Chevron

February 7, 1996

Chevron U.S.A. Products Company
6001 Bollinger Canyon Rd., Bldg. L
P.O. Box 5004
San Ramon, CA 94583-0804

Mark A. Miller
SAR Engineer
Phone No. 510 842-8134
Fax No. 510 842-8252

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

Re: Chevron Service Station #9-0290
1802 Webster Street, Alameda, CA

Dear Ms. Chu:

Enclosed is the Well Installation Report dated December 29, 1995, prepared by our consultant Gettler-Ryan, Inc. for the above referenced site. Four soil borings were advanced and completed as ground water monitor wells (B-10, B-11, B-12, and B-13). This work was done to characterize dissolved ground water concentrations down gradient of the underground storage tanks and pump islands. This investigation also focused on providing additional information regarding whether dissolved hydrocarbons could have migrated through ground water to nearby off-site utility trenches.

Soil samples collected were submitted to Sequoia Analytical for analysis. Laboratory results indicate that low concentrations of TPH-G, BTEX, and TPH-D were detected in nearly all samples collected. Concentrations of these constituents in a sample collected from B-11 were somewhat higher.

Ground water samples will be collected from the new wells in conjunction with the regularly scheduled quarterly event. If the results of the monitoring report indicate that the dissolved hydrocarbon plume in ground water is limited and defined, then monitoring reductions may be proposed.

If you have any questions or comments, please feel free to contact me at (510) 842-8134.

Sincerely,
CHEVRON U.S.A. PRODUCTS COMPANY

Mark A. Miller
Site Assessment and Remediation Engineer

Enclosure

cc: Ms. Y.M. Byeman

Ms. Louise Van De Deere
Housing Authority of the City of Alameda
701 Atlantic Avenue
Alameda, CA 94501

GETTLER-RYAN INC.

WELL INSTALLATION REPORT

for

Chevron Service Station #9-0290
1802 Webster Street
Alameda, California

Project No. 5280.01

Prepared for:

Chevron USA Products Company
P.O. Box 5004
San Ramon, California 94583

Prepared by:

Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

Barbara Sieminski
Project Geologist

Stephen J. Carter
Senior Geologist
R.G. #5577

REGISTERED GEOLOGIST
STEPHEN J. CARTER
No. 5577
STATE OF CALIFORNIA

December 29, 1995

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EXECUTIVE SUMMARY

Gettler-Ryan Inc. (G-R) presents this report of the subsurface investigation performed at Chevron Service Station #9-0290 located at 1802 Webster Street in Alameda, California. Four groundwater monitoring wells (B-10 through B-13) were installed at the site to further assess the absence or presence of dissolved hydrocarbons in soil and groundwater and to verify the groundwater flow direction and gradient beneath the site.

Shallow groundwater was encountered at depths of approximately 6.4 to 7 feet below ground surface (bgs) in borings B-10, B-12 and B-13, and at a depth of approximately 1 foot bgs in boring B-11. Based on groundwater monitoring data collected on November 29, 1995, groundwater beneath the site flows toward the northeast at a gradient of 0.003 to 0.01 ft/ft.

Total petroleum hydrocarbons as gasoline (TPHg) were detected at concentrations ranging from 69 parts per million (ppm) to 1,900 ppm in soil samples collected from borings B-10 through B-12 but were not detected in the sample collected from boring B-13. Total petroleum hydrocarbons as diesel (TPHd) were detected in soil samples collected from borings B-10 through B-13 at concentrations ranging from 1.1 ppm to 330 ppm. Methyl t-butyl ether (MTBE) was detected in samples collected from borings B-11 (at 2 feet bgs) and B-12 at concentrations of 17 ppm and 8.2 ppm, respectively, but was not detected in soil samples collected from borings B-10 and B-13. Benzene was detected at concentration of 0.75 ppm in the sample from boring B-10 but was not detected in soil samples from borings B-11 through B-13.

WELL INSTALLATION REPORT

for

Chevron Service Station #9-0290

1802 Webster Street

Alameda, California

Project No. 5280.01

1.0 INTRODUCTION

G-R is pleased to present this report documenting the results of the installation of four on-site groundwater monitoring wells at the above-referenced location (Figure 1). The wells were installed to further assess subsurface conditions beneath the site. The work for this phase of the investigation was performed as specified in the G-R *Well Installation* workplan dated August 11, 1995, approved by the Alameda County Health Care Services Agency (ACHCSA) in the letter dated October 4, 1995. The scope of work included: drilling four on-site soil borings (B-10 through B-13) and installing groundwater monitoring wells in these borings; collecting soil samples from the borings for chemical analysis; developing wells B-10 through B-13; surveying wellhead elevations of the newly installed wells; arranging for disposal of the waste materials; and preparing a report documenting the work.

2.0 SITE DESCRIPTION

2.1 General

Chevron Station 9-0290 is an operating service station located at the northeastern corner of the intersection of Webster Street and Buena Vista Avenue in Alameda, California. Site topography is flat at the elevation of approximately 12 feet above mean see level. Four 10,000-gallon gasoline underground storage tanks (USTs) are located in the common pit in the southwestern portion of the site. A waste oil UST is located south of the station building. A former waste oil UST was located near the southeastern corner of the gasoline UST pit. Locations of the USTs and other pertinent site features are shown on Figure 2.

2.2 Geology and Hydrogeology

The subject site is located within the California Coast Ranges. The Coast Ranges have a Franciscan basement composed of graywackes, limestone, shale and radiolarian chert[1]. Locally, the site is generally underlain by sand and silty sand.

The nearest surface waters are the Oakland Inner Harbor approximately 3/4 mile to the north and the San Francisco Bay approximately 2/3 mile to the south. Historical groundwater monitoring data from this site indicates,

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[1] Norris, Robert M. and Webb, Robert W., 1990, *Geology of California*, John Wiley and Sons, 537 pages.

groundwater is encountered at approximately 4 to 8 feet bgs. Historical monitoring data indicate that the groundwater flow direction beneath the site is northwesterly.

3.0 SITE HISTORY

The following site history was obtained from Chevron project files supplied to G-R.

As a result of an apparent 50 gallon regular gasoline leak from a 10,000-gallon underground storage tank (UST), six monitoring wells (B-1 through B-6) were installed at the site in January 1982 by J.H. Kleinfelder and Associates (K&A) of Walnut Creek, California under the direction of I.T. Enviroscience (ITE) of Concord, California. The tank was removed from service after a hole was found in the tank near the tank fill pipe. Although groundwater samples were collected from all six wells for visual inspection on January 21, 1982, no soil or groundwater samples were collected for chemical analysis. The combustible gas concentration and percent of lower explosive limit (LEL) was measured in each well. A sheen was not observed on any of the groundwater samples. A groundwater sampling program was initiated at the site in September 1991.

On September 19, 1991, approximately 1,400 gallons of diesel fuel were inadvertently pumped into tank backfill well A-1 during tank testing activities. Approximately 1,600 gallons of separate-phase hydrocarbons (SPH) were removed from the well immediately after the release was discovered. A weekly SPH recovery program established by Pacific Environmental Group, Inc. (PEG) of Santa Clara, California removed an additional 346 gallons of diesel SPH from well A-1 between September 1991 and July 1992. Since more SPH was recovered than apparently spilled, the SPH was analyzed to identify the various constituents. Laboratory analysis showed that the SPH consisted of 95.9 percent lube oil, 2.5 percent diesel fuel and 1.6 percent gasoline. A July 1992 letter from Chevron to Ms. Juliet Shin of the ACHCSA noted that the bulk of the diesel fuel had apparently been recovered. Laboratory results suggested that waste oil had also been inadvertently disposed into well A-1 because waste oil was also being recovered during weekly bailing. Since very small volumes of SPH were being recovered during bailing events in early 1992, the bailing frequency was reduced to biweekly in January 1992, and then to monthly in February 1992.

The USTs were removed and replaced in early 1982. A gauge stick hole was observed in the bottom of the regular gasoline tank during removal. A new diesel tank and new waste oil tank were also installed in the same excavation as the gasoline tanks. During tank replacement, monitoring well B-2 was destroyed to accommodate the new tanks and tank backfill wells A-1 and A-2 were installed within the new UST excavation.

Between March 29 and 30, 1993, Groundwater Technology of Concord, California (GTI) installed groundwater monitoring wells B-7, B-8 and B-9. Analytic results from soil samples collected during drilling activities showed

TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations below detection limits. Groundwater samples were collected in April 1993 from eight site monitoring wells and analyzed for TPHg, TPHd and BTEX. TPHg was detected in wells B-1, B-3 and B-4 at 13,000, 18,000 and 5,700 parts per billion (ppb), respectively. A-1 and A-2 had SPH thicknesses of 0.6 and 0.18 feet, respectively.

SPH were removed on a weekly basis from both tank backfill wells A-1 and A-2 until April 1994 when well A-2 was abandoned. Weekly SPH removal is still being conducted in well A-1. Due to the SPH viscosity, the use of absorbent pads to remove the SPH in wells A-1 and A-2 began in June 1993. Concentrations of TPHg, TPHd and BTEX have been consistently low or non-detect in all site wells for the last four quarters except for source area wells.

4.0 FIELD WORK

Field work at the site was conducted in accordance with the G-R Field Methods and Procedures included in the G-R workplan, and the Site Safety Plan dated September 5, 1995. Well installation permit #95716 was obtained from the Zone 7 Water Agency prior to drilling at the site. A copy of the permit is included in Appendix A.

4.1 Drilling Activities

On October 31, 1995, G-R personnel observed and documented the drilling of four on-site soil borings (B-10 through B-13) by Bay Area Exploration Services, Inc., of Cordelia, California (C57 #522125). Boring locations are shown on Figure 2. Borings B-10 through B-13 were drilled to 16.5 feet bgs using eight-inch hollow-stem augers driven by a truck-mounted CME-55 drill rig. Soil samples were collected from the borings at a minimum of five-foot intervals. Soil samples were field screened during drilling for the presence of volatile organic compounds using a photoionization detector (PID). PID readings are presented on the boring logs (Appendix B).

Groundwater monitoring wells were constructed in borings B-10 through B-13. The wells were constructed using two-inch diameter, 0.010-inch machine-slotted Schedule 40 PVC screen. A sand pack of #2/12 graded sand was placed across the entire screen interval, extending approximately 1/2 to 1 foot above the top of the screen. Each well was then sealed with 1/2 foot of hydrated bentonite chips followed by neat cement. Well construction details are presented on the boring logs in Appendix B.

Drill cuttings were stockpiled on-site, placed on and covered with plastic sheeting. After completion of well installation, four samples for disposal characterization were collected from the stockpiled soil and submitted to the laboratory for compositing and analysis as sample SP-(A-D)comp. On November 30, 1995, the soil stockpile was

removed from the site and transported to BFI Landfill in Livermore by Integrated Waste Management of Milpitas, California.

4.2 Well Development

On November 3, 1995, groundwater monitoring wells B-10 through B-13 were developed by G-R personnel using a vented surge block and hand-bailing. Groundwater evacuated during well development activities was transported to the Chevron Refinery in Richmond, California. Copies of the Well Development Data Field Sheets are included in Appendix C.

4.3 Wellhead Survey

On November 9, 1995, wells B-10 through B-13 were surveyed relative to mean sea level by Virgil Chavez, licensed land surveyor #6323 of Vallejo, California. The survey report is included in Appendix D and the survey data is summarized in Table 2.

4.4 Groundwater Monitoring

Quarterly monitoring and sampling of site groundwater monitoring wells was performed on November 29, 1995, by Blaine Tech Services Inc. of San Jose, California (Blaine Tech). Groundwater monitoring data are presented in Table 2 and a copy of the Blaine Tech field monitoring data sheet is included in Appendix C. Chemical analytical data will be reported in the Blaine Tech fourth quarter 1995 groundwater monitoring report.

4.5 Laboratory Analyses

Soil samples collected during this investigation were delivered under chain-of-custody to Sequoia Analytical of Redwood City, California (ELAP #1210). Selected soil samples from the well borings were analyzed for TPHg, BTEX, MTBE and TPHd by Environmental Protection Agency (EPA) Method 8015Mod/8020. Composite soil stockpile sample SP-(A-D)comp was analyzed for TPHg and BTEX using the methods described above. Copies of the laboratory analytical reports and chain-of-custody records for soil samples are included in Appendix F. G-R is not responsible for laboratory omissions or errors.

5.0 RESULTS

5.1 Subsurface Conditions

Soil encountered in borings B-10 through B-13 consisted of fine to medium sand. Groundwater was encountered in borings B-10, B-12 and B-13 at depths of approximately 6.4 to 7 feet bgs. Groundwater was encountered in boring B-11 at a depth of approximately 1 foot bgs. Detailed descriptions of the subsurface materials encountered during drilling are presented on the boring logs in Appendix B.

Using groundwater monitoring data collected by Blaine Tech on November 29, 1995, G-R has prepared a potentiometric map for the site (Figure 2). Based on these data, shallow groundwater beneath the site appears to flow toward the northeast at an approximate gradient of 0.003 to 0.01 ft/ft.

5.2 Analytical Results

Petroleum hydrocarbons were detected in all samples analyzed. TPHg were detected at concentrations ranging from 69 ppm to 1,900 ppm in soil samples collected from borings B-10 through B-12 but were not detected in the sample collected from boring B-13. TPHd were detected in soil samples collected from borings B-10 through B-13 at concentrations ranging from 1.1 ppm to 330 ppm. MTBE was detected in the soil samples collected from borings B-11 (at 2 feet bgs) and B-12 at concentrations of 17 ppm and 8.2 ppm, respectively, but was not detected in soil samples collected from borings B-10 and B-13. Benzene was detected at concentration of 0.75 ppm in the sample from boring B-10 but was not detected in soil samples from borings B-11 through B-13.

TPHg were detected in stockpile sample SP-(A-D)comp at concentration of 55 ppm. Benzene and toluene were not detected in the stockpile sample but ethylbenzene and xylenes were detected at concentrations of 0.61 ppm and 1.9 ppm, respectively. Analytical results of soil samples are summarized in Table 1.

Table 1. Soil Analytical Results - Chevron Service Station #9-0290, 1802 Webster Street, Alameda, California

Sample ID	Depth (ft)	Date	Analytic Method	TPHg	B	T	E	X	TPHd	MTBE
				<--------			ppm			-------->
B10-6	6	10/31/95	8015/8020	69	0.75	<0.10	0.78	0.78	330	<0.50
B11-2	2	10/31/95	8015/8020	1,900	<2.5	<2.5	39	150	77	17
B11-5	5	10/31/95	8015/8020	210	<0.50	<0.50	2.1	6.4	28	<2.5
B12-6	6	10/31/95	8015/8020	520	<1.0	<1.0	2.9	6.6	69	8.2
B13-6	6	10/31/95	8015/8020	<1	<0.0050	<0.0050	<0.0050	<0.0050	1.1	<0.025
SP-(A-D)comp	---	10/31/95	8015/8020	55	<0.10	<0.10	0.61	1.9	---	---

EXPLANATION:

TPHg = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
TPH(d) = Total Petroleum Hydrocarbons as diesel
MTBE = Methyl t-Butyl Ether
ppm = Parts per million
--- = Not analyzed/not applicable

ANALYTICAL METHODS:

8015 = EPA Method 8015Mod for TPHg and TPHd
8020 = EPA Method 8020 for BTEX and MTBE

ANALYTICAL LABORATORY:

Sequoia Analytical of Redwood City, California (ELAP #1210).

Sample Identification: B13-6
- B13-6 — Soil sample from boring
- B13-6 — Boring number
- B13-6 — Sample depth

Table 2. Water Level Data - Chevron Service Station #9-0290, 1802 Webster Street, Alameda, California

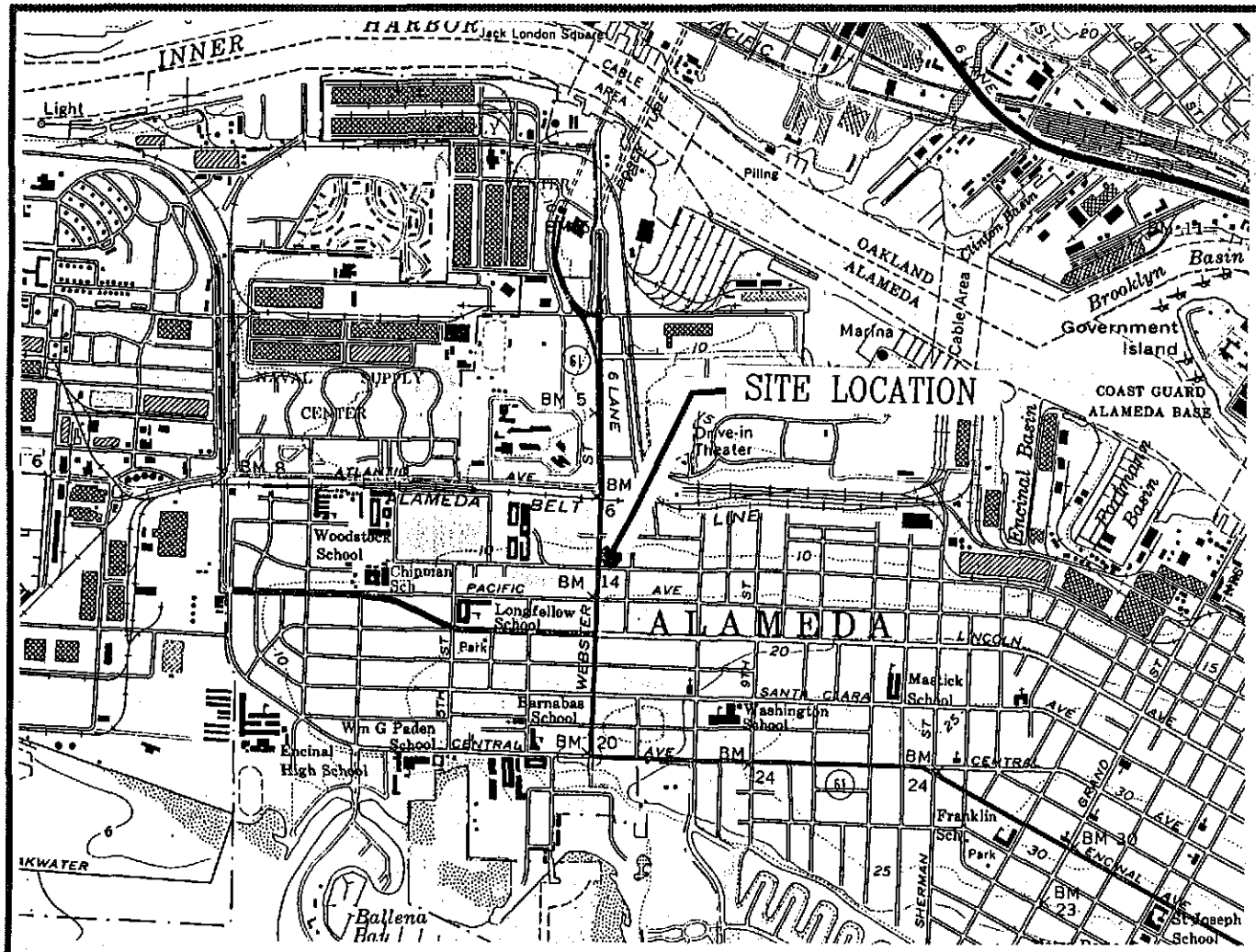
Well ID/ TOC (ft)	Date	DTW (ft)	Product Thickness	GWE (msl)
A-1/ 11.56	11/29/95	6.38	0.08	5.24*
B-1/ 12.12	11/29/95	5.85	0	6.27
B-5/ 10.18	11/29/95	5.21	0	4.97
B-6/ 11.97	11/29/95	6.00	0	5.97
B-10/ 11.42	11/29/95	6.51	0	4.91
B-11/ 11.98	11/29/95	5.90	0	6.08
B-12/ 11.16	11/29/95	6.01	0	5.15
B-13/ 11.17	11/29/95	5.91	0	5.26

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Groundwater elevation
msl = Measurements referenced relative to mean sea level
* = Groundwater elevation corrected for product presence (TOC - DTW + (Product thickness x 0.8)

NOTES:

Top of casing elevations of wells B-10 through B-13 were surveyed by Virgil Chavez, LS #6323, on November 8, 1995. Wellhead elevations for wells A-1, B-1, B-5 and B-6 were obtained from Blaine Tech Services, Inc. Groundwater Sampling Report # 950501-V-1.



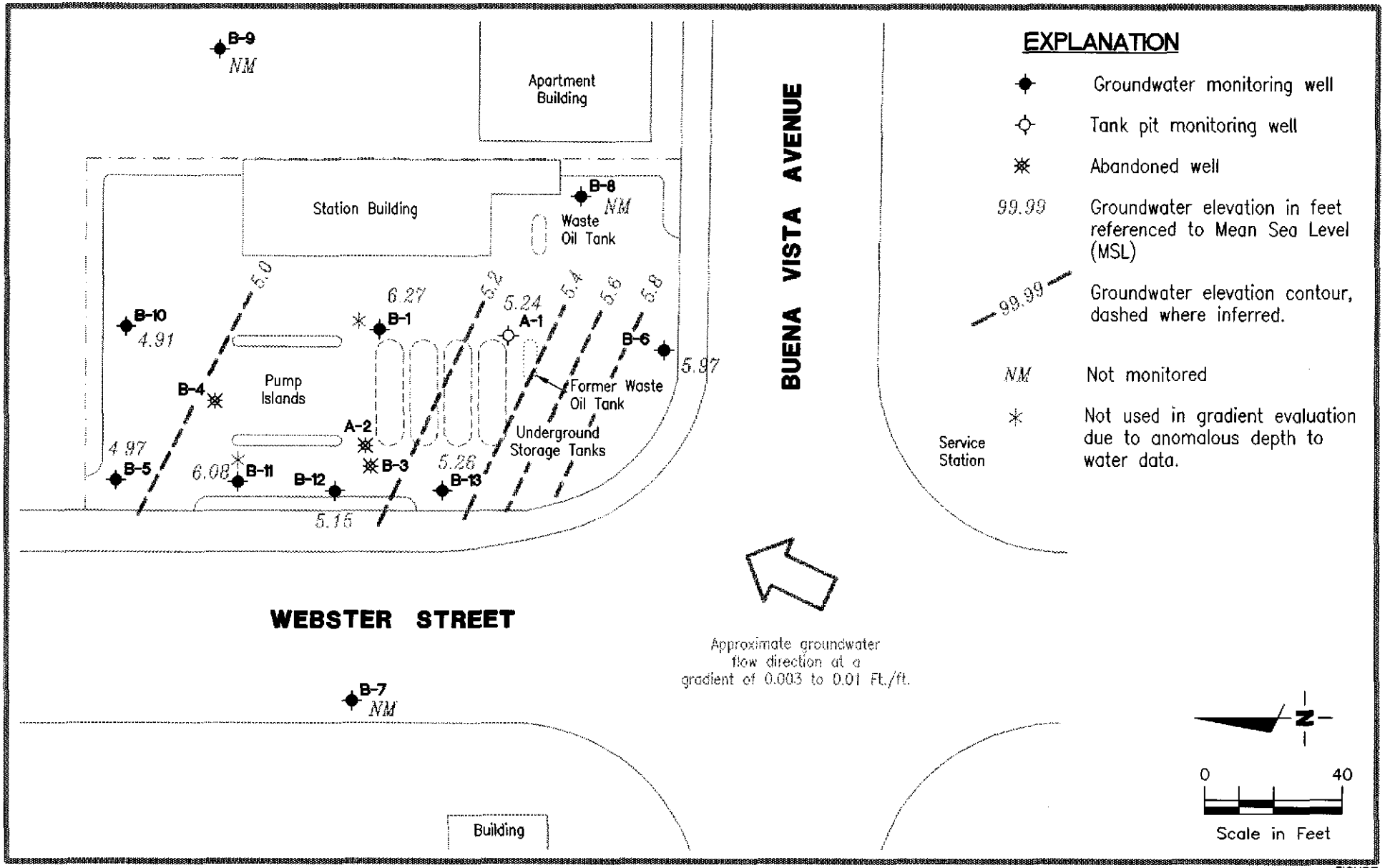
Base Map: USGS Topographic Map

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

VICINITY MAP
Chevron Service Station No. 9-0290
1802 Webster Street
Alameda, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5280		August, 1995	



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

POTENTIOMETRIC MAP
Chevron Service Station No. 9-0290
1802 Webster Street
Alameda, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5280.01		November 29, 1995	

APPENDIX A

WELL INSTALLATION 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

LOCATION OF PROJECT 1802 Webster Street
Alameda, California

CLIENT
Name Chevron USA Products Co
Address P.O. Box 5004 Voice (510) 842-9500
City San Ramon, CA Zip 94583-0804

APPLICANT
Name Gettler-Ryan Inc
Fax (510) 551-7555
Address 6747 Sierra Ct, Suite J Voice (510) 551-7888
City Dublin, CA Zip 94568

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	V	Well Destruction	___

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

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger Hollow Stem
Cable ___ Other ___

DRILLER'S LICENSE NO. C57# 522125

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 15 ft.
Surface Seal Depth 3 ft. Number 4

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

ESTIMATED STARTING DATE 10/30/95
ESTIMATED COMPLETION DATE 10/31/95

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

APPLICANT'S SIGNATURE Barbara Sieminski Date 10/20/95

FOR OFFICE USE

PERMIT NUMBER 95716
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(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.
3. 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.

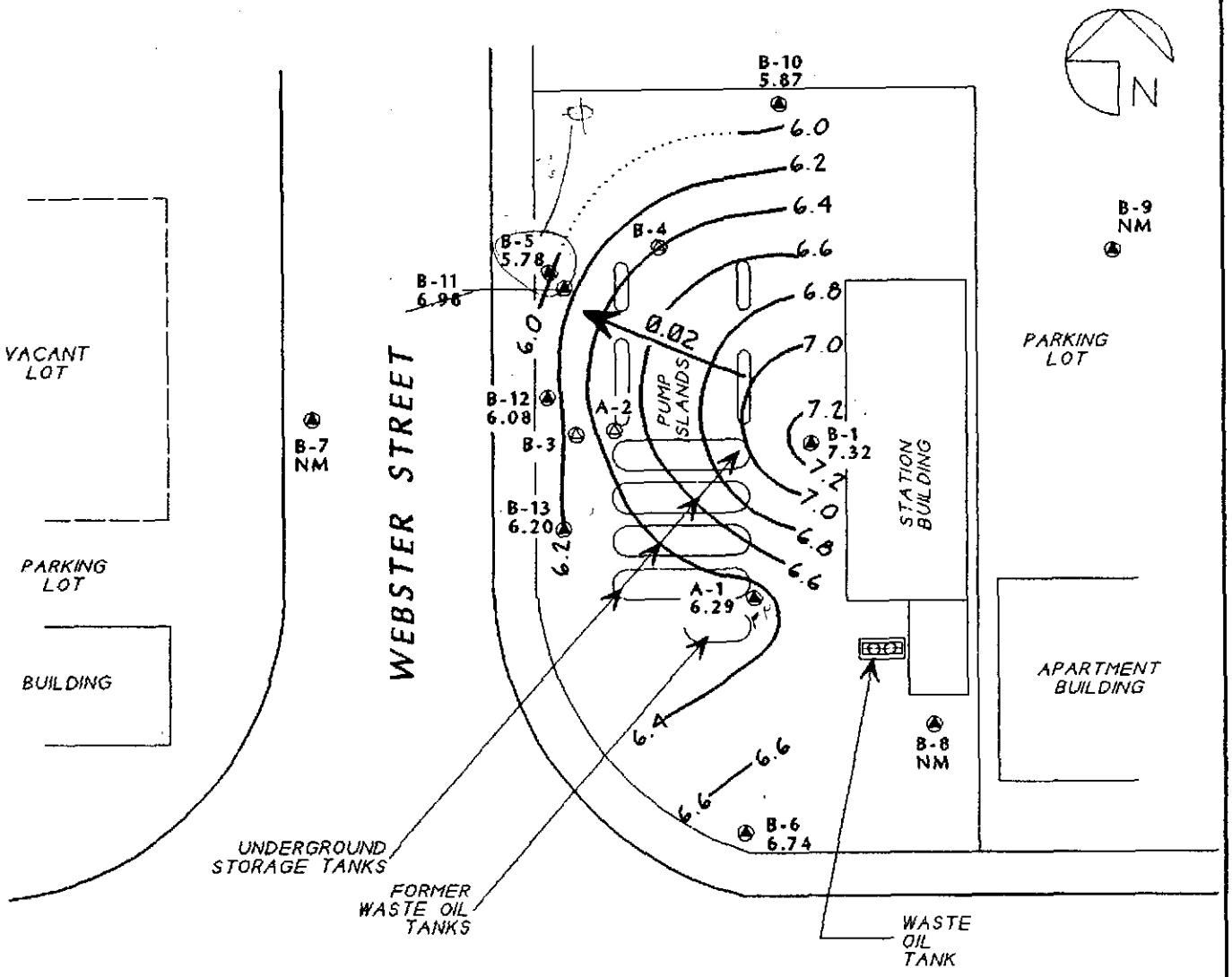
E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 24 Oct 95
Wyman Hong

91992

APPENDIX B

BORING LOGS



EXPLANATION

B-6	MONITORING WELL LOCATION AND WELL NUMBER
B-4	ABANDONED MONITORING WELL LOCATION AND WELL NUMBER
6.74	GROUND-WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
NM	NOT MEASURED
~~6.98~~	GROUND-WATER ELEVATION NOT USED FOR CONTOURING
6.4	GROUND-WATER ELEVATION CONTOUR IN FEET ABOVE MEAN SEA LEVEL
0.02	APPROXIMATE DIRECTION OF GROUND-WATER FLOW. GRADIENT INDICATED IN FEET / FEET

0 40
FEET

REGISTERED GEOLOGIST
JEREMY C. WIRE
NO. 6[illegible]
Certified
Hydrogeologist
STATE OF CALIFORNIA

TITLE : GROUND-WATER ELEVATION CONTOUR MAP - MAY 8, 1996

LOCATION : CHEVRON SERVICE STATION No.: 9-0290
1802 WEBSTER STREET, ALAMEDA, CALIFORNIA

SOURCE :CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

GEOCONSULTANTS, INC
SAN JOSE, CALIFORNIA
Project No. G758-09
DRAWING NO. CHEVRON\CH-0290\W050896

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 15% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

LL - Liquid Limit (%)

PI - Plastic Index (%)

PID - Volatile Vapors in ppm

MA - Particle Size Analysis

2.5 YR 6/2 - Soil Color according to Munsell Soil Color Charts (1975 Edition)

5 GY 5/2 - GSA Rock Color Chart

- No Soil Sample Recovered
- "Undisturbed" Sample
- Bulk or Classification Sample
- First Encountered Ground Water Level
- Piezometric Ground Water Level

Penetration - Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs

Unified Soil Classification - ASTM D 2488-85 and Key to Test Data

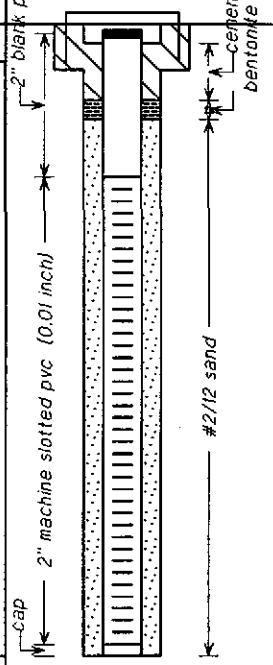
Gettler-Ryan, Inc.

Log of Boring B-10

PROJECT: *Chevron SS# 9-0290*	LOCATION: *1802 Webster Street, Alameda, CA*
G-R PROJECT NO.: *5280.01*	SURFACE ELEVATION: *11.42 feet MSL*
DATE STARTED: *10/31/95*	WL (ft. bgs): *7.0* DATE: *10/31/95* TIME: *15:05*
DATE FINISHED: *10/31/95*	WL (ft. bgs): *7.1* DATE: *10/31/95* TIME: *16:10*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
					PAVEMENT - asphalt over baserock.
				SP	SAND (SP) - very dark grayish brown (10YR 3/2), damp, loose; 100% fine sand.
5					Color change to light olive brown (2.5Y 5/4), becomes moist; 100% fine to medium sand.
	179	3	B10-6		Color change to dark greenish gray (5GY 4/1), hydrocarbon odor.
	172	21	B10-7		Saturated, medium dense at 7 feet.
					95% fine to medium sand, 5% clay at 8 feet.
10	2.8	30	B10-11		Color change to olive (5Y 5/3) mottled gray (5Y 5/1) and light olive brown (2.5Y 5/6).
15	0	18	B10-16		Color change to light olive brown (2.5Y 5/6).
					Bottom of boring at 16.5 feet, 10/31/95.
20					(* = converted to equivalent standard penetration blows/ft.)
25					
30					
35					

WELL DIAGRAM



JOB NUMBER: *5280.01*

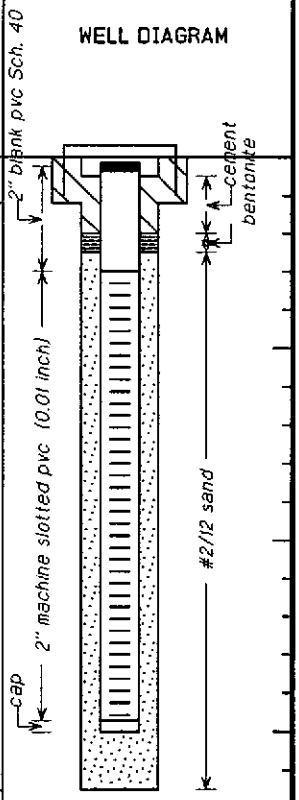
Gettler-Ryan, Inc.

Log of Boring B-11

PROJECT: *Chevron SS# 9-0290*	LOCATION: *1802 Webster Street, Alameda, CA*
G-R PROJECT NO. : *5280.01*	SURFACE ELEVATION: *11.98 feet MSL*
DATE STARTED: *10/31/95*	WL (ft. bgs): *1.0* DATE: *10/31/95* TIME: *11:40*
DATE FINISHED: *10/31/95*	WL (ft. bgs): *4.5* DATE: *10/31/95* TIME: *13:40*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							PAVEMENT – concrete over pea gravel.
	110	NA	B11-2			SP	SAND (SP) – black (2.5Y 2/0), saturated, loose; 100% fine sand; hydrocarbon odor.
5	54	4	B11-5				Color change to dark greenish gray (5GY 4/1); 95% fine to medium sand, 5% clay.
10	31	22	B11-11				Color change to dark olive (5Y 4/3) mottled gray (5Y 5/1); becomes medium dense; 100% fine to medium sand; roots.
15	5.9	22	B11-16				Color change to light olive brown (2.5Y 5/6) mottled olive (5Y 5/4).
							Bottom of boring at 16.5 feet, 10/31/95.
20							(* = converted to equivalent standard penetration blows/ft.)
25							
30							
35							

WELL DIAGRAM



JOB NUMBER: *5280.01*

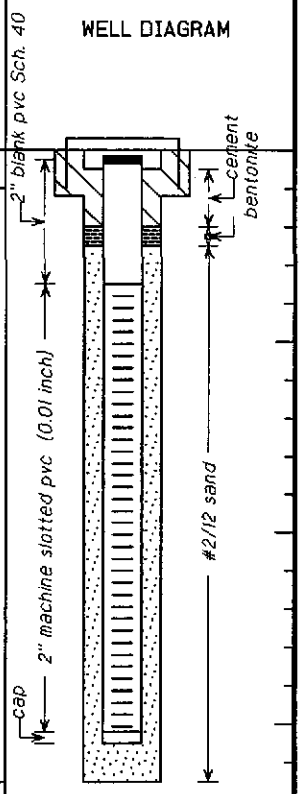
Gettler-Ryan, Inc.

Log of Boring B-12

PROJECT: *Chevron SS# 9-0290*	LOCATION: *1802 Webster Street, Alameda, CA*
G-R PROJECT NO. : *5280.01*	SURFACE ELEVATION: *11.16 feet MSL*
DATE STARTED: *10/31/95*	WL (ft. bgs): *6.4* DATE: *10/31/95* TIME: *14:10*
DATE FINISHED: *10/31/95*	WL (ft. bgs): *6.4* DATE: *10/31/95* TIME: *15:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							PAVEMENT - concrete over pea gravel.
						SP	SAND (SP) - very dark grayish brown (10YR 3/2), damp, loose; 100% fine sand.
							Color change to dark yellowish brown (10YR 4/4) at 4 feet.
5	240	7	B12-6				Color change to dark greenish gray (5GY 4/1; hydrocarbon odor.
							Saturated at 6.4 feet.
10	12	24	B12-11				Color change to grayish brown (2.5Y 5/2) mottled dark yellowish brown (10YR 4/6) and gray (N 5/0); 95% fine to medium sand 5% clay.
15	7.1	25	B12-16				Color change to light olive brown (2.5Y 5/4) mottled gray (N5/0).
							Bottom of boring at 16.5 feet, 10/31/95.
20							(* = converted to equivalent standard penetration blows/ft.)
25							
30							
35							

WELL DIAGRAM



JOB NUMBER: *5280.01*

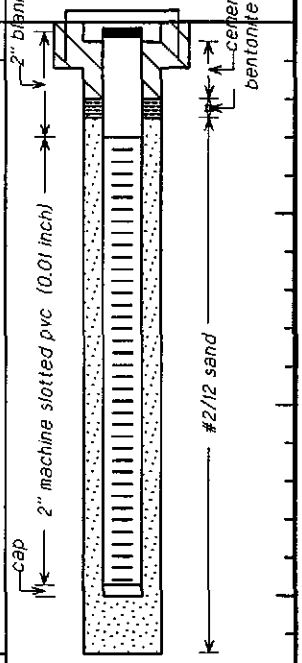
Gettler-Ryan, Inc.

Log of Boring B-13

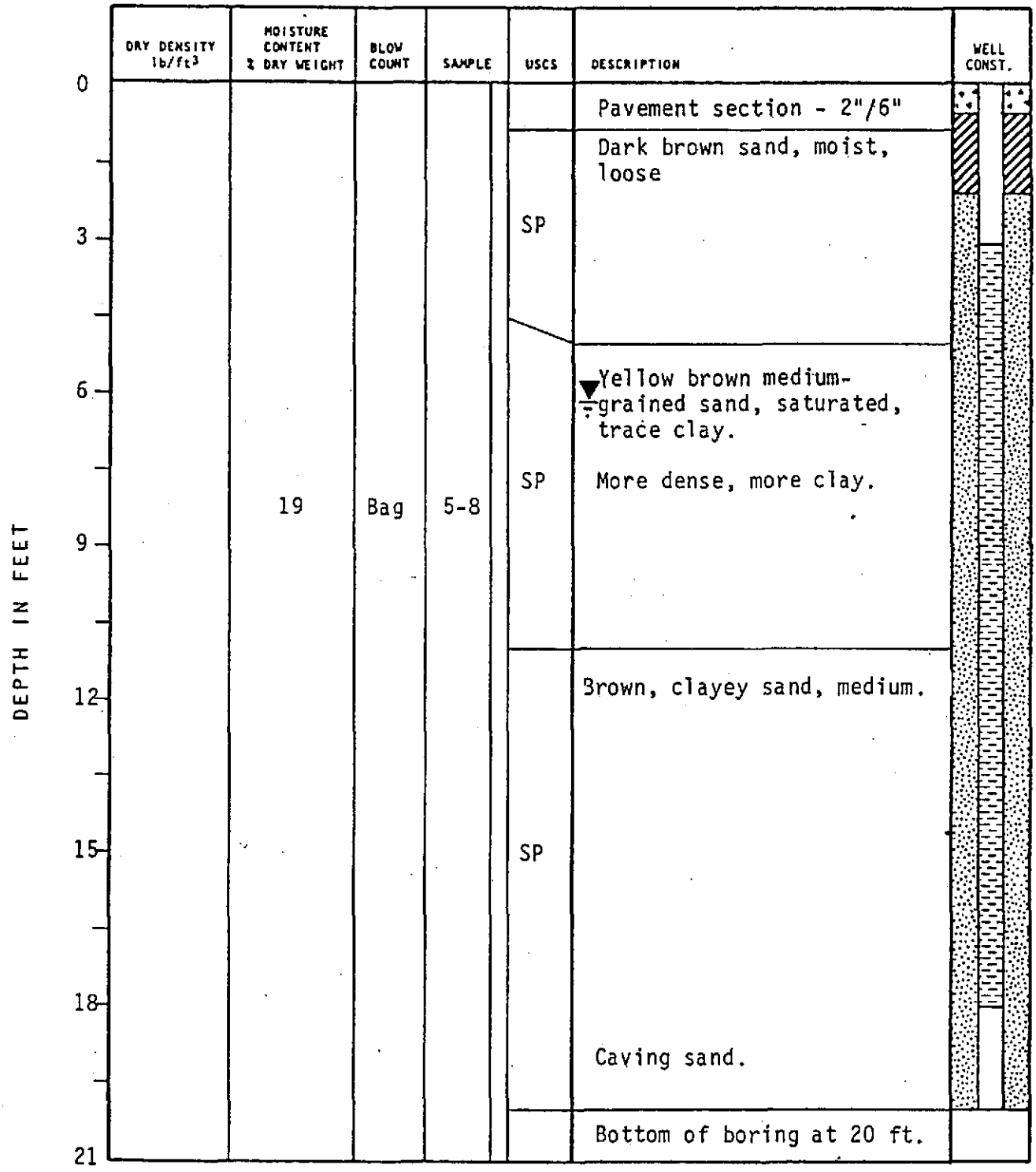
PROJECT: *Chevron SS# 9-0290*	LOCATION: *1802 Webster Street, Alameda, CA*
G-R PROJECT NO. : *5280.01*	SURFACE ELEVATION: *11.17 feet MSL*
DATE STARTED: *10/31/95*	WL (ft. bgs): *6.5* DATE: *10/31/95* TIME: *9:55*
DATE FINISHED: *10/31/95*	WL (ft. bgs): *6.5* DATE: *10/31/95* TIME: *10:35*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							PAVEMENT - asphalt over baserock.
						SP	SAND (SP) - very dark grayish brown (10YR 3/2), damp, loose; 100% fine sand.
5	2.8	5	B13-6				Color change to dark yellowish brown (10YR 4/4), becomes moist, medium dense.
	236	15	B13-7				Color change to dark greenish gray (5GY 4/1); hydrocarbon odor; 95% fine sand, 5% clay.
							Saturated at 7 feet.
10	12.7	22	B13-11				100% fine to medium sand.
15	3.4	23	B13-16				Color change to light olive brown (2.5Y 5/6).
							Bottom of boring at 16.5 feet, 10/31/95.
20							(* = converted to equivalent standard penetration blows/ft.)
25							
30							
35							

WELL DIAGRAM



JOB NUMBER: *5280.01*



J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

IT/ALAMEDA CHEVRON
ALAMEDA, CALIFORNIA

LOG OF BORING NO. B-5

PLATE 6

PREPARED BY: FK DATE: 1/28/82

CHECKED BY: CRN DATE: 1/28/82

PROJECT NO. B-1163-1

APPENDIX C

G-R WELL DEVELOPMENT
AND BLAIN TECH WELL MONITORING FIELD DATA SHEETS

WELL DEVELOPMENT DATA

OB NO. 5280.01

LOCATION Chevron# 9-0290 B-10

AME Guadalupe Sanchez

1802 Webster St Alameda

DATE 11-3-95

TIME	WATER LEVEL	pH	TEMP	CONDUCTIVITY	PURGE	SURGE	AMOUNT REMOVED GALLONS	COMMENTS (odor, color, sediments, etc.)
tart: 1258	6.42					✓		* Surged for 15 min.
~~Stop~~ 1319	7.02	6.9	74.6	1610	✓		2	mild, brown, sandy/clay
tart: 1323	7.94	6.9	73.9	1610	✓		4	" " "
~~Stop~~ 1328	8.73	6.8	73.2	1450	✓		6	" " "
tart: 1333	9.85	6.7	72.9	1210	✓		8	" " "
~~Stop~~ 1336	10.72	6.7	72.6	1120	✓		10	" " "
tart: 1341	11.09	6.8	72.7	1060	✓		12	" " "
~~Stop~~ 1345	11.36	6.7	72.8	1080	✓		14	" " "
tart: 1350	12.01	6.7	72.9	1050	✓		16	" " "
top: 1355	12.10	6.7	72.8	1060	✓		18	" " "

DTW BEFORE DEVELOPMENT 6.42

TOTAL DEPTH BEFORE DEVELOPMENT 16.25

DTW AFTER DEVELOPMENT 12.10

TOTAL DEPTH AFTER DEVELOPMENT 16.3

DEVELOPMENT METHOD

SURGE Block / Stainless Steel Bailer

PURGE Stainless Steel Bailer

INJECTION

AMT. INJECTED

ITIAL WELL VOLUME:

16.25 (TOTAL DEPTH INITIAL) − 6.42 (DTW (INITIAL)) × .17 (CONVERSION FACTOR) = 1.7 (1 WELL VOL)

CONVERSION FACTORS

2" = 0.17
3" = 0.38
4" = 0.66
6" = 1.50

WELL DEVELOPMENT DATA

JOB NO. 5280.01 LOCATION Chevron #9-0290 B-11

NAME Guadalupe Sanchez 1802 Webster ~~Ave~~ St Alameda

DATE 11-3-95

TIME	WATER LEVEL	pH	TEMP	CONDUCTIVITY	PURGE	SURGE	AMOUNT REMOVED GALLONS	COMMENTS (odor, color, sediments, etc.)
Start: 1625						✓		* Surged for 15 min.
Stop: 1645	5.80	7.1	71.4	1000	✓		2	mild, brown, ~~clay~~ sandy/clay
Start: 1649	6.72	7.1	70.9	940	✓		4	" " "
Stop: 1653	7.09	7.2	71.0	690			6	" " "
Start: 1658	7.96		70.8	510	✓		8	" " "
Stop: 1702	8.47	7.2	70.8	490	✓		10	" " "
Start: 1707	9.61	7.2	70.5	450	✓		12	" " "
Stop: 1711	10.38	7.1	70.4	440	✓		14	" " "
Start: 1716	11.01	7.1	70.4	430	✓		16	" " "
Stop: 1721	11.70	7.1	70.4	430	✓		18	" " "

DTW BEFORE DEVELOPMENT 5.80 TOTAL DEPTH BEFORE DEVELOPMENT 15.0

DTW AFTER DEVELOPMENT 11.70 TOTAL DEPTH AFTER DEVELOPMENT 15.0

INITIAL WELL VOLUME:

15.0 (TOTAL DEPTH INITIAL) − 5.80 (DTW (INITIAL)) × (.17) (CONVERSION FACTOR) = 1.6 (1 WELL VOL)

DEVELOPMENT METHOD

SURGE Block / Stainless Steel Block

PURGE Stainless Steel Block

INJECTION

AMT. INJECTED

CONVERSION FACTORS

2" = 0.17
3" = 0.38
4" = 0.66
6" = 1.50

WELL DEVELOPMENT DATA

JOB NO. 5280.01 LOCATION Chevron # 9-0290 B-12

NAME Guadalupe Sanchez 1802 Webster St Alameda

DATE 11-3-95

TIME	WATER LEVEL	pH	TEMP	CONDUCTIVITY	PURGE	SURGE	AMOUNT REMOVED GALLONS	COMMENTS (odor, color, sediments, etc.)
Start: 1510	5.88					✓		* Surged for 15 min
Stop: 1530	8.72	7.1	71.6	1210	✓		2	mill brown, sandy/clay
Start: 1535	11.37	7.1	69.1	1290	✓		4	" " "
Stop: 1539	13.93	7.0	70.1	1170	✓		6	" " "
Start: Stop 1544	15.28	7.1	70.2	990	✓		8	" " " (well dewatered)
Stop: start 1600	8.32	7.1	71.2	950	✓		10	" " "
Start: 1603	13.02	7.1	71.3	900	✓		12	" " "
Stop 1608	15.30	7.0	71.0	870			14	" " " (well dewatered)
Start:								* Well recovers fast
Stop:								

DTW BEFORE DEVELOPMENT 5.88 TOTAL DEPTH BEFORE DEVELOPMENT 15.3

DTW AFTER DEVELOPMENT 15.30 TOTAL DEPTH AFTER DEVELOPMENT 15.6

INITIAL WELL VOLUME:

15.3 (TOTAL DEPTH INITIAL) − 5.88 (DTW (INITIAL)) × .17 (CONVERSION FACTOR) = 1.6 (1 WELL VOL)

DEVELOPMENT METHOD

SURGE Block / Stainless Steel Bailer

PURGE Stainless Steel Bailer

INJECTION

AMT. INJECTED

CONVERSION FACTORS

2" = 0.17
3" = 0.38
4" = 0.66
6" = 1.50

WELL DEVELOPMENT DATA

OB NO. 5280-01 LOCATION Chevron #9-0290 B-13

AME Guadalupe Sanchez 1802 Webster St Alameda

ATE 11-3-95

TIME	WATER LEVEL	pH	TEMP	CONDUCTIVITY	PURGE	SURGE	AMOUNT REMOVED GALLONS	COMMENTS (odor, color, sediments, etc.)
art: 1402						✓		* Surged for 15 min.
top 1422	5.80	7.1	73.3	1370	✓		2	mild, brown, sandy/clay
art: 1427	6.22	7.0	73.0	1340	✓		4	" " "
top 1432	6.97	7.0	72.9	1260	✓		6	" " "
art: 1435	7.42	6.9	72.9	1200	✓		8	" " "
top 1440	8.01	6.9	73.0	1160	✓		10	" " "
art: 1444	8.75	7.0	73.1	1070	✓		12	" " "
top 1449	9.03	6.9	72.9	1030	✓		14	" " "
art: 1453	9.68	6.9	73.0	1010	✓		16	" " "
op: 1458	10.10	6.9	73.0	1000	✓		18	" " "

DTW BEFORE DEVELOPMENT 5.80

TOTAL DEPTH BEFORE DEVELOPMENT 13.8

DTW AFTER DEVELOPMENT 10.10

TOTAL DEPTH AFTER DEVELOPMENT 14.15

ITIAL WELL VOLUME:

13.8 (TOTAL DEPTH INITIAL) − 5.80 (DTW (INITIAL)) × (.17) (CONVERSION FACTOR) = 1.3 (1 WELL VOL)

DEVELOPMENT METHOD

SURGE Block / Stainless Steel Bailer

PURGE Stainless Steel Bailer

INJECTION

AMT. INJECTED

CONVERSION FACTORS

2" = 0.17
3" = 0.38
4" = 0.66
6" = 1.50

WELL GAUGING DATA

Project # 951129-G2 Date 11-29-95 Client Chevron 9-0290

Site 1802 WEBSTER ALAMEDA

Well I.D.	Well Size (in.)	Sheen/ Odor	Depth to Immiscible Liquid (feet)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to Water (feet)	Depth to Well Bottom (feet)	Survey Point: TOB or TOC
A1	3	F.P.	6.30	0.08	100 ml	6.38 ~~6.30~~	—	TOC
B1	2					5.85	17.22	
B5	2					5.21	18.00	
B6	2					6.00	18.22	
B10	2					6.51	16.13	
B11	2					5.90	14.78	
B12	2					6.01	15.45	
B13	2					5.91	13.99	

APPENDIX D

WELLHEAD SURVEY REPORT

Virgil Chavez Land Surveying
1418 Lassen Street
Vallejo, California 94591
707.553.2476

November 9, 1995
Project No. 1104-26

Barbara Sieminski
Gettler-Ryan, Inc.
6747 Sierra Ct. Suite J
Dublin, Ca. 94568

Subject: Monitoring Well Survey
Chevron Service Sta. No. 9-0290
1802 Webster Street
Alameda, Ca.

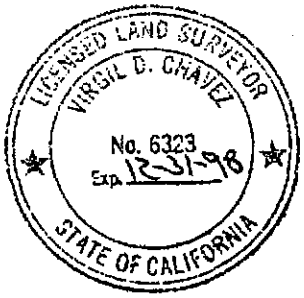
Dear Barbara:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was performed on November 8, 1995. Our findings are shown in the tables below. The benchmark, was a brass disk in a monument well at the mid return of the northwest corner of Webster St. and Buena Vista Ave. Benchmark Elevation = 11.09 feet, USGS Datum.

Well No.	Rim Elevation	Top of Casing Elevation
B - 10	11.80′	11.42′
B - 11	11.20′	11.98′
B - 12	11.41′	11.16′
B - 13	11.62′	11.17′

The table shown below is for top of casings. The back of sidewalk on Webster Street was used as the reference line.

Monitoring Well No.	Station	Offset
B - 10	1+69.50	56.27′
B - 11	1+36.47	6.95′
B - 12	1+05.72	5.18′
B - 13	0+77.56	6.35′
FC near north PL	1+80.37	0.00′(BSW)



Sincerely,

Virgil D. Chavez

Virgil D. Chavez, P.L.S. 6323
Virgil Chavez Land Surveying

APPENDIX E

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B10-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: 8015Mod/8020	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-01	Reported: 11/08/95

QC Batch Number: GC110395BTEXEXB
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**20**	**69**
Methyl t-Butyl Ether	0.50	N.D.
Benzene	**0.10**	**0.75**
Toluene	0.10	N.D.
Ethyl Benzene	**0.10**	**0.78**
Xylenes (Total)	**0.10**	**0.78**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	110

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B10-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: EPA 8015 Mod	Analyzed: 11/07/95
Attention: Barbara Sieminski	Lab Number: 9511064-01	Reported: 11/08/95

QC Batch Number: GC1103950HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	**10**	**330**
Chromatogram Pattern:	**C9-C24**	**UNIDENTIF**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	130

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B11-2	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: 8015Mod/8020	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-02	Reported: 11/08/95

QC Batch Number: GC110395BTEXEXB
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**500**	**1900**
Methyl t-Butyl Ether	**12**	**17**
Benzene	2.5	N.D.
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**39**
Xylenes (Total)	**2.5**	**150**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B11-2	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: EPA 8015 Mod	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-02	Reported: 11/08/95

QC Batch Number: GC1103950HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	5.0	77
Chromatogram Pattern:	C9-C24	UNIDENTIF

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B11-5	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: 8015Mod/8020	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-03	Reported: 11/08/95

QC Batch Number: GC110395BTEXEXB
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**100**	**210**
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**2.1**
Xylenes (Total)	**0.50**	**6.4**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B11-5	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: EPA 8015 Mod	Analyzed: 11/05/95
Attention: Barbara Sieminski	Lab Number: 9511064-03	Reported: 11/08/95

QC Batch Number: GC1103950HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	28
Chromatogram Pattern:	C9-C24	UNIDENTIF

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B12-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: 8015Mod/8020	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-04	Reported: 11/08/95

QC Batch Number: GC110395BTEXEXB
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**200**	**520**
Methyl t-Butyl Ether	**5.0**	**8.2**
Benzene	1.0	N.D.
Toluene	1.0	N.D.
Ethyl Benzene	**1.0**	**2.9**
Xylenes (Total)	**1.0**	**6.6**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B12-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: EPA 8015 Mod	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-04	Reported: 11/08/95

QC Batch Number: GC1103950HBPEXA
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	2.0	69
Chromatogram Pattern:	C9-C24	UNIDENTIF

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B13-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: 8015Mod/8020	Analyzed: 11/06/95
Attention: Barbara Sieminski	Lab Number: 9511064-05	Reported: 11/08/95

QC Batch Number: GC110395BTEXEXB
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Gettler Ryan/Geostrategies	Client Proj. ID: Chevron 9-0290, Alameda	Sampled: 10/31/95
6747 Sierra Court Suite G	Sample Descript: B13-6	Received: 11/01/95
Dublin, CA 94568	Matrix: LIQUID	Extracted: 11/03/95
	Analysis Method: EPA 8015 Mod	Analyzed: 11/05/95
Attention: Barbara Sieminski	Lab Number: 9511064-05	Reported: 11/08/95

QC Batch Number: GC1103950HBPEXA
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.1
Chromatogram Pattern:	C9-C24	UNIDENTIF

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	83

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

SEQUOIA ANALYTICAL - ELAP #1210

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Gettler Ryan/Geostrategies
6747 Sierra Court Suite G
Dublin, CA 94568
Attention: Barbara Sieminski

Client Proj. ID: Chevron 9-0290, Alameda
Lab Proj. ID: 9511064

Received: 11/01/95
Reported: 11/08/95

LABORATORY NARRATIVE

Q- Surrogate diluted out.

For sample:	the detection limit was raised by a factor of
#1(TPGBMS)	20
#1(VTPHDS)	10
#2(TPGBMS)	500
#2(VTPHDS)	5
#3(TPGBMS)	100
#4(TPGBMS)	200
#4(VTPHDS)	2

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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

Gettler Ryan/Geostrategies	Client Project ID:	Chevron 9-0290, Alameda	
6747 Sierra Court, Ste G	Matrix:	Solid	
Dublin, CA 94568			
Attention: Barbara Sieminski	Work Order #:	9511064 -01- 05	Reported: Nov 8, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC110395BTEXEXB	GC110395BTEXEXB	GC110395BTEXEXB	GC110395BTEXEXB	GC1103950HBPEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3550
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	B. Ali
MS/MSD #:	951114506	951114506	951114506	951114506	951100707
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	1.4
Prepared Date:	11/3/95	11/3/95	11/3/95	11/3/95	11/3/95
Analyzed Date:	11/3/95	11/3/95	11/3/95	11/3/95	11/5/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP5A
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	25 mg/Kg
Result:	0.16	0.16	0.17	0.49	21
MS % Recovery:	80	80	85	82	78
Dup. Result:	0.16	0.16	0.17	0.49	23
MSD % Recov.:	80	80	85	82	86
RPD:	0.0	0.0	0.0	0.0	9.1
RPD Limit:	0-50	0-50	0-50	0-50	0-50
LCS #:	BLK110395	BLK110395	BLK110395	BLK110395	BLK110395
Prepared Date:	11/3/95	11/3/95	11/3/95	11/3/95	11/3/95
Analyzed Date:	11/3/95	11/3/95	11/3/95	11/3/95	11/5/95
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	GCHP5A
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	25 mg/Kg
LCS Result:	0.19	0.19	0.19	0.56	20
LCS % Recov.:	95	95	95	93	80
MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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

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

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☐ No

Chain-of-Custody-Record

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

Chevron Facility Number 9-0290
Facility Address 1802 Webster Street, Alameda
Consultant Project Number 5280.01
Consultant Name Gettler-Ryan Inc.
Address 6747 Sierra Ct, Suite J, Dublin, CA 94568
Project Contact (Name) Barbara Sieminski
(Phone) (510) 551-7555 (Fax Number) (510) 551-7888

Chevron Contact (Name) Mark Miller
(Phone) (510) 842-8134
Laboratory Name Sequoia
Laboratory Release Number 2172720
Samples Collected by (Name) Barbara Sieminski
Collection Date 10/31/95
Signature Barbara Sieminski

9511064

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015) MTBE	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
10-6	1	1	S	G	15:05		Yes	X	X											
10-7		1			15:15															hold
10-11		1			15:20															hold
10-16		1			15:35															hold
11-2	2	1			11:55			X	X											
11-5	3	1			11:58			X	X											
11-11		1			12:00															hold
11-16		1			13:15															hold
12-6	4	1			14:10			X	X											
12-11		1			14:15															hold
12-16		1			14:30															hold
13-6	5	1			9:50			X	X											
13-7		1			9:55															hold
13-10.5		1			10:05															
13-16		1			10:15															

Confirm presence or absence of MTBE if it does not fall in the same range as TPHg & BTEX

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Barbara Sieminski	G-R	10/31/95 11:30	SK	SEQ	11-1-95 11:30
SK	SEQ	11-1-95 12:25			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time 12:22

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

Sequoia Analytical

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

Attention: Barbara Sieminski

Client Proj. ID: Chevron 9-0290, Alameda
Sample Descript: SP-(A-D)Comp
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9511017-01

Sampled: 10/31/95
Received: 11/01/95
Extracted: 11/01/95
Analyzed: 11/02/95
Reported: 11/03/95

QC Batch Number: GC110195BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**20**	**55**
Benzene	0.10	N.D.
Toluene	0.10	N.D.
Ethyl Benzene	**0.10**	**0.61**
Xylenes (Total)	**0.10**	**1.9**
Chromatogram Pattern:		**Gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Gettler Ryan/Geostrategies
6747 Sierra Court Suite G
Dublin, CA 94568
Attention: Barbara Sieminski

Client Proj. ID: Chevron 9-0290, Alameda
Lab Proj. ID: 9511017

Received: 11/01/95
Reported: 11/03/95

LABORATORY NARRATIVE

For sample: #1 — the detection limit was raised by a factor of 20

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Fax copy of Lab Report and COC to Chevron Contact: ☐ No ● ● Chain-of-Custody-Record

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(Phone) (510) 551-7555 (Fax Number) (510) 551-7888

Chevron Contact (Name) Mark Miller
(Phone) (510) 842-8134
Laboratory Name Sequoia
Laboratory Release Number 2172720
Samples Collected by (Name) Barbara Sieminski
Collection Date 10/31/95
Signature Barbara Sieminski

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
																				9511017
SP-A	01 A	1	S	G			Yes	X												
SP-B	B	1						X												
SP-C	C	1						X												Composite sample
SP-D	D	1						X												
Composite																				

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Barbara Sieminski	G-R	11/01/95 11:30	SR	SEQ	11-1-95 11:30
SR	SEQ	11-1-95 12:25			
			Received For Laboratory By (Signature)		Date/Time
			Sequoia		11/1/95 1222

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