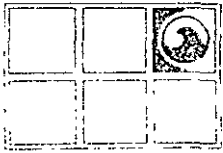


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Alameda County
Environmental Health



**GROUNDWATER
TECHNOLOGY, INC.**

1401 Halyard Drive, Suite 140, West Sacramento, CA 95691, (916) 372-4700

FAX (916) 372-8781

**ENVIRONMENTAL ASSESSMENT REPORT
CHEVRON SERVICE STATION NO. 9-1924
4904 SOUTH FRONT ROAD
LIVERMORE, CALIFORNIA**

GTI Project 02070 0004

November 9, 1995

Prepared for:

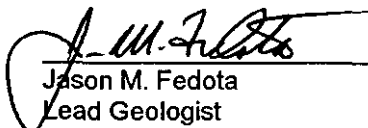
Mr. Brett Hunter
Chevron U.S.A. Products Company
6001 Bollinger Canyon Road, Bldg. L
San Ramon, CA 94583

Groundwater Technology, Inc.
Submitted by:




Brian McAloon
Associate Geologist

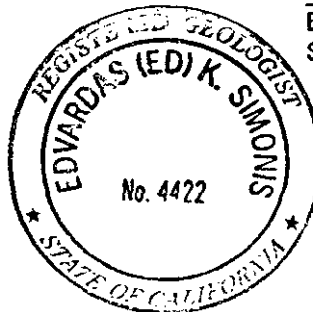
Groundwater Technology, Inc.
Approved by:



Jason M. Fedota
Lead Geologist
Project Manager



Ed K. Simonis, R.G.
Senior Geologist



0004EAR.RPT(Chv047)

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- A. Drilling Permit
- B. Drilling Logs and Well Construction Specifications
- C. Well Survey Data
- D. Laboratory Reports and Chain-of-Custody Manifests

1.0 INTRODUCTION

This report is submitted by Groundwater Technology, Inc. to summarize the methods and results of additional environmental assessment work conducted on October 2, 1995, at Chevron Service Station Number 9-1924 located at 4904 South Front Road, Livermore, California (Figure 1). All work was conducted in accordance with Groundwater Technology's *Work Plan for Additional Assessment*, dated May 4, 1994, which was approved by the County of Alameda Department of Environmental Health (DEH), Hazardous Materials Division. This work included conducting a background review of the site and immediate vicinity, contacting *Underground Service Alert (USA)* for marking of underground utilities, obtaining necessary permits, developing a health and safety plan for field activities, drilling and sampling two soil borings, installing and developing a groundwater monitoring well in each of the borings, and preparation of this report.

2.0 ADDITIONAL ASSESSMENT WORK

2.1 Background Review/Permitting/Site-Specific Health and Safety Plan

Groundwater Technology conducted a technical review of all relevant information available prior to proceeding with site assessment work.

A Drilling Permit was obtained from the Alameda County Flood Control and Water Conservation District Zone 7 agency. A copy of the permit is included in Appendix A.

Following a complete review of site conditions, Groundwater Technology prepared a site-specific *Health and Safety Plan* as required by the Occupational Safety and Health Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120). The document was reviewed and signed by all Groundwater Technology personnel and subcontractors prior to commencement of work at the site.

2.2 Soil Borings

On October 2, 1995, Groundwater Technology supervised the drilling of off-site soil borings C-20 and C-21 to a depth of approximately 25 feet below ground surface (BGS) utilizing a truck-mounted drill rig equipped with 8-inch outside-diameter (O.D.) hollow-stem augers. All drilling equipment was steam-cleaned prior to drilling, and sampling equipment was washed in an Alconox (detergent) solution and rinsed with water between sampling intervals. All rinsate water was removed from the site by Groundwater Technology on October 12, 1995, and transported to the Chevron Richmond refinery for recycling. All soil generated from the borings was placed on and covered with plastic sheeting and temporarily stored on site pending removal and disposal by Integrated Wastestream Management, Inc., of Milpitas, California.

2.3 Soil Sampling

Soil samples were collected from boreholes C-20 and C-21 at 5-foot intervals during drilling, beginning at approximately 5 feet BGS. Samples were collected using a 2.5-inch O.D. split-spoon sampler, lined with three 2-inch-diameter by 6-inch-long brass sample tubes. The sampler was driven 18 inches ahead of the augers at each sample point. Soil samples were field screened for hydrocarbon vapors using a photo-ionization detector. Soil was logged using the Unified Soil Classification System by a Groundwater Technology field geologist working under the supervision of a California registered geologist (Appendix B). One sample tube from each 5-foot interval was sealed, labeled and placed on ice in an insulated container for transport under chain-of-custody manifest to GTEL Environmental Laboratories, Inc., of Concord, California.

Soil samples collected at 10 feet BGS from borings C-20 and C-21, as well as a soil stockpile composite sample, were submitted for laboratory analysis. Samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX), and total petroleum hydrocarbons-as-gasoline (TPH-G) using U.S. Environmental Protection Agency (EPA) methods 5030/8020/8015 modified, and total petroleum hydrocarbons-as-diesel (TPH-D) via EPA method 3550/8015 modified.

2.4 Groundwater Monitoring Well Installation and Development

A groundwater monitoring well was installed in each of borings C-20 and C-21 on October 2, 1995. The monitoring wells were constructed of 2-inch-diameter schedule 40 PVC blank casing and 0.020-inch-slot well screen with flush threads. Well screen was installed at a depth of 10 to 25 feet BGS in each well. A #3-sand filter pack was installed in the annulus from the bottom of each borehole to 2 feet above the top of the well screen, followed by a well seal consisting of a 2-foot-thick bentonite layer overlain by neat cement (grout) to ground surface. Each well was secured by a locking expandable well cap and fitted with a traffic-rated well box set in concrete. Details of well construction are presented on the drilling log (Appendix B). Figure 1 shows the location of C-20 and C-21 relative to previously installed monitoring wells at the site.

Completed wells were surveyed by Morrow Surveying for horizontal position and elevation relative to mean sea level datum using previously surveyed monitoring wells on site as a reference (Appendix C). Elevations were obtained for tops-of-well-casing and the well box rims.

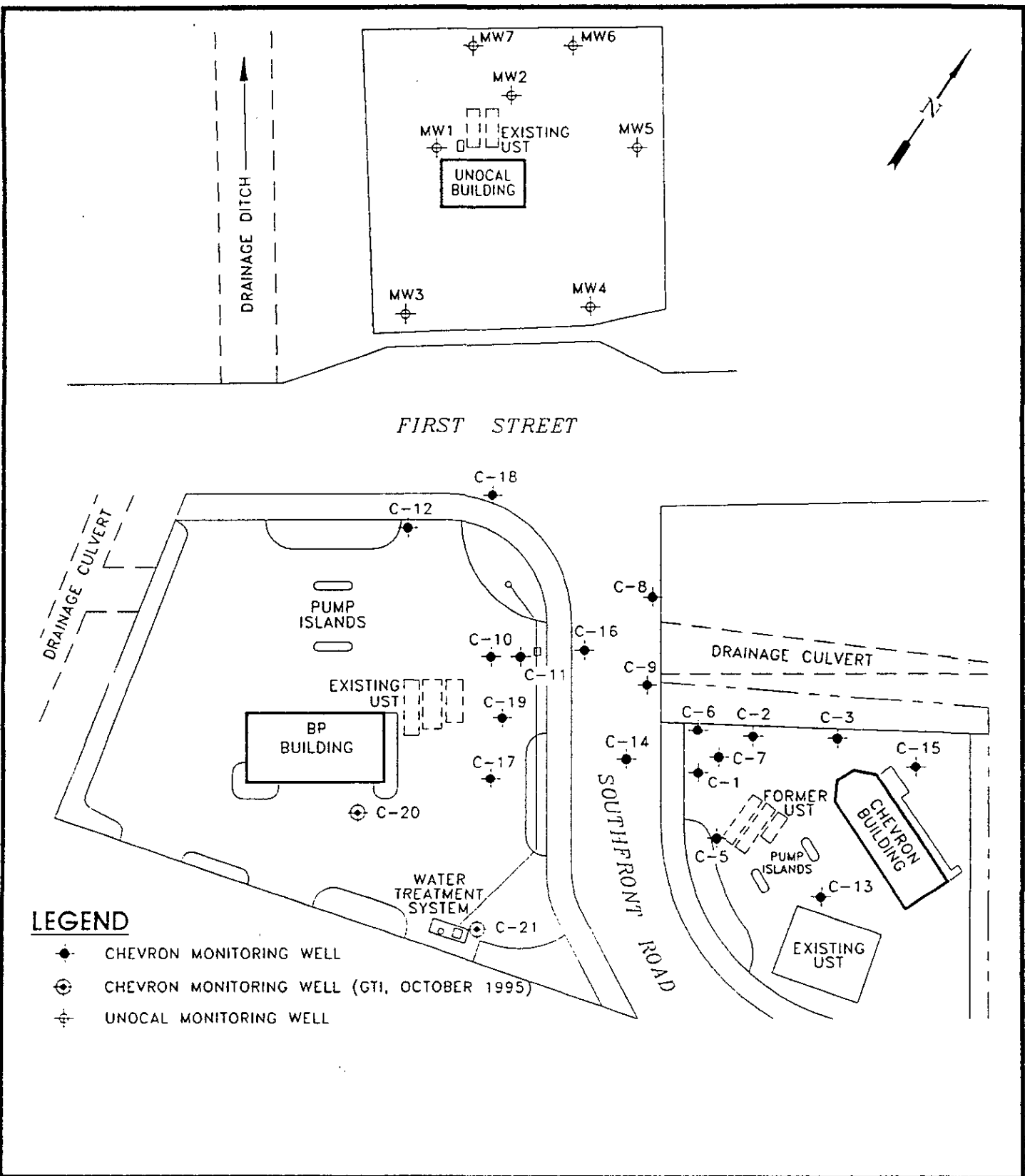
On October 12, 1995, C-20 and C-21 were developed by Groundwater Technology using a PVC bailer. Prior to development activities, depth to water was measured in each new well relative to top-of-well-casing to determine the static water level (Table 1). The new wells were manually developed using a surge block and bailer in order to remove fine-grained sediment. Approximately 11 well volumes of water was extracted from each well. All water generated during development was pumped into a purge trailer and transported to the Chevron refinery in Richmond for recycling.

3.0 RESULTS OF SOIL SAMPLE ANALYSES

Table 2 summarizes the laboratory analytical results for soil samples collected on October 2, 1995. TPH-G and BTEX were not detected in any of the analyzed soil boring samples or stockpile samples.

Copies of laboratory analyses reports and chain-of-custody manifests for the soil samples are included in Appendix D.

FIGURES



LEGEND

- CHEVRON MONITORING WELL
- ⊕ CHEVRON MONITORING WELL (GTI, OCTOBER 1995)
- ⊕ UNOCAL MONITORING WELL



SITE PLAN

CLIENT: CHEVRON U.S.A. PRODUCTS CO. SERVICE STATION NO. 9-1924		FILE: 4233SMA (1:80)	PROJECT NO.: 02070-0004	PM <i>[Signature]</i>	PE/RG <i>[Signature]</i>
LOCATION: 4904 SOUTHFRONT ROAD LIVERMORE, CALIFORNIA		REV. 1	DES. BMcA	DET. SP	DATE: 10-31-95
					FIGURE: 1

TABLES

Table 1
GROUNDWATER MONITORING WELL DATA
October 12, 1995

CHEVRON SERVICE STATION #9-1924
 4904 SOUTH FRONT ROAD, LIVERMORE, CALIFORNIA

WELL NUMBER	TOC ELEVATION (feet, MSL)	DTB (feet)	DTW (feet)	WTE (feet)
C-20	520.67	24.20	13.50	507.17
C-21	519.69	23.65	12.15	507.54

Explanation

All elevations are in feet relative to an arbitrary datum.

MSL = Mean sea level datum

TOC = Top of casing

DTB = Depth to bottom, measured from TOC

DTW = Depth to water, measured from TOC prior to well development 10/12/95

WTE = Water table elevation

0004WTA.WK1

Table 2
SOIL SAMPLE ANALYTICAL RESULTS

OCTOBER 2, 1995

CHEVRON SERVICE STATION #9-1924
4904 SOUTH FRONT ROAD, LIVERMORE, CALIFORNIA

SAMPLE NUMBER		BENZENE (µg/kg)	TOLUENE (µg/kg)	ETHYL BENZENE (µg/kg)	TOTAL XYLENES (µg/kg)	TPH-G (µg/kg)
BORING	DEPTH (feet BGS)					
C-20	5	--	--	--	--	--
	10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1000
	15	--	--	--	--	--
	20	--	--	--	--	--
	25	--	--	--	--	--
C-21	5	--	--	--	--	--
	10	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1000
	15	--	--	--	--	--
	20	--	--	--	--	--
	25	--	--	--	--	--
Comp *	NA	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<1000

EXPLANATION

BGS = Below ground surface
 TPH-G = Total petroleum hydrocarbons-as-gasoline
 TPH-D = Total petroleum hydrocarbons-as-diesel
 mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
 NA = Not applicable
 ND = Not detected at or above the minimum detection limit shown
 -- = Not analyzed
 * = Soil stockpile composite

0004ST1.WK4

APPENDIX A
DRILLING PERMIT



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT FORMER CHEVRON SYN #9-1924
490A SOUTH FRONT ROAD
LIVERMORE, CALIF.

PERMIT NUMBER 95648
LOCATION NUMBER _____

CLIENT
Name CHEVRON U.S.A. PRODUCTS COMPANY
Address P.O. Box 5004 Voice 510-842-9500
City SAN RAMON Zip 94583

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name BRIAN MCALOON, for, GROUNDWATER TECHNOLOGY
Address 1401 HALLARD DR. #140 Voice 916-372-4700
City WEST SACRAMENTO Zip 95691

A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
2. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

TYPE OF PROJECT
Well Construction _____ Geotechnical Investigation _____
Cathodic Protection _____ General _____
Water Supply _____ Contamination _____
Monitoring X Well Destruction _____

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other _____
Municipal _____ Irrigation _____

DRILLING METHOD:
Rod Rotary _____ Air Rotary _____ Auger X
Cable _____ Other _____

DRIILLER'S LICENSE NO. 582696 (C-57)

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum _____
Casing Diameter 2 in. Depth 20-25 ft.
Surface Seal Depth 8 ft. Number 2

GEOTECHNICAL PROJECTS
Number of Borings _____ Maximum _____
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE OCT. 2, 1995
ESTIMATED COMPLETION DATE OCT. 2, 1995

Approved Wyman Hong Date 2 Oct 95
Wyman Hong

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPENDIX B

DRILL LOGS AND WELL CONSTRUCTION SPECIFICATIONS



**GROUNDWATER
TECHNOLOGY**

Drilling Log

Monitoring Well C-20

Project Chevron - Livermore Owner Chevron USA Products Company
 Location 4904 South Front Street, Livermore, CA Proj. No. 02070 0004
 Surface Elev. _____ Total Hole Depth 26.5 ft. Diameter 8.25 in.
 Top of Casing _____ Water Level Initial 15.5 ft. Static _____
 Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
 Casing: Dia 2 in. Length 10 ft. Type Sch 40 PVC
 Fill Material #3 Monterey Sand/Neat Cement Rig/Core CME-55/Spill Spoon
 Drill Co. SES, Inc. Method Hollow Stem Auger/PID
 Driller John C. Log By Terry James Date 10/02/95 Permit # _____
 Checked By Ed Simonis License No. RG#4422 *ED*

See Site Map
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ x Recovery	Graphic Log	USCS Class.	Description
							(Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							6" asphalt.
0						CL	Silty CLAY (30,70): dark gray, damp, soft, plastic, no hydrocarbon odor.
2						CL	
4						CL	Silty CLAY (20,80): dark gray, damp, soft, plastic, no hydrocarbon odor.
6		0	C-20 -6.5'	3 3 3		CL	
8							
10		0	C-20 -11.5'	4 4 5		CL/ML	(grades silty CLAY (40,60): light olive, trace red and black mottling)
12							
14							
16		0	C-20 -16.5'	9 11 15		GC	Encountered water, 10/02/95, 1115 hrs. Sandy silty clayey GRAVEL (10,10,30,50): light brown, gravel up to 1.5", angular to subrounded, wet, no hydrocarbon odor. (gravel clasts: graywacke, red chert, volcanics, quartz) (grades saturated)
18							
20							Clayey sandy GRAVEL (10,30,60): gravel up to 1", angular to round, no hydrocarbon odor.
22		11	C-20 -21.5'	10 23 23		GW	
24						SW	



GROUNDWATER
TECHNOLOGY

Drilling Log

Monitoring Well C-20

Project Chevron - Livermore Owner Chevron USA Products Company
 Location 4904 South Front Street, Livermore, CA Proj. No. 02070 0004

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ X Recovery	Graphic Log	USCS Class.	Description
							(Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
24		8	C-20	15 30 29		SW CL	Medium to coarse SAND: brown-gray, wet, loose, litharenite, subangular, moderately sorted, no hydrocarbon odor.
26							Clay in sample shoe, wet, no hydrocarbon odor. End of boring. Installed groundwater monitoring well.
28							
30							
32							
34							
36							
38							
40							
42							
44							
46							
48							
50							
52							
54							
56							



GROUNDWATER
TECHNOLOGY

Drilling Log

Monitoring Well C-21

Project Chevron - Livermore Owner Chevron USA Products Company
 Location 4904 South Front Street, Livermore, CA Proj. No. 02070 0004
 Surface Elev. _____ Total Hole Depth 26.5 ft. Diameter 5.25 in.
 Top of Casing _____ Water Level Initial 15 ft. Static 11 ft.
 Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
 Casing: Dia 2 in. Length 10 ft. Type Sch 40 PVC
 Fill Material #3 Monterey Sand/Neat Cement Rig/Core CME-55/Spilt Spoon
 Drill Co. SES, Inc. Method Hollow Stem Auger/PID
 Driller John C. Log By Terry James Date 10/02/95 Permit # _____
 Checked By Ed Simonis License No. RG#4422 EPI

See Site Map
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ X Recovery	Graphic Log	USCS Class.	Description
							(Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0						SC	6" asphalt over base course.
2							Silty CLAY (15,85): black, very plastic, soft, damp, no hydrocarbon odor.
4						CL	
6		0	C-21 -6.5'	3 4 5			
8							Clayey SILT (40,60): olive, damp, soft, no hydrocarbon odor.
10							
12		0	C-21 -11.5'	4 4 5		ML/CL	Static water, 10/02/95 (some yellow mottling)
14							
16		40	C-21 -16.5'	5 19 20			Encountered water, 10/02/95, 1335 hrs.
18						GW	Sandy GRAVEL (30,70): gravel up to 2", subangular, saturated, loose, no hydrocarbon odor.
20							
22		0	C-21 -21.5'	4 5 7		CL	Sandy silty CLAY (20,20,60): light olive, damp, stiff, plastic, no hydrocarbon odor.
24							



GROUNDWATER
TECHNOLOGY

Drilling Log

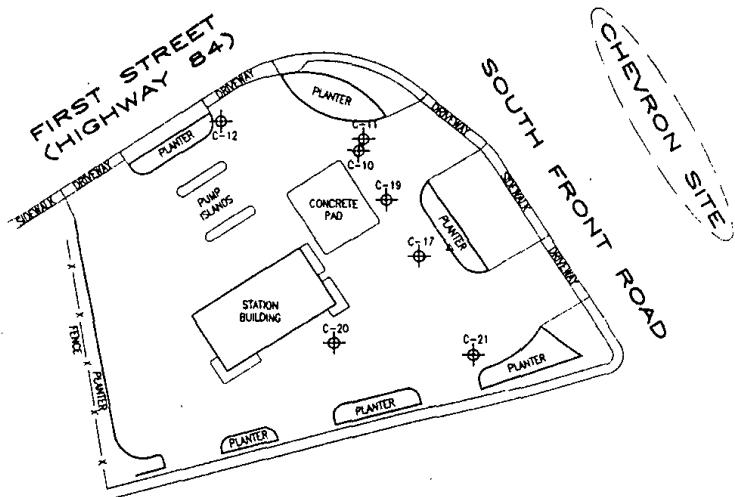
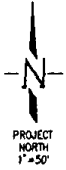
Monitoring Well C-21

Project Chevron - Livermore Owner Chevron USA Products Company
 Location 4904 South Front Street, Livermore, CA Proj. No. 02070 0004

Depth (ft.)	Well Completion	PID (ppm)	Sample ID Blow Count/ % Recovery	Graphic Log	USCS Class	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
						24
26		0	C-21 -26.5'			End of boring. Installed groundwater monitoring well.
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						
52						
54						
56						

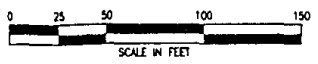
APPENDIX C
WELL SURVEY DATA

Monitoring Well Exhibit
 Prepared for:
 Groundwater Technology, Inc.

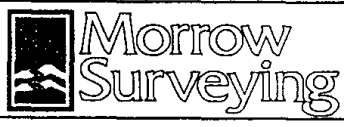


DESCRIPTION	NORTHING	EASTING	ELEV (PVC)	ELEV (BOX)
C-10	1050.1	953.6	520.41	520.64
C-11	1056.4	956.1	519.95	520.47
C-12	1055.0	883.3	518.82	520.03
C-17	995.3	984.0	520.53	521.37
C-19	1024.9	968.0	520.96	521.16
C-20	950.0	941.6	520.67	521.37
C-21	944.4	1012.0	519.69	520.18

GRID IS ARBITRARY.
 ELEVATIONS BASED ON DATA PROVIDED BY GROUNDWATER TECHNOLOGY, INC



Chevron Station No. 9-1924
 4904 South Front Road
 Livermore
 Alameda County
 California



1450 Harbor Boulevard
 Suite D
 West Sacramento, CA 95691
 (916) 372-8124

Date: October, 1995
 Scale: 1"=50'
 Sheet 1 of 1
 Revisions:
 Book: 402/22
 Drawing No. 2730-041

APPENDIX D

LABORATORY REPORTS AND CHAIN-OF-CUSTODY MANIFESTS



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Midwest Region

4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

October 16, 1995

Jason Fedota
GROUNDWATER TECHNOLOGY, INC
4057 Port Chicago Highway
Concord, CA 94520

RE: GTEL Client ID: 020700004
Login Number: W5100074
Project ID (number): 020700004
Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

Dear Jason Fedota:

Enclosed please find the analytical results for the samples received by GTEL Environmental Laboratories, Inc. on 10/05/95 under Chain-of-Custody Number(s) 33026.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes. This report is to be reproduced only in full.

GTEL is certified by the Department of Health Service under Certification Number 1845.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Justin Ward, Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

GTEL Client ID: 020700004

Login Number: W5100074

Project ID (number): 020700004

Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

Method: EPA 8020

Matrix: Low Soil

GTEL Sample Number	W5100074-02	W5100074-07	W5100074-11	--
Client ID	C-20-10	C-21-10	COMP	--
Date Sampled	10/02/95	10/02/95	10/02/95	--
Date Analyzed	10/12/95	10/12/95	10/12/95	--
Dilution Factor	1.00	1.00	1.00	--

Analyte	Reporting		Concentration:Wet Weight			
	Limit	Units				
Benzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	--
Toluene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	--
Ethylbenzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	--
Xylenes (total)	5.0	ug/kg	< 5.0	< 5.0	< 5.0	--
BTEX (total)	--	ug/kg	--	--	--	--
TPH as Gasoline	1000	ug/kg	< 1000	< 1000	< 1000	--
Percent Solids	--	%	84.6	87.1	87.3	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 1.

GTEL Client ID: 020700004
Login Number: W5100074
Project ID (number): 020700004
Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Low Soil

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

GTEL Client ID: 020700004

QUALITY CONTROL RESULTS

Login Number: W5100074

Volatile Organics

Project ID (number): 020700004

Method: EPA 8020

Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

Matrix: Low Soil

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020	Acceptability Limits:		43-136%
101295GC4-1	CV101295204	Calibration Verifi	67.9
101295GC4-3	BL1012954	Method blanks low	64.7
101295GC4-4	MS10013303	Matrix Spike	68.8
101295GC4-5	MD10013303	Matrix Spike Dupli	68.5
--	10007402	C-20-10	62.2
--	10007407	C-21-10	64.4
--	10007411	COMP	64.8

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

GTEL Client ID: 020700004

QUALITY CONTROL RESULTS

Login Number: W5100074

Volatile Organics

Project ID (number): 020700004

Method: EPA 8020

Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

Matrix: Low Soil

Method Blank Results

QC Batch No: 101295GC4-3

Date Analyzed: 12-OCT-95

Analyte	Method: EPA 8020	Concentration: ug/kg
Benzene	< 1.00	
Toluene	< 2.00	
Ethylbenzene	< 2.00	
Xylenes (Total)	< 4.00	
TPH as Gasoline	< 100	

Notes:

GTEL Client ID: 020700004
 Login Number: W5100074
 Project ID (number): 020700004
 Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

QUALITY CONTROL RESULTS

Volatile Organics
 Method: EPA 8020
 Matrix: Low Soil

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020	Units:ug/L	QC Batch:101295GC4-1		
Benzene	20.0	18.9	94.5	77-123%
Toluene	20.0	18.6	93.0	77.5-122.5%
Ethylbenzene	20.0	19.9	99.5	63-137%
Xylenes (Total)	60.0	59.9	99.8	85-115%
TPH as Gasoline	500	526	105.2	80-120%

Notes:

QC check source: Supelco #LA12389

GTEL Client ID: 020700004
 Login Number: W5100074
 Project ID (number): 020700004
 Project ID (name): CHEVRON/9-1924/4904 SOUTHFRONT RD/LIVERMORE/CA

QUALITY CONTROL RESULTS

Volatile Organics
 Method: EPA 8020
 Matrix: Low Soil

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID: W5100133-03		MS ID: MS10013303		MSD ID: MD10013303						
Analysis Date: 12-OCT-95		12-OCT-95		12-OCT-95						
Units: mg/kg	Sample	Spikes Added		MS	MS	MSD	MSD	Acceptability Limits		
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	% Rec.
Benzene	5.0 (0.162)	76.5	78.7	67.3	87.8	70.4	89.2	1.60	22.6	61.1-125.9
Toluene	5.0 (0.0970)	76.5	78.7	62.5	81.6	65.5	83.1	1.80	27.5	59.8-124.6
Ethylbenzene	5.0 (0.0370)	76.5	78.7	64.1	83.7	67.2	85.3	1.90	26.4	57.5-138
Xylenes (Total)	5.0 (0.363)	229	236	194	84.6	203	85.9	1.50	26.7	54.3-137

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.



Chevron

December 3, 1998

Chevron Products Company
 6001 Bollinger Canyon Road
 Building L, Room 1110
 PO Box 6004
 San Ramon, CA 94583-0904

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

Philip R. Briggs
 Project Manager
 Site Assessment & Remediation
 Phone 925 842-9136
 Fax 925 842-8370

Re: Chevron Service Station #9-1924
4904 Southfront Road
Livermore, California

Dear Ms. Chu:

Enclosed is the Fourth Quarter Groundwater Monitoring Report for 1998, prepared by our consultant Blaine Tech Services, Inc. for the above noted site. The groundwater samples were analyzed for the presence of TPH-g, BTEX, MtBE constituents. Monitoring wells C-6, C-9, C-11 and C-14 and C-17 are sampled semi-annually (2nd and 4th quarters), while wells C-2, C-5, C-19 and C-20 are sampled annually (2nd quarter). Monitoring wells C-1, C-3, C-7, C-8, C-10, C-12, C-13, C-15, C-16 and C-18 have been discontinued from sampling. This change in the sampling frequency was agreed to in your letter of January 6, 1997. All wells are measured for groundwater depth.

Monitoring well C-9 showed a decline in the benzene constituent from the previous sampling event, while wells C-6 and C-17 showed a slight increase. There was insufficient water in well C-14 to take a sample.

The concentrations of all the constituents increased significantly in monitoring well C-11 from the previous sampling event. This could be an anomaly, however Chevron will resample well C-11 and well C-1, which is upgradient of C-11, to confirm this. This sampling event will occur in the first quarter of 1999. At the same time, MtBE will be confirmed by EPA Method 8260.

Depth to groundwater varied from 10.85 feet to 13.09 feet below grade with a direction of flow northwesterly.

2611128 SS X BP

QM X TRANSMITTAL

3 4 5 C

Ms. Eva Chu
Chevron Service Station #9-1924
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Chevron will continue to monitor the wells in the sampling frequency as noted above.
Please note, that I have assumed the responsibility of this site from Ms. Tammy Hodge.

If you have any questions, call me at (925) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY



Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Mr. Bill Scudder, Chevron

Mr. Scott Hooton
BP Oil Company
295 SW 41st Street
Renton, WA 98055-4931

Mr. Gary Stumpf
Mobil Oil
3225 Gallows Road, Rm. 6W116
Fairfax, Virginia 22037

Mr. Larry Silva
Tosco NW
601 Union Street, Suite 2500
Seattle, WA 98101

Mr. Chuck Headlee
RWQCB-San Francisco Area
2101 Webster Street, Suite 500
Oakland, CA 94612

Dave D—
please call Phil
Briggs and give him
the correct contact
info for Tosco.

Dave
~~on vacation until 1-11-99~~
OK