

ENVIRONMENTAL
PROTECTION

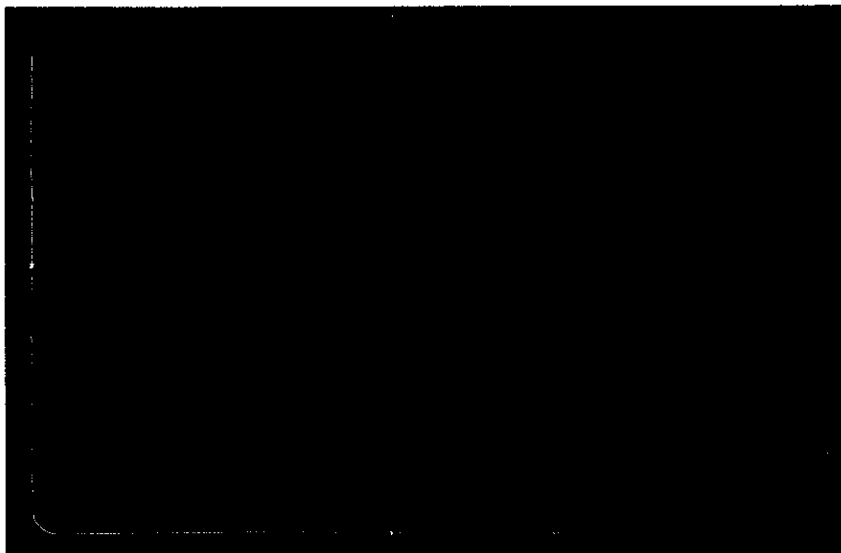
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Environmental



Canonie Environmental

Canonie Environmental Services Corp
7901 Stoneridge Drive
Suite 100
Pleasanton, California 94588

Phone: 510-463-9117
FAX: 510-463-2981

March 1995

94-241-001-10

SUBSURFACE ENVIRONMENTAL
INVESTIGATION REPORT
FORMER CHEVRON SERVICE STATION 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

Prepared for:

Chevron U.S.A. Products Company

Canonie Environmental Services Corp.
7901 Stoneridge Drive, Suite 100
Pleasanton, CA 94588

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**SUBSURFACE ENVIRONMENTAL INVESTIGATION REPORT
FORMER CHEVRON SERVICE STATION 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA**

1.0 INTRODUCTION

At the request of Chevron U.S.A. Products Company (Chevron), Canonie Environmental Services Corp. (Canonie) (formerly RESNA Industries Inc. [RESNA], which was purchased by Canonie on January 13, 1995) performed a subsurface environmental investigation at former Chevron Service Station 9-2621 located at 7667 Amador Valley Boulevard in Dublin, California. The approximate location of the site is shown on the Site Vicinity Map (Plate 1). The purpose of the investigation was to evaluate the extent of petroleum hydrocarbons in soil and groundwater in the vicinity of the site.

Work conducted for the investigation included:

- Preparing a site safety plan and obtaining appropriate drilling permits.
- Engaging a utility locator service prior to drilling at the site.
- Drilling one off-site soil boring, collecting soil samples from the boring at 5-foot intervals, at obvious changes in sediment type, where subjective evidence of petroleum hydrocarbons was observed, from just above groundwater, and from the bottom of the boring.
- Constructing one off-site 2-inch-diameter monitoring well in the soil boring (B11/MW6).
- Developing, purging, and sampling the newly installed groundwater monitoring well.
- Submitting selected soil and groundwater samples to Chevron's contracted laboratory for analysis.

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- Contracting a licensed land surveyor to survey the locations and tops-of-casing of the on- and off-site wells relative to mean sea level.
- Evaluating the direction of groundwater flow and gradient beneath the site.
- Preparing a report summarizing field and laboratory procedures and findings.

2.0 BACKGROUND

Former Chevron Station No. 9-2621 is located at 7667 Amador Valley Boulevard in Dublin, as depicted on the Site Vicinity Map (Plate 1). From approximately 1960 to 1976, Chevron operated a service station at the site. In 1976 Chevron removed the service station building, underground storage tanks (USTs), dispenser islands, and associated piping. The approximate locations of the former station facilities, USTs, and other pertinent site features are shown on the Generalized Site Plan (Plate 2). The site is currently occupied by the Amador Valley Medical Center. In 1992 RESNA Industries drilled four soil borings at the site (RESNA, November 1992. Project No. F1036.01). Residual hydrocarbons were detected in the soil beneath the site. In March 1993, Pacific Environmental Group (PEG) collected soil and groundwater samples at six soil boring/hydropunch locations on-site. Hydrocarbons were not detected in soil samples collected from the borings. Hydrocarbons were detected in groundwater samples collected from each hydropunch location, except from the hydropunch (HP-1), located adjacent to the former waste oil underground storage tank (PEG, April 26, 1993. Project 325-35.01).

On September 21, 1993, RESNA drilled two on-site and two off-site soil borings (B-5 through B-8) and installed 2-inch monitoring wells (MW-1 through MW-4) in the borings. Gasoline hydrocarbons were not detected (RESNA, November 23, 1993).

On March 4, 1994 RESNA drilled one on-site and one off-site soil boring (B-9 and B-10, respectively) and installed a 2-inch monitoring well (MW-5) in boring B-9. A groundwater grab sample was collected from boring B-10 and the boring was grouted to the surface. Gasoline hydrocarbons were not detected in soil samples collected from borings B-9 and B-10. Gasoline hydrocarbons were detected in groundwater samples collected from monitoring well MW-5 and from temporary well B-10 (RESNA, April 27, 1993).

3.0 FIELD INVESTIGATION

3.1 Site-Specific Health and Safety Plan/Permitting

A Site-Specific Health and Safety Plan was prepared as required by the Occupational Health and Safety Administration (OSHA) Standard Hazardous Waste Operations and Emergency Response guidelines (29 CFR 1910.120). The Site-Specific Health and Safety Plan (HSP) was prepared by field personnel, following a review of site conditions. The HSP was reviewed by the project manager, field personnel, and subcontractor personnel before beginning field operations at the site.

All applicable permits pertaining to drilling the soil boring and installing the groundwater monitoring well were obtained from the Alameda County Flood Control and Water Conservation District, Zone 7 Water Agency and City of Dublin Public Works Department. Copies of permits are in Appendix A.

3.2 Soil Boring and Sampling

At Chevron's request, a geologist was at the site on January 11, 1995, to observe Exploration Geoservices, Inc. (Exploration) of San Jose, California drill one soil boring (B11/MW6) to a depth of 18 feet below ground surface (bgs) at a location selected by Chevron, using a Mobile B-57 truck-mounted drill rig equipped with 8-inch hollow-stem augers. Exploration installed one 2-inch-diameter monitoring well (MW-6) in Boring B-11. The locations of the borings and wells are shown on Plate 2. During field operations, field personnel followed standard operating procedures for drilling the soil boring and installing the groundwater monitoring well. Standard operating procedures are presented in Appendix B.

Prior to drilling the soil boring, a sewer line was located (by a representative from the Dublin-San Ramon Services District) at a distance of approximately 2 feet to 3 feet west of the proposed boring location and approximately 6 feet below ground surface (Figure 2 and 3). Other subsurface utilities in the median were marked by the subsurface utility locator.

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During drilling of Boring B11/MW6, soil samples were collected at 5-foot intervals, at obvious changes in sediment type, where subjective evidence of petroleum hydrocarbons was observed, from just above first encountered groundwater and from the bottom of the borings. Samples were collected using a 2.5-inch outside diameter California-modified split-spoon sampler, lined with cleaned 2-inch-diameter by 6-inch-long brass sample tubes. At each sampling depth the sampler was driven 18 inches ahead of the augers. Soil samples were screened in the field using a photoionization detector (PID), and readings were recorded on the boring logs. One sample from each sample interval was sealed with aluminum foil, capped, labeled, placed on ice in an insulated container, and delivered to a California-certified laboratory selected by Chevron for chemical analysis. Soil sampling equipment was decontaminated with a solution of phosphate-free soap between sampling to minimize the possibility of cross-contamination. The field geologist logged the earth materials encountered during drilling using the Unified Soil Classification System. A log of the boring is in Appendix C.

Drill cuttings from the boring were placed on plastic sheeting pending characterization, and were subsequently removed from the site for disposal by Chevron's contractor, Integrated Waste Management of Milpitas, California. Water used for decontamination purposes was removed from the site and disposed of at the Chevron Refinery in Richmond, California.

3.3 Monitoring Well Construction

Monitoring Well MW-6 was constructed of schedule 40, flush-threaded, 2-inch diameter blank casing and well screen with 0.020-inch slots. The well screen was installed between approximate depths of 4 and 18.0 feet below grade in this boring. A sand filter pack was placed around the well screen to a height of approximately 0.5 foot above the top of the screen. A hydrated bentonite plug about 1 foot thick was placed above the sand pack, and the remaining annular space was filled with a neat cement to grade. The wellhead was protected by a locking cap and a traffic-rated utility box with a water-tight, bolted lid. Well construction details are presented in Appendix C.

3.4 Monitoring Well Development and Sampling

The Monitoring Well MW-6 was developed by surging and bailing on January 27, 1995. Well development removes fine-grained sediments from the well and sand pack, produces a relatively evenly distributed sand filter pack, and improves well efficiency. Prior to well development, a field technician used a bailer to collect a groundwater sample for subjective analysis of hydrocarbon sheen or free product. No subjective evidence of hydrocarbons was noted in the groundwater removed from Monitoring Well MW-6 prior to development. However, strong hydrocarbon odor was noticed during the well development. Following subjective analysis, the field technician bailed approximately ten well volumes of groundwater from well MW-6. Well development water was placed into a Department of Transportation approved water trailer and transported to Chevron's Richmond, California refinery for disposal.

On January 30, 1995, a field technician measured depth-to-water in well MW-6 to an accuracy of 0.01 foot using an interface probe. The interface probe incorporates an optical sensor and electrical conductivity probe which distinguishes between water and petroleum products. No free product was detected in Monitoring Well MW-6. Before collecting groundwater samples from Monitoring Well MW-6, field personnel purged approximately three well casing volumes of water from the well. Following groundwater recovery, groundwater samples were collected and placed in appropriate containers using a Teflon® bailer cleaned with a solution of a laboratory-grade detergent and rinsed with tap water and distilled water. Samples were labeled and placed on ice in an insulated container for delivery under chain-of-custody protocol to a Chevron contracted laboratory. Purge water generated during groundwater sampling was placed into a DOT-approved water trailer and transported to Chevron's Richmond, California refinery for disposal. On January 30, 1995, a field technician measured depths to groundwater in all site wells.

3.5 Surveying

The site monitoring wells (MW1 through MW6) were surveyed on February 6, 1995, by Ron Archer Civil Engineer Inc. of Pleasanton, California, licensed land surveyor.

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The elevation of each wellhead was surveyed to within 0.01 foot with respect to mean sea level. The survey data are presented in Appendix D.

4.0 SITE CONDITIONS

4.1 Geology and Hydrogeology

During drilling of Boring B-11/MW6, unconsolidated sediments consisting of silty clay, clayey silt, and clayey sand were encountered. Descriptions of the materials encountered are shown on the boring log (Appendix C). Groundwater was first encountered during drilling at approximate depth of 7.5 feet below grade.

4.2 Groundwater Gradient

The wellhead elevations of the site wells were surveyed to within 0.01 foot with respect to mean sea level by Ron Archer Civil Engineer Inc. Well survey data are in Appendix D. These data were combined with the depths to groundwater measured on January 30, 1995, to evaluate the elevation of the groundwater surface in each well and the groundwater gradient beneath the site. A map of the potentiometric surface at the site is presented on Plate 3. Data used to compile the Potentiometric Map are presented in Table 1. Based on these data, the interpreted groundwater flow direction at the site is to the east. The evaluated average hydraulic gradient on January 30, 1995, was approximately 0.009 (Plate 3).

5.0 LABORATORY ANALYSES

The soil sample selected for laboratory analysis from Boring B11/MW6 was analyzed for total purgeable petroleum hydrocarbons as gasoline (TPPH) (= TPHg) using modified Environmental Protection Agency (EPA) Method 8015; benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8020; and total organic carbon using EPA Method 9060. The groundwater sample collected from well MW-6 was analyzed for TPPH and BTEX using EPA Methods Modified 8015 and 8020.

6.0 ANALYTICAL RESULTS

6.1 Soil

TPPH and BTEX were not detected in soil samples collected from Boring B11/MW6. Total organic carbon was detected in samples collected from B11/MW6. Results of laboratory analyses are summarized in Table 2. Laboratory sheets and chain of custody are included in Appendix E.

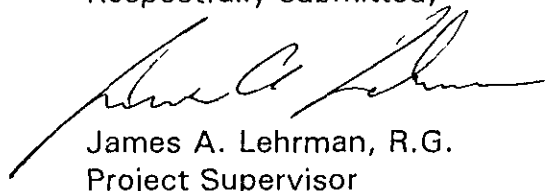
6.2 Groundwater

TPPH and BTEX were detected in groundwater samples collected from Monitoring Well MW-6. Results of groundwater analyses are summarized in Table 3. Laboratory sheets and chain of custody are included in Appendix E.

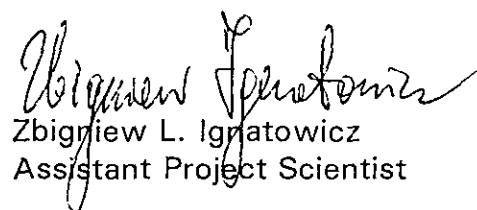
7.0 LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions of soil and ground water beneath the site. No soil engineering or geotechnical recommendations are implied or should be inferred. Evaluation of the geologic conditions at the site for the purpose of this investigation is made from a limited number of observation points. Subsurface conditions may vary away from the data points available. Additional work, including further subsurface investigation, can reduce the inherent uncertainties associated with this type of investigation.

Respectfully submitted,



James A. Lehrman, R.G.
Project Supervisor



Zbigniew L. Ignatowicz
Assistant Project Scientist

CanonieEnvironmental

REFERENCES

Pacific Environmental Group, Inc., 1993, Report: Soil and Groundwater Investigation at Former Chevron Service Station 9-2621, 7667 Amador Valley Boulevard at Starwood Drive, Dublin, California, Project 325-35.01, April 26.

RESNA Industries, 1992, Phase II Investigation at Amador Valley Medical Center (Former Chevron Service Station 9-2621), 7667 Amador Valley Boulevard, Dublin, California, Project No. F1036.01, November.

RESNA Industries, 1993, Report: Additional Subsurface Environmental Investigation, 7667 Amador Valley Boulevard, Dublin, California, Project No. 170111.01, November 23.

RESNA Industries, 1994, Report: Additional Subsurface Environmental Investigation, 7667 Amador Valley Boulevard, Dublin, California, Project No. 170111.02, April 27.

United States Geological Survey, 1980, Dublin, California, 7.5-Minute Topographic Quadrangle Map.

TABLE 1

GROUNDWATER ELEVATION DATA
FORMER CHEVRON SERVICE STATION 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

Well No.	Date	TOC	DTW	Elevation/P.S.
MW1	01/30/95	346.73	5.42	341.31
MW2	01/30/95	348.41	6.79	341.62
MW3	01/30/95	347.14	5.60	341.54
MW4	01/30/95	343.52	4.28	339.24
MW5	01/30/95	345.51	4.52	340.99
MW6	01/30/95	345.25	4.71	340.54

TABLE 2

SOIL ANALYTICAL RESULTS
 FORMER CHEVRON SERVICE STATION 9-2621
 7667 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA

Sample No.	Date	Concentrations in mg/kg				
		TPPH	Benzene	Toluene	Ethyl-Benzene	Total Xylenes
B11-2-5.5	01/11/95	<1.0	<0.005	<0.005	<0.005	<0.015

Notes:

mg/kg denotes milligrams per kilogram.

TPPH denotes total purgeable petroleum hydrocarbons as gasoline.

< denotes less than indicated detection limit established by the laboratory.

TABLE 2A

SOIL ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

Sample No.	Date	Concentrations in mg/kg
		Total Organic Carbon
B11-3-4.5	01/11/95	4,000
B11-6-11.5	01/11/95	5,500

Notes:

mg/kg denotes milligrams per kilogram.

TPPH denotes total purgeable petroleum hydrocarbons as gasoline.

< denotes less than indicated detection limit established by the laboratory.

TABLE 3

GROUNDWATER ANALYTICAL RESULTS
 FORMER CHEVRON SERVICE STATION 9-2621
 7667 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA

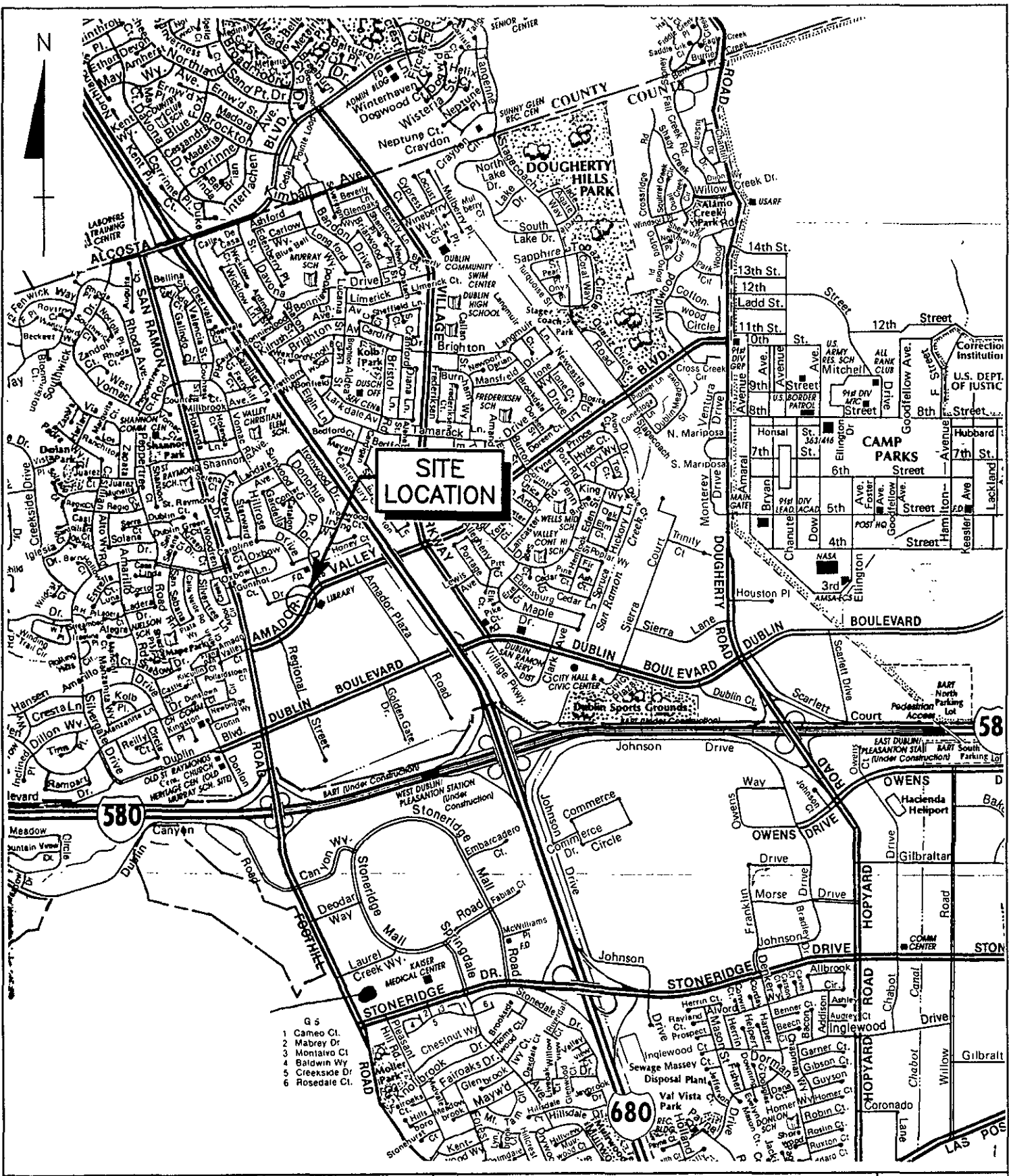
Sample No.	Date	Concentrations in $\mu\text{g/l}$				
		TPPH	Benzene	Toluene	Ethyl-Benzene	Total Xylenes
MW6	01/30/95	430	1.5	0.79	4.4	3.3
BB-1	01/30/95	<50	<0.5	<0.5	<0.5	<0.5

Notes:

$\mu\text{g/l}$ denotes micrograms per liter.

TPPH denotes total purgeable petroleum hydrocarbons as gasoline.

< denotes less than indicated detection limit established by the laboratory.



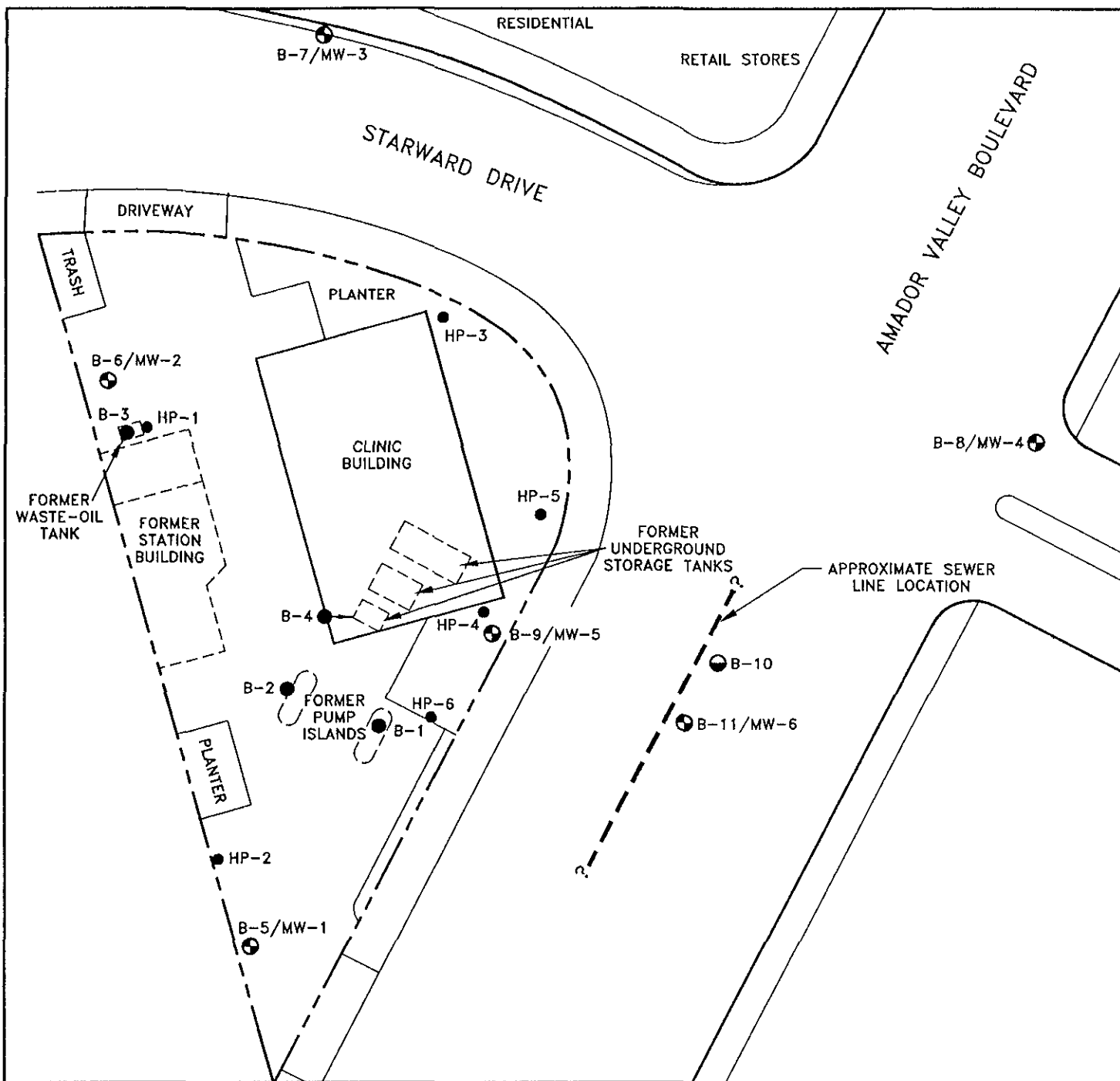
**SITE
LOCATION**

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
DRAWING NO. 94-241-A1

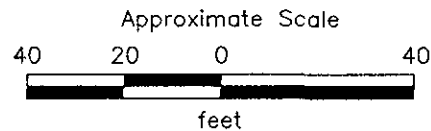
SITE VICINITY MAP
FORMER CHEVRON STATION NO. 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

FIGURE
1



LEGEND

- B-9/MW-5  = BORING/MONITORING WELL
- B-10  = TEMPORARY WELL
- B-2  = SOIL BORING (RESNA, 1992)
- B-4  = ANGLED BORING (RESNA, 1992)
- HP-6  = HYDROPUNCH (PEG, 1993)



SOURCE: MODIFIED FROM PLAN SUPPLIED BY PACIFIC ENVIRONMENTAL GROUP, INC. WELLS SURVEYED BY RON ARCHER, CIVIL ENGINEER, INC., 1993, 1995

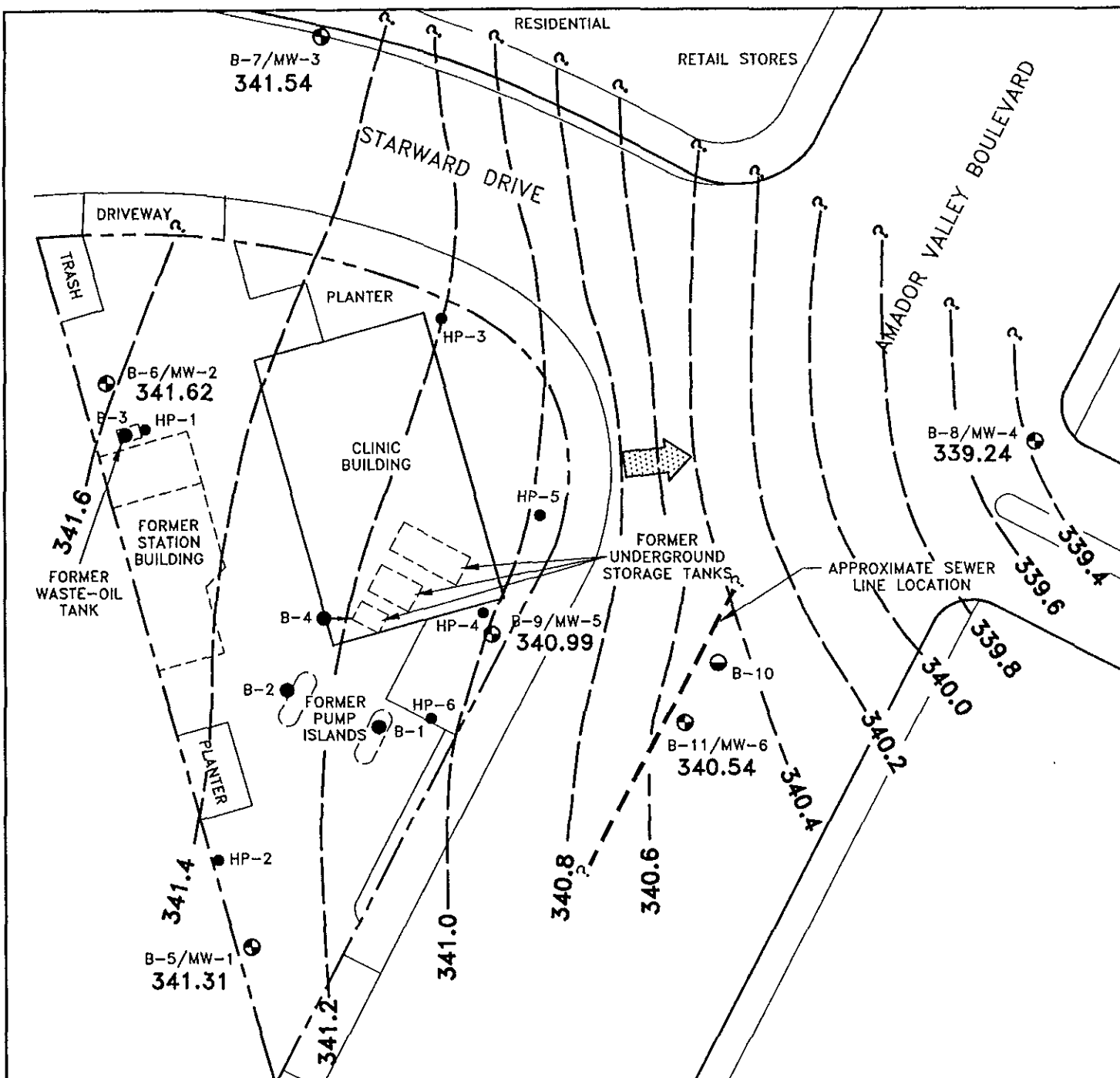
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GENERALIZED SITE PLAN
 FORMER CHEVRON STATION NO. 9-2621
 7667 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA

FIGURE

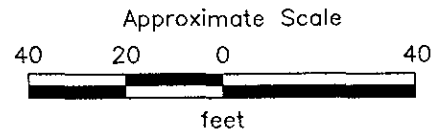
2

DRAWING NO. 94-241-A2



LEGEND

- B-9/MW-5 = BORING/MONITORING WELL
- B-10 = TEMPORARY WELL
- B-2 = SOIL BORING (RESNA, 1992)
- B-4 = ANGLED BORING (RESNA, 1992)
- HP-6 = HYDROPUNCH (PEG, 1993)



SOURCE: MODIFIED FROM PLAN SUPPLIED BY PACIFIC ENVIRONMENTAL GROUP, INC. WELLS SURVEYED BY RON ARCHER, CIVIL ENGINEER, INC., 1993, 1995

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GROUNDWATER ELEVATION MAP
(1-30-95)
FORMER CHEVRON STATION NO. 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

FIGURE

3

DRAWING NO. 94-241-A3

APPENDIX A

PERMITS

CanonieEnvironmental



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 7667 Amador Valley Road,
Dublin, CA

PERMIT NUMBER 94793

LOCATION NUMBER _____

CLIENT

Name Chevron USA Products Co.
Address 6001 Bollinger CynVoice Rd., Bldg L.
City San Ramon, CA Zip 94583

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT

Name William Madison
RESNA Industries Fax (510) 651-8647
Address 42501 Albrae St. Voice (510) 440-3347
City Fremont, CA Zip 94538

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.

TYPE OF PROJECT

Well Construction	_____	Geotechnical Investigation	_____
Cathodic Protection	_____	General	_____
Water Supply	_____	Contamination	_____
Monitoring	<u>X</u>	Well Destruction	_____

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.

PROPOSED WATER SUPPLY WELL USE

Domestic	_____	Industrial	_____	Other	_____
Municipal	_____	Irrigation	_____		

DRILLING METHOD:

Mud Rotary	_____	Air Rotary	_____	Auger	<u>X</u>
Cable	_____	Other	_____		

DRILLER'S LICENSE NO. 482390

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonites 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.

WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>20</u> ft.
Surface Seal Depth	<u>3-5</u> ft.	Number	<u>1</u>

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 12/20/94

ESTIMATED COMPLETION DATE 12/20/94

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

Approved _____

Wyman Hong
Wyman Hong

Date 16 Dec 94

APPLICANT'S _____

J.M. - Q.P.

CITY OF DUBLIN
PUBLIC WORKS DEPARTMENT
100 Civic Plaza
Dublin, California 94568
(510) 833-6630

RECEIVED
DEC 19 1994
PUBLIC WORKS

ENCROACHMENT PERMIT

PERMIT TO DO WORK IN ACCORDANCE WITH CITY OF DUBLIN MUNICIPAL CODE CHAPTER 7.04 AND ANY SPECIAL REQUIREMENTS SHOWN OR LISTED HEREIN.

Applicant/Permittee:	Permit Fee:	\$ 10.00
Name: <u>Chevron USA Products Co./</u>	Plancheck Fee:	\$
RESNA Industries	Resurfacing Surcharge:	\$ 50.00
Address: <u>P.O. Box 5004</u>	Inspection Fees:	\$ 80.00
San Ramon, CA 94583		\$
ATTN: Kenneth Kan		\$
Telephone <u>(510) 842-9500</u>	Total Fees:	\$ 140.00
	Bond: Surety: \$2000 on file	Cash: \$
	Total Paid:	\$ 140.00
	Receipt No.	

PLEASE READ THIS PERMIT CAREFULLY. KEEP IT AT THE WORK SITE. TO ARRANGE FOR INSPECTION, PHONE 833-6630 AT LEAST 48 HOURS BEFORE YOU START WORK.

JOB LOCATION: 7667 XXXX Amador Valley Blvd. - center line of roadway

DESCRIPTION OF WORK: (Attach 2 copies of plans. Attach additional pages if needed.)

Installation of one 2" diameter monitoring well

Length of Excavation _____ ft. Width 8" in. ft. Depth 20 ft.

U. S. A. IDENTIFICATION NUMBER (if applicable) 392947

ATTENTION IS DIRECTED TO THE GENERAL PROVISIONS PRINTED ON THE REVERSE SIDE OF THIS PERMIT AND TO THE FOLLOWING SPECIAL REQUIREMENTS:

1. Permittee shall provide and keep current a certificate of Public Liability and Workers Compensation Insurance which names the City of Dublin and its employees and agents as additional insureds.
2. Worksites left in an unsafe condition will be secured by the City Maintenance Department and the cost charged to the permittee.

No lane closures allowed wk. of 12/19/94 (due to holiday traffic).

Proceedure of Work: All work authorized by the permit shall be performed in a workmanlike, diligent, and expeditious manner, and must be complete to the satisfaction of the City Engineer.

Liability and Damages: The permittee shall be responsible for all liability imposed by law for personal injury or property damage which may arise out of the work permitted and done by permittee under this permit, or which may arise out of failure on the part of the permittee to perform his obligations under said permit in respect to maintenance and encroachments. The permittee shall protect and indemnify the City of Dublin, its officers and employees, and save them harmless in every way from all action by law for damage or injury to persons or property that may arise out of or be occasioned in any way because of his operations as provided in this permit.

Signature of Permittee:
By: William Madison - RESNA Industries, Inc.
Date: 12/19/94

City Engineer
By: [Signature]
Date of Issue: 12/19/94

Inspection Record (Note date, type of inspection, and comments.)

Completion Date: _____ Inspector: _____

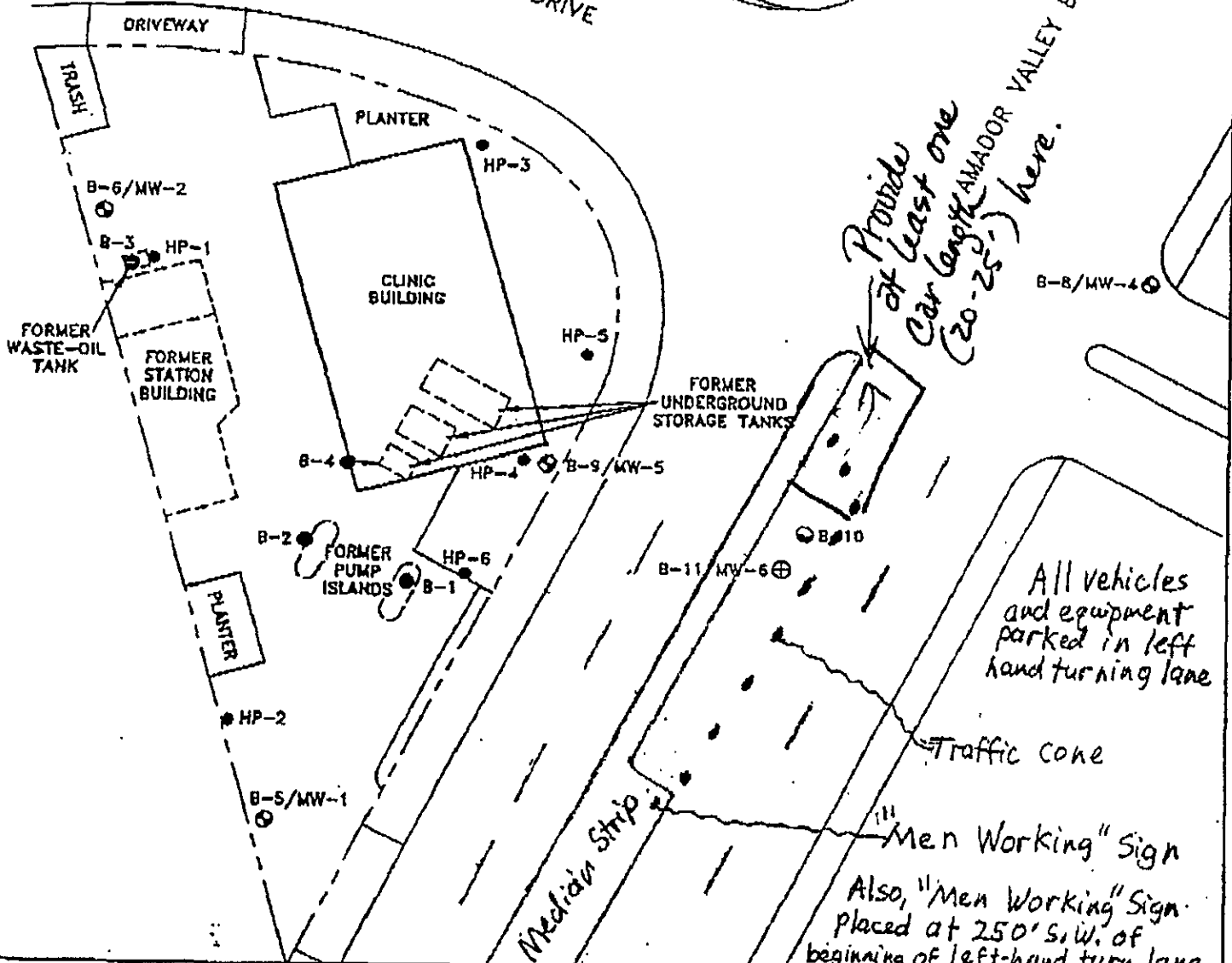
Traffic Control Plan

RESIDENTIAL

RETAIL STORES

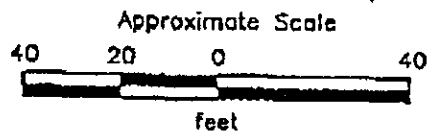
STARWARD DRIVE

AMADOR VALLEY BOULEVARD



LEGEND

- B-9/MW-5 ⊕ = BORING/MONITORING WELL
- B-10 ⊕ = TEMPORARY WELL
- B-2 ● = SOIL BORING (RESNA, 1992)
- B-4 ●- - = ANGLED BORING (RESNA, 1992)
- HP-6 ● = HYDROPUNCH (PEG, 1993)
- B-11/MW-6 ⊕ = PROPOSED BORING/MONITORING WELL



SOURCE: MODIFIED FROM PLAN SUPPLIED BY PACIFIC ENVIRONMENTAL GROUP, INC. WELLS SURVEYED BY RON ARCHER, CIVIL ENGINEER, INC., 1993



GENERALIZED SITE PLAN
FORMER CHEVRON STATION NO. 9-2621
7667 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA

PLATE

2

PROJECT 170111.03

RESNA

COMMUNICATION MEMO

<input checked="" type="checkbox"/> TELEPHONE	<input type="checkbox"/> CONFERENCE	DATE: 12/5/94	TIME: 9:15A	FILE NO: 170111.03	PAGE: 1
Person Contacted: Ginger	Telephone Number: 510 833-6630		Prepared By: William Madson		
Company: City of Dublin Dept. of Public Works	<input type="checkbox"/> Info. Only		<input type="checkbox"/> Action Required		
Location: Dublin	Responsible Person:				
SUBJECT: \$2,000 bond for Encroach. Permit					

NOTES AND DISCUSSION:

Ginger said that Chevron U.S.A. has a bond with the City of Dublin (\$2000) and that it would be up to Chevron or RESNA who would be put as the "Permitter." She said that for this site the bondholder is Chevron and that that bond could be applied to additional work at that site, meaning a new encroachment permit.

FREMONT
42501 Albrae
Fremont, CA 94538-3114
(510) 659-0404

IRVINE
17062 Murphy Avenue
Irvine, CA 92714
Telephone: (714) 756-8666

CHANDLER
135 S. Weber Drive
Suite 1
Chandler, Arizona 85226
(602) 961-0777

SIGNATURE: 

<input checked="" type="checkbox"/> TELEPHONE	<input type="checkbox"/> CONFERENCE	DATE: 12/13/94	TIME: 9:55	FILE NO: 170111.03	PAGE: 1
Person Contacted: Ginger Russell - Administrative Aide		Telephone Number: 510 833-6630			
Company: City of Dublin - Dept. of Public Works		Prepared By: William Madison			
Location: Dublin		<input type="checkbox"/> Info. Only <input type="checkbox"/> Action Required			
SUBJECT: Cert. of Insurance + Bond for 7667		Responsible Person:			

NOTES AND DISCUSSION: Amador Valley Blvd. Site.

Ginger told William that for work done previously at the site and in the street (Amador Valley Blvd. and Starward Drive) that RESNA provided the certificate of Public Liability and Workers' Compensation Insurance (required by Dublin DPW on their encroachment permit) and Chevron provided the \$2,000 bond (also required by Dublin DPW). Ginger said that the insurance was to cover while RESNA was supervising work done in the right-of-ways, in case the drill rig caused an accident while conducting the work in the street, for example, she said, so, while work is being done in the street, she said. Ginger also said that the \$2,000 bond Chevron has with the DPW for this site, ~~for~~^{with} work done previously in the right-of-ways for this site (earlier this year and in 1993) will cover for the proposed work (well installation in Amador Valley Blvd.) we will (RESNA/Chevron) be doing because the work is in the same intersection or area as the previous work.

In addition, Ginger said that the certificate of insurance RESNA has on file with the DPW is good until February 1995.

<input checked="" type="checkbox"/> FREMONT 42501 Albrae Fremont, CA 94538-3114 (510) 659-0404	<input type="checkbox"/> IRVINE 17062 Murphy Avenue Irvine, CA 92714 Telephone: (714) 756-8666	<input type="checkbox"/> CHANDLER 135 S. Weber Drive Suite 1 Chandler, Arizona 85226 (602) 961-0777
--	--	--

SIGNATURE: 

CITY OF DUBLIN
PUBLIC WORKS DEPARTMENT

YOUR RECEIPT
THANK YOU
CITY OF DUBLIN
DEVELOPMENTAL SERVICES

I V E D
1994
WORKS

100 Civic Plaza
Dublin, CA 94568
(510) 833-6630

ENCROACHMENT PERMIT

02/14/94 10:08AM
001A#1583

DO WORK IN ACCORDANCE WITH THE CITY OF DUBLIN MUNICIPAL CODE CHAPTER 7.04 AND ANY REQUIREMENTS SHOWN OR LISTED HEREIN.

ENCROACHMENT PERMIT NUMBER: H0000000000009417
ENCRH FR: \$140.00

Permittee: RESNA INC. INC.

Permit Number: 94-17

ITEMS CHECK: 10 \$140.00

73 DIGITAL DR.

Receipt No. 1583

NEWATE, CA. 94449

Fee: \$ 140.00

Bond: \$ Existing from Chevron.

Phone: (415) 382-7400

PLEASE READ THIS PERMIT CAREFULLY. KEEP IT AT THE WORK SITE. TO ARRANGE FOR INSPECTION, PHONE 833-6630 AT LEAST 48 HOURS BEFORE YOU START WORK.

JOB LOCATION 7667 AMADOR VALLEY BOULEVARD

DESCRIPTION OF WORK:

DRILL ONE 3" DIAMETER ^{BORING} TO APPROXIMATELY 10 FEET BELOW GRADE. TAKE SOIL AND WATER SAMPLE GROUT BORING TO SURFACE.

USA Identification Number: 42696

Length of Excavation _____ l.f. Width 3" DIAM. l.f. Depth 10 ft.

ATTENTION IS DIRECTED TO THE GENERAL PROVISIONS PRINTED ON THE REVERSE SIDE OF THIS PERMIT AND TO THE FOLLOWING SPECIAL REQUIREMENTS (To be filled in by Public Works Inspection Department):

PERMITTEE SHALL PROVIDE AND KEEP CURRENT A CERTIFICATE OF PUBLIC LIABILITY AND WORKERS' COMPENSATION INSURANCE WHICH NAMES THE CITY OF DUBLIN AND ITS EMPLOYEES AND AGENTS AS ADDITIONAL INSURED.

Worksites left in an unsafe condition will be secured by the City Maintenance Department and the cost charged to the permittee.

Traffic Control shall be to Caltrans standards.

Prosecution of Work: All work authorized by the permit shall be performed in a workmanlike, diligent, and expeditious manner, and must be complete to the satisfaction of the City Engineer.

Liability and Damages: The permittee shall be responsible for all liability imposed by law for personal injury or property damage which may arise out of the work permitted and done by permittee under this permit, or which may arise out of failure on the part of the permittee to perform his obligations under said permit in respect to maintenance and encroachment. The permittee shall protect and indemnify the City of Dublin, its officers and employees, and save them harmless in every way from all action by law for damage or injury to persons or property that may arise out of or be occasioned in any way because of his operations as provided in this permit.

Signature of Permittee

By: Erich Neupert FOR RESNA

City Engineer

By: [Signature]

Date: 2/9/94

Date of Issue: 2/14/94

Work Completed: _____

Inspector: _____

APPENDIX B

FIELD PROCEDURES

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FIELD PROTOCOL

The following presents RESNA Industries' field protocol for a typical site investigation involving hydrocarbon-impacted soil and/or groundwater.

Site Safety Plan

The Site Safety Plan describes the safety requirements for the evaluation of hydrocarbons in soil, groundwater, and the vadose-zone at the site. The site Safety Plan is applicable to personnel of RESNA Industries and its subcontractors. RESNA Industries personnel and subcontractors of RESNA Industries scheduled to perform the work at the site are briefed on the contents of the Site Safety Plan before work begins. A copy of the Site Safety Plan is available for reference by appropriate parties during the work. A site Safety Officer is assigned to the project.

Soil Borings

Prior to the drilling of borings and construction of monitoring wells, permits are acquired from the appropriate regulatory agency. In addition to the above-mentioned permits, encroachment permits from the City or State are acquired if drilling of borings off-site on City or State property is necessary. Copies of the permits are included in the appendix of the project report. Prior to drilling, Underground Service Alert (USA) is notified of our intent to drill, and known underground utility lines and structures are approximately marked.

The borings are drilled by a truck-mounted drill rig equipped with 8- or 10-inch-diameter, solid-stem or hollow-stem augers. Other methods such as rotary or casing hammer may be used if special conditions are encountered. The augers, sampling equipment and other equipment that comes into contact with the soil are steam-cleaned prior to drilling each boring to minimize the possibility of cross-contamination. Sampling equipment is cleaned with a trisodium phosphate solution and rinsed with clean water between samples. After drilling the borings, monitoring wells are constructed in the borings, or neat-cement grout with bentonite is used to backfill the borings to the ground surface.

Borings for groundwater monitoring wells are drilled to a depth of no more than 20 feet below the depth at which a saturated zone is first encountered, or a short distance into a stratum beneath the saturated zone which is of sufficient texture, moisture, and consistency to be judged as a perching layer by the field geologist, whichever is shallower. Drilling into a deeper aquifer below the shallowest aquifer is begun only after a conductor casing is properly installed and allowed to set, to seal the shallow aquifer.

Drill Cuttings

Drill cuttings subjectively evaluated as containing hydrocarbons at levels greater than 100 parts per million (ppm) are separated from those subjectively evaluated as containing hydrocarbons at levels less than 100 ppm. Evaluation is based either on subjective evidence of soil discoloration, or on measurements made using a field calibrated OVM. Readings are taken by placing a soil sample into a ziplock-type plastic bag and allowing volatilization to occur. The intake probe of the OVM is then inserted into the head space created in the plastic bag immediately after opening it. Field instruments such as the OVM are useful for measuring relative concentrations of vapor content, but cannot be used to measure levels of hydrocarbons with the accuracy of laboratory analysis. The drill cuttings from the borings are placed in labeled 55-gallon drums approved by the Department of Transportation, or on plastic at the site, and covered with plastic. The cuttings remain the responsibility of the client.

Sampling of Stockpiled Soil

One composite soil sample is collected for each 50 cubic yards of stockpiled soil, and for each individual stockpile composed of less than 50 cubic yards. Composite soil samples are obtained by first evaluating relatively high, average, and low areas of hydrocarbon concentration by digging approximately one to two feet into the stockpile and placing the intake probe of a field calibrated OVM against the surface of the soil; and then collecting one sample from the "high" reading area, and three samples from the "average" areas. Samples are collected by removing the top one to two feet of soil, then driving laboratory-cleaned brass sleeves into the soil. The samples are sealed in the sleeves using aluminum foil, plastic caps, and plastic zip-lock bags or aluminized duct tape; labeled; and promptly placed in iced storage for transport to the laboratory, where compositing is performed.

Soil Sampling in Borings

Soil samples are collected at no greater than 5-foot intervals from the ground surface to the total depth of the borings. The soil samples are collected by advancing the boring to a point immediately above the sampling depth, and then driving a California-modified, split-spoon sampler containing brass sleeves through the hollow center of the auger into the soil. (A standard penetrometer, which does not contain liners, may be used to collect samples when laboratory analysis for volatile components is not an issue. The sampler and brass sleeves are laboratory-cleaned, steam-cleaned, or washed thoroughly with Alconox® and water, prior to each use. The sampler is driven with a standard 140-pound hammer repeatedly dropped 30 inches. The number of blows to drive the sampler each successive six inches are counted and recorded to evaluate the relative consistency of the soil. When necessary, the sampler may be

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pushed by the drill rig hydraulics. In this case, the pressure exerted (in pounds per square inch) is recorded.

The samples selected for laboratory analysis are removed from the sampler and quickly sealed in their brass sleeves with aluminum foil, plastic caps, and plastic zip-lock bags or aluminized duct tape. The samples are then labeled, promptly placed in iced storage, and delivered to a laboratory certified by the State of California to perform the analyses requested.

One of the samples in brass sleeves not selected for laboratory analysis at each sampling interval is tested in the field using an OVM that is field calibrated at the beginning of each day it is used. This testing is performed by inserting the intake probe of the OVM into the head space in the plastic bag containing the soil sample as described in the Drill Cuttings section above. The OVM readings are presented in Logs of Borings included in the project report.

Logging of Borings

A geologist is present to log the soil cuttings and samples using the Unified Soil Classification System. Samples not selected for chemical analysis, and the soil in the sampler shoe, are extruded in the field for inspection. Logs include texture, color, moisture, plasticity, consistency, blow counts, and any other characteristics noted. Logs also include subjective evidence for the presence of hydrocarbons, such as soil staining, noticeable or obvious product odor, and OVM readings.

Monitoring Well Construction

Monitoring wells are constructed in selected borings using clean 2- or 4-inch-diameter, thread-jointed, Schedule 40 polyvinyl chloride (PVC) casing. No chemical cements, glues, or solvents are used in well construction. Each casing bottom is sealed with a threaded end-plug, and each casing top with a locking plug. The screened portions of the wells are constructed of machine-slotted PVC casing with 0.020-inch-wide (typical) slots for initial site wells. Slot size for subsequent wells may be based on sieve analysis and/or well development data. The screened sections in groundwater monitoring wells are placed to allow monitoring during seasonal fluctuations of groundwater levels.

The annular space of each well is backfilled with No. 2 by 12 sand or similar sorted sand (groundwater monitoring wells), or pea gravel (vapor extraction wells) to approximately two feet above the top of the screened casing for initial site wells. The sand pack grain size for subsequent wells may be based on sieve analysis and/or well development data. A 1- to 2-foot-thick bentonite plug is placed above the sand as a seal against cement entering the filter pack. The remaining annulus is then backfilled

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with a slurry of water, neat cement, and bentonite to approximately one foot below the ground surface.

An aluminum utility box with a PVC apron is placed over each wellhead and set in concrete placed flush with the surrounding ground surface. Each wellhead cover has a seal to protect the monitoring well against surface-water infiltration and requires a special wrench to open. The design discourages vandalism and reduces the possibility of accidental disturbance of the well.

Groundwater Monitoring Well Development

The monitoring wells are developed by bailing or over-pumping and surge-block techniques. The wells are either bailed or pumped, allowed to recharge, and bailed or pumped again until the water removed from the wells is evaluated to be clear. Turbidity measurements (in NTUs) are recorded during well development and are used in evaluating well development. The development method used, initial turbidity measurement, volume of water removed, final turbidity measurement, and other pertinent field data and observations are recorded. The wells are allowed to equilibrate for at least 48 hours after development prior to sampling. Water generated by well development is stored in 17E Department of Transportation (DOT) 55-gallon drums on site, and remains the responsibility of the client.

Groundwater Sampling

The static water level in each well is measured to the nearest 0.01-foot using a Solinst® electric water-level sounder or oil/water interface probe (if the wells contain floating product) cleaned with Alconox® and water before use in each well. The depth of each well is also measured. The liquid in the wells is examined for visual evidence of hydrocarbons by gently lowering approximately half the length of a Teflon® bailer (cleaned with Alconox® and water) past the air/water interface. The sample is then retrieved and inspected for floating product, sheen, emulsion, color, sediment, and clarity. Obvious product odor is recorded if noted. If floating product is present in the well, the thickness of floating product is measured using an oil/water interface probe and is recorded to the nearest 0.01 foot. Floating product is removed from wells on site visits.

Groundwater samples from the wells are collected in approximate order of increasing product concentration, as best known or estimated. Wells which do not contain floating product are purged using a submersible pump. Equipment which comes in contact with the interior of the well or the groundwater is cleaned with Alconox® and deionized or distilled water prior to use in each well. The wells are purged until withdrawal is of sufficient duration to result in stabilized pH, temperature, and electrical conductivity of the water. These parameters are measured to the nearest 0.1 pH unit, 0.1 degree F, and 10 umhos/cm, respectively, using portable meters

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calibrated daily to a buffer and conductivity standard, according to the manufacturer's specifications. A minimum of four well volumes is purged from each well. If the well becomes dewatered, the water level is allowed to recover to at least 80 percent of the initial water level. When recovery of the water level has not reached at least 0 percent of the static water level after two hours, a groundwater sample will be collected when sufficient volume is available to fill the sample container. Prior to the collection of each groundwater sample, the Teflon® bailer is cleaned with Alconox® and rinsed with tap water and deionized water, and the latex gloves worn by the sampler changed. Hydrochloric acid is added to the sample vials as a preservative (when applicable). Sample containers remain sealed until usage at the site. A sample method blank is collected by pouring distilled water into the bailer and then into sample vials. Method blanks are analyzed periodically to verify effective cleaning procedures. A sample of the formation water is then collected from the surface of the water in each of the wells using the Teflon® bailer. The water samples are then gently poured into laboratory-cleaned, 40-milliliter (ml) glass vials, 500 ml plastic bottles or 1-liter glass bottles (as required for specific laboratory analysis), sealed with Teflon®-lined caps, and inspected for air bubbles to check for head space, which would allow volatilization to occur. If a bubble is evident, the cap is removed, more sample is added, and the bottle resealed. The samples are then labeled and promptly placed in iced storage, and the wellhead is secured. A field log documenting sampling procedures and parameter monitoring is maintained. Water generated by the purging of wells is stored in 17E DOT 55-gallon drums, and floating product bailed from the wells is stored in double containment on-site; this water and product remains the responsibility of the client.

Sample Labeling and Handling

Sample containers are labeled in the field with the job number, unique sample location, depth, and date, and promptly placed in iced storage for transport to the laboratory. A Chain of Custody Record is initiated by the field geologist and updated throughout handling of the samples, and accompanies the samples to a laboratory certified by the State of California for the analyses requested. Samples are transported to the laboratory promptly to help ensure that recommended sample holding times are not exceeded. Samples are properly disposed of after their useful life has expired.

APPENDIX C

BORING LOGS

CanonieEnvironmental

Boring Log

Canonie

PROJECT No. 94-241-003

BORING No. B11/MW-6

LOGGED BY W: MADISON

PROJECT NAME: CHEVRON

BORING LOCATION: FORMER STATION NO. 9-2621

SURFACE ELEV: _____

DRILLER: D. WOOD

DATE STARTED: 01/11/95

DATE FINISHED: 01/11/95

DEPTH (ft)	SAMPLE			BLOW COUNT			REC (in)	USCS CLASS	GRAPHIC LOG	WC (%)	Q _u (tsf)	LAYER DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO	
	No.	TYPE	INTERVAL		0'	6'									12'
			FROM	TO	6'	12'									18'
													ASPHALT.		
								GM				.5	Silty, sandy, GRAVEL (fill), clasts to 1-inch.		
								CL				2	Very dark, grayish brown, silty CLAY, moderate plasticity, damp to moist.		
												4.5	Stiff at 4 feet.		
5												5	Sand lens, fine to medium SAND, very moist to wet.		
													Very stiff, dark gray, clayey SILT, low plasticity, moist to very moist.		
													Wet at 7.5 feet. Whiteish mottling in cracks.		
10															
													Very stiff, moist to very moist.		
													Color change to grayish brown, trace of coarse gravel, clast to 1.5-inch, subangular.		
								SC				16.5	Olive, clayey SAND, loose, fine to medium SAND, wet to saturated, trace of fine subrounded gravel, clast to 1/2-inch.		
								ML				18	Very stiff, very dark, grayish brown, clayey SILT, low plasticity, moist to very moist.		
												18.5	Bottom of Boring at 18.5 feet.		
20															

Observation Well Detail

PROJECT No. 94-241-003

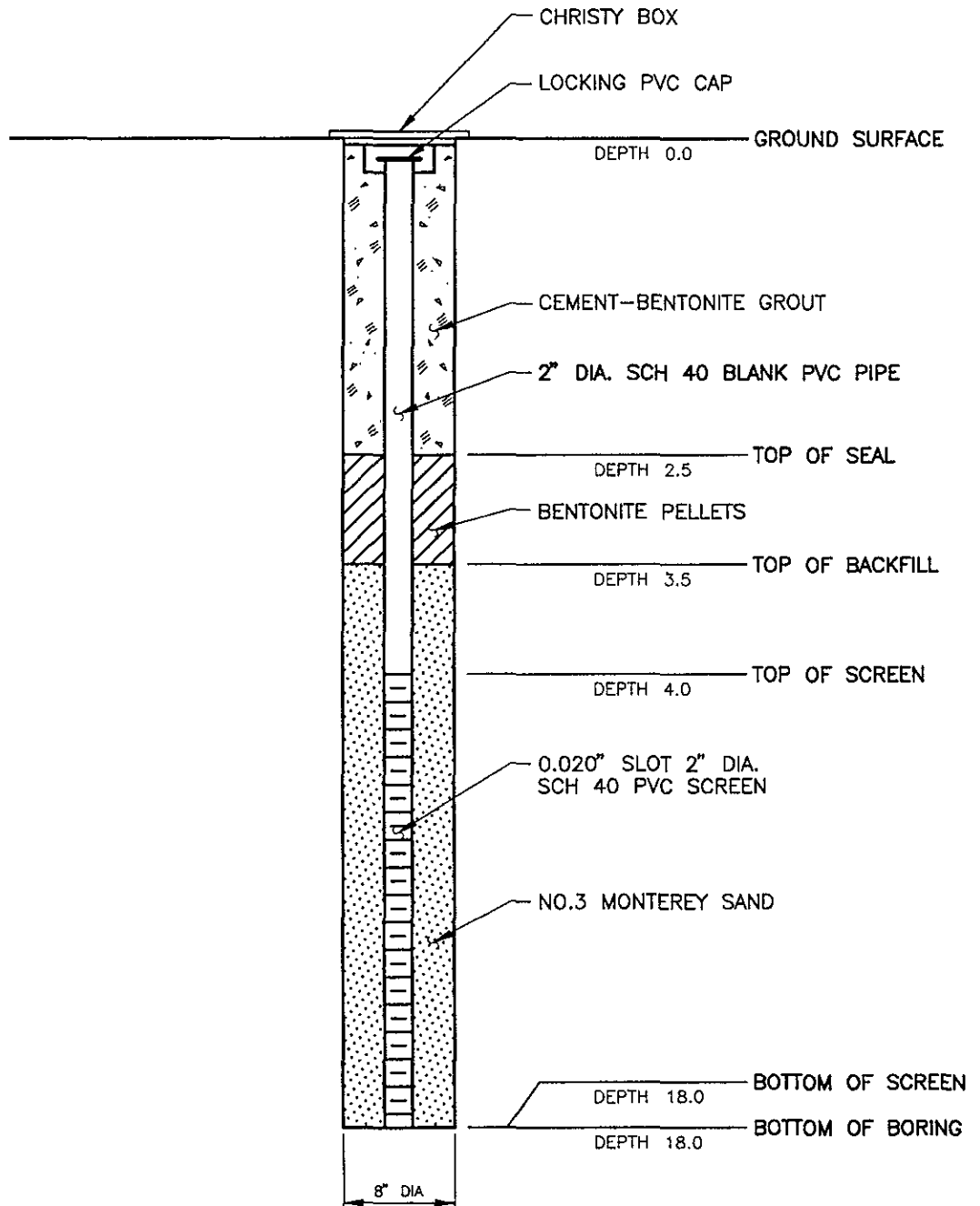
WELL No. MW-6

PROJECT NAME CHEVRON - DUBLIN

WELL LOCATION 7667 AMADOR VALLEY BOULEVARD

DATE 2-21-95

BY W.M.



NOTES:

1. NOT DRAWN TO SCALE.
2. SEE BORING LOG FOR DETAILED SOIL DESCRIPTION.

APPENDIX D

SURVEY DATA

CanonieEnvironmental

RON ARCHER

CIVIL ENGINEER INC.

CONSULTING • PLANNING • DESIGN • SURVEYING

4133 Mohr Ave., Suite E • Pleasanton, CA 94566
(510) 462-9372



SEPTEMBER 28, 1993
MARCH 9, 1994
REVISED FEBRUARY 6, 1995

JOB NO 2057.2

ELEVATIONS OF EXISTING MONITORING WELLS AT THE FORMER CHEVRON STATION NO. 9-2621, NOW AMADOR VALLEY MEDICAL CENTER LOCATED AT 7667 AMADOR VALLEY BOULEVARD AT STARWARD DRIVE, CITY OF DUBLIN, ALAMEDA COUNTY, CALIFORNIA.

FOR: *CANONIE ENVIRONMENTAL SERVICES INC.*

BENCHMARK:

A FOUND ALAMEDA COUNTY DISK STAMPED AV-STW AT THE NORTHEASTERLY END OF RETURN IN THE TOP OF CURB AT THE NORTHWEST CORNER OF INTERSECTION OF STARWARD DRIVE AND AMADOR VALLEY BOULEVARD. ELEVATION TAKEN AS 344.171.

MONITORING WELL DATA TABLE

WELL DESIGNATION	TOP OF CASING ELEVATION	TOP OF BOX ELEVATION
MW-1	346.73	
MW-2	348.41	
MW-3	347.14	
MW-4	343.52	
MW-5	345.51	
MW-6 ✓	345.25	

ORIGINAL

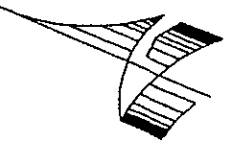
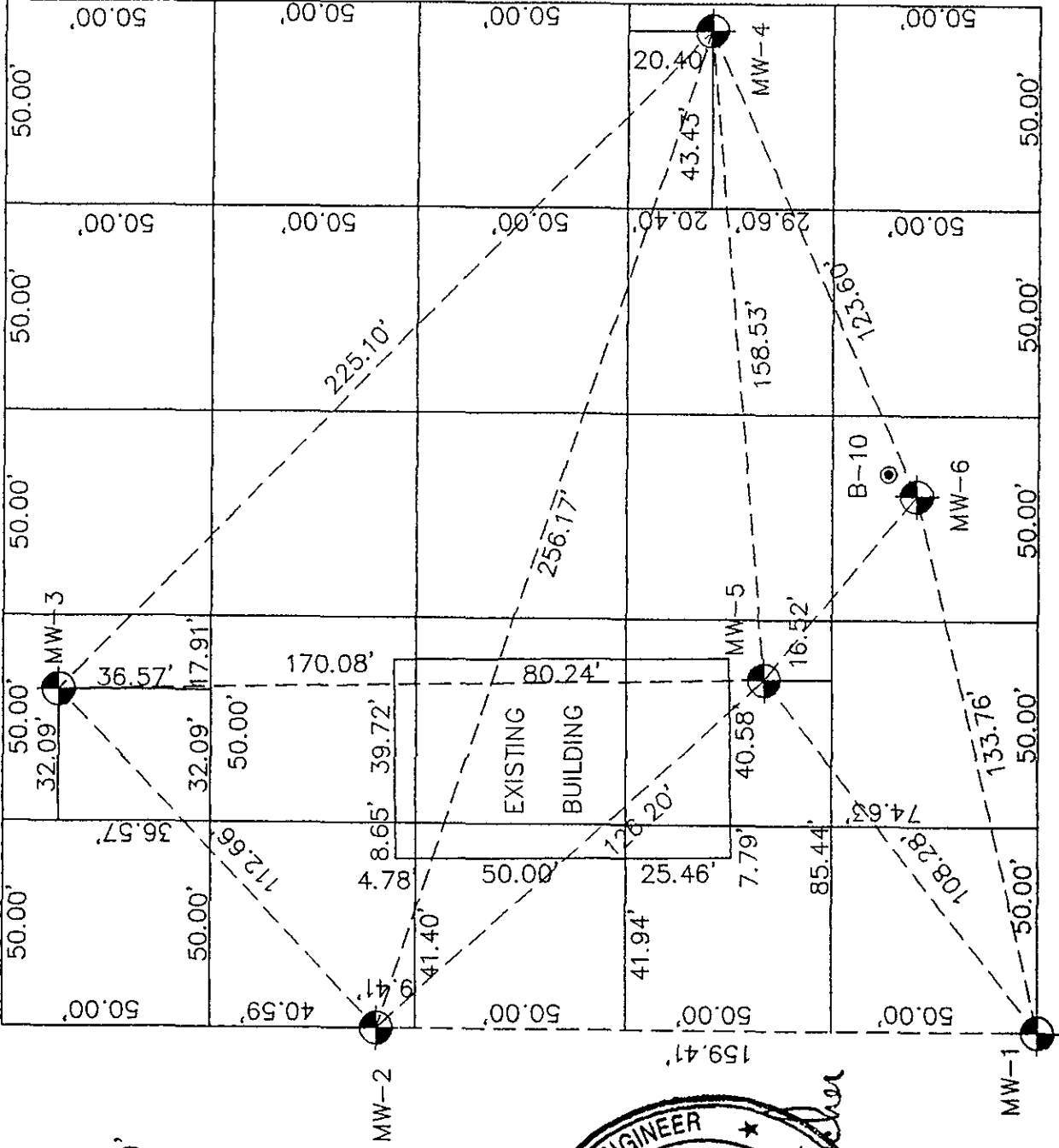
RECEIVED FEB 07 1995

✓ = NEW WELLS

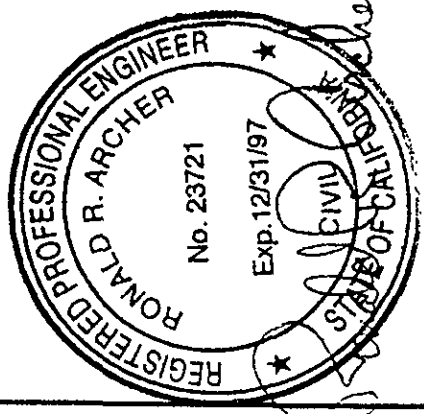


94-241-3-10

FEBRUARY 6, 1995



SCALE: 1" = 40'



ORIGINAL

FILE 94-241-3-10

RECEIVED FEB 07 1995

APPENDIX E

LABORATORY ANALYTICAL REPORTS AND
CHAIN OF CUSTODY RECORDS

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RESNA 42501 Albrae Street Fremont, CA 94538	Client Proj. ID: 170111.03 Chevron 9-2621 Lab Proj. ID: 9501656	Sampled: 01/11/95 Received: 01/12/95 Analyzed: see below Reported: 01/24/95
Attention: Justin Power		

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9501656-02 Sample Desc : SOLID,B11-3-4.5				
Organic Carbon : Total	mg/Kg	01/24/95	100	4000
Lab No: 9501656-03 Sample Desc : SOLID,B11-6-11.5				
Organic Carbon : Total	mg/Kg	01/24/95	100	5500

ORIGINAL

94-241
FILE
170111.03

RECEIVED FEB 09 1995

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

SEQUOIA ANALYTICAL - ELAP #1210

Vickie Tague Clark

Vickie Tague Clark
Project Manager





RESNA Client Proj. ID: 170111.03 Chevron 9-2621 Sampled: 01/11/95
42501 Albrae Street Sample Descript: B11-2-5.5 Received: 01/12/95
Fremont, CA 94538 Matrix: SOLID Extracted: 01/17/95
Attention: Justin Power Analysis Method: 8015Mod/8020 Analyzed: 01/17/95
Lab Number: 9501656-01 Reported: 01/24/95
QC Batch Number: GC011795BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	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:	0.0050	N.D.

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	80


ORIGINAL

RECEIVED FEB 09 1995

FILE 94-241 / 170111.03

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

SEQUOIA ANALYTICAL - ELAP #1210


Vickie Tague Clark
Project Manager





RESNA
42501 Albrae Street
Fremont, CA 94538
Attention: Justin Power

Client Project ID: 170111.03 Chevron 9-2621
Matrix: Solid

Work Order #: 9501656 -01

Reported: Jan 27, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011795BTEXEXA	GC011795BTEXEXA	GC011795BTEXEXA	GC011795BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	T. Granicher	T. Granicher	T. Granicher	T. Granicher
MS/MSD #:	950126702	950126702	950126702	950126702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/17/95	1/17/95	1/17/95	1/17/95
Analyzed Date:	1/17/95	1/17/95	1/17/95	1/17/95
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.19	0.20	0.19	0.58
MS % Recovery:	95	100	95	97
Dup. Result:	0.18	0.19	0.19	0.56
MSD % Recov.:	90	95	95	93
RPD:	5.4	5.1	0.0	3.5
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	-	-	-	-
Prepared Date:	-	-	-	-
Analyzed Date:	-	-	-	-
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	-	-	-	-
LCS Result:	-	-	-	-
LCS % Recov.:	-	-	-	-

MS/MSD	55-145	47-149	47-155	56-140
LCS				
Control Limits				

SEQUOIA ANALYTICAL

Vickie Tague Clark

Vickie Tague Clark
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

9501656.RES · 1 >





RESNA	Client Project ID: 170111.03 Chevron 9-2621	
42501 Albrae Street	Matrix: Solid	
Fremont, CA 94538		
Attention: Justin Power	Work Order #: 9501656 -02-03	Reported: Jan 27, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Total Organic Carbon
QC Batch#:	IN0124959060TCA
Analy. Method:	EPA 9060
Prep. Method:	N.A.

Analyst:	K. Hynes
MS/MSD #:	950165603
Sample Conc.:	5500
Prepared Date:	1/24/95
Analyzed Date:	1/24/95
Instrument I.D.#:	INTOC1
Conc. Spiked:	5000 mg/Kg

Result:	10000
MS % Recovery:	90

Dup. Result:	11000
MSD % Recov.:	110

RPD:	9.5
RPD Limit:	0-40

LCS #:	-
Prepared Date:	-
Analyzed Date:	-
Instrument I.D.#:	-
Conc. Spiked:	-
LCS Result:	-
LCS % Recov.:	-

MS/MSD	60-140
LCS	
Control Limits	

SEQUOIA ANALYTICAL

Vickie Clark
Vickie Tague Clark
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





RESNA 42501 Albrae Street Fremont, CA 94538	Client Proj. ID: 170111.03, Chevron 9-2621 Sample Descript: SPA (1-4) Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9501574-01	Sampled: 01/11/95 Received: 01/12/95 Extracted: 01/17/95 Analyzed: 01/17/95 Reported: 01/24/95
---	--	--

QC Batch Number: GC011795BTEXEXA
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	5.0	58
Benzene	0.025	N.D.
Toluene	0.025	N.D.
Ethyl Benzene	0.025	0.31
Xylenes (Total)	0.025	0.23
Chromatogram Pattern:		
Non Gas Mix		<C8
Weathered Gas		C8-C12

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	167 Q

ORIGINAL

RECEIVED JAN 25 1995

170111.03 / 94-241

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

SEQUOIA ANALYTICAL - ELAP #1210

VMT Clark

Vickie Tague Clark
Project Manager





Sequoia
Analytical

680 Chesapeake Drive
1900 Bates Avenue, Suite L
819 Striker Avenue, Suite 8

Redwood City, CA 94063
Concord, CA 94520
Sacramento, CA 95834

(415) 364-9600
(510) 686-9600
(916) 921-9600

FAX (415) 364-9233
FAX (510) 686-9689
FAX (916) 921-0100

RESNA
42501 Albrae Street
Fremont, CA 94538
Attention: Justin Power

Client Proj. ID: 170111.03, Chevron 9-2621

Received: 01/12/95

Lab Proj. ID: 9501574

Reported: 01/24/95

LABORATORY NARRATIVE

(TPPH) High surrogate recovery was due to co-eluting matrix peaks.

SEQUOIA ANALYTICAL

Vickie Tague Clark
Project Manager





RESNA Client Project ID: 170111.03, Former Chevron
 42501 Albrae Street Matrix: SOLID
 Fremont, CA 94538
 Attention: Justin Power Work Order #: 9501574 01 Reported: Jan 23, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC011795BTEXEXA	GC011795BTEXEXA	GC011795BTEXEXA	GC011795BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	T. Granicher	T. Granicher	T. Granicher	T. Granicher
MS/MSD #:	950126702	950126702	950126702	950126702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/17/95	1/17/95	1/17/95	1/17/95
Analyzed Date:	1/17/95	1/17/95	1/17/95	1/17/95
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg

Result:	0.19	0.20	0.19	0.58
MS % Recovery:	95	100	95	97

Dup. Result:	0.18	0.19	0.19	0.56
MSD % Recov.:	90	95	95	93

RPD:	5.4	5.1	0.0	3.5
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	-	-	-	-
Prepared Date:	-	-	-	-
Analyzed Date:	-	-	-	-
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	-	-	-	-
LCS Result:	-	-	-	-
LCS % Recov.:	-	-	-	-

MS/MSD	55-145	47-149	47-155	56-140
LCS				
Control Limits				

SEQUOIA ANALYTICAL

Vickie Clark
 Vickie Tague Clark
 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

9501574.RES <1>



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

Chain-of-Custody-Record

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

Chevron Facility Number: Former Chevron Service Station
 Facility Address: 7667 Amador Valley Blvd, # 9-2621
 Consultant Project Number: 17011403
 Consultant Name: RESNA Industries, Inc.
 Address: 42501 Albrae St., Ste 100, Fremont
 Project Contact (Name): Justin Power / William Madison
 (Phone): 510440-3300 (Fax Number): 510651-8641

Chevron Contact (Name): Keane Pa Kan
 (Phone): 510 942-8752
 Laboratory Name: Sequoia Analytical
 Laboratory Release Number: 2147781
 Samples Collected by (Name): William Madison
 Collection Date: 1/12/95
 Signature: [Signature]

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)	Analytes To Be Performed										Remarks
								BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (8020)	Purgeable Hydrocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd, Cr, Pb, Zn, Ni (CAP or AA)			
SPA-1		1	S	C			Y	X										COMPOSITE 4 Tubes into one sample and analyze the one sample for TPH/G/BTEX
SPA-2		1	S	C			Y	X										
SPA-3		1	S	C			Y	X										
SPA-4		1	S	C			Y	X										
Please FAX RESULTS TO Gina / Jay / TOM at IWM (408) 942-1499																		

Relinquished By (Signature): <u>[Signature]</u>	Organization: <u>RESNA</u>	Date/Time: <u>1/12/95 11:05</u>	Received By (Signature): <u>[Signature]</u>	Organization: <u>Sequoia</u>	Date/Time: <u>1/12/95</u>	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature):	Organization:	Date/Time:	Received By (Signature):	Organization:	Date/Time:	
Relinquished By (Signature):	Organization:	Date/Time:	Received For Laboratory By (Signature):	Organization:	Date/Time:	

01/12/95 15:15
 COC-310403 81/MCH
 03510 651 8647
 RESNA
 01/12/95



Canonie Environmental
7901 Stoneridge Dr, Ste 100
Pleasanton, CA 94578

Client Proj. ID: 94-241.003, Chevron 9-2621
Sample Descript: BB-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 950117-01

Sampled: 01/30/95
Received: 01/31/95
Analyzed: 02/06/95
Reported: 02/14/95

Attention: Zbig Ignatowicz

QC Batch Number: GC020695BTEX03A

Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates
Trifluorotoluene

Control Limits %
70 130

% Recovery
97

ORIGINAL

FILE

94-241-001-10

RECEIVED MAR 0 1 1995

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

SEQUOIA ANALYTICAL - ELAP #1210

Vickie Tague Clark
Project Manager





Canonie Environmental
7901 Stoneridge Dr, Ste 100
Pleasanton, CA 94578

Client Proj. ID: 94-241.003, Chevron 9-2621
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9501117-02

Sampled: 01/30/95
Received: 01/31/95
Analyzed: 02/06/95
Reported: 02/14/95

Attention: Zbig Ignatowicz

QC Batch Number: GC020695BTEX03A

Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	430
Benzene	0.50	1.5
Toluene	0.50	0.79
Ethyl Benzene	0.50	4.4
Xylenes (Total)	0.50	3.3
Chromatogram Pattern:		Gas

Surrogates
Trifluorotoluene

Control Limits %
70 130

% Recovery
100

ORIGINAL

FILE

94-241-001-10

RECEIVED MAR 01 1995

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

SEQUOIA ANALYTICAL - ELAP #1210

VMT Clark

Vickie Tague Clark
Project Manager





Canonie Environmental 7901 Stoneridge Dr, Ste 100 Pleasanton, CA 94578	Client Proj. ID: 94-241.003, Chevron 9-2621 Sample Descript: TB#1 Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9501117-03	Sampled: 01/30/95 Received: 01/31/95 Analyzed: 02/06/95 Reported: 02/14/95
Attention: Zbig Ignatowicz		
QC Batch Number: GC020695BTEX03A		
Instrument ID: GCHP03		

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		N.D.

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	93

ORIGINAL FILE 94-241-001-10
RECEIVED MAR 01 1995

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

SEQUOIA ANALYTICAL - ELAP #1210

MT Clark

Vickie Tague Clark
Project Manager





Canonie Environmental Client Project ID: 94-241.003, Chevron 9-2621
7901 Stoneridge Drive, Suite 100 Matrix: Liquid
Pleasanton, CA 94588
Attention: Zbig Ignatowicz Work Order #: 9501117 -01-3 Reported: Feb 16, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC020695BTEX03A	GC020695BTEX03A	GC020695BTEX03A	GC020695BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	9501F1201	9501F1201	9501F1201	9501F1201
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	2/6/95	2/6/95	2/6/95	2/6/95
Analyzed Date:	2/6/95	2/6/95	2/6/95	2/6/95
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.6	9.5	9.5	29
MS % Recovery:	96	95	95	97
Dup. Result:	8.7	8.7	8.7	26
MSD % Recov.:	87	87	87	87
RPD:	9.8	8.8	8.8	11
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	-	-	-	-
Prepared Date:	-	-	-	-
Analyzed Date:	-	-	-	-
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	-	-	-	-
LCS Result:	-	-	-	-
LCS % Recov.:	-	-	-	-

MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120
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SEQUOIA ANALYTICAL

Vickie Tague Clark
Vickie Tague Clark
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

9501117.CAN <1>



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

Chevron Facility Number 9-2621
Facility Address 7607 AMADOR VALLEY BLVD.
Consultant Project Number 94-241 003
Consultant Name CANONIC ENVIRONMENTAL
Address 7101 STONERIDGE DR. PLEASANTON
Project Contact (Name) ZBIG IGNATOWICZ
(Phone) (510) 463-9117 (Fax Number) (510) 463-2981

Chevron Contact (Name) KENNETH KAN
(Phone) (510) 842-8752
Laboratory Name SEQUOIA
Laboratory Release Number 2147781
Samples Collected by (Name) JEFFREY D. SALA
Collection Date 1/30/95
Signature Jeffrey D. Sala

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										Remarks	
								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)				
BB-1		3	W	G	11:55	HCL	Y	X											
MW-6		3	W	G	12:00	HCL	Y	X											
TB#1		3	W	G	—	HCL	Y	X											

NOTE:
DON'T BILL
FOR TB#1

Relinquished By (Signature) <u>Jeffrey D. Sala</u>	Organization <u>Canonie</u>	Date/Time <u>1/31/95 9:30</u>	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice) 24 Hrs. 48 Hrs. 5 Days 10 Days <u>As Contracted</u>
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time	

(See Reverse for Instructions)

NO. _____

PROJECT NAME CHEVRON 9-2021 DIVISION SAMPLERS JEFFREY D. SALA
 PROJECT NUMBER 94-241 003 (PRINT) Jeffrey D. Sala
 RECORDER Jeffrey D. Sala (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES		SAMPLE DESCRIPTION CODES		TAT CODES
A. 40-ml VOA Vial	E. Brass Tube	A. Ground Water	F. Oil	1. Standard
B. Glass Liter	F. Other _____	B. Surface Water	G. Waste	2. 48 Hour
C. Plastic 500-ml		C. Leachate	H. Blank/Spike	3. 24 Hour
D. Plastic Liter		D. Rinseate	I. Other <u>Blank</u>	4. Other _____
		E. Soil/Sediment		

DATE	TIME	SAMPLE ID	Sample Container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION			ANALYSIS REQUESTED				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Stored at 4°C (Check)	No VOA Headspace (Check)	NOTES	LABORATORY USE ONLY		
					Unpreserved	HNO ₃	HCL	Field Filtered (Check)										ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1/30/95	11:55	BB-1	AA						TPHG										
1/30/95	12:05	MW-6	AA						ATRX										
1/30/95	---	TB#1	AI													Do NOT fill for TB#1			

NOTES / MISCELLANEOUS	Relinquished by: (Signature) <u>Jeffrey D. Sala</u>	Received By: (Signature) <u>Steve Tar</u>	Date <u>1-31-95</u>	Time <u>9:50</u>
	Relinquished By: (Signature) <u>Steve Tar</u>	Received By: (Signature) _____	Date _____	Time _____
	Relinquished By: (Signature) _____	Received By: (Signature) _____	Date _____	Time _____

Method of Shipment	Description of Transport Container	Other Chains-Of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature) _____	Date _____	Time _____	Received for lab By: (Signature) <u>Chad Allen</u>	Date <u>1-31-95</u>	Time <u>1317</u>
--------------------	------------------------------------	---	----------------------------------	------------	------------	--	---------------------	------------------

Send Lab Results to (Name): ZBIG IGNATOWICZ (Check Office Below) Verbal Requested: Yes No

- | | | | | | |
|--|--|--|--|---|--|
| <input type="checkbox"/> DALLAS
TEL (214) 770-1800
FAX (214) 770-0249 | <input type="checkbox"/> DENVER
TEL (303) 790-1747
FAX (303) 799-0186 | <input type="checkbox"/> IRVINE
TEL (714) 757-1755
FAX (714) 757-0960 | <input type="checkbox"/> MT. VIEW
TEL (415) 960-1640
FAX (415) 960-0739 | <input type="checkbox"/> PORTER
TEL (219) 926-8651
FAX (219) 926-7169 | <input type="checkbox"/> OTHER _____
TEL _____
FAX _____ |
| <input type="checkbox"/> BOZEMAN
TEL (406) 586-9496
FAX (406) 586-9724 | <input type="checkbox"/> HOUSTON
TEL (713) 589-8686
FAX (713) 531-8886 | <input type="checkbox"/> KING OF PRUSSIA
TEL (215) 337-2551
FAX (215) 337-0560 | <input checked="" type="checkbox"/> PLEASANTON
TEL (510) 463-9117
FAX (510) 463-2981 | <input type="checkbox"/> PORTLAND
TEL (503) 241-0282
FAX (503) 241-0486 | <input type="checkbox"/> OTHER _____
TEL _____
FAX _____ |