

1105-020-03

ALCO
HAZMAT



Chevron

November 30, 1994

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

Site Assessment & Remediation Group
Phone (510) 842-9500

Ms. Eva Chu
Alameda County Environmental Health
80 Swan Way, Room 200
Oakland, CA 94621

Ⓢ approve WP but sample for
2 quarters initially

Re: Former Chevron Service Station No. 9-2621
7667 Amador Valley Blvd., Dublin, CA 94568

Dear Ms. Chu :

I have called the California State Department of Motor Vehicles, California State Highway Patrol in Dublin, and the Dublin Police Department to determine if an accident had occurred at the intersection of Starward Dr. and Amador Valley Blvd. Based on my conversation with Penny Greais at the Dublin Police Department, an accident has never occurred at this intersection. Unfortunately, their computer records only date back to 1991 so an accident may have occurred at this intersection prior to 1991. There are written records that date back to 1982. According to Penny Greais, this information is confidential. I am currently checking the Alameda Co. Dispatcher Office.

I have called Dublin San Ramon Services Department for information on their sanitary sewer lines, water lines, and storm drain lines. Based on their maps, there is an 8 inch water and sewer line running underneath Amador Valley Blvd. The flow direction of the sewer line based on the arrows is west to east. It appears that the sewer line is approximately 7-8 feet below grade.

In attempt to identify the dissolved hydrocarbons underneath Amador Valley Blvd., I have sent the chromatographs to Chevron Research and Technology Co. (CRTC). CRTC was not able to identify the gasoline based on the chromatographs because there was not enough information.

At the request of Chevron U.S.A. Products Co., RESNA has prepared the enclosed work plan to confirm the detection of dissolved hydrocarbons found in temporary well (boring) B-10. RESNA plans to install one two inch monitoring well near B-10. Water obtained from this well will be analyzed for TPH-G and BTEX. Another water sample will be collected and analyzed by CRTC for identification if hydrocarbons are still being detected.

Please review and approve the enclosed work plan from RESNA dated November 21, 1994. Once you have reviewed this work plan, please inform my office in writing of your approval or concerns. If you have any questions or comments, please call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.

Kenneth Kan
Engineer

LKAN/MacFile 9-2621R10

Enclosures

cc : Mr. Kevin Graves
RWQCB-S.F.Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

Mr. Jerry Lemm
J. L. Lemm & Associates
5506 Sunol Blvd., Suite 203
Pleasanton, CA 94566-7779

Ms. Bette Owen
Chevron U.S.A. Products Co.


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FAX: (510) 651-2233

WORK PLAN:
ADDITIONAL ENVIRONMENTAL INVESTIGATION
at
Former Chevron Service Station No. 9-2621
7667 Amador Valley Boulevard
Dublin, California

Prepared for


Mr. Kenneth Kan
Chevron U.S.A. Products Company
6001 Bollinger Canyon Road, Bldg. L
San Ramon, California 94583

by
RESNA Industries Inc.

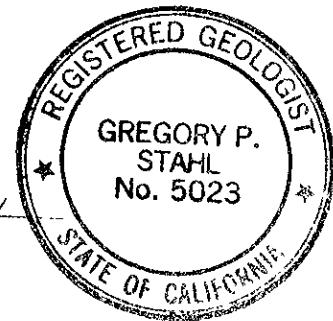


Zbigniew Ignatowicz
Project Geologist

Reviewed by



Gregory P. Stahl, CRG 5023



November 21, 1994

42501 Albrae Street, Suite 100
Fremont, California 94538
Phone: (510) 440-3300
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**WORK PLAN:
ADDITIONAL ENVIRONMENTAL INVESTIGATION**
at
Former Chevron Service Station No. 9-2621
7667 Amador Valley Boulevard
Dublin, California
for Chevron U.S.A. Products Company

INTRODUCTION

Chevron U.S.A. Products Company (Chevron) requested that RESNA Industries Inc. (RESNA) prepare this work plan to confirm the detection of dissolved gasoline hydrocarbons in groundwater downgradient of Former Chevron Service Station No. 9-2621 in Dublin, California after previous environmental investigations detected gasoline hydrocarbons in groundwater collected from temporary well B-10, located downgradient of the site.

Work for the investigation will include drilling one offsite soil boring, constructing a 2-inch diameter monitoring well in the boring, collecting and analyzing soil samples at 5-foot intervals from the boring and groundwater samples from the well, and preparing a report summarizing our field and laboratory procedures and findings.

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 onsite. 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 onsite and two offsite 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 onsite and one offsite 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).

PROPOSED WORK

This investigation is designed to confirm the presence of gasoline hydrocarbons in groundwater detected in groundwater samples collected from previously drilled temporary well B-10, located downgradient of the site. The specific tasks are summarized below and discussed in the sections that follow. We will perform the following tasks:

- Prepare a site safety plan and obtain appropriate monitoring well permits.
- Contract with an underground utility locator service to locate underground utilities located in the vicinity of the proposed soil boring/monitoring well location.
- Drill one offsite soil boring (B-11) to approximately 20 feet below ground surface. We expect to encounter groundwater at approximately 10 feet below grade. The location of the proposed soil boring is shown on Plate 2.

- Collect and classify relatively undisturbed soil samples at 5-foot intervals, at obvious changes in soil type, and at the capillary fringe.
- Construct one 2-inch diameter monitoring well (MW-6) in boring B-11.
- Develop, purge and sample the newly installed well.
- Submit selected soil and groundwater samples to a laboratory certified by the state of California for analyses for TPHg using U.S. Environmental Protection Agency (EPA) Method 8015 (modified); and for benzene, toluene, ethylbenzene, and total xylene isomers (BTEX) using EPA Method 8020; and total organic carbon (TOC).
- Contract a licensed land surveyor to survey the locations and elevations of the tops of the newly installed and existing well casings relative to mean sea level.
- Prepare a report summarizing our field and laboratory procedures and findings.

Site Safety Plan and Permits

A Site-Specific Health and Safety Plan will be prepared prior to the start of fieldwork by RESNA 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 will be prepared by RESNA personnel, following a review of site conditions and any existing Site-Specific Health and Safety Plans for the site with the project manager. The document will be reviewed by RESNA personnel and subcontractors performing work at the site. A copy of the Site-Specific Health and Safety Plan will be kept at the work site and will be available for reference by appropriate parties during the work. The RESNA geologist will act as the Site Safety Officer. All applicable local and State permits pertaining to the proposed work will be obtained before commencing field work.

Soil Boring and Sampling

RESNA will contact Underground Services Alert before drilling to help locate public utility lines at the site. RESNA will hand auger the boring location to a depth of approximately 3 feet to 5 feet before drilling to reduce the risk of damaging underground structures. The location of the proposed soil boring and monitoring well is shown on Plate 2. Chevron chose the soil boring locations to determine if gasoline hydrocarbons are present in groundwater adjacent to previously drilled temporary well B-10.

Soil boring B-11 will be drilled with a CME-55 (or similar) drill rig equipped with 8-inch diameter, hollow-stem augers. Augers and sampling equipment will be steam cleaned before use. The rinsate will be containerized and stored onsite. Drilling will be performed under the observation of a geologist, and the earth materials in the borings will be classified while drilling using the visual and manual methods according to the Unified Soil Classification System.

RESNA expects to drill soil boring B-11 to approximately 20 feet below grade. The soil boring will be drilled to approximately 10 feet below the first-encountered groundwater or at most 5 feet into any confining layer encountered beneath the uppermost water-bearing zone. If a confining layer is encountered, the boring will be terminated and backfilled with bentonite to the top of the confining layer before installing a groundwater monitoring well. During drilling, soil samples will be collected every 5 feet, at obvious changes in soil stratigraphy, or at obvious signs of hydrocarbons. Samples will be collected with a California-modified, split-spoon sampler equipped with laboratory-cleaned brass sleeves. Samples will be collected by advancing the auger to a point just above the sampling depth and driving the sampler into the soil. The sampler will be driven 18 inches with a standard 140-pound hammer repeatedly dropped 30 inches. The number of blows required to drive the sampler each successive 6-inch interval will be counted and recorded to give an indication of soil consistency.

Soil samples will be monitored with a photoionization detector (PID), which measures hydrocarbon concentrations in the ambient air or headspace above the soil sample. Field instruments such as the PID are useful for indicating relative levels of volatile hydrocarbons, but do not detect concentrations of hydrocarbons with the same precision as laboratory analyses. Soil samples selected for possible chemical analysis will be sealed promptly with aluminum foil, plastic caps, and duct tape. The samples will be labeled and placed in storage for transport to the

laboratory. Chain of Custody Records will be initiated by the geologist in the field, updated throughout handling of the samples, and sent with the samples to the laboratory. Copies of these records will be included in the final report. Cuttings generated during drilling will be segregated on the basis of field evidence of hydrocarbons and sampled. The drill cuttings will be removed to an appropriate disposal facility by a contractor selected by Chevron upon receipt of analytic results.

Well Construction

Monitoring well MW-6 will be constructed of thread-jointed, 2-inch-inner-diameter, Schedule 40 polyvinyl chloride (PVC) casing in boring B-11. No chemical cements, glues, or solvents will be used in well construction. The screened portion of the well will consist of factory-perforated casing with 0.020-inch-wide slots. We expect that the well screen will be installed from the total depth of each well to approximately 10 feet below grade. The well screen for the well will be installed approximately five feet above (or in such a way as to allow for a proper surface seal) and ten feet below the current water table to permit entry of separate-phase hydrocarbons, if present, and to allow for fluctuations in the groundwater elevation. Unperforated casing will be installed from the top of the screen to the ground surface. The annular space in the well will be packed with #3 sand to approximately 1 foot above the slotted interval. A bentonite plug will be constructed above the sand pack to prevent cement from entering the filter pack. The remaining annulus will be backfilled to grade with a slurry of cement and bentonite powder.

The monitoring well will be protected with traffic-rated, cast-aluminum utility box. The box has a seal to minimize surface-water infiltration and must be opened with an allen head wrench. The design of this box reduces the possibility of accidental disturbance of the well.

Monitoring Well Development and Sampling

RESNA will wait a minimum of 24 hours before development of the monitoring well to allow the grout to harden. Initially, a water sample will be collected for subjective analysis before development of the monitoring well. This sample will be collected from near the water surface in the well with a new Teflon bailer. The well will be developed with a surge block and pump. Well development will continue until the discharge water is clear of silt and sand. Clay-size sediments derived from the screened portion of the formation cannot be eliminated by well development.

After the water level has been allowed to stabilize, the well will be checked for separate-phase hydrocarbons using an interface probe. The thickness of any product detected in the well will be recorded. If separate-phase hydrocarbons are encountered in the well, the well will not be purged, and the water will not be sampled for chemical analysis. Separate-phase hydrocarbons will be bailed from the well and stored in labeled drums onsite. RESNA will apprise Chevron of appropriate disposal options for separate-phase hydrocarbons bailed from the well.

If separate-phase hydrocarbons greater than 0.02-inches thick are not detected after development, the well will be purged of approximately 4 to 5 casing volumes of water with a submersible pump, or until pH, conductivity, and temperature of the purged water have stabilized. Water purged from the well will be directed to a tank trailer and transported to Chevron's Richmond Refinery for disposal.

The well will be allowed to recover to at least 80 percent of static conditions, and a sample of the groundwater will be collected with a new Teflon bailer. The water will be transferred slowly from the bailer to laboratory-cleaned, 1-liter amber bottles and 40-milliliter glass vials for analyses by the laboratory. The glass vials will contain hydrochloric acid as a preservative. Our geologist will check to see if headspace is present. If headspace is present, we will collect more samples until none is present. Chain of Custody Records will be initiated in the field by the geologist, updated throughout handling of the samples and sent along with the samples to the laboratory. Copies of Chain of Custody Records will be included in our final report.

Evaluation of Potentiometric Surface

The groundwater gradient and direction of groundwater flow at the site will be evaluated. The elevation of the top of each well casing will be measured relative to mean sea level by a licensed land surveyor. Water-depth measurements will be made from the top of the casing in the wells to the nearest 0.01 foot with an electronic water-level indicator. The wells will be vented to the atmosphere for a minimum of 1 hour before obtaining depth-to-water measurements. Venting is conducted to allow the groundwater to equilibrate with barometric pressure. These data will be combined to evaluate the relative elevation of the groundwater surface in each well and the slope of the groundwater surface across the site.

Laboratory Analyses

Soil samples selected for analyses will generally include the sample with the highest reading on the PID, any sample with visual evidence of hydrocarbons, and the sample collected from just above the first encountered water. A soil sample will be collected from above and below groundwater and analyzed for TOC. Analysis of soil and groundwater samples will be performed for TPHg using modified EPA Method 8015, and for BTEX using EPA Methods 8020. Detection limits for the tests requested and concentration present will be stated on the laboratory reports. Analytical methods and detection limits will conform to guidelines specified in the latest edition of the Tri-Regional Recommendations. Laboratory analyses will be performed by a laboratory certified by the State of California.

Report Preparation

A report summarizing our field and laboratory procedures and findings will be prepared.

Future Action

If TPHg and BTEX are not detected in groundwater samples collected from newly installed monitoring well MW-6, then Chevron will request closure of the above referenced site to further environmental work based on the meeting held on August 18, 1994 with Chevron, the Regional Water Quality Control Board-San Francisco Bay Region, and the Alameda County Environmental Health Department. *want 2 quarters.*

REFERENCES

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

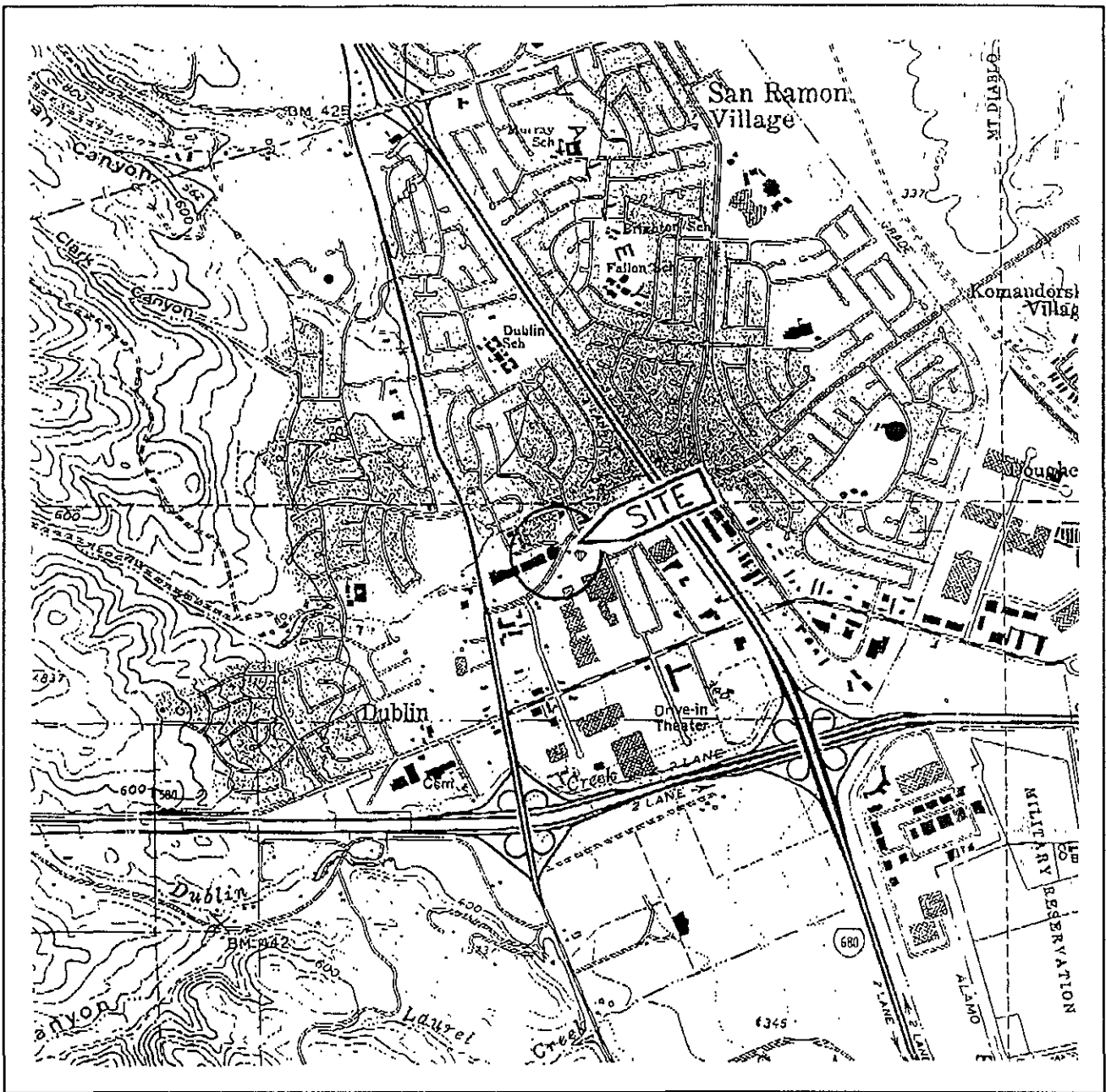
RESNA Industries. November 1992. Phase II Investigation at Amador Valley Medical Center (Former Chevron Service Station 9-2621), 7667 Amador Valley Boulevard, Dublin, California. Project No. F1036.01.



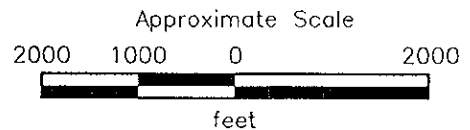
Pacific Environmental Group, Inc. April 26, 1993. Report: Soil and Groundwater Investigation at Former Chevron Service Station 9-2621, 7667 Amador Valley Boulevard at Starwood Drive, Dublin, California. Project 325-35.01.

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

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



Source: U.S. Geological Survey
 7.5-Minute Quadrangle
 Dublin, California
 Photorevised 1980



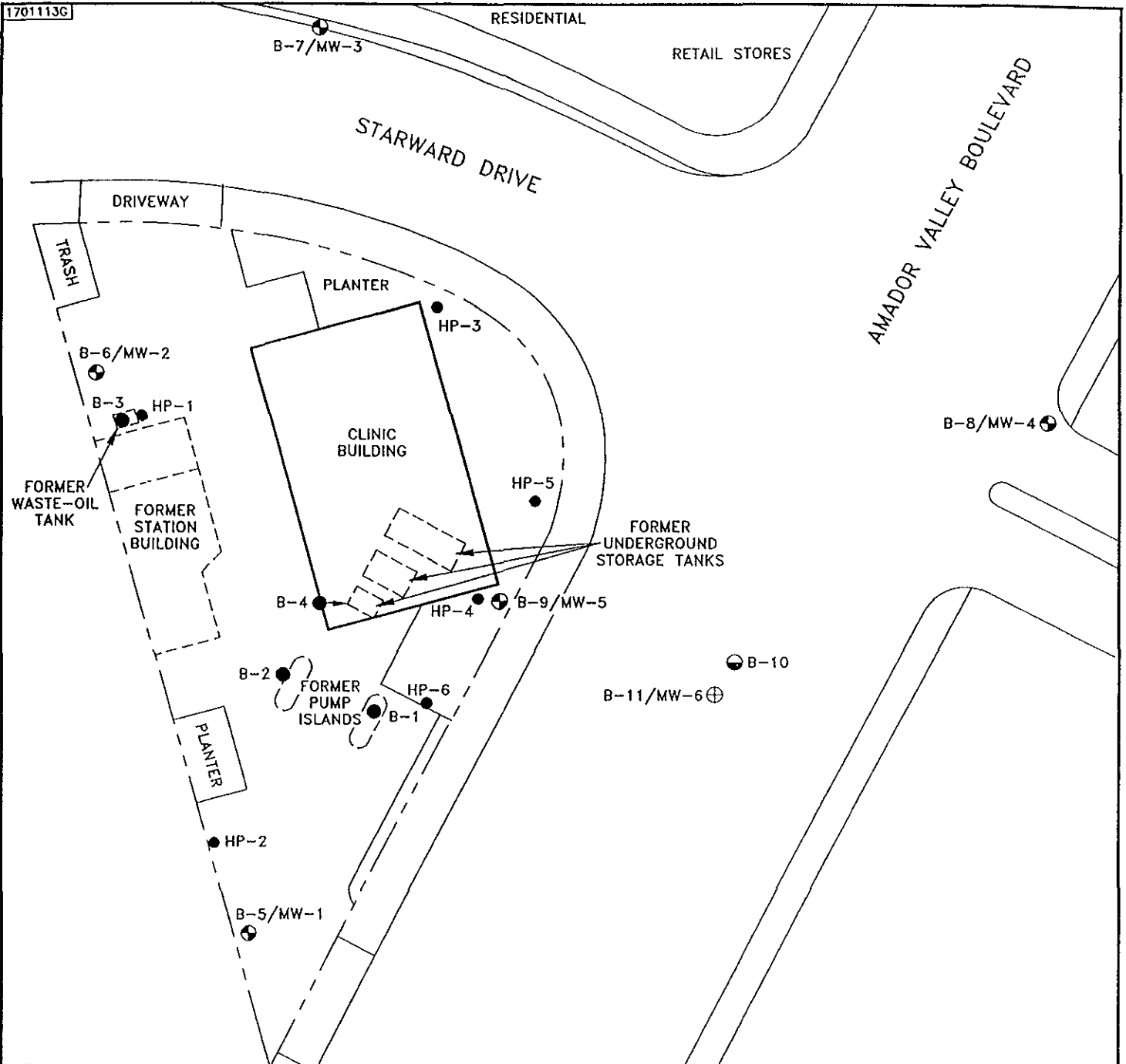
SITE VICINITY MAP
 FORMER CHEVRON STATION NO. 9-2621
 7667 AMADOR VALLEY BOULEVARD
 DUBLIN, CALIFORNIA

PLATE

1

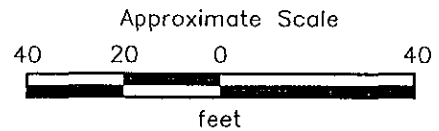
PROJECT

170111.03



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