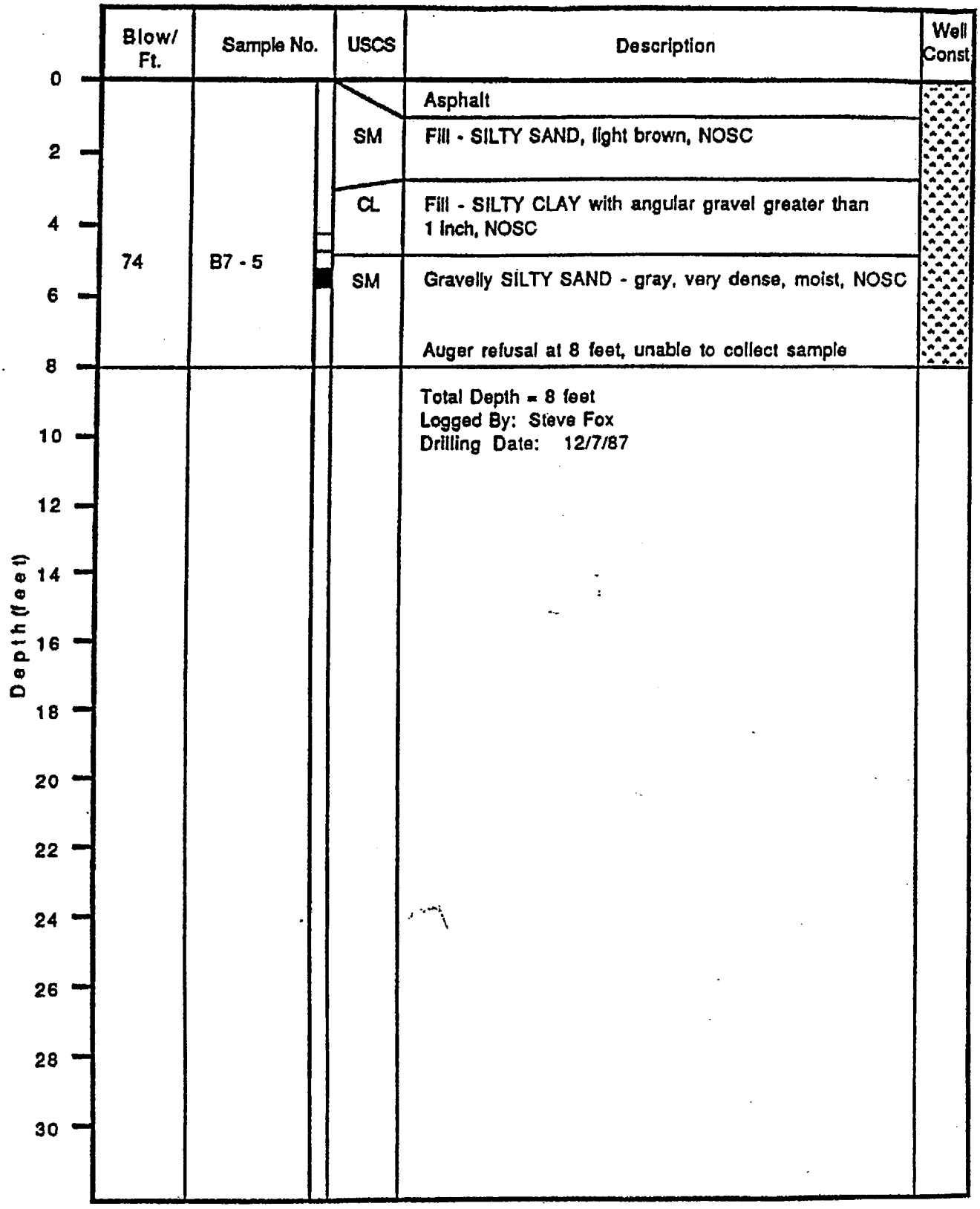
PROJECT NO. 10-1782-01

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

BORING LOG B-6

PLATE

A7



B - 7

KLEINFELDER

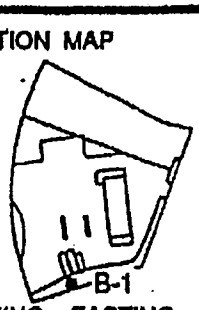
PROJECT NO. 10-1782-01

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

BORING LOG B-7

PLATE
A8

LOCATION MAP



NORTHING	EASTING	ELEVATION
154.6	172.9	29.18

PACIFIC ENVIRONMENTAL GROUP, INC.

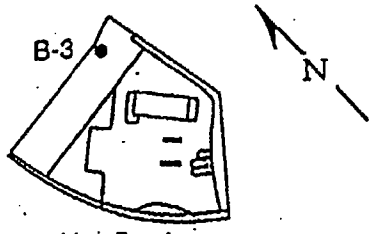
BORING NO.B-1
PAGE 1 OF 1

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"
HOLE DEPTH: 22'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Back Filled With Grout			Mst			1				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.
						2				SM	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.
			Dp			3					
						4					
				0		5				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.
	1	1	Mst			6					
				0		7				CL	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.
			Mst			8					
						9					
		2				10					
						11					
						12					
			Mst-Wt	2		13				SM	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.
				11		14					
		3				15					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.
						16					
				15		17				SS	@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.
		4				18					
						19					
			Dp		26	20					@20': bedding at 77° TCA.
						21					@22': moderate product odor.
				>200		22					BOTTOM OF BORING AT 22'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

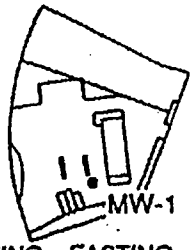
BORING NO. B-3
PAGE 1 OF 1

PROJECT NO. 325-04.04
LOGGED BY: CJM
DRILLER: Great Sierra
DRILLING METHOD: AIR
SAMPLING METHOD: CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: Chevron
DATE DRILLED: 5-21-93
LOCATION: Grant Line Road
HOLE DIAMETER: 94 mm
HOLE DEPTH: 25'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Cement	Mst	0		2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24			SS	SANDSTONE (Neroly Formation): green; >85% coarse sand; subangular; lithic fragments; moderate to hard no product odor.
	Dp	0						@15': bluish/green; 90% medium to fine sand; quartz; no lithic fragments; moderate to hard, no product odor.
				26, 28, 30, 32, 34, 36, 38, 40, 42, 44				BOTTOM OF BORING 25'

LOCATION MAP



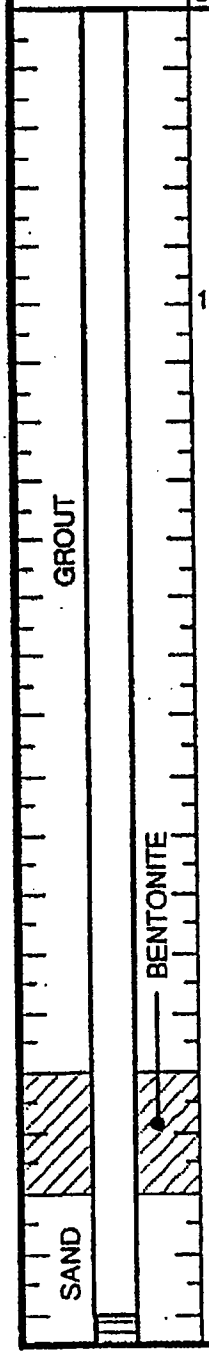
NORTHING	EASTING	ELEVATION
154.6	172.9	29.18

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-1
PAGE 1 OF 2

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

CLIENT: CHEVRON
DATE DRILLED: 12-8-92
LOCATION: Grant Line Road
HOLE DIAMETER: 10"
HOLE DEPTH: 39.5'
WELL DIAMETER: 4"
WELL DEPTH: 38'
CASING STICKUP: ~2.3



CORE BOX RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
	Dp	0	0	1–2			SC	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.
1				3–4			GC-SC	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.
1		16		5–6				
2			0	7–8			SC	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.
3			12	9–12				
		1		13–14			GC	SILTY GRAVEL: silica cemented 1/4 - 1 1/4" diameter rounded quartz pebbles; poor core recovery.
				15			SS	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.
4	Dry		16	16–18				
		3		19				@19': weak product odor increasing to strong product odor at 23'.
5				20–22				
			32					

See Page One

PACIFIC ENVIRONMENTAL GROUP, INC.

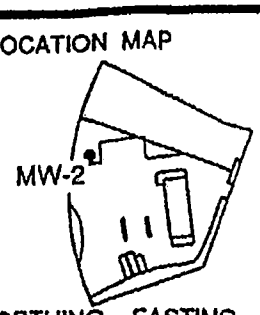
WELL MW-1
PAGE 2 OF 2

PROJECT NO. 325-04.01
LOGGED BY:
DRILLER:
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT:
DATE DRILLED:
LOCATION:
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY	SAMPLE ANALYZED	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
SAND / CAP	2	5	Dp-Mst	>200	22	23–28				SS	SANDSTONE (Neroly Formation): continued
		6	Dp	>220	53	29–31					@23': 1/2" altered epidotized vein at 35° TCA, horizontal parting common; very strong product odor at 25' and continues with depth.
		7	Dp								@29': bedding at 80° TCA.
		8	Wt	70	0	32–36					@31': moderate product odor; equigranular sandstone.
		9	Wt		12	37–39					@32': poor core recovery due to saturation of sandstone; weak product odor.
SLOUGH			Dp	6							@38': 5" bed of subrounded conglomerate pebbles from 1/4" to 2" diameter; no product odor.
											@39': 1mm wide chlorite veinlets at 12° TCA.
						40–44					BOTTOM OF BORING AT 39.5'

LOCATION MAP



NORTHING 270.1 | EASTING 131.9 | ELEVATION 27.22

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-2
PAGE 1 OF 2

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

CLIENT: CHEVRON
DATE DRILLED: 12-10-92
LOCATION: Grant Line Road
HOLE DIAMETER: 8"
HOLE DEPTH: 37'
WELL DIAMETER: 2"
WELL DEPTH: 36'
CASING STICKUP: ~2.1

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT	1	1	Dp	0	16	1–7			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.
						3–7			SS	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.
		2	Dp	0	8	11–13				
BENTONITE		3	Mst	0	0	14–19				@14-19': loose; unconslidated sandstone; no core recovery.
SAND	2	4		0	100	20–22				@20': pebbles; brown to dark brown; matrix is >90% quartz and altered chloritic minerals; ~5-20% intergranular porosity; angular grains; pebbles are subangular, 1/4 - 1" diameter pebbles weathered by iron oxide and manganese oxide; hard; no product odor.

PACIFIC ENVIRONMENTAL GROUP, INC.

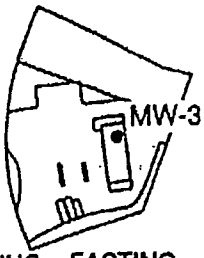
See Page One

PROJECT NO. 325-04.01
LOGGED BY:
DRILLER:
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT:
DATE DRILLED:
LOCATION:
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY	SAMPLE ANALYZED	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
SAND CAP	2	5	Dp-Mst	0	6	23–27				SS	SANDSTONE (Neroly Formation): continued @25-26': sandy claystone; brown to dark brown; fine sandy texture; horizontal platy fracturing; rare mineral grain solution cavities; moderate hardness; no product odor. @27.5': parting common at 80° TCA. @28.5-29.3': sandy claystone; brown to dark brown; fine sandy texture; horizontal platy fracturing; rare mineral grain solution cavities; moderate hardness; no product odor.
	3	6	Wt Mst	0	0	28–32					@31.5': bedding at 75° TCA.
		7	Wt Dp	0	0	33–36					@33.3-34': brecciated claystone as described above; rare biotite; moderate hardness; crushed fracturing; no product oodor. @34-36': Neroly Formation; intense parting at 76° TCA. @36-36.2': brecciated claystone as described above; rare biotite; moderate hardness; crushed fracturing; no product oodor.
			Wt	1		37					BOTTOM OF BORING AT 37'
						38–44					

LOCATION MAP



NORTHING 220.3 | EASTING 242.3 | ELEVATION 29.26

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-3
PAGE 1 OF 2

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

CLIENT: CHEVRON
DATE DRILLED: 12-10-92
LOCATION: Grant Line Road
HOLE DIAMETER: 8"
HOLE DEPTH: 40'
WELL DIAMETER: 2"
WELL DEPTH: 37.5'
CASING STICKUP: ~2.3

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT		1	Dp			1				SC	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.
						2				CL	@1': 3-4" asphalt layer
						3					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 low hardness; minor rounded to 1" pebbles; rare manganese oxide; stiff; no product odor.
						4					
						5					
					0	6					
		2				7				SP	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.
			Mst	0		8					
						9					
						10					
						11					
		3			0	12					
	1					13					
						14					
				3		15				SS	CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'.
		4	Dp		0	16					
						17					
						18					
		5			0	19					
			Wt			20					@17-18': rounded 2" diameter pebbles recovered; no sand matrix.
				0		21					@21': see next page.
SAND		6			24	22					

BENTONITE

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL MW-3
PAGE 2 OF 2

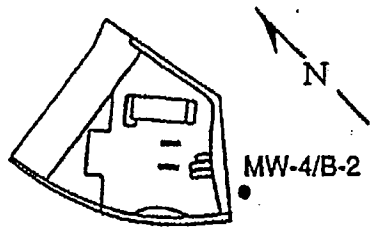
See Page One

PROJECT NO. 325-04.01
LOGGED BY:
DRILLER:
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT:
DATE DRILLED:
LOCATION:
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	RQD (%)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
SAND	2	7	Dp	16	6	23–28				SS	SANDSTONE (Neroly Formation): black; 90% subangular quartz and weathered mafic minerals; minor feldspar grains fine to medium grained; 10% fines; sucrosic texture; homogeneous; moderate to intense fracturing; weakly weathered; low hardness; no product odor. @22-24': slight clay enriched zone; brittle subhorizontal parting. @23.5': bedding at 62° TCA with perpendicular fracture running at 77° TCA. @28': bedding at 77° TCA with similar high angle fracture perpendicular to bedding at 25° TCA; increased hardness due to cementation; parting common along bedding planes at 75° and 83° TCA. @30': slight product odor.
		8	Dp	1	0	28–32					
	3			0		32–36					@36': bedding at 55° TCA.
SLOUGH		9	Mst-Dp		0	36–38					@38': high angle fractures at 30° TCA and 11° TCA.
				2		38–40					BOTTOM OF BORING AT 40'
						40–44					

LOCATION MAP

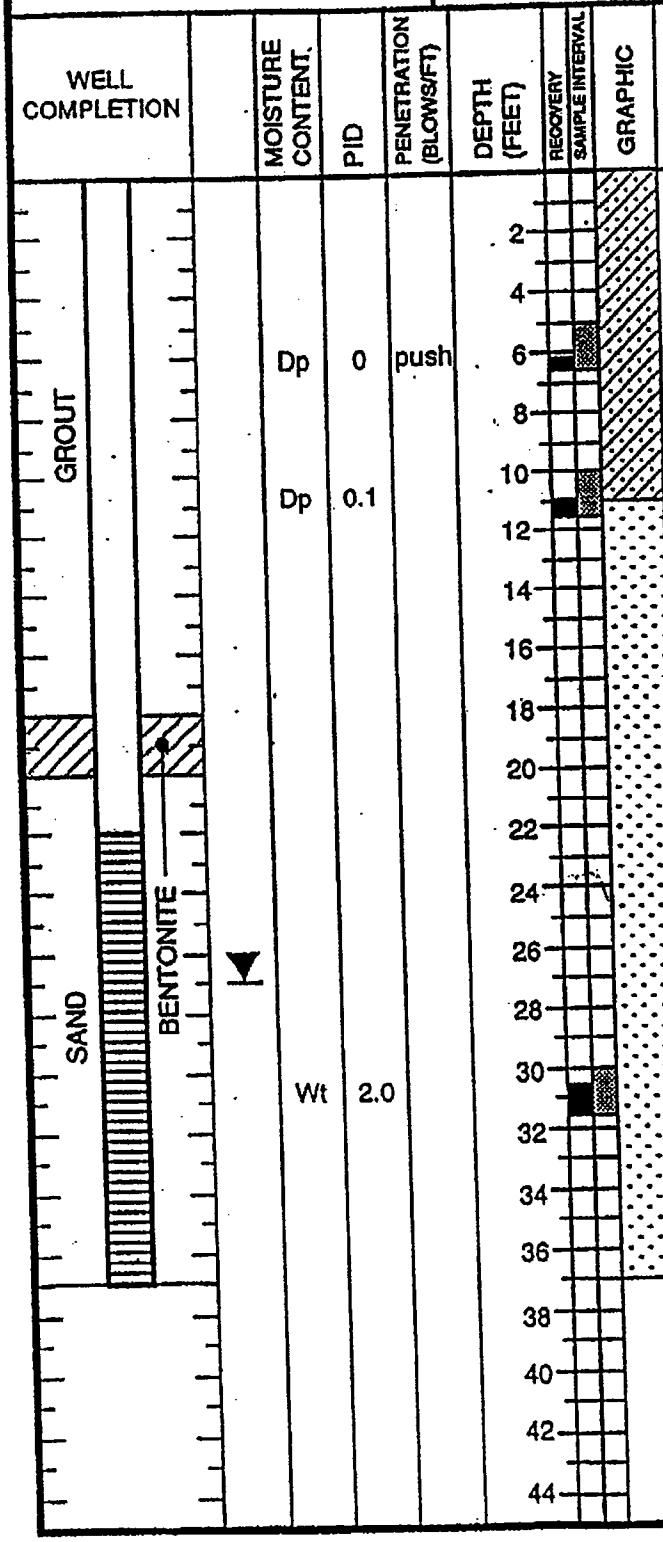


PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-4/B-2
PAGE 1 OF 1

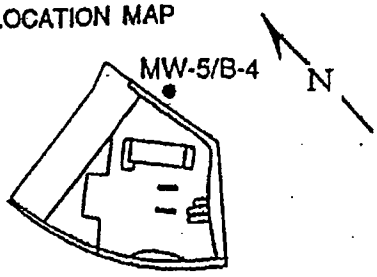
PROJECT NO. 325-04.04
LOGGED BY: AFW
DRILLER: Great Sierra
DRILLING METHOD: AIR
SAMPLING METHOD: CORE
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 X 12 Sand

CLIENT: Chevron
DATE DRILLED: 5-21-93
LOCATION: Grant Line Road
HOLE DIAMETER: 8 7/8"
HOLE DEPTH: 37'
WELL DIAMETER: 2"
WELL DEPTH: 37'
CASING STICKUP: 3'



SOIL TYPE	LITHOLOGY / REMARKS
SC	CLAYEY SAND - FILL: dark brown; 30-40% fines; abundant lithic fragments; loose; no product odor.
SS	SANDSTONE (Neroly Formation): olive green >90% fine to medium sand; subangular quartz, lithic fragments, and weakly altered feldspar; faint product odor.
	@30': as above; no product odor.

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

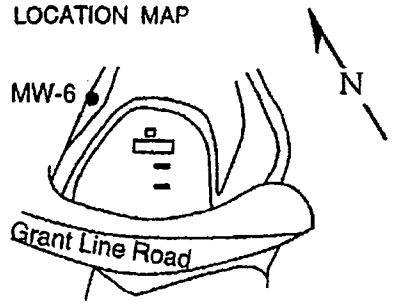
WELL NO. MW-5/B-4
PAGE 1 OF 1

PROJECT NO. 325-04.04
LOGGED BY: CJM
DRILLER: Great Sierra
DRILLING METHOD: AIR
SAMPLING METHOD: CORE
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 X 12 SAND

CLIENT: Chevron
DATE DRILLED: 5-25-93
LOCATION: Grant Line Road
HOLE DIAMETER: 8 7/8"
HOLE DEPTH: 25'
WELL DIAMETER: 2"
WELL DEPTH: 25'
CASING STICKUP: 3'

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT, BENTONITE, SAND				2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44			SS	SANDSTONE: greenish brown; 90% coarse sand; lithic fragments; no product odor.
	Mst	0						@10': grayish brown; 90% coarse to medium sand; subrounded to subangular; lithic fragments; hard to very hard; no product odor.
	Wt	0						
								BOTTOM OF BORING 25'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

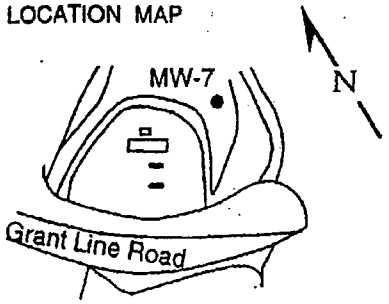
WELL NO. MW-6
PAGE 1 OF 1

PROJECT NO. 325-004.1B
LOGGED BY: MOTO
DRILLER: ALL TERRAIN
DRILLING METHOD: AIR ROTARY
SAMPLING METHOD: CORE
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.020"
SAND PACK: 2 X 12 SAND

CLIENT: CHEVRON
DATE DRILLED: 10-27-95
LOCATION: Grant Line Road
HOLE DIAMETER: 6.5"
HOLE DEPTH: 30'
WELL DIAMETER: 2"
WELL DEPTH: 30'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				2				TOPSOIL
				4				
	Dp	0		6			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				@8-12': alternating 1" beds of sandstone and conglomeratic lenses; scour marks; no product odor.
	Mst	0		10				
				12				
	Wt	0		14				@13-14': coarsens downward.
				16				
				18				@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.
	Wt	0		20				
				22				
	Wt	0		24				
				26				@26-30': predominately fine to medium grained sand; no product odor.
				28				
SAND / BENTONITE	Wt	0		30				
				32				BOTTOM OF BORING AT 30'
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

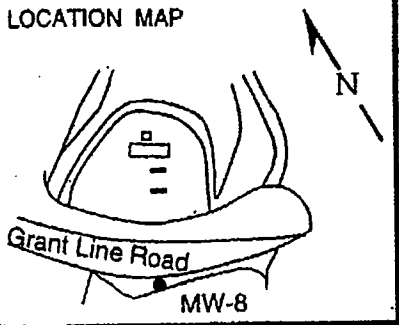
WELL NO. MW-7
PAGE 1 OF 1

PROJECT NO. 325-004.1B
LOGGED BY: MOTO
DRILLER: ALL TERRAIN
DRILLING METHOD: AIR ROTARY
SAMPLING METHOD: CORE
CASING TYPE: SCH 40 PVC
SLOT SIZE: 0.020"
SAND PACK: 2 X 12 SAND

CLIENT: CHEVRON
DATE DRILLED: 10-24-95
LOCATION: Grant Line Road
HOLE DIAMETER: 6.5"
HOLE DEPTH: 25'
WELL DIAMETER: 2"
WELL DEPTH: 25'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT, BENTONITE, SAND				2, 4				ALLUVIUM: topsoil
	Dp	0		6, 8			Slst	SANDY SILTSTONE (Neroly Formation): olive; strongly weathered; vertical root holes to 1 cm common; no product odor.
	Dp	0		10				
	Dp	0		12			SS	SANDSTONE (Neroly Formation): light gray to olive; 85% fine to medium grained sand; 15% coarse sand; very hard; no product odor.
	Wt	0		14				@11': verticalar calcite veins to 1/2" diameter common; no product odor.
				16			SS	CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as above; matrix is partially lithified subrounded pebbles to 2" diameter; very hard; no product odor.
				18, 20				
	Wt	0		22				
				24			SS	SANDSTONE (Neroly Formation): gray; 10% fines; 80% medium sand; 10% coarse sand common; scour marks; 1/4" thick lenses of coarse grained sand; well lithified; no product odor.
	Wt	0		26, 28, 30, 32, 34, 36, 38, 40, 42, 44				BOTTOM OF BORING AT 25'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-8
PAGE 1 OF 1

PROJECT NO. 325-004.1B
LOGGED BY: MOTO
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
DATE DRILLED: 10-24, 25, 27-95
LOCATION: Grant Line Road
HOLE DIAMETER: 6.5"
HOLE DEPTH: 40'
WELL DIAMETER: 2"
WELL DEPTH: 40'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				0		SS	SANDSTONE (Neroly Formation): dark gray; 15% fines; 85% fine to medium subangular sand; weathered feldspars; massive; weakly oxidized; well sorted; no product odor.
	Dp	0		6			
	Dp	0		10			@10': dark bluish gray to black; no product odor.
	Dp	0		16			@17': light gray; 85% fine to medium sand; 15% coarse sand; subrounded to subangular; weakly altered feldspars; massive; very hard; no product odor.
	Dp	0		20			
	Mst	0		22		Slst	SANDY SILTSTONE: pinkish gray to brown; fine sandy texture; occasional mineral grain solution cavities; massive; manganese oxide common; moderate hardness; no product odor.
BENTONITE				28		SS	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.
SAND	Wt	0		30			
	Wt	0		34			@30-33': rounded pebbles to 2" diameter recovered; no sand matrix.
				36			@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.
				40			BOTTOM OF BORING AT 40'
				42			
				44			

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT D

Groundwater Monitoring and Sampling Report

GETTLER-RYAN INC.

TRANSMITTAL

December 22, 2006
G-R #385251

TO: Ms. Laura Heberle
Cambria Environmental Technology, Inc.
2000 Opportunity Drive, Suite 110
Roseville, California 95678

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Former Chevron Service Station
#9-7127
I-580 and Grant Line Road
Tracy, California
MTI: 63H-1656

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	December 22, 2006	Groundwater Monitoring and Sampling Report **Second Semi-Annual - Event of November 21, 2006**

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced report for **your use and distribution to the following:**

Mr. Dana Thurman, Chevron Environmental Management Company, P.O. Box 6012, Room K2236, San Ramon, CA 94583
Mr. Barney Chan, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 **(Distributed by Cambria via PDF)**

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***January 9, 2007***, at which time the final report will be distributed to the following:

cc: Ms. Christyl Escarda, RWQCB, Central Valley Region, 11020 Sun Center Drive, Suite 200, Rancho Cordova, CA 95670-6114
Mr. Ardavan Onsori, 29310 Union City Blvd., Union City, CA 94587

Enclosures

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
3140 Gold Camp Drive, Suite 170 • **Rancho Cordova**, CA 95670 • (916) 631-1300 • Fax (916) 631-1317
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Chevron

Dana R. Thurman
Property Specialist
Retail and Terminal
Business Unit

Chevron Environmental Management Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 842-9559
Fax (925) 842-8370
dthurman@chevron.com

December 22, 2006

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station #9-7127

Address: I-580 & Grant Line Road, Tracy, California

I have reviewed the attached routine groundwater monitoring report dated December 22, 2006.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Gettler-Ryan, Inc., upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Dana Thurman
Project Manager

Enclosure: Report

GETTLER-RYAN INC.

December 22, 2006
G-R Job #385251

Mr. Dana Thurman
Chevron Environmental Management Company
P.O. Box 6012, Room K2236
San Ramon, CA 94583

RE: Second Semi-Annual Event of November 21, 2006
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-7127
I-580 and Grant Line Road
Tracy, California

Dear Mr. Thurman:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. A Concentration Map is included as Figure 2. The chain of custody document and laboratory analytical report are also attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding
Project Coordinator

Hagop Kevork
P.E. No. C55734

REGISTERED PROFESSIONAL ENGINEER
HAGOP KEVORK
No. C 55734
Exp. 12/31/08
CIVIL
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Figure 2: Concentration Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results - Oxygenate Compounds
Table 3: Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

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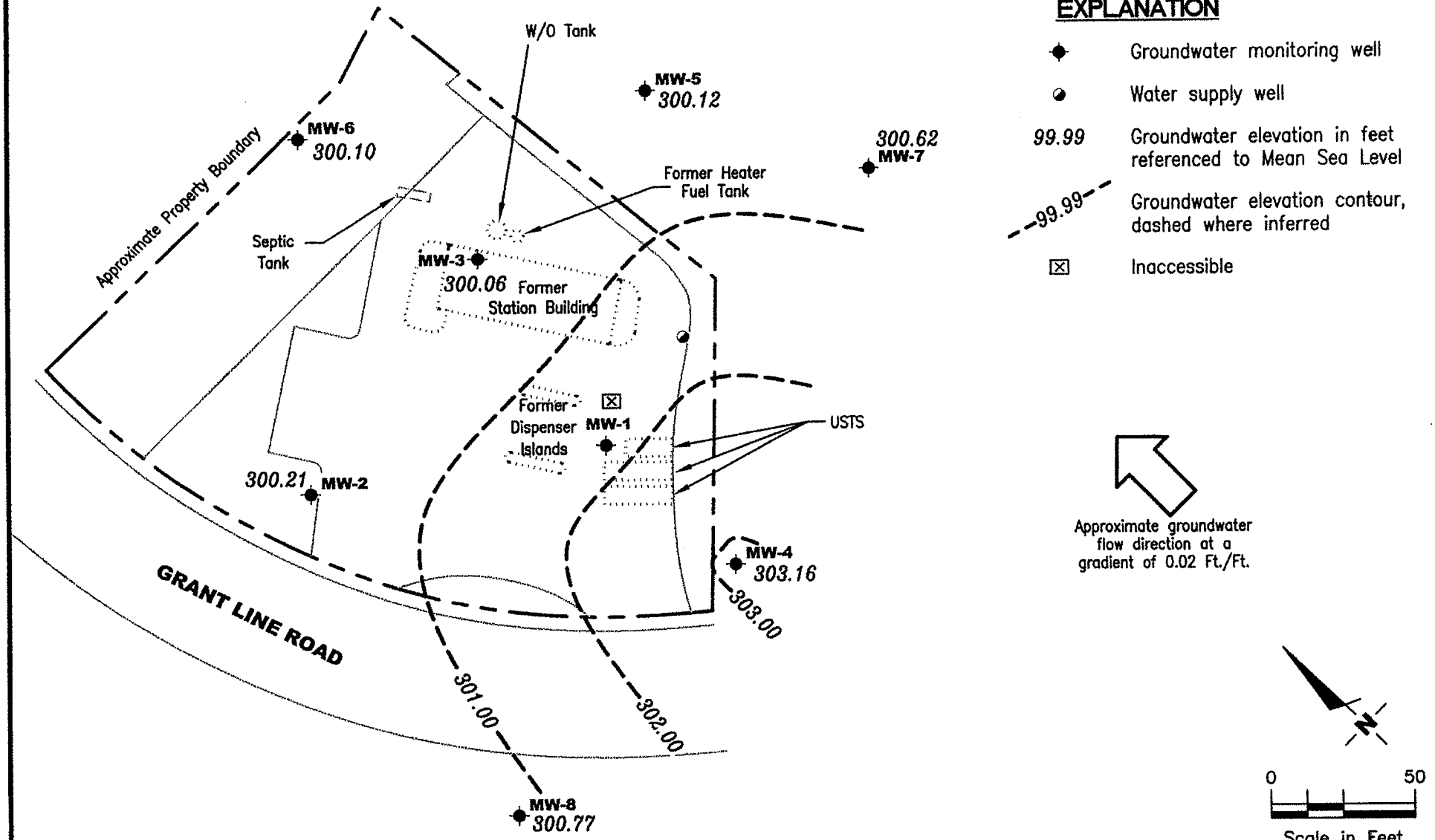


Source: Figure modified from drawing provided by RRM engineering contracting firm.

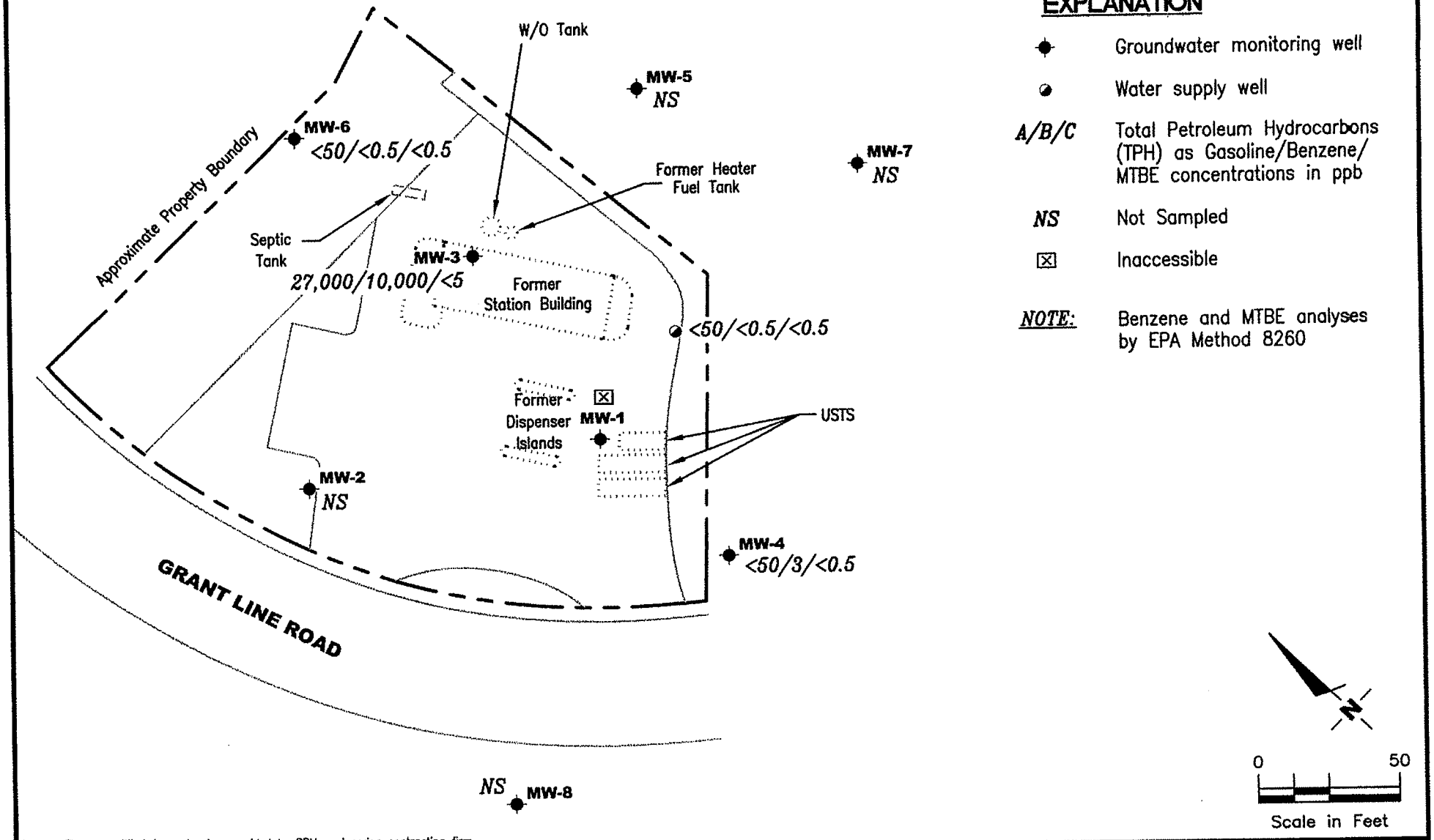
GETTLER - RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568 (925) 551-7555

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

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
385251		November 21, 2006	

FILE NAME: P:\Enviro\Chevron\9-7127\Q06-9-7127.DWG | Layout Tab: Pat4



Source: Figure modified from drawing provided by RRM engineering contracting firm.

FIGURE 2

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

GETTLER - RYAN INC.
6747 Sierra Court, Suite J
Dublin, CA 94568 (925) 551-7555

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
385251		November 21, 2006	

FILE NAME: P:\Enviro\Chevron\9-7127\Q06-9-7127.DWG | Layout Tab: Con4

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
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	--	--	--	--	--	--	--	--
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
05/06/97	329.17	301.05	28.12	--	--	98,000	23,000	17,000	1100	5200	<500
07/27/97	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
08/12/98[2]	329.17	301.99	27.18	--	--	--	--	--	--	--	--
11/23/98	329.17	301.63	27.54	--	--	131,000	14,600	23,700	1990	13,600	<200

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-1 (cont)											
05/11/99[2,7]	329.17	301.89	27.28	--	--	--	--	--	--	--	--
11/24/99	329.17	301.22[8]	28.11	>0.2	0.26	--	--	--	--	--	--
05/23/00[1]	329.17	302.34**	27.61	0.97	0.52[13]	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
10/31/00	329.17	301.47**	28.35	0.81	0.26[13]	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
05/18/01	329.17	301.27**	28.62	0.90	0.00	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
11/16/01[15]	329.17	300.63**	28.57	0.04	0.00	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
07/01/02[15]	329.17	300.38**	29.36	0.71	0.50[13]	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
11/08/02[15]	329.17	300.07**	29.82	0.90	0.13[13]	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
06/13/03[15]	329.17	300.59**	28.83	0.31	1.85[18]	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
11/20/03	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
05/18/04	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
11/19/04	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
05/03/05	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
11/28/05	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
05/25/06	329.17	INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER						--	--	--	--
11/21/06	**329.17**	**INACCESSIBLE - ATTACHED TO A SOLAR POWERED BELT SKIMMER**						--	--	--	--
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	--	--	--	--	--	--	--	--
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	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/07/95	327.22	300.16	27.06	--	--	--	--	--	--	--	--
07/21/95	327.22	299.75	27.47	--	--	--	--	--	--	--	--
08/15/95	327.22	299.65	27.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/07/95	327.22	298.53	28.69	--	--	--	--	--	--	--	--
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

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-2 (cont)											
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	--	--	--	--	--	--	--	--
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 ANNUALLY		--	--	--	--
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	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/31/00	327.22	301.30	25.92	0.00	0.00	--	--	--	--	--	--
05/18/01	327.22	301.14	26.08	0.00	0.00	<50	0.52	2.6	<0.50	1.9	<2.5
11/16/01	327.22	300.41	26.81	0.00	0.00	--	--	--	--	--	--
07/01/02	327.22	300.25	26.97	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02	327.22	299.92	27.30	0.00	0.00	--	--	--	--	--	--
06/13/03[19]	327.22	300.49	26.73	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/20/03	327.22	300.74	26.48	0.00	0.00	--	--	--	--	--	--
05/18/04[19]	327.22	300.14	27.08	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04	327.22	300.52	26.70	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/03/05[19]	327.22	299.97	27.25	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05	327.22	299.77	27.45	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/25/06[19]	327.22	300.62	26.60	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/06	**327.22**	**300.21**	**27.01**	**0.00**	**0.00**	**SAMPLED ANNUALLY**		--	--	--	--
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	--	--	--	--	--	--	--	--

Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station #9-7127
I-580 and Grant Line Road
Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3 (cont)											
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	--	--	--	--	--	--	--	--
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	--
09/07/95	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
08/12/98[2]	329.28	302.25	27.03	--	--	--	--	--	--	--	--
11/23/98	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
05/11/99[3]	329.28	302.60	26.68	--	--	--	--	--	--	--	<100

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-3 (cont)											
11/24/99	329.28	301.83	27.45	--	--	62,800	16,600	8300	900	4890	<500
05/23/00[1]	329.28	302.11	27.17	0.00	0.00	27,000[7]	14,000	12,000	940	4,600	770
10/31/00[1]	329.28	301.27	28.01	0.00	0.00	110,000[10]	25,700	21,300	1,300	7,320	1,680
05/18/01[1]	329.28	301.07	28.21	0.00	0.00	58,000[7]	19,000	16,000	1,400	7,000	2,300/11[14]
11/16/01[1]	329.28	300.41	28.87	0.00	0.00	100,000	23,000	16,000	1,400	6,800	<200
07/01/02[1]	329.28	300.20	29.08	0.00	0.00	75,000	16,000	8,800	980	4,000	140/<10[17]
11/08/02	329.28	299.89	29.39	0.00	0.00	45,000	9,800	5,800	590	2,400	<50
06/13/03[19,20]	329.28	300.46	28.82	0.00	0.00	42,000	9,100	4,100	580	1,800	5
11/20/03[19]	329.28	300.51	28.77	0.00	0.00	52,000	12,000	4,500	660	3,200	5
05/18/04[19]	329.28	300.07	29.21	0.00	0.00	57,000	15,000	5,700	840	3,400	9
11/19/04[19]	329.28	300.42	28.86	0.00	0.00	67,000	15,000	4,200	850	3,400	7
05/03/05[19]	329.28	299.88	29.40	0.00	0.00	54,000	13,000	3,400	690	2,600	<10
11/28/05[19]	329.28	299.72	29.56	0.00	0.00	56,000	16,000	1,800	950	3,500	<25
05/25/06[19]	329.28	300.47	28.81	0.00	0.00	38,000	9,400	1,800	680	2,100	<5
11/21/06[19]	**329.28**	**300.06**	**29.22**	**0.00**	**0.00**	**27,000**	**10,000**	**420**	**650**	**1,600**	**<5**
MW-4											
05/21/93	--	--	--	--	--	<50	12	2.0	<0.5	1.0	--
11/05/93	--	--	--	--	--	300	56	10	0.8	3.0	--
02/15/94	329.44	299.54	29.90	--	--	260	47	12	2.0	4.0	--
04/21/94	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	--	--	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	--	--	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	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-4 (cont)											
11/15/95	329.44	299.39	30.05	--	--	270	94	9.4	0.77	4.3	27
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	--	--	--	--	--	--	--	--
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	0.00	0.00	370[8]	470[9]	1.1	9.7	5.9	84
10/31/00[1]	329.44	304.42	25.02	0.00	0.00	672[11]	224	<5.00	<5.00	<15.0	<25.0
05/18/01[1]	329.44	304.23	25.21	0.00	0.00	230[7]	37	<0.50	1.3	0.95	22/2.1[14]
11/16/01[16]	329.44	303.53	25.91	0.00	0.00	290	36	<0.50	<0.50	<1.5	<2.5
07/01/02	329.44	303.33	26.11	0.00	0.00	410	60	<0.50	2.1	<1.5	<2.5
11/08/02	329.44	303.01	26.43	0.00	0.00	64	7.0	<0.50	<0.50	<1.5	<2.5
06/13/03[19]	329.44	302.58	26.86	0.00	0.00	79	4	<0.5	<0.5	<0.5	<0.5
11/20/03[19]	329.44	302.81	26.63	0.00	0.00	350	36	<0.5	2	0.7	<0.5
05/18/04[19]	329.44	303.13	26.31	0.00	0.00	160	22	<0.5	2	1	<0.5
11/19/04[19]	329.44	302.56	26.88	0.00	0.00	480	93	2	4	4	<0.5
05/03/05[19]	329.44	302.96	26.48	0.00	0.00	180	40	0.8	1	1	<0.5
11/28/05[19]	329.44	302.76	26.68	0.00	0.00	630	96	2	5	5	<0.5
05/25/06[19]	329.44	303.59	25.85	0.00	0.00	2,400	490	11	33	21	<0.5
11/21/06[19]	**329.44**	**303.16**	**26.28**	**0.00**	**0.00**	**<50**	**3**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

As of 11/21/06

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
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	--	--	--	--	--	--	--	--
10/28/96	312.88	300.16	12.72	--	--	--	--	--	--	--	--
11/11/96	312.88	300.27	12.61	--	--	--	--	--	--	--	--
05/06/97	312.88	300.82	12.06	--	--	<50	2.2	2.0	<0.5	1.7	<5.0
07/27/97	312.88	300.49	12.39	--	--	--	--	--	--	--	--
11/18/97	312.88	300.43	12.45	--	--	--	--	--	--	--	--
05/31/98	312.88	302.30	10.58	--	--	<50	<0.3	<0.3	<0.3	<0.6	<10
11/23/98	312.88	301.96	10.92	--	--	SAMPLED ANNUALLY		--	--	--	--

Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station #9-7127
I-580 and Grant Line Road
Tracy, California

WELL ID/ DATE		TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-5 (cont)												
05/11/99		312.88	302.39	10.49	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/23/00		312.88	301.79	11.09	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/31/00		312.88	300.97	11.91	0.00	0.00	--	--	--	--	--	--
05/18/01		312.88	300.82	12.06	0.00	0.00	<50	0.52	2.0	<0.50	1.0	<2.5
11/16/01		312.88	300.11	12.77	0.00	0.00	--	--	--	--	--	--
07/01/02		312.88	299.94	12.94	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02		312.88	299.61	13.27	0.00	0.00	--	--	--	--	--	--
06/13/03[19]		312.88	300.03	12.85	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/20/03		312.88	300.21	12.67	0.00	0.00	--	--	--	--	--	--
05/18/04[19]		312.88	299.98	12.90	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04		312.88	300.05	12.83	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/03/05[19]		312.88	300.00	12.88	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05		312.88	299.39	13.49	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/25/06[19]	NP[21]	312.88	300.58	12.30	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/06		**312.88**	**300.12**	**12.76**	**0.00**	**0.00**	**SAMPLED ANNUALLY**		--	--	--	--
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	UNABLE TO LOCATE		--	--	--	--	--	--	--	--
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

Table 1

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

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-6 (cont)											
11/24/99	312.20	301.55	10.65	--	--	77.2	13.5	<0.5	<0.5	<0.5	<2.5
05/23/00	312.20	301.85	10.35	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/31/00	312.20	301.83	10.37	0.00	0.00	<50.0	<0.500	<0.500	<0.500	<1.50	5.08
05/18/01	312.20	300.89	11.31	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
11/16/01	312.20	300.31	11.89	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/01/02	312.20	300.04	12.16	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02	312.20	299.70	12.50	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
06/13/03	312.20	UNABLE TO LOCATE		--	--	--	--	--	--	--	--
11/20/03	312.20	UNABLE TO LOCATE		--	--	--	--	--	--	--	--
05/18/04[19]	312.20	299.94	12.26	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04[19]	312.20	300.16	12.04	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/03/05[19]	312.20	299.98	12.22	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05[19]	312.20	299.59	12.61	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/25/06[19]	312.20	300.37	11.83	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/06[19]	**312.20**	**300.10**	**12.10**	**0.00**	**0.00**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
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 ANNUALLY			--	--	--
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	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5

As of 11/21/06

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE		TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-7 (cont)												
10/31/00		313.36	301.51	11.85	0.00	0.00	--	--	--	--	--	--
05/18/01		313.36	301.34	12.02	0.00	0.00	<50	<0.50	1.7	<0.50	1.2	<2.5
11/16/01		313.36	300.53	12.83	0.00	0.00	--	--	--	--	--	--
07/01/02		313.36	300.42	12.94	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02		313.36	300.11	13.25	0.00	0.00	--	--	--	--	--	--
06/13/03[19]		313.36	300.55	12.81	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/20/03		313.36	300.77	12.59	0.00	0.00	--	--	--	--	--	--
05/18/04[19]		313.36	300.53	12.83	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04		313.36	300.57	12.79	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/03/05[19]		313.36	300.55	12.81	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05		313.36	299.78	13.58	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/25/06[19]	NP[21]	313.36	301.07	12.29	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/06		**313.36**	**300.62**	**12.74**	**0.00**	**0.00**	**SAMPLED ANNUALLY**		--	--	--	--
MW-8												
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	--	--	--	--	--	--	--	--
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 ANNUALLY		--	--	--	--
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	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/31/00		329.91	318.78	11.13	0.00	0.00	--	--	--	--	--	--
05/18/01		329.91	301.67	28.24	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
MW-8 (cont)											
11/16/01	329.91	300.84	29.07	0.00	0.00	--	--	--	--	--	--
07/01/02	329.91	300.74	29.17	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02	329.91	300.4	29.51	0.00	0.00	--	--	--	--	--	--
06/13/03[19]	329.91	300.77	29.14	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/20/03	329.91	300.97	28.94	0.00	0.00	--	--	--	--	--	--
05/18/04[19]	329.91	300.56	29.35	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04	329.91	300.81	29.10	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/03/05[19]	329.91	300.40	29.51	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05	329.91	300.17	29.74	0.00	0.00	SAMPLED ANNUALLY		--	--	--	--
05/25/06[19]	329.91	300.96	28.95	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/06	**329.91**	**300.77**	**29.14**	**0.00**	**0.00**	**SAMPLED ANNUALLY**		--	--	--	--
SUPPLY WELL											
11/15/95	--	--	--	--	--	<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
07/27/97	--	--	--	--	--	--	--	--	--	--	--
11/18/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/31/98	--	--	--	--	--	--	--	--	--	--	--
11/23/98	--	--	--	--	--	<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	--	--	--	--	--	SAMPLED ANNUALLY		--	--	--	--
10/30/00	--	--	--	--	--	--	--	--	--	--	--
05/18/01	--	--	--	--	--	--	--	--	--	--	--
11/16/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/01/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/20/03[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/18/04	--	--	--	--	--	SAMPLED ANNUALLY		--	--	--	--
11/19/04[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/03/05	--	--	--	--	--	SAMPLED ANNUALLY		--	--	--	--
11/28/05[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/25/06	--	--	--	--	--	SAMPLED ANNUALLY		--	--	--	--
11/21/06[19]	--	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station #9-7127
I-580 and Grant Line Road
Tracy, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	TOTAL SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
BAILER BLANK											
02/15/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
TRIP BLANK											
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	<5.0
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	--	--	--	--	--	--	--	--	--	--	--
07/27/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/18/97	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	<10
05/31/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
11/23/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/11/99	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.5
05/23/00	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.50	49.0
10/31/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
05/18/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
QA											
11/16/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/01/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
11/08/02	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/13/03[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/20/03[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/18/04[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/19/04[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/03/05[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/28/05[19]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/25/06[19]	--	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
11/21/06[19]	--	--	--	--	--						

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
(ft.) = Feet
GWE = Groundwater Elevation
(msl) = Mean sea level
DTW = Depth to Water
SPHT = Separate Phase Hydrocarbon Thickness

SPH = Separate Phase Hydrocarbons
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes

MTBE = Methyl tertiary butyl ether
-- = Not Measured/Not Analyzed
NP = No Purge
(ppb) = Parts per billion
QA = Quality Assurance/Trip Blank

* TOC elevations are relative to msl.

** GWE has been corrected for the presence of SPH, correction factor = [(TOC - DTW) + (SPHT x 0.80)].

1 ORC present in well.

2 ORC Installed.

3 Confirmation run.

4 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.

6 Well was not sampled due to damaged casing and debris in well. Ground water elevation is an estimate.

7 Laboratory report indicates gasoline C6-C12.

8 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.

9 Laboratory report indicates result exceeds the linear range of calibration.

10 Laboratory report indicates gasoline.

11 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.

14 MTBE by EPA Method 8260 was analyzed outside the EPA recommended holding time.

15 Skimmer in well.

16 ORC not present in well.

17 MTBE by EPA Method 8260.

18 4.5 liters of SPH removed from skimmer and 2.5 liters of SPH removed from well.

19 BTEX and MTBE by EPA Method 8260.

20 Removed ORC from well.

21 Area inaccessible to truck; unable to purge.

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID	DATE	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
MW-2	06/13/03	--	<0.5	--	--	--
	11/20/03	SAMPLED ANNUALLY		--	--	--
	05/18/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--
MW-3	05/18/01[1]	1,000	11	<10	<10	<10
	07/01/02	600	<10	<10	<10	<10
	06/13/03	--	5	--	--	--
	11/20/03	--	5	--	--	--
	05/18/04	--	9	--	--	--
	11/19/04	--	7	--	--	--
	05/03/05	--	<10	--	--	--
	11/28/05	--	<25	--	--	--
	05/25/06	--	<5	--	--	--
	11/21/06	--	**<5**	--	--	--
MW-4	05/18/01[1]	200	2.1	<2.0	<2.0	<2.0
	06/13/03	--	<0.5	--	--	--
	11/20/03	--	<0.5	--	--	--
	05/18/04	--	<0.5	--	--	--
	11/19/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	11/28/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--
	11/21/06	--	**<0.5**	--	--	--
MW-5	06/13/03	--	<0.5	--	--	--
	11/20/03	SAMPLED ANNUALLY		--	--	--
	05/18/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--

Table 2

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID	DATE	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)
MW-6	05/18/04	--	<0.5	--	--	--
	11/19/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	11/28/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--
	11/21/06	--	**<0.5**	--	--	--
MW-7	06/13/03	--	<0.5	--	--	--
	11/20/03	SAMPLED ANNUALLY		--	--	--
	05/18/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--
MW-8	06/13/03	--	<0.5	--	--	--
	11/20/03	SAMPLED ANNUALLY		--	--	--
	05/18/04	--	<0.5	--	--	--
	05/03/05	--	<0.5	--	--	--
	05/25/06	--	<0.5	--	--	--
SUPPLY WELL	11/28/05	--	<0.5	--	--	--
	11/21/06	--	**<0.5**	--	--	--

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

EXPLANATIONS:

TBA = Tertiary butyl alcohol
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether
ETBE = Ethyl tertiary butyl ether
TAME = Tertiary amyl methyl ether
(ppb) = Parts per billion
-- = Not Analyzed

[1] Laboratory report indicates samples were analyzed outside the EPA recommended holding time.

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

Table 3

Groundwater Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	Time	Volume (gallons)	pH	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-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											
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	--	--	--	--
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	12:08	6.0	6.90	1100.00	21.1/--	--	--	--	--	--	--	--
05/11/99	12:10	7.0	7.00	1100.00	21.2/--	2.3 (Post)	91 (Post)	290	62	59	--	0.043
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	--	--	--	--	--	--	--

Table 3

Groundwater Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	Time	Volume (gallons)	pH	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-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	--	--	--	--
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/--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--
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	--	--	--	--
MW-4												
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

Table 3

Groundwater Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	Time	Volume (gallons)	pH	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-4 (cont)												
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/--	--	--	--	--	--	--	--
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											
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	--	--	--	--

Table 3

Groundwater Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	Time	Volume (gallons)	pH	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-6 (cont)												
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/--	--	--	--	--	--	--	--
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	--	--	--	--
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

Table 3

Groundwater Analytical Results

Former Chevron Service Station #9-7127

I-580 and Grant Line Road

Tracy, California

WELL ID/ DATE	Time	Volume (gallons)	pH	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-7 (cont)												
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	--	--	--	--	--	--	--
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	--/72.5	--	--	--	--	--	--	--
05/23/00	4:32	7.5	7.27	4390.00	--/71.2	--	--	--	--	--	--	--
SUPPLY WELL												
07/27/97	13:40	--	7.85	257.00	22.7	4.89	-53	200	48	76	<10	1.5
11/23/98	15:15	1.0	7.40	1115.00	20.4	--	--	--	--	--	--	--
11/24/99	12:45	--	2.50	5386.00	18.8	--	--	--	--	--	--	--
05/23/00	--	--	--	--	--	--	--	--	--	--	--	--

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, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable 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 disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. 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 Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by IWM to Chemical Waste Management located in Kettleman Hill, California.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: Joe

Well ID MW- 1 Date Monitored: _____ Well Condition: _____
Well Diameter 2 / 4 in.
Total Depth _____ ft.
Depth to Water _____ ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

_____ xVF _____ = _____ x3 case volume= Estimated Purge Volume: _____ gal.

Purge Equipment:
Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Suction Pump _____
Grundfos _____
Other: _____

Sampling Equipment:
Disposable Bailer _____
Pressure Bailer _____
Discrete Bailer _____
Other: _____

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: _____ ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ gal
Amt Removed from Well: _____ gal
Water Removed: _____
Product Transferred to: _____

Start Time (purge): _____ Weather Conditions: _____
Sample Time/Date: _____ / _____ Water Color: _____ Odor: _____
Purging Flow Rate: _____ gpm. Sediment Description: _____
Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: Inaccessible Attached to a solar powered belt skimmer.

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127
Site Address: I-580 And Grant Line Road
City: Tracy, CA

Job Number: 385251
Event Date: 11-21-06 (inclusive)
Sampler: Joe

Well ID: MW-2
Well Diameter: (2) 4 in.
Total Depth: 38.24 ft.
Depth to Water: 27.01 ft.

Date Monitored: 11-21-06
Well Condition: O.K

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

_____ xVF _____ = _____ x3 case volume= Estimated Purge Volume: _____ gal.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Other:

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description: _____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ gal
Amt Removed from Well: _____ gal
Water Removed: _____
Product Transferred to: _____

Start Time (purge): _____
Sample Time/Date: /
Purging Flow Rate: _____ gpm.
Did well de-water? _____

Weather Conditions: _____
Water Color: _____ Odor: _____
Sediment Description: _____
If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: MW-2

Add/Replaced Lock: _____
Add/Replaced Plug: _____ Size: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 | Job Number: 385251
Site Address: I-580 And Grant Line Road | Event Date: 11-21-06 (inclusive)
City: Tracy, CA | Sampler: Jus

Well ID: MW-3 | Date Monitored: 11-21-06 | Well Condition: O.K.
Well Diameter: (2) 4 in.
Total Depth: 40.04 ft.
Depth to Water: 29.22 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

10.82 xVF 0.17 = 1.84 x3 case volume= Estimated Purge Volume: 5.5 gal.

Purge Equipment:
Disposable Bailer: ✓
Stainless Steel Bailer:
Stack Pump:
Suction Pump:
Grundfos:
Other:

Sampling Equipment:
Disposable Bailer: ✓
Pressure Bailer:
Discrete Bailer:
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0925 | Weather Conditions: cloudy
Sample Time/Date: 0950 / 11-21-06 | Water Color: clear | Odor: yes
Purging Flow Rate: 0.5 gpm. | Sediment Description:
Did well de-water? | If yes, Time: | Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0930	1.5	6.79	1010	58.9		
0934	3	6.70	1016	58.8		
0938	5.5	6.72	1024	59.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: Joe

Well ID MW-4 Date Monitored: 11-21-06 Well Condition: o.k
Well Diameter (2) 4 in.
Total Depth 31.70 ft.
Depth to Water 26.28 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

5.42 xVF 0.17 = 0.92 x3 case volume= Estimated Purge Volume: 3 gal.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer ✓
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer ✓
Pressure Bailer
Discrete Bailer
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0850 Weather Conditions: cloudy
Sample Time/Date: 0915 / 11-21-06 Water Color: clear Odor: yes
Purging Flow Rate: 0.5 gpm. Sediment Description:
Did well de-water? If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0900	1	7.15	931	60.2		
0903	2	7.20	922	60.1		
0907	3	7.24	919	60.4		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: Joe

Well ID MW-5 Date Monitored: 11-21-06 Well Condition: O.K

Well Diameter (2) 4 in.
Total Depth 28.10 ft.
Depth to Water 12.76 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

____ xVF ____ = ____ x3 case volume= Estimated Purge Volume: ____ gal.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Other:

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ____ gal
Amt Removed from Well: ____ gal
Water Removed:
Product Transferred to:

Start Time (purge): ____ Weather Conditions: ____
Sample Time/Date: / Water Color: ____ Odor: ____
Purging Flow Rate: ____ gpm. Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: Mildly

Add/Replaced Lock: ____ Add/Replaced Plug: ____ Size: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127
Site Address: I-580 And Grant Line Road
City: Tracy, CA

Job Number: 385251
Event Date: 11-21-06 (inclusive)
Sampler: Sue

Well ID: MW-6
Well Diameter: (2) 4 in.
Total Depth: 28.70 ft.
Depth to Water: 12.10 ft.
16.60 xVF 0.17 = 2.82 x3 case volume= Estimated Purge Volume: 8 gal.

Date Monitored: 11-21-06 Well Condition: O.K

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
Disposable Bailer: ✓
Stainless Steel Bailer:
Stack Pump:
Suction Pump:
Grundfos:
Other:

Sampling Equipment:
Disposable Bailer: ✓
Pressure Bailer:
Discrete Bailer:
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:

Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0812 Weather Conditions: cloudy
Sample Time/Date: 0832 / 11-21-06 Water Color: clear Odor: none
Purging Flow Rate: 0.5 gpm. Sediment Description:
Did well de-water? If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
0812	3	7.48	696	59.2		
12816	5	7.50	710	68.1		
0822	8	7.41	722	59.2		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: Joe

Well ID MW-7 Date Monitored: 11-21-06 Well Condition: o.k
Well Diameter (2) 4 in.
Total Depth 28.04 ft.
Depth to Water 12.74 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

_____ xVF _____ = _____ x3 case volume= Estimated Purge Volume: _____ gal.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Other:

Time Started: _____ (2400 hrs)
Time Completed: _____ (2400 hrs)
Depth to Product: _____ ft
Depth to Water: _____ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: _____ gal
Amt Removed from Well: _____ gal
Water Removed:
Product Transferred to:

Start Time (purge): _____ Weather Conditions: _____
Sample Time/Date: / Water Color: _____ Odor: _____
Purging Flow Rate: _____ gpm. Sediment Description: _____
Did well de-water? _____ If yes, Time: _____ Volume: _____ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: m. only

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: Joe

Well ID MW-8 Date Monitored: 11-21-06 Well Condition: O.K
Well Diameter (2) 4 in.
Total Depth 41.80 ft.
Depth to Water 29.14 ft.
~~Free Product~~ xVF ~~0.17~~ = ~~Case Volume~~ x3 case volume= Estimated Purge Volume: ~~0.0~~ gal.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:
Disposable Bailer ~~0.0~~
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Other:

Sampling Equipment:
Disposable Bailer ~~0.0~~
Pressure Bailer
Discrete Bailer
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description:

Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): Weather Conditions:
Sample Time/Date: / Water Color: Odor:
Purging Flow Rate: gpm. Sediment Description:
Did well de-water? If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: Monthly

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-7127 Job Number: 385251
Site Address: I-580 And Grant Line Road Event Date: 11-21-06 (inclusive)
City: Tracy, CA Sampler: JDC

Well ID: Supply Well Date Monitored: ✓ Well Condition: ✓
Well Diameter: ___ in.
Total Depth: ___ ft.
Depth to Water: ___ ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

___ xVF ___ = ___ x3 case volume= Estimated Purge Volume: ___ gal.

Purge Equipment:
Disposable Bailer ___
Stainless Steel Bailer ___
Stack Pump ___
Suction Pump ___
Grundfos ___
Other: ___

Sampling Equipment:
Disposable Bailer ✓
Pressure Bailer ___
Discrete Bailer ___
Other: ___

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: 0 ft
Visual Confirmation/Description: ___
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ gal
Amt Removed from Well: ___ gal
Water Removed: ___
Product Transferred to: ___

Start Time (purge): ___ Weather Conditions: cloudy
Sample Time/Date: 1045 / 11-21-06 Water Color: clear Odor: none
Purging Flow Rate: ___ gpm. Sediment Description: ___
Did well de-water? ___ If yes, Time: ___ Volume: ___ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
Supply Well	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: ___

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Size: ___

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

112206-01

Acct. #: 10011 12099 For Lancaster Laboratories use only Sample #: 4923642-46 SCR#:

G# 1015511

Cambria MTI Project #: 63H-1656

Facility #: SS#9-7127 G-R#385251 Global ID#T0600102298
Site Address: I-580 AND GRANT LINE ROAD, TRACY, CA
Chevron PM: MTI Lead Consultant: CAMBRIAEB
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: JOE ASEMIAN
Service Order #: ☐ Non SAR:

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil ☐ Air ☐ Potable ☐ NPDES	Total Number of Containers	Analyses Requested: Preservation Codes H	H	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420 ☐ 7421 ☐
QA	—	—	✓			✓		2			✓	✓				
MW-3	11-21-06	0950						6			✓	✓				
MW-4	↓	0915						6			✓	✓				
MW-6		0835						6			✓	✓				
SupplyWell		1015	↓			↓		6			✓	✓				

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ J value reporting needed
☒ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy s on highest hit
☐ Run ____ oxy s on all hits

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I — Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk
EDF/EDD

	Date	Time		Date	Time
Relinquished by:	11-21-06	1130	Received by: D Vamo	11/22/06	
Relinquished by: D Vamo	11/22/06		Received by: [illegible]	11/22/06	1140
Relinquished by: [illegible]	11/22/06	15:50	Received by: DHL	11/22/06	
Relinquished by Commercial Carrier: UPS FedEx Other DHL			Received by:	11/24/06	0950
Temperature Upon Receipt 5 coolers C° 1.9°-4.8°			Custody Seals Intact? Yes No		

3460 Rev. 7/30/01

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1015511. Samples arrived at the laboratory on Friday, November 24, 2006. The PO# for this group is 0015009981 and the release number is MTI.

Client Description			Lancaster Labs Number
QA-T-061121	NA	Water	4923642
MW-3-W-061121	Grab	Water	4923643
MW-4-W-061121	Grab	Water	4923644
MW-6-W-061121	Grab	Water	4923645
SupplyWell-W-061121	Grab	Water	4923646

ELECTRONIC COPY TO Gettler-Ryan, Inc. Attn: Cheryl Hansen

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Marla S. Lord
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4923642

QA-T-061121 NA Water
Facility# 97127 Job# 385251 MTI# 63H-1656 GRD
I-580 & Grant Line-Tracy T0600102298 QA
Collected:11/21/2006

Account Number: 12099

Submitted: 11/24/2006 09:50
Reported: 11/30/2006 at 10:07
Discard: 12/31/2006

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

TCYQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/27/2006 14:37	Martha L Seidel	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 00:33	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/27/2006 14:37	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/29/2006 00:33	Kelly E Brickley	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4923643

MW-3-W-061121 Grab Water
Facility# 97127 Job# 385251 MTI# 63H-1656 GRD
I-580 & Grant Line-Tracy T0600102298 MW-3
Collected:11/21/2006 09:50 by JA

Account Number: 12099

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

Submitted: 11/24/2006 09:50
Reported: 11/30/2006 at 10:07
Discard: 12/31/2006

TRCY3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	27,000.	2,500.	ug/l	50
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	5.	ug/l	10
05401	Benzene	71-43-2	10,000.	50.	ug/l	100
05407	Toluene	108-88-3	420.	5.	ug/l	10
05415	Ethylbenzene	100-41-4	650.	5.	ug/l	10
06310	Xylene (Total)	1330-20-7	1,600.	5.	ug/l	10

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/27/2006 17:25	Martha L Seidel	50
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 00:57	Kelly E Brickley	10
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 01:21	Kelly E Brickley	100
01146	GC VOA Water Prep	SW-846 5030B	1	11/27/2006 17:25	Martha L Seidel	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/29/2006 00:57	Kelly E Brickley	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	11/29/2006 01:21	Kelly E Brickley	100

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4923644

MW-4-W-061121 Grab Water
Facility# 97127 Job# 385251 MTI# 63H-1656 GRD
I-580 & Grant Line-Tracy T0600102298 MW-4
Collected:11/21/2006 09:15 by JA

Account Number: 12099

Submitted: 11/24/2006 09:50
Reported: 11/30/2006 at 10:07
Discard: 12/31/2006

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

TRCY4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	3.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/27/2006 18:28	Martha L Seidel	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 01:44	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/27/2006 18:28	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/29/2006 01:44	Kelly E Brickley	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4923645

MW-6-W-061121 Grab Water
Facility# 97127 Job# 385251 MTI# 63H-1656 GRD
I-580 & Grant Line-Tracy T0600102298 MW-6
Collected:11/21/2006 08:35 by JA

Account Number: 12099

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

Submitted: 11/24/2006 09:50
Reported: 11/30/2006 at 10:07
Discard: 12/31/2006

TRCY5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/27/2006 18:49	Martha L Seidel	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 02:09	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/27/2006 18:49	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/29/2006 02:09	Kelly E Brickley	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4923646

SupplyWell-W-061121 Grab Water
Facility# 97127 Job# 385251 MTI# 63H-1656 GRD
I-580 & Grant Line-Tracy T0600102298 SupplyWell
Collected:11/21/2006 10:15 by JA

Account Number: 12099

Submitted: 11/24/2006 09:50
Reported: 11/30/2006 at 10:07
Discard: 12/31/2006

Chevron c/o Cambria
Suite 110
200 Opportunity Drive
Roseville CA 95678

TCYSW

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	TPH GRO SW-846 8015B mod	1	11/27/2006 19:10	Martha L Seidel	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/29/2006 02:32	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/27/2006 19:10	Martha L Seidel	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/29/2006 02:32	Kelly E Brickley	1

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o Cambria
Reported: 11/30/06 at 10:08 AM

Group Number: 1015511

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 06331A54A	Sample number(s): 4923642-4923646							
TPH-GRO - Waters	N.D.	50.	ug/l	120	126	70-130	5	30
Batch number: Z063324AA	Sample number(s): 4923642-4923646							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		73-119		
Benzene	N.D.	0.5	ug/l	100		85-117		
Toluene	N.D.	0.5	ug/l	109		85-115		
Ethylbenzene	N.D.	0.5	ug/l	105		82-119		
Xylene (Total)	N.D.	0.5	ug/l	104		83-113		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 06331A54A	Sample number(s): 4923642-4923646 UNSPK: P923625								
TPH-GRO - Waters	134		63-154						
Batch number: Z063324AA	Sample number(s): 4923642-4923646 UNSPK: P923602								
Methyl Tertiary Butyl Ether	98	96	69-127	2	30				
Benzene	106	105	83-128	1	30				
Toluene	114	111	83-127	2	30				
Ethylbenzene	113	112	82-129	1	30				
Xylene (Total)	112	109	82-130	3	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-GRO - Waters
Batch number: 06331A54A

	Trifluorotoluene-F
4923642	94
4923643	98
4923644	90
4923645	98
4923646	100
Blank	93

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Cambria
Reported: 11/30/06 at 10:08 AM

Group Number: 1015511

Surrogate Quality Control

LCS	103
LCSD	102
MS	102
Limits:	63-135

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z063324AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4923642	101	102	110	102
4923643	98	98	113	102
4923644	100	101	111	101
4923645	101	101	109	101
4923646	100	100	111	100
Blank	102	102	112	101
LCS	101	102	110	107
MS	103	107	112	106
MSD	102	106	111	105
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The background result was more than four times the spike added.

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected
TNTC	Too Numerous To Count
IU	International Units
umhos/cm	micromhos/cm
C	degrees Celsius
Cal	(diet) calories
meq	milliequivalents
g	gram(s)
ug	microgram(s)
ml	milliliter(s)
m3	cubic meter(s)

BMQL	Below Minimum Quantitation Level
MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units
NTU	nephelometric turbidity units
F	degrees Fahrenheit
lb.	pound(s)
kg	kilogram(s)
mg	milligram(s)
l	liter(s)
ul	microliter(s)
fib >5 um/ml	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT E

Water Supply Well Groundwater Analytical Data

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	ND	ND	ND
03/11/93	ND	ND	ND	ND	ND
03/19/93	ND	0.8	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	ND	ND	ND	ND
06/04/93	ND	ND	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

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

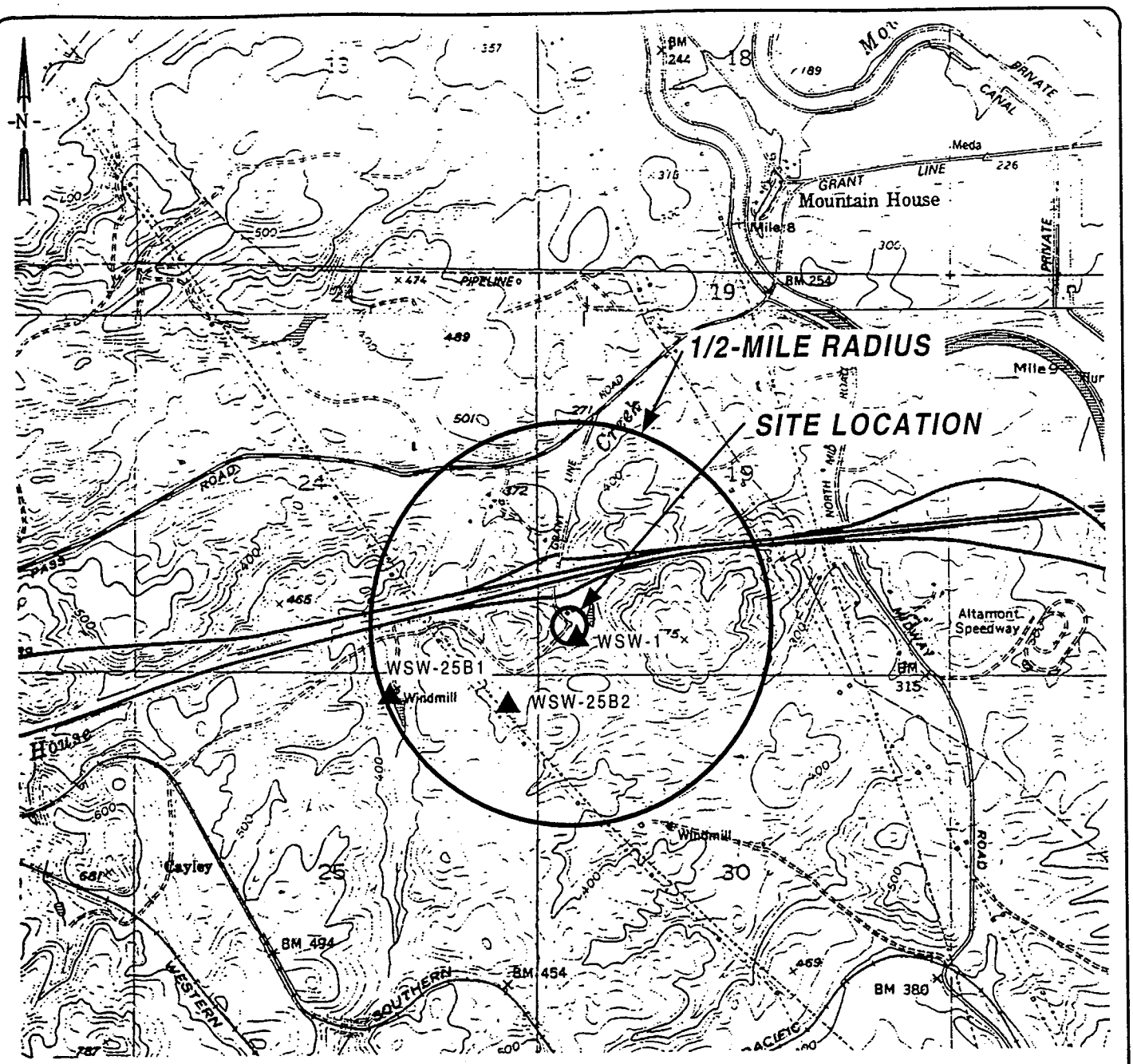
Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
08/12/93	ND	ND	ND	ND	ND
08/19/93	ND	ND	ND	ND	ND
08/26/93	ND	ND	ND	ND	ND
09/02/93	ND	ND	ND	ND	ND
09/09/93	ND	ND	ND	ND	ND
09/17/93	ND	ND	ND	ND	ND
09/23/93	ND	ND	ND	ND	ND
10/01/93	ND	ND	ND	ND	ND
10/07/93	ND	ND	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	ND
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.

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT F

Well Survey Data



QUADRANGLE LOCATION

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

EXPLANATION

▲ WELL LOCATION

WELL ID	WELL TYPE
WSW-25B1	Domestic
WSW-25B2	Domestic
WSW-1	Livestock

RRM
engineering contracting firm

SCALE: 0 FEET 2000

DRAWN BY:

DATE: May 5, 1999

1/2-MILE WELL SURVEY MAP

Former Chevron Station 9-7127
Grant Line Road at Interstate 580
Tracy, California

FIGURE: 1

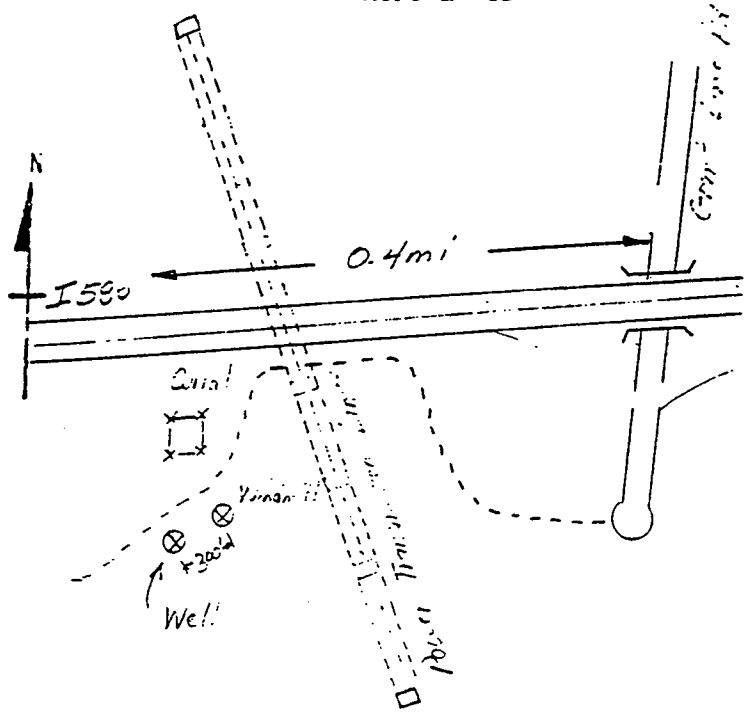
PROJECT: AA51

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SKETCH
No scale
ACFC & WCD



CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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CONESTOGA-ROVERS
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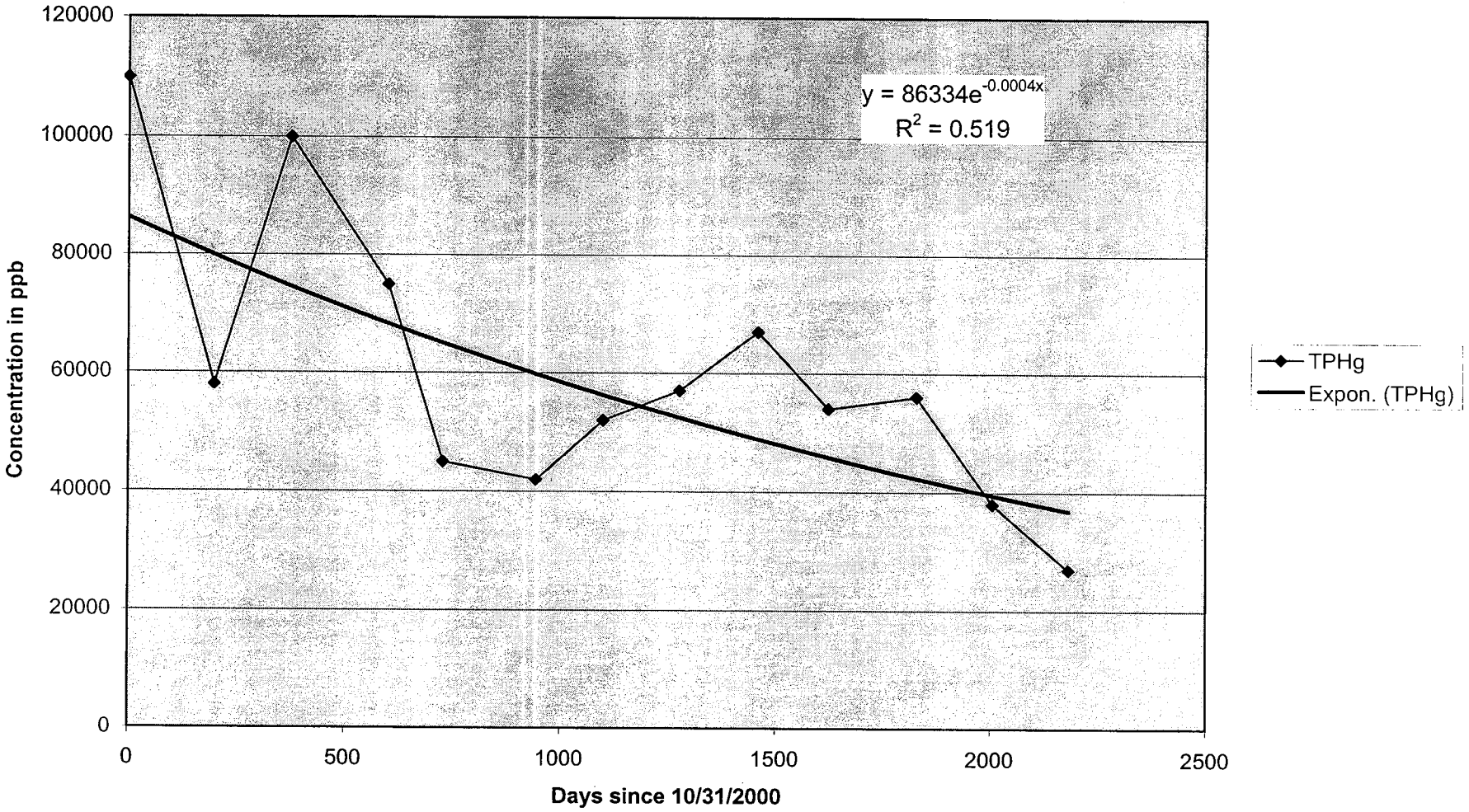
ATTACHMENT G

Trend Graphs and Degradation Calculations

Concentration Trend Graph
TPHg Concentrations (MW-3)
Former Chevron Station 9-7127



Predicted Time for the Cleanup of TPHg in Well MW-3,

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

Calculate "time to cleanup" given the first-order decay equation:

$y = b e^{ax}$ ⟹ $x = \ln(y/b) / a$

Given

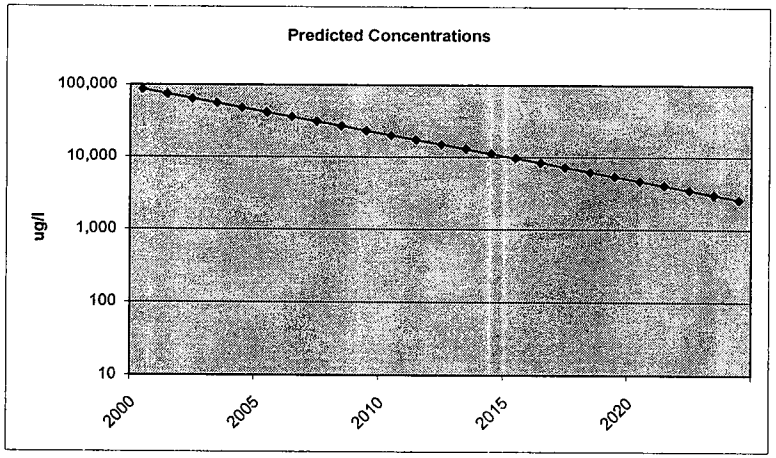
Water Quality Objective:	y	50	ug/L
Constant:	b	8.63E+04	
Constant:	a	-0.0004	
Date of peak concentration		10/31/2000	

Calculate

Days from peak concentration:	x	18,635	Days
Years from peak concentration:		51.1	Years
Estimated date of cleanup:		Nov-2051	

Calculated Half Life = -ln(2)/a

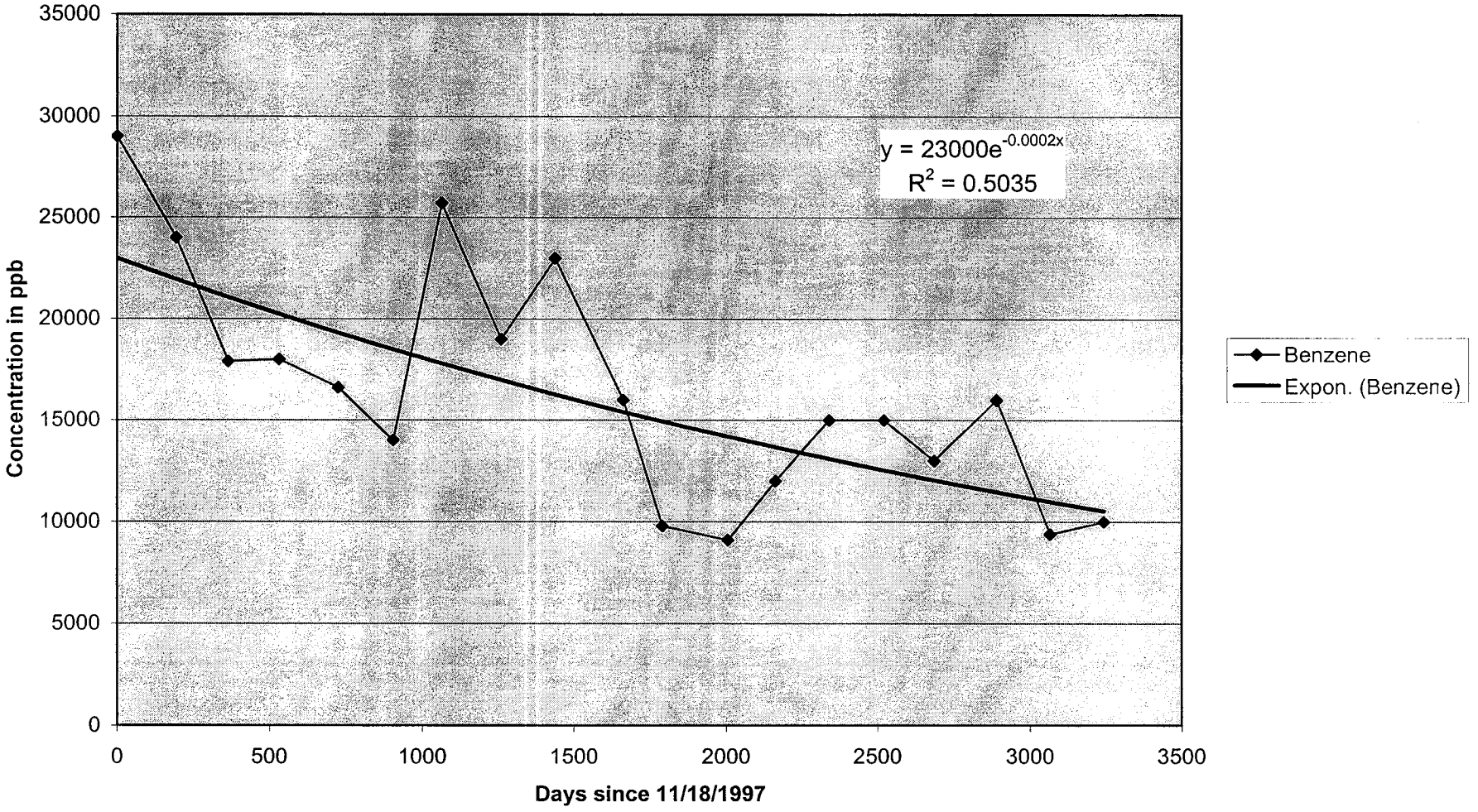
1,733	Days
4.75	years



Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
10/31/2000	0	86,334
10/31/2001	365	74,606
10/31/2002	730	64,472
10/31/2003	1,095	55,714
10/31/2004	1,461	48,126
10/31/2005	1,826	41,588
10/31/2006	2,191	35,939
10/31/2007	2,556	31,057
10/31/2008	2,922	26,827
10/31/2009	3,287	23,183
10/31/2010	3,652	20,034
10/31/2011	4,017	17,312
10/31/2012	4,383	14,955
10/31/2013	4,748	12,923
10/31/2014	5,113	11,168
10/31/2015	5,478	9,651
10/30/2016	5,843	8,340
10/30/2017	6,208	7,207
10/30/2018	6,573	6,228
10/30/2019	6,938	5,382
10/29/2020	7,303	4,651
10/29/2021	7,668	4,019
10/29/2022	8,033	3,473
10/29/2023	8,398	3,001
10/28/2024	8,763	2,594
10/28/2025	9,128	2,241
10/28/2026	9,493	1,937
10/28/2027	9,858	1,674
10/27/2028	10,223	1,446
10/27/2029	10,588	1,250
10/27/2030	10,953	1,080
10/27/2031	11,318	933
10/26/2032	11,683	807
10/26/2033	12,048	697
10/26/2034	12,413	602
10/26/2035	12,778	520
10/25/2036	13,143	450
10/25/2037	13,508	389
10/25/2038	13,873	336
10/25/2039	14,238	290
10/24/2040	14,603	251
10/24/2041	14,968	217
10/24/2042	15,333	187
10/24/2043	15,698	162
10/23/2044	16,063	140
10/23/2045	16,428	121
10/23/2046	16,793	104
10/23/2047	17,158	90
10/22/2048	17,523	78
10/22/2049	17,888	67
10/22/2050	18,253	58
10/22/2051	18,618	50

Concentration Trend Graph
Benzene Concentrations (MW-3)
Former Chevron Station 9-7127



Predicted Time for the Cleanup of Benzene in Well MW-3,

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

Calculate "time to cleanup" given the first-order decay equation:

$y = b\,e^{ax}$ ===> $x = \ln(y/b) / a$

Given

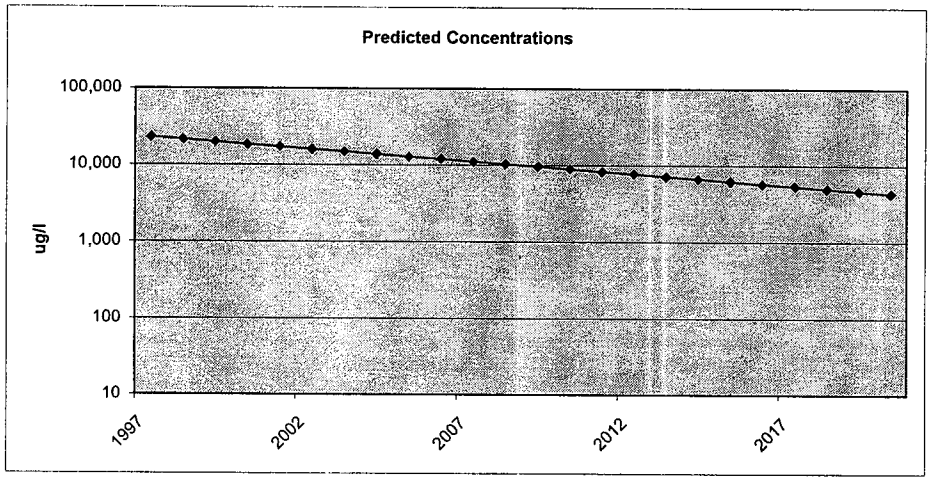
Water Quality Objective:	y	1	ug/L
Constant:	b	2.30E+04	
Constant:	a	-0.0002	
Date of peak concentration		11/18/1997	

Calculate

Days from peak concentration:	x	50,216	Days
Years from peak concentration:		137.6	Years
Estimated date of cleanup:		May-2135	

Calculated Half Life = -ln(2)/a

3,466	Days
9.50	years



Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
11/18/1997	0	23,000
11/18/1998	365	21,381
11/18/1999	730	19,876
11/17/2000	1,095	18,476
11/18/2001	1,461	17,172
11/18/2002	1,826	15,963
11/18/2003	2,191	14,840
11/17/2004	2,556	13,795
11/18/2005	2,922	12,821
11/18/2006	3,287	11,919
11/18/2007	3,652	11,079
11/17/2008	4,017	10,299
11/18/2009	4,383	9,572
11/18/2010	4,748	8,899
11/18/2011	5,113	8,272
11/17/2012	5,478	7,690
11/17/2013	5,843	7,148
11/17/2014	6,208	6,645
11/17/2015	6,573	6,177
11/16/2016	6,938	5,742
11/16/2017	7,303	5,338
11/16/2018	7,668	4,962
11/16/2019	8,033	4,613
11/15/2020	8,398	4,288
11/15/2021	8,763	3,986
11/15/2022	9,128	3,706
11/15/2023	9,493	3,445
11/14/2024	9,858	3,202
11/14/2025	10,223	2,977
11/14/2026	10,588	2,767
11/14/2027	10,953	2,573
11/13/2028	11,318	2,391
11/13/2029	11,683	2,223
11/13/2030	12,048	2,067
11/13/2031	12,413	1,921
11/12/2032	12,778	1,786
11/12/2033	13,143	1,660
11/12/2034	13,508	1,543
11/12/2035	13,873	1,435
11/11/2036	14,238	1,334
11/11/2037	14,603	1,240
11/11/2038	14,968	1,152
11/11/2039	15,333	1,071
11/10/2040	15,698	996
11/10/2041	16,063	926

Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
11/10/2042	16,428	861
11/10/2043	16,793	800
11/9/2044	17,158	744
11/9/2045	17,523	691
11/9/2046	17,888	643
11/9/2047	18,253	597
11/8/2048	18,618	555
11/8/2049	18,983	516
11/8/2050	19,348	480
11/8/2051	19,713	446
11/7/2052	20,078	415
11/7/2053	20,443	386
11/7/2054	20,808	358
11/7/2055	21,173	333
11/6/2056	21,538	310
11/6/2057	21,903	288
11/6/2058	22,268	268
11/6/2059	22,633	249
11/5/2060	22,998	231
11/5/2061	23,363	215
11/5/2062	23,728	200
11/5/2063	24,093	186
11/4/2064	24,458	173
11/4/2065	24,823	161
11/4/2066	25,188	149
11/4/2067	25,553	139
11/3/2068	25,918	129
11/3/2069	26,283	120
11/3/2070	26,648	111
11/3/2071	27,013	104
11/2/2072	27,378	96
11/2/2073	27,743	90
11/2/2074	28,108	83
11/2/2075	28,473	77
11/1/2076	28,838	72
11/1/2077	29,203	67
11/1/2078	29,568	62
11/1/2079	29,933	58
10/31/2080	30,298	54
10/31/2081	30,663	50
10/31/2082	31,028	46
10/31/2083	31,393	43
10/30/2084	31,758	40
10/30/2085	32,123	37
10/30/2086	32,488	35
10/30/2087	32,853	32
10/29/2088	33,218	30
10/29/2089	33,583	28
10/29/2090	33,948	26
10/29/2091	34,313	24
10/28/2092	34,678	22

Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
10/28/2093	35,043	21
10/28/2094	35,408	19
10/28/2095	35,773	18
10/27/2096	36,138	17
10/27/2097	36,503	16
10/27/2098	36,868	14
10/27/2099	37,233	13
10/27/2100	37,598	12
10/27/2101	37,963	12
10/27/2102	38,328	11
10/27/2103	38,693	10
10/26/2104	39,058	9
10/26/2105	39,423	9
10/26/2106	39,788	8
10/26/2107	40,153	7
10/25/2108	40,518	7
10/25/2109	40,883	6
10/25/2110	41,248	6
10/25/2111	41,613	6
10/24/2112	41,978	5
10/24/2113	42,343	5
10/24/2114	42,708	4
10/24/2115	43,073	4
10/23/2116	43,438	4
10/23/2117	43,803	4
10/23/2118	44,168	3
10/23/2119	44,533	3
10/22/2120	44,898	3
10/22/2121	45,263	3
10/22/2122	45,628	3
10/22/2123	45,993	2
10/21/2124	46,358	2
10/21/2125	46,723	2
10/21/2126	47,088	2
10/21/2127	47,453	2
10/20/2128	47,818	2
10/20/2129	48,183	2
10/20/2130	48,548	1
10/20/2131	48,913	1
10/19/2132	49,278	1
10/19/2133	49,643	1
10/19/2134	50,008	1
10/19/2135	50,373	1

CONESTOGA-ROVERS
& ASSOCIATES

ATTACHMENT H

Surfactant Enhanced LNAPL Recovery and Attenuation Report

Surfactant Enhanced LNAPL Recovery and Attenuation

Robert J. Tworkowski, PG, URS Corporation
and
Jason L. Baer, REM, Maryland Environmental Service

Background

Many leaking underground storage tank cases, even those not considered to pose a threat to human health or the environment, remain open due to the periodic presence of residual light non-aqueous phase liquids (LNAPLs). Although the majority of the LNAPL has been removed at many of these sites, it is not unusual to find open environmental cases that exceed 10 years of age. The residual phase of the LNAPL continues to degrade ground water quality by partitioning into dissolved phase concentrations that can be in excess of regulatory criteria. Corporations have finite resources that they are able to allocate to the remediation of these types of sites. Although the individual budgets on these low-risk sites can be minimal, their collective impact on corporate environmental programs can be quite significant. In order to ensure that adequate funding is available for sites that truly pose a risk to human health and the environment and warrant active remediation, regulatory agencies and companies alike are evaluating alternative, non-traditional approaches and technologies for the cleanup of these low-risk sites. The expedited removal of residual LNAPL can help mitigate the source of the dissolved phase plume, minimize the risk to potential receptors, achieve regulatory compliance, and ultimately expedite case closure.

Approach

To accelerate cleanup and closure of these low-risk sites, two non-conventional remedial approaches have been combined: in-situ surfactant flushing and mobile multi-phase high-vacuum extraction. Surfactants are designed to change the interfacial tension between the water and NAPL bodies and desorb the residual LNAPLs entrained in the soil matrix by micro-emulsifying the organic particles, and forming a micelle. In the case of weathered LNAPLs, surfactants have been used to decrease the viscosity of the material, resulting in increased and more efficient recovery. Surfactants are also considered bioremediation enhancing and vapor suppression agents. The use of mobile multi-phase high-vacuum extraction allows the environmental engineer to focus remediation efforts at a targeted area of the site without incurring the cost and disruption associated with traditional permanent remediation approaches. Additionally, this method increases the effective radius of influence, while minimizing the volume of effluent recovered that requires treatment and/or disposal. This combined approach involves the in-situ application of a surfactant mixture, under pressure, into the site subsurface. The injection is followed by high-vacuum induced multi-phase recovery from an extraction well, via a mobile vacuum truck.

In addition to the physical removal of residual LNAPL and dissolved constituents during the flushing and extraction process, this study evaluated the solubilization and mobilization of the residual LNAPL and dissolved constituents following extraction. While there has been concern that the addition of a surfactant mixture may only result in the dilution and physical dispersion of any residual LNAPL and potentially increase the concentrations of the dissolved constituents, this study observed the successful mass phase transfer/removal following surfactant application/extraction and tracked the resulting attenuation of the dissolved constituents.

When surfactants are introduced into a water / NAPL system, they have two major results: 1) mobilization of free NAPL and 2) solubilization of residual NAPL. Of these two, mobilization is more rapid and has resulted in much of the negative views of surfactant use. In order to counteract the effects of mobilization and prevent unwanted migration, this study followed the surfactant injection with an extraction event to capture and remove the majority of the mobilized NAPL mass. Additionally, as shown with many other remediation technologies, more effective mass removal is achievable when a system is not allowed to achieve equilibrium. One example of this is the use of pulsed air sparging versus continuous air sparging. It was decided that the combined use of an injection and extraction event in close temporal proximity could help achieve this desired "push-pull" type of disequilibrium.

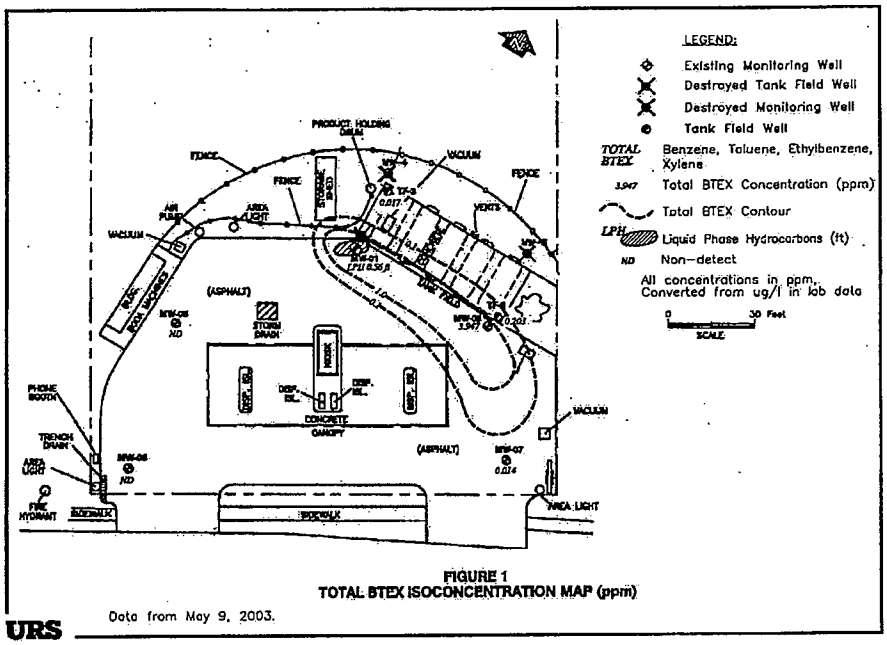


FIGURE 1
TOTAL BTEX ISOCONCENTRATION MAP (ppm)

Data from May 9, 2003.

URS

Site Background

The site selected for this test is an operational retail gasoline service station. The site is located in the southern portion of Maryland, within the Coastal Plain. The lithology of the site is characterized by interbedded alluvial sands, silts, clays and gravels. Ground water at the site is found at a depth of approximately 15-feet below ground surface. Ground water at the site generally flows to the southwest at an approximate gradient of 0.0003 feet/foot. Figure 1 depicts a map that shows the general features of the site and the location of the injection / extraction and monitoring wells as well as total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations detected in the monitoring wells prior to applying the surfactant.

There has been an open environmental case at the site since 1984, due in part to the intermittent presence of LNAPL in several of the ground water monitoring wells at the site. Although the case has been open for over two decades, active remediation was not undertaken due to the limited areal distribution of LNAPL and high dissolved BTEX in the ground water at the site. Additionally, since only the surficial, water-table "aquifer" was impacted and the site is not located in an area with potable wells, active remediation was not deemed necessary to protect human health and the environment. The case could not be closed previously due to the limited presence of LNAPL in one of the monitoring wells (Maryland regulations prohibit the closure of cases with LNAPL present and require the removal of LNAPL to the maximum extent practical – a sheen). Environmental activities at the site were limited to quarterly ground water monitoring and the use of passive bailers for LNAPL recovery.

Historically, a dissolved BTEX plume has extended from the area of the underground storage tank (UST) tank field to the area of well MW-7. Well MW-1 has historically contained several inches of LNAPL, while well MW-2 has contained periodic traces of LNAPL. The maximum LNAPL thickness reported historically in well MW-1 was approximately 1.40 feet. However, at the beginning of the pilot test, MW-1 contained approximately 0.56 foot of LNAPL.

Surfactant Injection / Extraction Event #1

On October 6, 2003, all wells at the subject site were gauged. Monitoring well MW-1 was found to contain 0.56 foot of LNAPL and MW-2 was found to contain 0.01 foot of LNAPL. Following well gauging and preparation of necessary materials, 150 gallons of 4% solution proprietary-blend non-ionic surfactant (EC-165, EnviroClean, LLC) was injected into well MW-1. Approximately 100 gallons of 3% solution surfactant was

injected into well MW-2. The surfactant mixture was injected through a down-well surge block at a flow rate of approximately 5 gallons per minute (gpm) and a pressure of approximately 15 pounds per square inch (psi). It was estimated that the surfactant mixture achieved a radius of influence of approximately 10 feet around the injection wells. Based on literature research of surfactants, the surfactants were left in the ground for a period of approximately 72 hours prior to extraction.

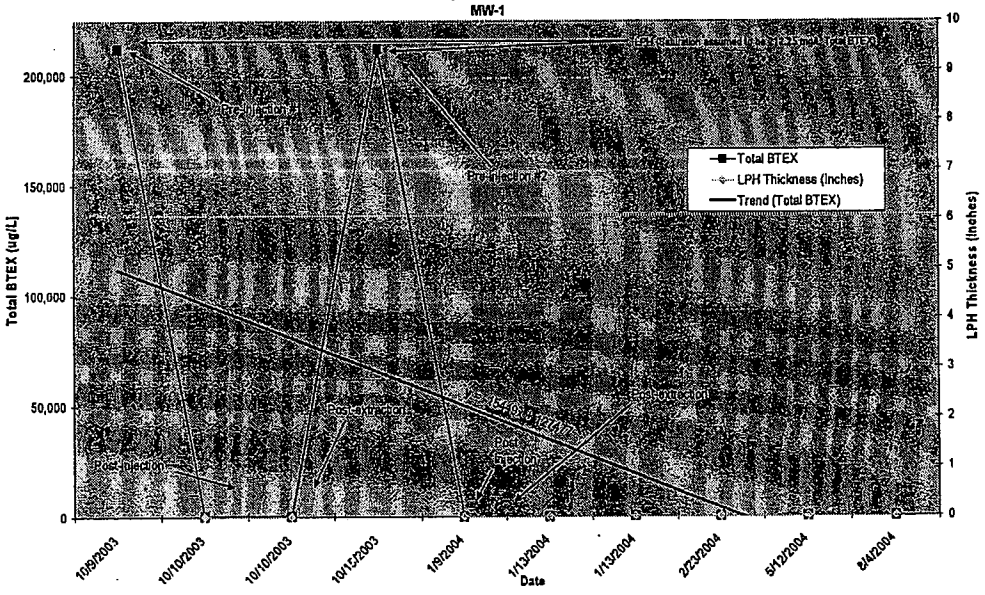
On October 9, 2003, all wells at the subject site were gauged. MW-1 and MW-2 were not found to contain any LNAPL. Following well gauging, a vacuum truck equipped with a down-well drop-tube and well seal was utilized to evacuate the liquid in the two injection wells, under vacuum. Approximately 500 gallons of water, LNAPL, and emulsion was removed from well MW-1 and approximately 300 gallons of water and emulsion was removed from well MW-2.

Following completion of the first surfactant injection and extraction event, the monitoring wells at the site were gauged several times. Approximately 0.02 foot of LNAPL was detected in MW-1 one week subsequent to the completion of the extraction event, and LNAPL did not return to MW-2. Due to the presence of residual LNAPL in MW-1, it was decided that one additional surfactant application would be conducted.

Ground Water Monitoring Results Subsequent to Event #1

Subsequent to the first surfactant injection / extraction event, but prior to the second event, a round of ground water samples was collected from all of the monitoring wells at the site. A >99.99% reduction in total BTEX concentrations was observed in injection / extraction well MW-1 and a 97% reduction in total BTEX concentrations was observed in injection / extraction well MW-2. BTEX concentrations in downgradient wells MW-5 and MW-6 remained non-detect during this sampling period. However monitoring well MW-5 did exhibit a slight increase in methyl tertiary butyl ether (MTBE) concentrations (64 parts per billion [ppb] to 285 ppb). A slight increase in dissolved BTEX concentration was observed in Well MW-7 (14 ppb to 68 ppb) subsequent to the first injection / extraction event. The ground water monitoring results from MW-1 are included in Figure 2. The ground water monitoring results from MW-2 are included in Figure 3.

Figure 2
Surfactant Injection & Extraction Well
MW-1



Surfactant Injection / Extraction Event #2

On January 9, 2004, all wells at the subject site were gauged. MW-1 and MW-2 were not found to contain any LNAPL. However, due to the presence of relatively high levels of dissolved BTEX in the vicinity of the two

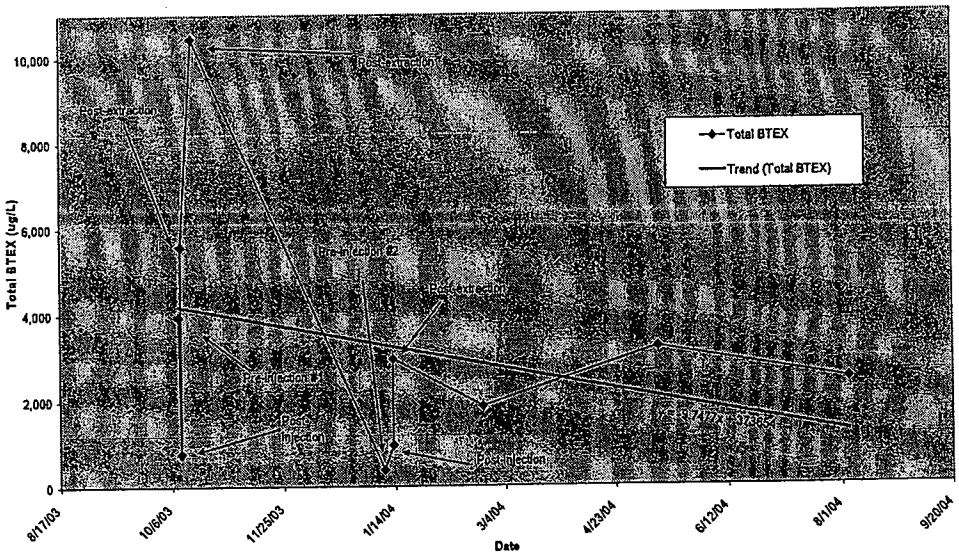
injection / extraction wells, a second surfactant injection and extraction event was completed. Following well gauging and preparation of necessary materials, 200 gallons of 5% solution proprietary-blend non-ionic surfactant (EC-165, EnviroClean, LLC) was injected into well MW-1. Approximately 100 gallons of 5% solution surfactant was injected into well MW-2. The surfactant mixture was injected through a down-well surge block at a flow rate of approximately 5 gpm and a pressure of approximately 15 psi. The surfactants were left in the ground for a period of approximately 96 hours prior to extraction during this injection event.

On January 13, 2004, all wells at the subject site were gauged. MW-1 and MW-2 were not found to contain any LNAPL. Following well gauging, a vacuum truck equipped with a down-well drop-tube and well seal was utilized to evacuate the liquid in the two injection wells, under vacuum. Approximately 390 gallons of water and LNAPL emulsion was removed from well MW-1 and approximately 625 gallons of water and LNAPL emulsion was removed from well MW-2.

Ground Water Monitoring Results Subsequent to Event #2

Subsequent to the second surfactant injection / extraction event, a round of samples was collected from all of the ground water monitoring wells at the site. Approximately an additional 60% reduction in total BTEX concentrations was observed in injection / extraction well MW-1, for a net reduction of >99.99% over pre-test concentrations, and a net 40% reduction in overall total BTEX concentrations was observed in injection / extraction well MW-2. BTEX concentrations in downgradient monitoring well MW-5 went from non-detect levels of benzene to a detectable concentration of 1 ppb. MTBE concentrations in monitoring well MW-5 increased from 285 ppb to 555 ppb. Downgradient monitoring well MW-6 remained non-detect for BTEX and MTBE. BTEX concentrations in monitoring well MW-7 slightly increased from 68 ppb to 80 ppb. The ground water monitoring results from MW-1 are included in Figure 2. The ground water monitoring results from MW-2 are included in Figure 3.

Figure 3
Surfactant Injection & Extraction Well
MW-2



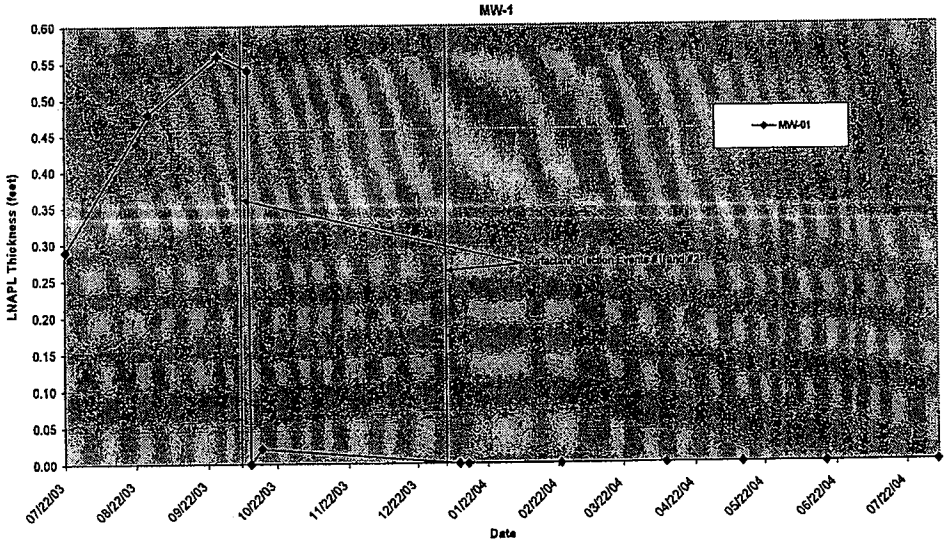
Ground Water Monitoring Results in Surfactant Injection / Extraction Wells

The study found that LNAPL was not observed in any of the test sites following the two surfactant injection and extraction events. The LNAPL reduction observed in MW-1 was significant. Prior to the initiation of the test, MW-1 contained 0.56 foot of LNAPL. Subsequent to the completion of the test, MW-1 was found to not contain measurable LNAPL. LNAPL monitoring results are depicted in Figure 4. Also, the study found that

dissolved BTEX concentrations in the injection / extraction wells was reduced by 99.99% and 18% in wells MW-1 and MW-2, respectively, following the two surfactant injection and extraction events.

As discussed previously, the two main mechanisms associated with the use of surfactants in a water / oil system are mobilization and solubilization. Both of these mechanisms were observed during the study. First, the majority of the LNAPL mass in the site subsurface was mobilized following the injection of the surfactant solution. Within several days of the injections, Winsor Type III reactions were observed in MW-1. The Winsor Type III reaction is characterized by the presence of three distinct phases: an aqueous or dissolved phase, a micro-emulsion phase, and a NAPL phase. During the vacuum extraction event performed on October 9, 2003, this multi-phase phenomenon was observed. Fluids recovered from the vicinity of MW-1 included hydrocarbon-impacted ground water, micro-emulsion globules, and LNAPL. The amount of fluid recovered from well MW-1 was approximately 500 gallons. It was estimated that approximately 25% of this fluid consisted of NAPL and micro-emulsion, with the remainder of the mixture being comprised of impacted ground water and surfactant solution. Within a relatively short period of time (several days to weeks) following the initial injection / extraction event, dissolved BTEX concentrations in well MW-2 increased significantly. During this same period of time, residual LNAPL in the vicinity of MW-1 continued to be mobilized by the residual surfactant. The occurrence of the residual surfactant was confirmed during subsequent monitoring events, visually by the presence of a tracer dye that was included in the surfactant formulation. Following the initial extraction event on MW-1, no LNAPL was detected. However, within one week after the extraction event, the LNAPL thickness in MW-1 had returned to 0.02 foot. Solubilization of the LNAPL mass present in the site subsurface was observed during this study; however, mobilization appeared to be the predominant mechanism, followed by solubilization. As shown in Figure 3, there was a marked increase in dissolved BTEX concentrations immediately following the initial surfactant injection. As shown in this figure, however, the relatively high dissolved BTEX concentrations appeared to quickly attenuate. It is believed that the surfactant released the NAPL mass from the relatively unavailable residual phase into the extremely bioavailable dissolved or aqueous phase, where it can be readily broken down by resident microbe populations.

Figure 4
Measured LNAPL Thickness
MW-1



Ground Water Monitoring Results in Downgradient Wells

There is concern that the surfactant treatments can be simply diluting, displacing, or dispersing the LNAPL mass and result in creating a more dissolved fraction. In order to evaluate this potential concern, close attention was given to the two ground water monitoring wells located hydraulically downgradient from the surfactant injection / extraction wells, MW-1 and MW-2. Figure 5 depicts the results of ground water samples collected from downgradient wells MW-5 and MW-6, as well as the side gradient well MW-7. Given the historical

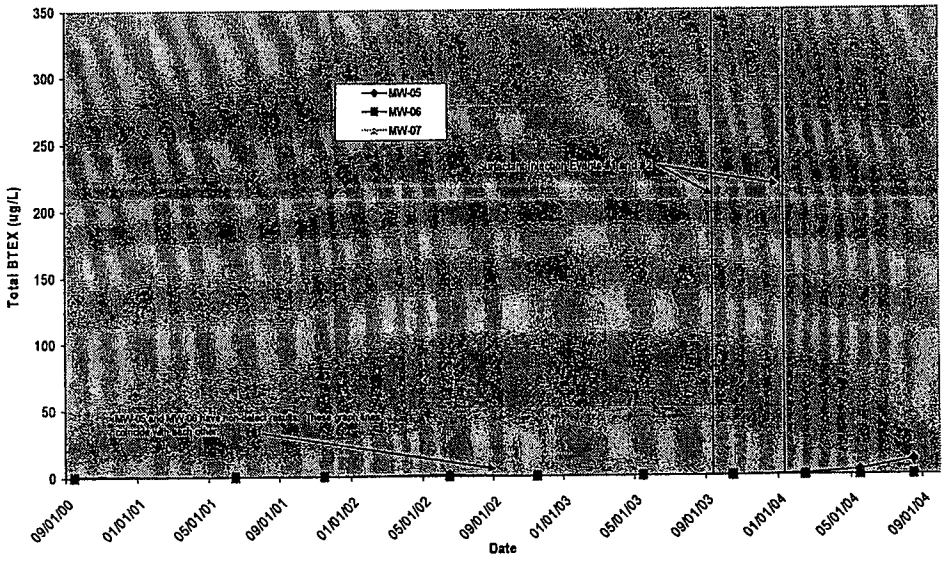
direction of ground water flow at the site and the spatial proximity to the source and treatment area, special consideration was given to well MW-5.

As to the concept of dilution, during the initial surfactant injection event, approximately 250 gallons of surfactant solution were introduced into the subsurface in the areas of MW-1 and MW-2. The volume of non-native fluid introduced into the system is <0.5% of the total volume of the water contained in the area between MW-1 and MW-2. It is highly unlikely that this extremely small volume of water, relative to the water volume of the test area, resulted in the initial concentration reductions of 97% to >99% observed during the first phase of the test.

With regard to the role displacement and dispersion play on this site, the data collected from the downgradient monitoring wells may support limited contribution due to these mechanisms. Immediately following the first and second surfactant injection / extraction events, the dissolved petroleum concentrations in MW-5 increased. Benzene concentrations went from non-detect to 9 ppb. BTEX concentrations went from non-detect to 11 ppb. MTBE concentration went from 64 to 1,960 ppb. If a correlation does exist (there are no contributions from current operations at the service station), the decrease in mass observed in the areas of MW-1 and MW-2 would likely result in significantly higher dissolved petroleum concentrations than those observed in MW-5. It should also be noted that within 3-4 days of injection, the surfactant solution was extracted. In fact, 3-4 times the initial injection volume was recovered and removed by the vacuum extraction unit.

In the absence of dilution, dispersion, or displacement as the mechanisms for the attenuation observed at the site, the ideas of bioavailability and biodegradation are given more weight. Although no microbial samples were collected as part of this study and biodegradation was not directly studied, anecdotal evidence supports the occurrence of enhanced biodegradation subsequent to the injection / extraction events. It is believed that the significant attenuation rates observed in wells MW-1 and MW-2, subsequent to the injection / extraction events is due to the increased bioavailability of the contaminant mass as a by-product of increased solubilization.

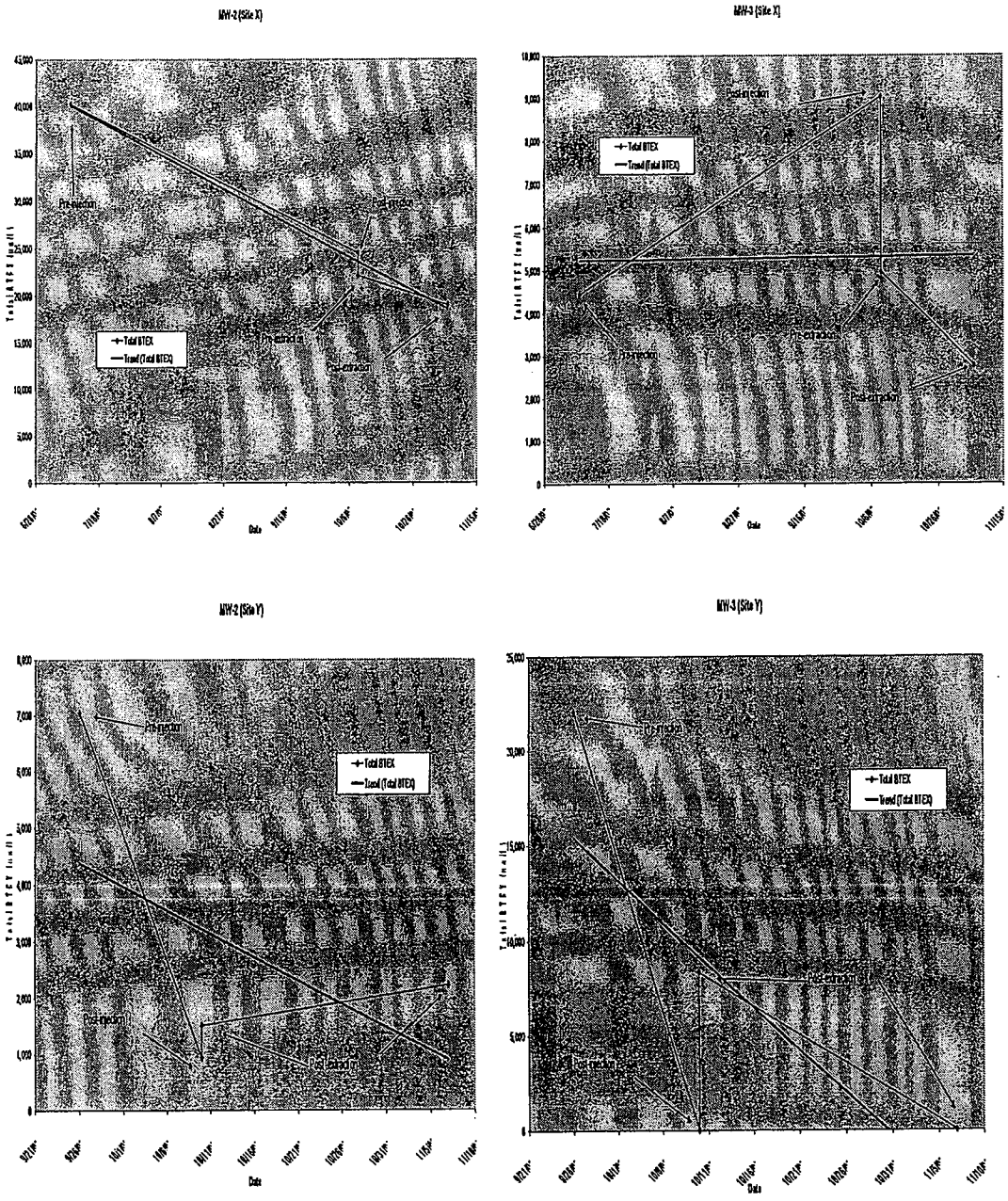
Figure 5
Downgradient Monitoring Well Data
MW-5, MW-6, & MW-7



Results from Additional Test Sites

The results of this study were promising and the technology was employed at several other sites throughout Maryland. Results observed at this site were consistent with the results observed at the other sites. The following graphs show the results from two other surfactant injection / extraction sites. Although the results are not quite as remarkable as those from the study site, the results are consistent with the observations at the study

site. It should be noted that the wells presented below contained only relatively high levels of dissolved BTEX and did not contain LNAPL as the study site did.

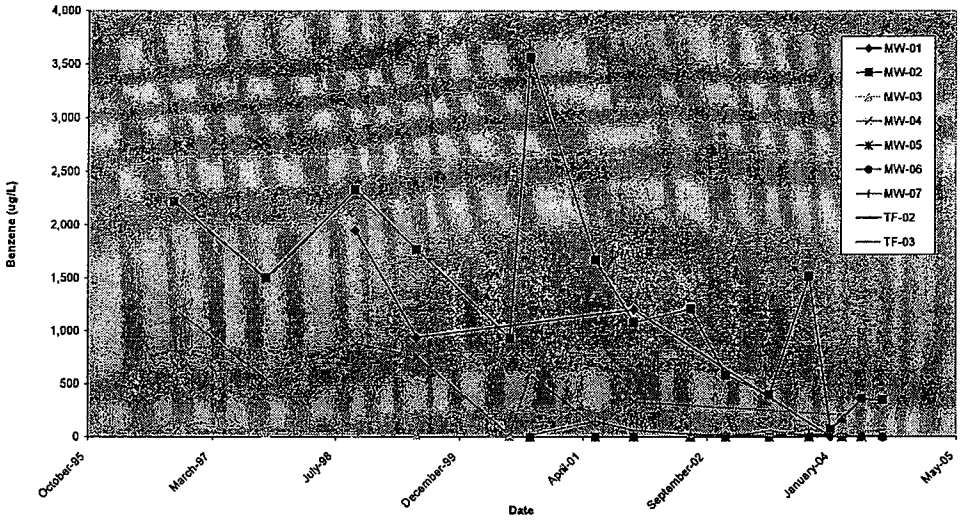


Conclusions and Path Forward

The goal of this study was to determine if surfactant injection / extraction could be a viable remediation option for low-risk petroleum sites that did not warrant full-scale active remediation efforts. Many sites and environmental cases exist that do not pose a significant risk to human health or the environment, but must remain open due to the continuous or intermittent presence of small amounts of LNAPL. In the State of Maryland, a site that has been shown to not pose a significant risk can be closed once LNAPL is removed and a declining contaminant mass and/or concentration trend is shown. Ultimately, the surfactant injection /

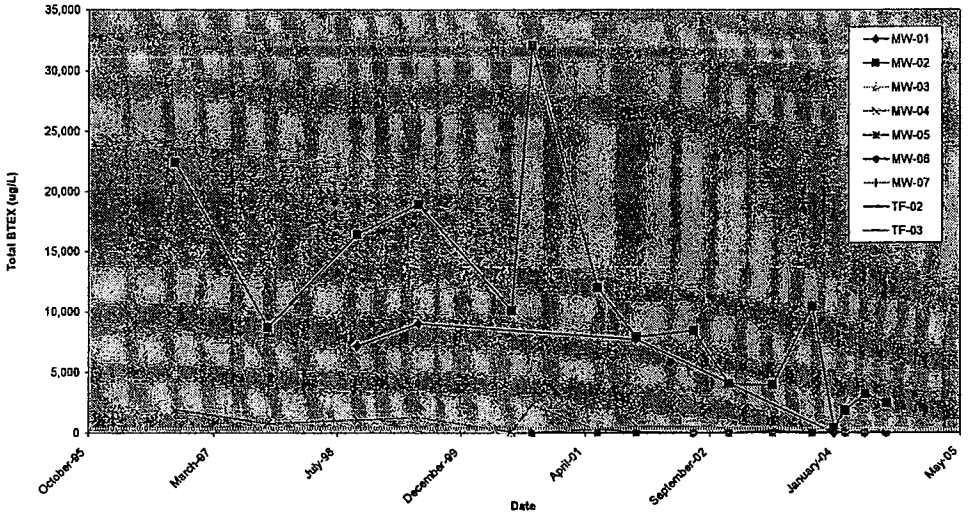
extraction events employed at the subject site were able to remove all the persistent measurable LNAPL from the site monitoring wells. The closure request for this site has been submitted and approved pending a final compliance inspection at the site (it is an operational retail gas station) by the Maryland Department of the Environment regulator.

Figure 6
Dissolved Benzene Concentrations



Figures 6 and 7 depict the dissolved benzene and Total BTEX concentrations observed at the site over time. Based on this data, and the resulting case closure, this form of remedial application appears to be successful. The client was able to achieve case closure in a period of a little more than one year, at a cost of approximately $25,000 (including monitoring costs). Operations at the site were minimally disrupted by the surfactant injection / extraction project, as it can be deployed as a mobile technology.

Figure 7
Dissolved Total BTEX Concentrations



Future studies will focus on the biodegradation of the dissolved phase of the contamination. This study demonstrated the successful physical removal processes of LNAPL from affected areas. Additional study is required to evaluate the processes of bioavailability and potential limiting factors that may affect

biodegradation. If the surfactant injection / extraction technology is applied to a site, it is important to understand the biochemical parameters at the site that may limit the rate of removal so that if an increase in dissolved phase concentrations is observed in downgradient wells, measures can be put in place to address these potential concerns. These biochemical parameters may include dissolved oxygen concentration, CO_2, ORP, pH, sulfate, sulfide, nitrate, nitrite, iron, alkalinity, BOD, COD, methane and bacterial plate counts. It is recommended that the biochemical and hydrogeologic parameters be understood at sites where there may be risk to potential downgradient receptors prior to incorporating this technology.

Biographical Sketches of the Authors:

Robert J. Tworkowski is a Professional Geologist with over 20 years of experience in the field of environmental site assessment and remediation. Mr. Tworkowski works for URS Corporation, and manages a Remediation Services Group that provides services primarily to the petroleum sector. Mr. Tworkowski has a BS degree in Geology from Rutgers University.

Jason L. Baer is a Registered Environmental Manager with over 10 years of experience in the field of environmental site assessment and remediation. Mr. Baer, formerly with URS Corporation, currently works for the State of Maryland, Maryland Environmental Service as a Project Manager, specializing in the remediation of petroleum- and solvent-impacted sites. Mr. Baer has a BA degree in Liberal Arts from St. Mary's College of Maryland and an MS in Environmental Management from the University of Maryland.