RESNA
Working to Restore Nature

5/5/94 ① Continue GMR
can delete sampling of MW 1, 2, 3
② Which way does trench slope
where is source of contam in street?
check Resna report July 22, 1992

73 Digital Drive
Novato, CA 94949
Phone: (415) 382-7400
Fax: (415) 382-7415

REPORT
ADDITIONAL SUBSURFACE ENVIRONMENTAL INVESTIGATION

Former Chevron Service Station 9-2621
7667 Amador Valley Boulevard
Dublin, California

Prepared for:

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Chevron U.S.A. Products Company
P.O. Box 5004
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April 27, 1994
RESNA Job 170111.02

CONTENTS

TABLES

PLATES

APPENDICES

APPENDIX A:	PERMITS
APPENDIX B:	FIELD PROCEDURES
APPENDIX C:	BORING LOGS
APPENDIX D:	SURVEY DATA
APPENDIX E:	LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY RECORDS

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at

Former Chevron Service Station 9-2621
7667 Amador Valley Boulevard
Dublin, California

for

Chevron U.S.A. Products Company

1.0 INTRODUCTION

At the request of Chevron U.S.A. Products Company (Chevron), RESNA Industries Inc. (RESNA) performed an additional subsurface environmental investigation at former Chevron Service Station 9-2621 located at 7667 Amador Valley Boulevard in Dublin, California. The purpose of this investigation was to further evaluate the extent of residual hydrocarbons in soil and the lateral extent of dissolved hydrocarbons in groundwater downgradient of the former underground storage tanks (USTs) and offsite to the southeast. This additional subsurface investigation was requested after hydrocarbons in soil and groundwater were detected during previous environmental investigations performed at the site.

Work RESNA conducted for the investigation included:

- Drilling one onsite soil boring (B-9) and one offsite soil boring (B-10) into first encountered groundwater at locations selected by Chevron.

- Collecting soil samples from the borings at approximately 5-foot intervals, changes in lithology, where subjective evidence of petroleum hydrocarbons were observed, and just above first encountered groundwater.

- Constructing one 2-inch-diameter monitoring well (MW-5) in boring B-9 and one 2-inch-diameter temporary well in boring B-10.

- Collecting a groundwater sample from boring B-10, removing the temporary well casing, and grouting the boring to the surface.

- Developing, purging, and sampling the monitoring well. Groundwater samples were also collected from wells MW-1 through MW-4.

- Submitting selected soil and groundwater samples for analysis to Chevron's contracted laboratory for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additionally, one soil sample from the offsite boring was analyzed for total organic carbon (TOC).

- Contracting a licensed land surveyor to measure the top-of-casing elevation of the newly-installed well and one existing well relative to mean sea level.

- Evaluating the direction of groundwater flow and gradient beneath the site.

2.0 BACKGROUND

2.1 Site Description

Former Chevron Service Station No. 9-2621 is on the southwest corner of the intersection of Amador Valley Boulevard and Starward Drive. The approximate location of the site is shown on the Site Vicinity Map (Plate 1). The site is currently occupied by the Amador Valley Medical Center. The approximate locations of the former station building, pump islands, and gasoline USTs are shown on the Generalized Site Plan (Plate 2).

2.2 Previous Environmental Work

In 1992, RESNA drilled four soil borings at the site (RESNA, November 1992). Residual hydrocarbons were detected in the soil beneath the site. In March 1993, Pacific Environmental Group (PEG) drilled and collected soil and groundwater samples at six temporary well locations onsite. Hydrocarbons were not detected in soil samples collected from the borings.

Hydrocarbons were detected in groundwater samples collected from each temporary well location, except from the temporary well located adjacent to the former waste-oil UST. (PEG, April 26, 1993). In September 1993, RESNA drilled two additional onsite and two offsite soil borings and constructed monitoring wells in the borings. Low concentrations of toluene were detected in the soil sample analyzed from onsite boring B-5. Hydrocarbons were not detected in water samples collected from monitoring wells MW-1 through MW-4 (RESNA, November 23, 1993).

3.0 FIELD INVESTIGATION

3.1 Site-Specific Health and Safety Plan/ Permitting

RESNA prepared a Site-Specific Health and Safety Plan 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 RESNA personnel, following a review of site conditions. The HSP was reviewed by the project manager, RESNA field personnel, and subcontractor personnel before beginning field operations at the site.

All applicable permits pertaining to drilling soil borings and the installing groundwater monitoring well and temporary well were obtained from the Zone 7 Water Agency, and the City of Dublin. Copies of permits obtained by RESNA are in Appendix A.

3.2 Soil Borings and Sampling

At Chevron's request, a geologist from RESNA was at the site on March 4, 1994 to observe Woodward Drilling of Rio Vista, California drill two soil borings (B-9 and B-10) into first encountered groundwater at locations selected by Chevron, using a Mobile B-57 truck-mounted drill rig equipped with 8-inch hollow-stem augers. Boring B-9 was drilled to 17 feet below grade, and boring B-10 was drilled to 10 feet below grade. A 2-inch-diameter monitoring well (MW-5) was installed in boring B-9 and a 2-inch-diameter temporary well was installed in boring B-10. The locations of the wells are shown on Plate 2. During field operations,

RESNA personnel followed RESNA's standard operating procedures for drilling soil borings and installing groundwater monitoring wells. RESNA's standard operating procedures are presented in Appendix B.

During drilling of borings B-9 and B-10, soil samples were collected at approximately 5-foot intervals, at obvious changes in sediment type, where subjective evidence of petroleum hydrocarbons was observed, and just above first encountered groundwater. Samples were collected using a 2.0 inch diameter California-modified split-spoon sampler, lined with cleaned 2-inch-diameter by 6-inch-long brass sample tubes. At the selected sampling depths the sampler was driven 18 inches ahead of the augers. Soil samples were screened in the field using a photoionization detector, and readings were recorded on the boring logs. One sample from each sample interval was sealed with aluminum foil, capped, secured with teflon tape, labeled, placed on ice in an insulated container, and delivered under chain-of-custody protocol 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. Logs of borings are 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.

3.3 Monitoring Well Construction

Monitoring well MW-5 was constructed in boring B-9 of schedule 40, flush-threaded, 2-inch diameter blank casing and well screen with 0.020-inch slots. The well screen was installed between approximately 5 and 17 feet below grade in each boring. A sand filter was placed around the well screen to a height of approximately 6 inches above the top of the screen. A hydrated bentonite plug about 6 inches thick was placed above the sand pack and the remaining annular space was filled with a cement/bentonite slurry 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 the boring logs (Appendix C).

3.4 Monitoring Well Development and Sampling

The monitoring well was developed by surging and bailing on March 10, 1994. 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 RESNA technician used a bailer to collect groundwater samples for subjective analysis. Following subjective analysis, the technician bailed approximately ten well volumes of groundwater from the well. Well development water was transported to Chevron's Richmond, California refinery for disposal.

On March 11, 1994, a RESNA technician measured depths-to-water in wells MW-1 through MW-5 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 wells MW-1 through MW-5. Before collecting groundwater samples from monitoring wells MW-1 through MW-5, RESNA personnel purged approximately three well casing volumes of water from the wells. Following groundwater recovery, groundwater samples were collected and placed in appropriate containers using a Teflon bailer cleaned with a solution of Alconox 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 transported to Chevron's Richmond, California refinery for disposal.

3.5 Temporary Well Installation and Sampling

New 2-inch diameter groundwater monitoring well screen and blank casing was temporarily installed in boring B-10. The temporary well casing was constructed of schedule 40 PVC casing with flush treads and 0.020-inch-slot well screen. The well screen was placed approximately one foot above and four feet below the current water table to permit entry of separate-phase hydrocarbons. No separate-phase hydrocarbons were detected, and a water sample was collected from the temporary well using a clean Teflon bailer. Following collection of groundwater samples, the temporary well casing was removed from the boring and the boring was backfilled to the surface with a cement/bentonite slurry.

4.0 SITE CONDITIONS

4.1 Geology and Hydrogeology

During drilling of borings B-9 and B-10, unconsolidated sediments consisting of clay, clayey-silt, and silty-sand were encountered. Descriptions of the materials encountered are shown on the boring logs (Appendix C). Groundwater was first encountered during drilling at an approximate depth of 7.5 feet.

4.2 Groundwater Gradient

The elevation of the tops-of-casing in the newly installed and one existing well were surveyed to within 0.01 foot with respect to a known benchmark and mean sea level by Ron Archer Civil Engineering of Pleasanton, California, a licensed land surveyor. Well survey data are in Appendix D. These data were combined with the depths to groundwater measured on March 11, 1994 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 in 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 on March 11, 1994 was to the east-southeast. The groundwater gradient was 0.009.

5.0 LABORATORY ANALYSES

Selected soil samples collected from each boring were submitted to Chevron's contract laboratory for analysis for TPHg using modified Environmental Protection Agency (EPA) Method 8015 and BTEX using EPA Method 8020. Additionally, one sample from offsite boring B-10 was analyzed for TOC using EPA Method 415.1. Groundwater samples collected from wells MW-1 through MW-5 were analyzed for TPHg using EPA Modified Method 8015 and BTEX using EPA Method 8020.

6.0 ANALYTICAL RESULTS

6.1 Soil

Results of soil sample analyses are summarized in Table 2. Laboratory analytical results are included in Appendix F. Concentrations of TPHg and BTEX were not detected in soil samples collected from borings B-9 and B-10. TOC was detected at a concentration of 13,000 parts per million in the soil sample collected from boring B-10.

6.2 Groundwater

Results of groundwater analyses are summarized in Table 3. TPHg and BTEX were not detected in water samples collected from monitoring wells MW-1 through MW-4, but were detected in the samples from well MW-5 and from boring B-10. The sample from temporary well B-10 contained 23,000 parts per billion (ppb) TPHg and 120 ppb benzene, and the sample from monitoring well MW-5 contained 770 ppb TPHg and 1.4 ppb benzene.

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.

8.0 REFERENCES

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

RESNA Industries. November 1992. Phase II Investigation at Amador Valley Medical Center (Former Chevron Service Station 9-2621), 7667 Amador Valley Boulevard, Dublin, California. Project F1036.01.

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

RESNA Industries. August 8, 1993. Site Safety Plan: Soil Boring and Monitoring Well Installation at Former Chevron Service Station 9-2621, 7667 Amador Valley Boulevard, Dublin, California. 170111.01SSP.

RESNA Industries. November 23, 1993. Report: Additional Subsurface Environmental Investigation at Former Chevron Service Station 9-2621, 7667 Amador Valley Boulevard, Dublin, California. 170111.01RPT.

TABLES

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Table 1

GROUNDWATER ELEVATION DATA
Former Chevron Service Station 9-2621
7667 Amador Valley Boulevard
Dublin, California

Well Number	Date Measured	Top of Casing	Depth to Water	Elevation GW/PS
MW-1	3/11/94	346.73	7.16	339.57
MW-2	3/11/94	348.41	8.60	339.81
MW-3	3/11/94	347.14	7.44	339.70
MW-4	3/11/94	343.52	5.45	338.07
MW-5	3/11/94	345.51	6.10	339.41

Notes:

Top-of-Casing elevation feet above sea level
Depth to Water measured in feet
GW/PS = Groundwater/Potentiometric Surface elevation above mean sea level (feet)

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Table 2

SOIL ANALYTICAL RESULTS
Former Chevron Service Station 9-2621
7667 Amador Valley Boulevard
Dublin, California

Sample	Date	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOC
S-6.0-B9	3/12/94	<1	<0.005	<0.005	<0.005	<0.015	NA
S-3.0-B10	3/12/94	<1	<0.005	<0.005	<0.005	<0.015	NA
S-5.0-B10	3/12/94	<1	<0.005	<0.005	<0.005	<0.015	13,000

Notes:

All results in parts per million (ppm)

S	=	Soil sample
6.5	=	Sample depth in feet
B9	=	Boring B-9
TPHg	=	Total petroleum hydrocarbons as gasoline.
TOC	=	Total organic carbon
<	=	Less than indicated detection limit established by the laboratory
NA	=	Sample not analyzed

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Table 3

GROUNDWATER ANALYTICAL RESULTS
Former Chevron Service Station 9-2621
7667 Amador Valley Boulevard
Dublin, California

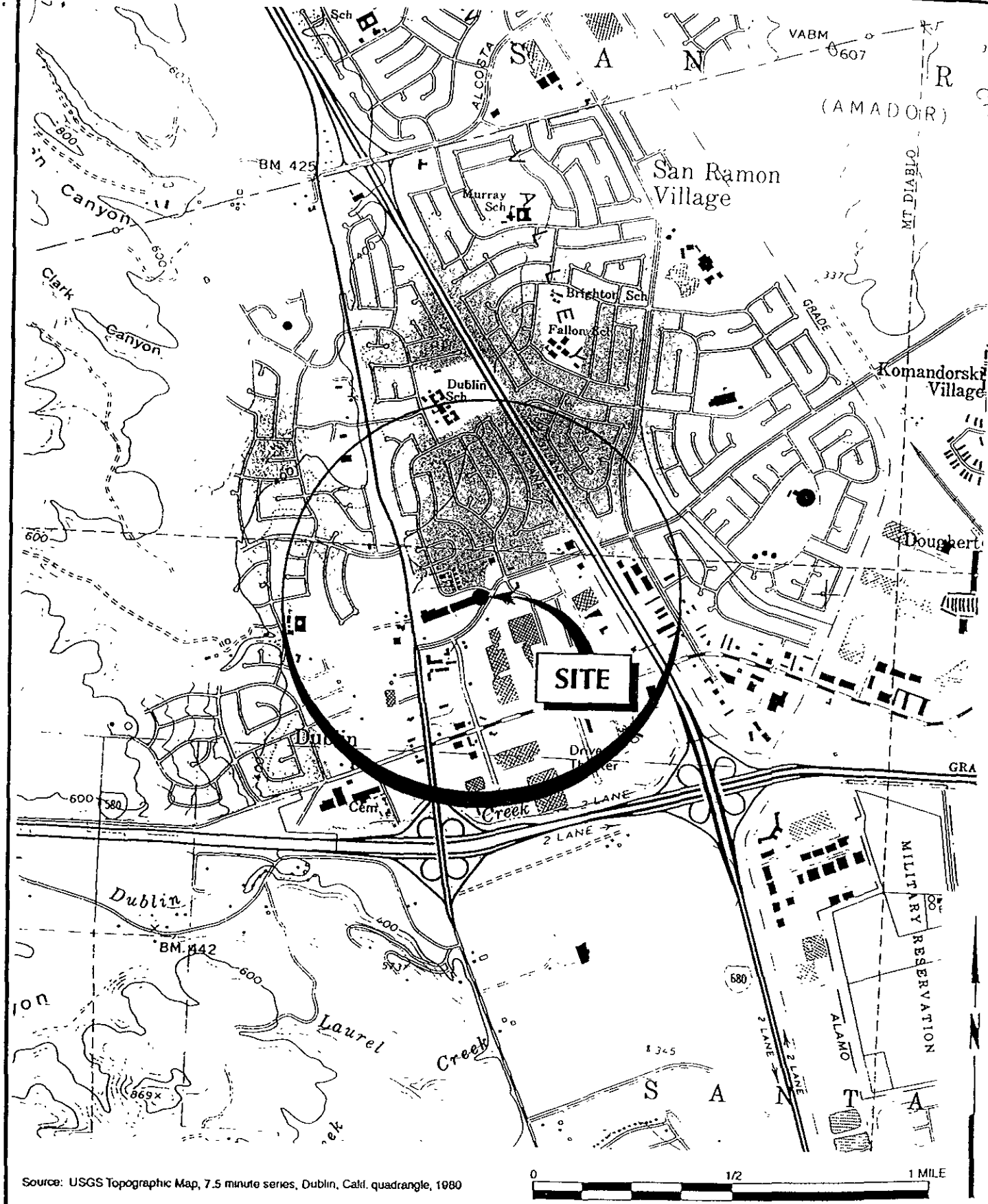
Sample Number	Date Sampled	Ethyl- TPHg	Total Benzene	Toluene	Ethyl- Benzene	Xylenes
B-10	3/4/94	23000	120	180	1500	730
MW1	3/11/94	<50	<0.5	<0.5	<0.5	<0.5
MW2	3/11/94	<50	<0.5	<0.5	<0.5	<0.5
MW3	3/11/94	<50	<0.5	<0.5	<0.5	<0.5
MW4	3/11/94	<50	<0.5	<0.5	<0.5	<0.5
MW5	3/11/94	770	1.4	37	5.6	10
TB-LB	3/4/94	<50	<0.5	<0.5	<0.5	<0.5
TB-LB	3/11/94	<50	<0.5	<0.5	<0.5	<0.5

Notes:

All results in parts per billion (ppb)

W	=	Water sample
5	=	Water level elevation
MW1	=	Monitoring Well MW-1
TPHg	=	Total petroleum hydrocarbons as gasoline.
<	=	Less than detection limit established by the laboratory
TB-LB	=	Travel blank

PLATES



Source: USGS Topographic Map, 7.5 minute series, Dublin, Calif. quadrangle, 1980

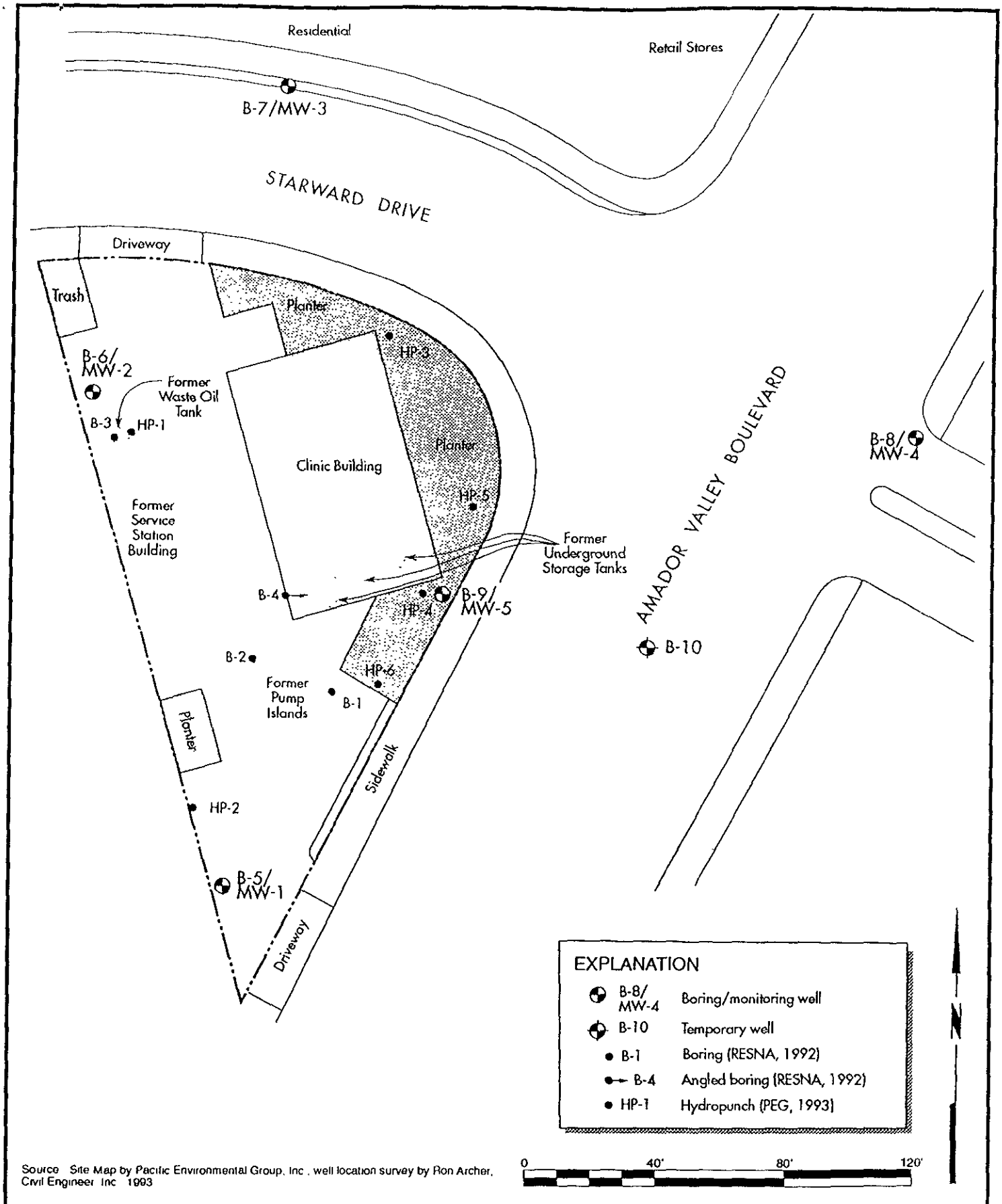
RESNA

PROJECT NO. 170111.02 | 6/93

SITE VICINITY MAP

Amador Valley Medical Center
7667 Amador Valley Boulevard
Dublin, California

PLATE 1



Source Site Map by Pacific Environmental Group, Inc., well location survey by Ron Archer, Civil Engineer Inc 1993

RESNA

PROJECT NO. 170111.02

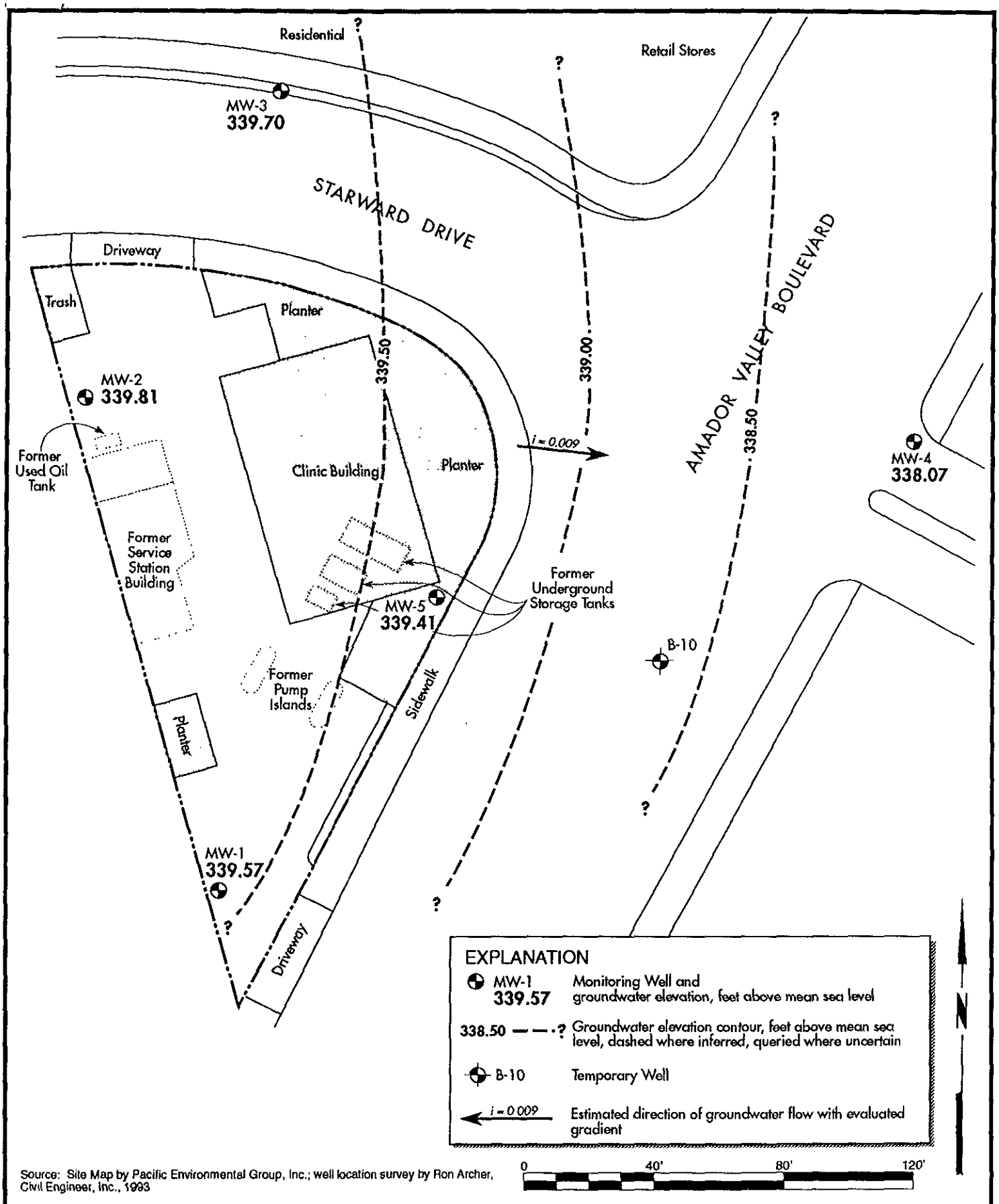
1/94

GENERALIZED SITE PLAN

Amador Valley Medical Center
7667 Amador Valley Boulevard
Dublin, California

PLATE

2



Source: Site Map by Pacific Environmental Group, Inc.; well location survey by Ron Archer, Civil Engineer, Inc., 1993

RESNA

PROJECT NO. 170111.01 | 4/94

POTENTIOMETRIC SURFACE MAP

March 11, 1994

Amador Valley Medical Center
7667 Amador Valley Boulevard
Dublin, California

PLATE
3

APPENDIX A

PERMITS

FEB 15 1994

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 7667 AMADOR VALLEY BOULEVARD DUBLIN, CA.

CLIENT
Name CHEVRON U.S.A. PRODUCTS Co.
Address 2410 CAMINO RAMON Voice 510-842-8752
City SAN RAMON, CA. Zip 94583

APPLICANT
Name RESNA INDUSTRIES INC.
Fax (510) 882-7415
Address 73 DIGITAL DR. Voice (510) 592-7400
City NOVATO, CA. Zip 94944

TYPE OF PROJECT

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

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

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger ✓
Cable ___ Other ___

DRILLER'S LICENSE NO. 581639

WELL PROJECTS

Drill Hole Diameter	8	in.	Maximum		
Casing Diameter	2"	in.	Depth	20	ft.
Surface Seal Depth	5	ft.	Number	1	

GEOTECHNICAL PROJECTS

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

ESTIMATED STARTING DATE 3/8/94
ESTIMATED COMPLETION DATE 3/8/94

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

APPLICANT'S SIGNATURE Enoch Nugent FOR RESNA Date 2/1/94

FOR OFFICE USE

PERMIT NUMBER 94096
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Appiy

(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 14 Feb 94
Wyman Hong

91992

FEB 1 5 1994

CITY OF DUBLIN
PUBLIC WORKS DEPARTMENT

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

YOUR RECEIPT
THANK YOU
CITY OF DUBLIN
DEVELOPMENTAL SERVCS

V E D
1994
WORKS

ENCROACHMENT PERMIT

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

#0000000000009417
ENCRH PR $140.00

ITEMS 1@
CHECK $140.00

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

/Permittee: ESNA IND. INC.
73 DIGITAL DR.
NOVATO, CA. 94949
Phone: (415) 382-7400

Permit Number: 94-17
Receipt No. 1583
Fee: $ 140.00
Bond: $ Existing from Chevron

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: 42646

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 INSUREDS.

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 permitteeto perform his obligations under said permit in respect to maintainance 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: Encr Permit FOR RESNA
Date: 2/9/94

City Engineer
By: [signature]
Date of Issue: 2/14/94

Work Completed: _____

Inspector _____

DPW -- 001

APPENDIX B

FIELD PROCEDURES

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FIELD PROTOCOLS

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

Site Safety Plan

The Site Safety Plan describes the safety requirements for the evaluation of gasoline 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 offsite 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 gasoline hydrocarbons at levels greater than 100 parts per million (ppm) are separated from those subjectively evaluated as containing gasoline 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 headspace created in the plastic bag immediately after opening it. 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.

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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 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 determined 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 gasoline 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.

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 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 headspace 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 gasoline hydrocarbons; such as soil staining, noticeable or obvious product odor, and OVM readings.

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.

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 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 80 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 headspace, 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 onsite; 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.

RESNA
Working to Restore Nature

Quality Assurance/Quality Control

The sampling and analysis procedures employed by RESNA for groundwater sampling and monitoring follow regulatory guidance for quality assurance/quality control (QA/QC). Quality control is maintained by site-specific field protocols and quality control checks performed by the laboratory. Laboratory and field handling of samples may be monitored by including QC samples for analysis. QC samples may include any combination of the following. The number and types of QC samples are selected and analyzed on a project-specific basis.

Trip blanks - Trip blanks are sent to the project site, and travel with project site samples. They are not opened, and are returned from a project site with the samples for analysis.

Field blank - Prepared in the field using organic-free water. Field blanks accompany project site samples to the laboratory and are analyzed periodically for specific chemical compounds present at the project site where they were prepared.

Duplicates - Duplicate samples are collected from a selected well and project site. They are analyzed at two different laboratories, or at the same laboratory under different labels.

Equipment blank - Periodic QC samples are collected from field equipment rinsate to verify adequate cleaning procedures.

APPENDIX C

BORING LOGS

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel and sand mixtures, little or no fines.
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines.
		GM	Silty gravels, gravel-sand-silt mixtures.
		GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines.
		SP	Poorly-graded sands or gravelly sand mixture, little or no fines.
		SM	Silty sands, sand-silt mixtures.
		SC	Clayey sands, sand-silt mixtures.
FINE GRAINED SOILS	SILTS AND CLAYS LL <50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
		CL	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, lean clays.
		OL	Organic silts and organic silt-clays of low plasticity.
	SILTS AND CLAYS LL >50	MH	Inorganic clays or low to medium plasticity, gravelly clays, sandy clays, lean clays.
		CH	Inorganic clays of high plasticity, fat clays.
		OH	Organic clays of medium to high plasticity.
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils.

Depth through which sampler is driven.

Relatively undisturbed sample

Missed sample

Ground water level observed in boring

S-10 Sample number

PID Photoionization detector reading

Sand pack

Bentonite annular seal

Neat cement annular seal

Blank PVC

Machine-slotted PVC

PVC Centralizer

BLOW/FT REPRESENTS THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH THE LAST 12 INCHES OF AN 18 INCH PENETRATION.

DASHED LINES SEPARATING UNITS OF THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS IN THE BORING AT THE TIME OF DRILLING ONLY.

RESNA

PROJECT NO. 170111.02 | FILE NO. 0111B1A

UNIFIED SOIL CLASSIFICATION SYSTEM AND SYMBOL KEY
Former Chevron Service Station No. 9-2621
7667 Amador Valley Boulevard
Dublin, California

PLATE

Total depth of boring: 17 Feet **Diameter of boring:** 8 Inch **Date drilled:** 3/4/94

Casing diameter: 2 Inch **Length:** 17 Feet **Slot size:** 0.020 Inch

Screen diameter: 2 Inch **Length:** 12 Feet **Material type:** PVC

Drilling Company: Woodward Drilling **Driller:** Charlie Lawrence

Method Used: Hollow-stem auger, California modified split-spoon **Field Geologist:** C L

Signature of Registered Professional: _____

Registration No.: _____ **State:** California

MEASURED DEPTH	SAMPLE NO.	BLOWS	P.I.D.	USCS CODE	DESCRIPTION	WELL CONST.
0						
2				CL	Clay, brown	
4						
6	S-5	17	35 ppmv		Clay, brown, damp, stiff, no odor.	
8	S-8	15	650 ppmv	ML	Clayey silt, brown to gray, damp, stiff, hydrocarbon odor.	
10	S-10	19	150 ppmv		Becoming moist.	
12						
14						
16	S-15	15	15 ppmv	SM	Silty sand, brown, no odor, wet, dense.	
18					Boring terminated at 17 Feet. Boring Converted to monitoring well.	

RESNA

PROJECT NO. 170111.02 FILE NO 0111B2A

LOG OF BORING: B-9/MW-5

Former Chevron Service Station No. 9-2621
7667 Amador Valley Boulevard
Dublin, California

PLATE

Total depth of boring: 10 Feet **Diameter of boring:** 4 Inch **Date drilled:** 3/4/94

Casing diameter: NA **Length:** NA **Slot size:** NA

Screen diameter: NA **Length:** NA **Material type:** NA

Drilling Company: Woodward Drilling **Driller:** Stephen Leach

Method Used: Hollow-stem auger, California modified split-spoon **Field Geologist:** SL

Signature of Registered Professional:

Registration No.: _____ **State:** California

MEASURED DEPTH	SAMPLE NO.	BLOWS	P.I.D.	USCS CODE	DESCRIPTION	WELL CONST.
0						
					Asphalt	
2				CL	Clay, brown	
	S-3		0 ppmv		Clay, brown, damp	
4						
	S-5		0 ppmv			
6						
	S-7		16 ppmv	ML ▼	Clayey silt, brown, moist	
8						
10					Boring terminated at 10 feet Boring backfilled with cement bentonite slurry	
12						
14						
16						
18						

RESNA

PROJECT NO. 170111.02 FILE NO 0111B3A

LOG OF BORING: B-10

Former Chevron Service Station No. 9-2621
7667 Amador Valley Boulevard
Dublin, California

PLATE

APPENDIX D

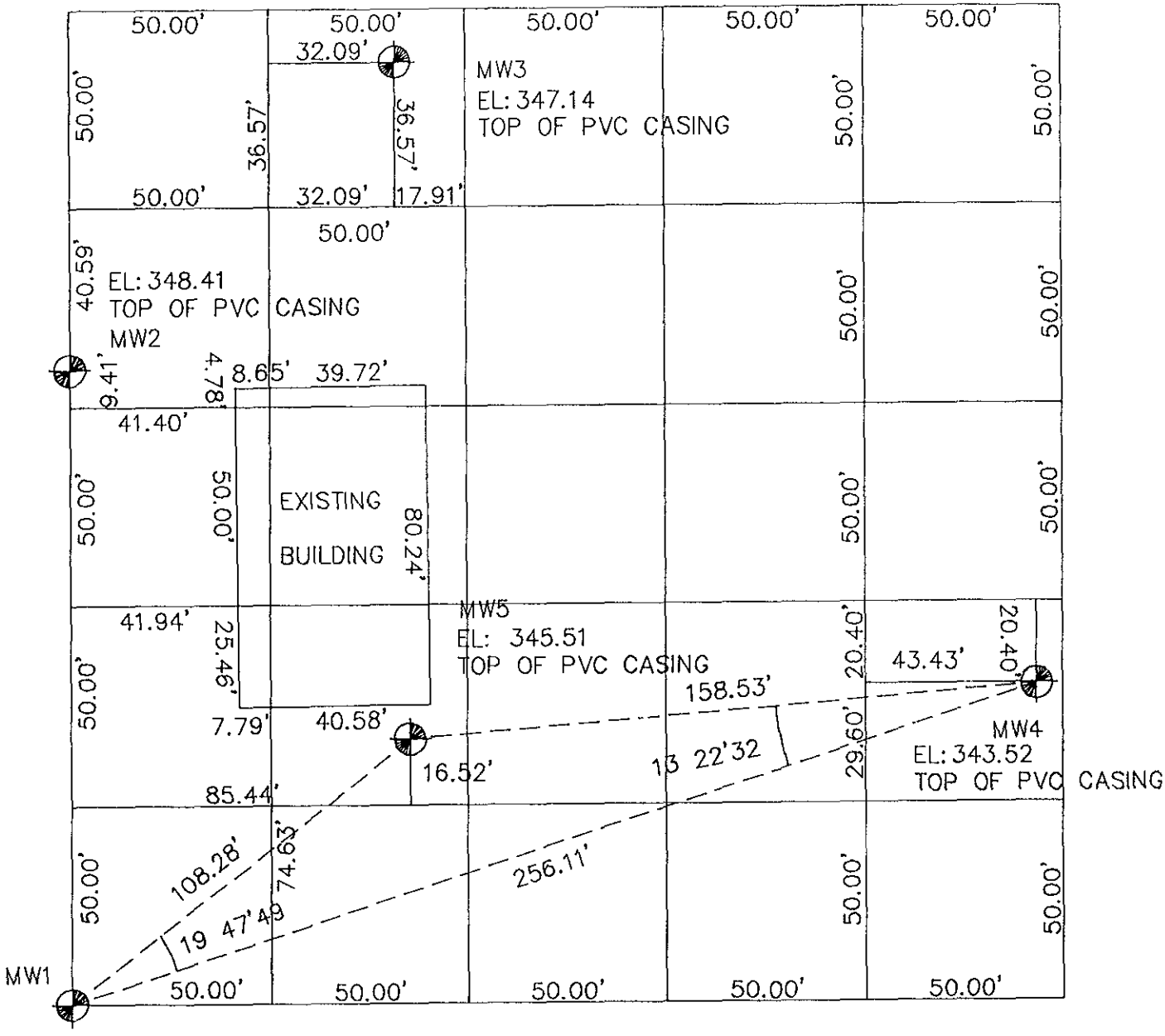
SURVEY DATA

SCALE: 1" 40'

SEPTEMBER 28, 1993
REVISED MARCH 9, 1994

JOB NO. 2057

RON ARCHER
CIVIL ENGINEER INC.
CONSULTING / PLANNING / DESIGN / SURVEYING
4133 MOHR AVENUE SUITE E
PLEASANTON, CA 94566
(510) 462-9372



PLAT SHOWING MONITORING WELLS AT THE AMADOR VALLEY MEDICAL CENTER LOCATED AT 7667 AMADOR VALLEY BOULEVARD AT STARWARD DRIVE, CITY OF DUBLIN, ALAMEDA COUNTY, CALIFORNIA.

FOR RESNA INDUSTRIES INC.

REGISTERED PROFESSIONAL ENGINEER
RONALD R. ARCHER
No. 23721
Exp. 12/31/97
CIVIL
STATE OF CALIFORNIA

APPENDIX E

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY RECORDS

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Resna Industries
Attn: ERIC NEUPERT

Project 170111.02
Reported 03/15/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
15292- 1	S-6.0-B9	03/04/94	03/12/94	Soil
15292- 4	S-3.0-B10	03/04/94	03/12/94	Soil
15292- 5	S-5.0-B10	03/04/94	03/12/94	Soil
15292- 7	B-10	03/04/94	03/11/94	Water
15292- 8	TB-LB	03/04/94	03/11/94	Water

RESULTS OF ANALYSIS B-10

Laboratory Number:	15292- 1 soil B9-6'	15292- 4 soil B-10 3'	15292- 5 soil B10-5'	15292- 7 water	15292- 8 water Blank
Gasoline:	ND<1	ND<1	ND<1	23000	ND<50
Benzene:	ND<.005	ND<.005	ND<.005	120	ND<0.5
Toluene:	ND<.005	ND<.005	ND<.005	180	ND<0.5
Ethyl Benzene:	ND<.005	ND<.005	ND<.005	1500	ND<0.5
Total Xylenes:	ND<.005	ND<.005	ND<.005	730	ND<0.5
Concentration:	mg/kg	mg/kg	mg/kg	ug/L	ug/L

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 15292

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
mg/kg = parts per million (ppm)
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Soil: 50mg/kg
Minimum Detection Limit in Water: 5000ug/L
Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg
Minimum Quantitation Limit for Diesel in Water: 50 ug/L
EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg
Minimum Quantitation Limit for Gasoline in Water: 50 ug/L
EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Soil: 0.005mg/kg
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	84/87	4%	75-125
Benzene:	120/120	0%	72-125
Toluene:	120/122	2%	75-125
Ethyl Benzene:	110/110	0%	75-125
Total Xylenes:	111/113	2%	75-125

Cecilia G Joaquin
Senior Chemist
Account Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Superior Precision Analytical
1555 Burke St., Unit 1
San Francisco, CA 94124

Client Project ID: P.O. 15292, Chevron 9-2621
Sample Descript: Soil, 15292-5 S-5.0-B10

Lab Number: 4C75701

Sampled: Mar 4, 1994
Received: Mar 10, 1994
Analyzed: see below
Reported: Mar 24, 1994

LABORATORY ANALYSIS

Analyte	Date Analyzed	Detection Limit mg/kg	Sample Result mg/kg
Total Organic Carbon	3/22/94	50	13,000

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

SEQUOIA ANALYTICAL

FOR
Suzanne Chin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
1900 Bates Avenue, Suite L, Concord, CA 94520, (510) 686-9600, FAX (510) 686-9689
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Superior Precision Analytical
1555 Burke St., Unit 1
San Francisco, CA 94124

Client Project ID: P.O. 15292, Chevron 9-2621
Matrix: Solid

QC Sample Group: 4C75701

Reported: Mar 24, 1994

QUALITY CONTROL DATA REPORT

ANALYTE	Total Organic Carbon
Method:	EPA 9060
Analyst:	K. Hynes
MS/MSD Batch#:	4C57017
Date Prepared:	3/22/94
Date Analyzed:	3/22/94
Instrument I.D.#:	N/A
Conc. Spiked:	2200 mg/kg
Matrix Spike % Recovery:	118
Matrix Spike Duplicate % Recovery:	82
Relative % Difference:	36
LCS Batch#:	-
Date Prepared:	-
Date Analyzed:	-
Instrument I.D.#:	-
LCS % Recovery:	-
% Recovery Control Limits:	80-120

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.

SEQUOIA ANALYTICAL

Suzanne Chin
Project Manager

LAB JOB# _____

Chain of Custody and Analysis Request

Page ___ of ___

Superior Precision Analytical
1555 Burke Street, Unit I
San Francisco, CA 94124
Phone: (415) 647-2081 Fax: (415) 821-7123
Contact:

Project No.: P.O. No. 15292

TURN AROUND TIME

Same Day	72 Hrs.
24 Hrs.	48 Hrs.
5 Day	10 Day

Bill To:

Superior Precision Analytical Inc.
P.O. Box 1545
Martinez, California 94553

Analysis Request

Work Subcontracted to: Sequoia

Laboratory Sample ID	Client Sample ID	Matrix (S = Soil, A = Air, W = Water)	Reactivity	CAM 17	Metals	COD	Ammonia	TOC	8010					Date Sampled	# of Containers	Preservatives
	use this ID on container															
15292-5	S-5.0-3/0	SO						X						9403757-a		

COMMENTS

- [x] Please fax invoice or quote ASAP
- [ ] Please fax results to Superior, San Francisco
- [x] Please fax results to our client (see attached COC)

Relinquished By:		Date	Time	Received By:		Date	Time
Organization:	Superior	3/9/94	2:15 am/pm	Organization:	Alpine	3/10/94	11:57 am/pm
Relinquished By:		Date	Time	Received By:		Date	Time
Organization:	Alpine	3/10/94	1:25 am/pm	Organization:		/ /	: am/pm
Relinquished By:		Date	Time	Received By:		Date	Time
Organization:		/ /	: am/pm	Laboratory:	Argon/Sequoia	3/10/94	: am/pm

Lab - Please initial the following

Samples Stored in Ice _____
Appropriate Containers: _____
Samples Preserved: _____
VOAs without headspace _____
Comments: _____

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

15292

Chain-of-Custody-Record

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

Chevron Facility Number 9-2621
Facility Address 7667 Amador Valley Blvd.
Consultant Project Number 170111.02
Consultant Name RESNA
Address 73 Digital Dr. Novato Ca. 94949
Project Contact (Name) Erich Neupert
(Phone) (415)382-7400 (Fax Number) (415)382-7415

Chevron Contact (Name) Kenneth Kan
(Phone) (510) 842-9500
Laboratory Name Superior Lab
Laboratory Release Number 568341
Samples Collected by (Name) Charles Lawrence
Collection Date 3-4-94
Signature Charles Lawrence

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	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)		TOTAL ORGANIC CARBON CAL. EPA LUFT ASSOC. METHOD 5180				Remarks
S-6.0-B9	1	1	S	D	10:10	—	Yes	✓													
S-8.0-B9	2	1	S	D	10:20	—	Yes														HOLD
S-11.0-B9	3	1	S	D	10:40	—	Yes														HOLD
S3.0 B10	4	1	S	D			YES	✓													
S5.0 B10	5	1	S	D			YES	✓													
S7.0 B10	6	1	S	D			YES														HOLD
B-10	7	3	W	D		HCl	Yes	X													
TB-LB	8	1	W	D		HCl	Yes	X													

Please initial:
Samples stored in ice.
Appropriate containers.
Samples preserved.
Volatiles free of headspace.
COC complete.

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Charles Lawrence	RESNA	3/4/94 1600	Erich Neupert	RESNA	3/4/94 1600
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Erich Neupert	RESNA	3/4/94 9:00	Pat Keller	Aero	3/4/94 9:00
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
Pat Keller	617	3-9-94 17:58	R. B—		3/9/94 1300

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

COC-3.DWG/03 91/HCH

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

Resna Industries
Attn: ERIC NEUPERT

Project 170111.02
Reported 03/23/94

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
15316- 1	MW-1	03/11/94	03/21/94	Water
15316- 2	MW-2	03/11/94	03/21/94	Water
15316- 3	MW-3	03/11/94	03/22/94	Water
15316- 4	MW-4	03/11/94	03/22/94	Water
15316- 5	MW-5	03/11/94	03/21/94	Water
15316- 6	TB-LB	03/11/94	03/22/94	Water

RESULTS OF ANALYSIS

Laboratory Number:	15316- 1	15316- 2	15316- 3	15316- 4	15316- 5
Gasoline:	ND<50	ND<50	ND<50	ND<50	770
Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4
Toluene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	37
Ethyl Benzene:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6
Total Xylenes:	ND<0.5	ND<0.5	ND<0.5	ND<0.5	10
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number:	15316- 6
Gasoline:	ND<50
Benzene:	ND<0.5
Toluene:	ND<0.5
Ethyl Benzene:	ND<0.5
Total Xylenes:	ND<0.5
Concentration:	ug/L

Superior Precision Analytical, Inc.
1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 15316

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	86/89	3%	67-129
Benzene:	98/103	5%	74-125
Toluene:	96/103	7%	74-125
Ethyl Benzene:	99/105	6%	74-125
Total Xylenes:	98/103	5%	74-125

Cecilia G Joaquin
Senior Chemist
Account Manager

Fax copy of Lab Report and COC to Chevron Contact: ☑ Yes ☐ No 1/5/16

Chain-of-Custody-Record

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

Chevron Facility Number 9-2621
Facility Address 7667 Amador Valley Blvd
Consultant Project Number 170111.02
Consultant Name RESNA Ind.
Address 73 Digital Dr. Novato Ca. 94949
Project Contact (Name) Erich Neuport
(Phone) (415)382-7400 (Fax Number) (415)382-7415

Chevron Contact (Name) Kenneth Kan
(Phone) (510) 842-9500
Laboratory Name Superior Labs
Laboratory Release Number 568391
Samples Collected by (Name) Charles Lawrence
Collection Date 3-11-94
Signature Charles Lawrence

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
MW-1		3	W		11:15	HCL	Yes	✓												
MW-2		3	W		12:00	—	Yes	✓												
MW-3		3	W		12:45	—	Yes	✓												
MW-4		3	W		13:45	—	Yes	✓												
MW-5		3	W		14:35	—	Yes	✓												
TB-LB		1	W		16:00	HCL	Yes	✓												

Please initial: CB
Samples Stored in ice NO
Appropriate containers ✓
Samples preserved ✓
VOA's without headspace ✓
Comments: SAMPLES ARRIVED IN A PLASTIC BAG.

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Charles Lawrence	RESNA	3-14-94 11:20		AEL	3-15-94 11:20
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	AEL	11-14-94 1:20			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
			R. B.		3/14/94 1323

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

COC-3.DWG/03 91/HCH