GETTLER-RYAN INC.

TRANSMITTAL

JUN 28 2002

TO: Mr. Marty O'Gara
Can-Am Plumbing Inc.
151 Wyoming Street
Pleasanton, California, 94566

DATE: June 21, 2002
PROJ. #: 948162.03-1
SUBJECT: Work Plan
Can-Am Plumbing
151 Wyoming Street
Pleasanton, California

FROM:
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COMMENTS:

Enclosed is one copy of the referenced document. If you have any questions, please call me at (925) 551-7555.

Cc: Mr. Scott Seery, Alameda County Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

GETTLER-RYAN INC.

WORK PLAN FOR LIMITED SUBSURFACE INVESTIGATION

at

Can-Am Plumbing Inc.
151 Wyoming Street
Pleasanton, California

Report No. 948162.02-1

Prepared for:

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Pleasanton, California

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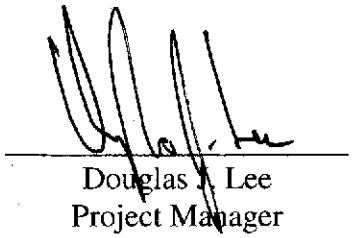

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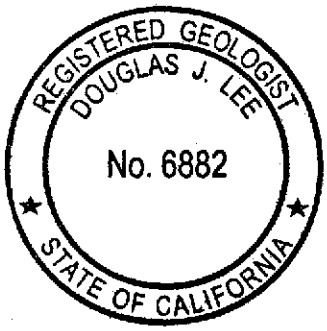

June 21, 2002

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GETTLER-RYAN INC.

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WORK PLAN FOR LIMITED SUBSURFACE INVESTIGATION

at

Can-Am Plumbing Inc.
151 Wyoming Street
Pleasanton, California

Report No. 948162.03-1

INTRODUCTION

At the request of Can-Am Plumbing Inc. (Can-Am), Gettler-Ryan Inc. (GR), has prepared this Work Plan for a Limited Subsurface Investigation to further evaluate soil and groundwater conditions at the subject site. This work is being proposed in response to a letter from the Alameda County Environmental Health Services (ACEHS) dated April 5, 2002. This scope of work was developed based on a meeting between the ACEHS and GR on February 9, 2001 at the site.

The proposed scope of work includes: writing a site safety plan; obtaining the required permits; installing four Geoprobe® soil borings; converting one of the soil borings into a groundwater monitoring well, developing and sampling the newly installed well; collecting and submitting selected soil and groundwater samples for chemical analysis; surveying the wellhead elevations; coordinating and disposing of the waste materials; and preparing a report presenting the observations associated with the above scope of work.

The scope of work proposed in this Work Plan is intended to comply with the State of California Water Resources Control Board's *Leaking Underground Fuel Tanks (LUFT) Manual* and *California Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, as well as Alameda County Flood Control and Water Conservation District (Zone 7) and ACEHS guidelines.

SITE DESCRIPTION

General

The subject site is located southwest of the intersection of Wyoming Street and Utah Street in Pleasanton, California (Figure 1). The immediate vicinity of the site is predominantly developed with commercial facilities. One dispenser island and two gasoline USTs have been removed from the site. One UST pit monitoring casing is located in the former UST excavation backfill. Pertinent former and existing site features are shown on Figure 2.

Geology and Hydrogeology

The subject site is located at the southern margin of the Amador Valley. The site vicinity is underlain by Holocene-age fine grain alluvium. These deposits are composed of unconsolidated plastic moderately to poorly sorted carbonaceous silt and clay (Helley, 1979). The nearest surface water is Arroyo Del Valle, a seasonal stream, which is located approximately 800 feet south of the subject site.

GR's previous investigation (installation of MW-1 and MW-2) at the site indicates that the unsaturated and saturated zones are comprised predominantly of interbedded silts, clay, and gravels. On January 21, 2000, groundwater was initially encountered during drilling activities in MW-1 at a depth of 25 feet bgs. Groundwater was not observed in MW-2 until February 18, 2000.

PREVIOUS ENVIRONMENTAL WORK

On June 10, 1999, two 1,000-gallon single-wall fiberglass gasoline USTs, one dispenser island, and related single-wall product piping were removed by GR. GR personnel performed soil and groundwater sampling activities in conjunction with the UST removal. The existing UST pit monitoring casing (W-1 on Figure 2) was allowed to remain in the UST excavation. Groundwater was encountered in the UST excavation at approximately 3.75 feet below ground surface (bgs).

Two soil samples, designated as X-1-3 and X-2-3 on Figure 2, were collected from the sidewalls of the gasoline UST excavation at a depth of 3 feet bgs. The soil samples were reported as not detected for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) Method 8015 (Modified), gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8020 and total lead by EPA Method 6010, except for 0.0050 parts per million (ppm) of benzene detected in X-1-3. Methyl tert-butyl ether (MtBE) by EPA Method 8020 was detected in X-1-3 and X-2-3 at concentrations of 3.3 and 4.1 ppm, respectively.

One soil sample, designated as D-1-3 on Figure 2, was collected beneath the dispenser islands at a depth of 3 feet bgs. The sample collected beneath the dispenser island was reported as not detected for TPHg, benzene, and lead and contained 3.6 ppm of MtBE.

One grab groundwater sample was collected from the gasoline UST excavation, utilizing the UST pit monitoring casing. The sample contained 39,000 parts per billion (ppb) of TPHg, 1,100 ppb of benzene, and 100,000 ppb of MtBE.

Two on-site soil borings were drilled on January 21, 2000 and completed as groundwater monitoring wells MW-1 and MW-2. The wells were installed to a total depth of approximately 32 feet bgs. A third proposed monitoring well was not installed when groundwater was not encountered in MW-2 during drilling and following well installation. The locations of the wells are shown on Figure 2.

Petroleum hydrocarbons were not detected in the four soil samples collected from well boring MW-1. TPHg and BTEX were not detected in the six soil samples collected from well boring MW-2. MTBE was detected in five of the six samples at concentrations ranging from 0.12 to 3.6 ppm.

Well MW-1 was developed on January 26, 2000. Depth to groundwater in wells MW-1 and MW-2 were measured and each well checked for the presence of floating product prior to development. Well MW-2 was found to be dry, therefore it was not developed. Well MW-1 dewatered during development, yielding only five well volumes. On January 31, 2000, a groundwater sample was collected from MW-1 and well MW-2 was again found to be dry. The two wells and UST pit monitoring casing W-1 were monitored on February 18 and 24, 2000. Groundwater was observed in well MW-2 on February 18, 2000 and the well was developed on February 24, 2000 at which time it dewatered after yielding approximately four well volumes. Wells MW-1 and MW-2 were monitored and sampled again on May 11, 2000 In addition, grab groundwater samples were collected from UST pit monitoring casing W-1 on January 27, February 24, and May 11, 2000.

Groundwater samples collected from well MW-1 on January 31 and May 11, 2000 were reported as not detected for all analytes. Groundwater sample MW-2, collected on May 11, 2000, contained 11,000 ppb of MTBE by EPA Method 8020, 12,000 ppb of MTBE by EPA Method 8260, and was reported as not detected at an elevated detection for TPHg and BTEX.

Perched groundwater has been removed intermittently from UST backfill monitoring casing W-1, starting on October 12, 1999. A total of 4,625 gallons of groundwater were removed from the former UST excavation backfill on four separate occasions between October 12 and November 8, 1999. As of May 4, 2000, a total of 8,755 gallons of groundwater have been removed from W-1 by

Nor Cal Oil and transported under uniform hazardous waste manifest to the Americlean, Inc. facility in Silver Springs, Nevada for disposal.

Three groundwater samples were collected from casing W-1 during the course the previous investigation. The groundwater sample collected on January 27, 2000 contained 8,300 ppb of TPHg, 1,900 ppb of MTBE, and was reported as not detected at an elevated detection limit for benzene. The groundwater sample collected on February 24, 2000 contained 7,800 ppb of TPHg, 1,300 ppb of MTBE, and was reported as not detected at an elevated detection limit for benzene. The groundwater sample collected on May 11, 2000 contained 130ppb TPHg, 3.5 ppb of benzene, 600 ppb of MTBE by EPA Method 8020, and 730 ppb of MTBE by EPA Method 8260. The analytical results, field observations and discussion of the monitoring well installation are presented in GR's *Well Installation Report*, dated Febraury 1, 2001.

SCOPE OF WORK

GR proposes to install four Geoprobe® soil borings at the locations shown on Figure 2, and if field conditions warrant, convert one of the Geoprobes into a groundwater monitoring well. Soil sampling will be conducted continuously and groundwater samples will be collected from each of the soil borings to assess the degree and extent of hydrocarbon-impacted groundwater at the site. Field work will be conducted in accordance with GR Field Methods and Procedures (Appendix A). To perform this scope of work, GR proposes the following specific tasks:

Task 1. Pre-Field Activities

Prepare a site-specific safety plan and obtain the necessary permits from the Alameda County Flood Control and Water Conservation District (Zone 7). Mark the proposed monitoring well locations and notify Underground Service Alert (USA) at least 48 hours prior to initiating work. A subsurface utility locator will inspect each proposed location for buried utilities.

Task 2. Geoprobe® Advancement

Install four Geoprobe soil borings at the locations shown on Figure 2. Probing and well installation activities will be performed by a California-licensed driller (C-57 license). A GR geologist will observe the probing, collect soil samples for lithologic description and chemical analysis, prepare boring logs, and collect groundwater samples for chemical analyses. The borings will be advanced using a Geoprobe rig utilizing direct push technology. The probe adjacent to MW-2 (Figure 2) will be advanced using dual-tube probing tools to allow for collection of depth discrete grab groundwater samples.

Soil samples for lithologic description and possible chemical analysis will be collected continuously to develop an accurate profile of subsurface hydrogeologic conditions. Soil samples will be collected with a Macrocore® or dual-tube sampling barrel fitted with clean plastic sample liners. Sample handling procedures are described in Appendix A. Although the actual number of samples submitted for chemical analysis will depend on site conditions and field screening data, we anticipate a minimum of one sample from each boring will be submitted for chemical analysis as described in Task 7.

Soil from each sampled interval will be screened in the field for the presence of volatile organic compounds using a photoionization detector (PID). These data will be collected for reconnaissance purposes only, and will not be used as verification of the presence or absence of petroleum hydrocarbons. Field screening data will be recorded on the boring log.

Drill cuttings will be stored at the site pending receipt of chemical analytical data and disposal. Stockpiled cuttings will be placed on and covered with plastic sheeting or placed in DOT-approved, properly labeled 55-gallon drums. Four soil samples of the drill cuttings will be collected for disposal characterization as described in Appendix A. These samples will be submitted to the laboratory for compositing into one sample, and then analyzed as described in Task 7. Drill cuttings will be transported to Forward Landfill, located in Manteca, California for disposal. Steam cleaning rinsate wastewater will be stored at the site in properly labeled drums pending disposal.

Task 3. Grab Groundwater Sampling

A minimum of one grab groundwater sample will be collected form each Geoprobe location in accordance with GR Field Methods and Procedures (Appendix A). Depth-discrete grab groundwater samples will be attempted in the Geoprobe adjacent to MW-2 (Figure 2). The depth-discrete grab samples will be collected from a sampling device advanced into native aquifer material through the hollow dual-tube probe rods. Target depths for discrete groundwater samples will be 25, 32 and 40 feet bgs. All groundwater samples will be analyzed as described in Task 7.

Task 4. Well Installation

If groundwater is encountered in sufficient quantity, one of the soil borings will be converted into a groundwater monitoring well. The boring designated for conversion is shown on Figure 2, however field conditions may warrant altering the soil boring to be converted. A

GR geologist will monitor the drilling activities. The soil boring will be overdrilled with eight-inch-diameter hollow-stem augers prior to well installation.

The Groundwater monitoring well will be constructed of 2-inch diameter Schedule 40 polyvinyl chloride (PVC) well casing and 0.02-inch machine-slotted well screen, as shown on the Proposed Well Construction Detail (Figure 3). Depth to groundwater is anticipated to be approximately 21 feet bgs. The proposed wells will be constructed with approximately nine feet of screen within the saturated zone and six feet extending above the anticipated groundwater level.

Task 5. Wellhead Survey.

The elevations of the vault boxes and the top of the PVC casings of the preexisting and newly installed wells will be surveyed to mean sea level by a California licensed surveyor. The surveyor will also obtain the horizontal and Global Positioning System (GPS) coordinates for all wells.

Task 6. Well Development and Sampling.

The newly installed monitoring well will be developed after being allowed to stand a minimum of 72 hours after completion. During development, the clarity of the discharged well water and selected groundwater parameters (pH, temperature, and conductivity) will be monitored. A groundwater sample will be collected when the discharge water runs clear and the groundwater parameters have stabilized. In addition, groundwater samples will be collected from the preexisting wells (MW-1 and MW-2) and the UST Backfill casing (W-1). The groundwater samples will be analyzed as described in Task 6. Development and groundwater sampling procedures are described in Appendix A. Groundwater removed from the wells during development and sampling will be stored at the site in properly labeled drums pending disposal.

Task 7. Laboratory Analyses.

All samples will be submitted to a California-certified Hazardous Materials Testing Laboratory. Soil samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) by Environmental Protection Agency (EPA) Method 8015/Modified, benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020. Groundwater samples collected will be analyzed for: TPHg, BTEX, ethanol, tert-butyl alcohol (TBA), MtBE, di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), 1,2-dichloroethane (1,2-DCA), tert-amyl methyl ether (TAME) and ethylene

dibromide (EDB) by EPA Method 8260. The composite soil sample collected from the stockpile will be analyzed for TPHg (EPA Method 8015), BTEX and MtBE (EPA Method 8020), and total lead (EPA Method 6010).

Task 8. Report Preparation.

Following receipt and analysis of all data, a report will be prepared which summarizes the procedures and findings associated with this investigation. The report will be submitted to Can-Am for their use and distribution.

PROJECT STAFF

Mr. Douglas Lee, a Registered Geologist in the State of California (R.G. No. 6882) will provide technical oversight and review of the work and will supervise implementation of the field and office operations. GR employs a staff of geologists, engineers, and technicians who will assist with the project.

SCHEDULE

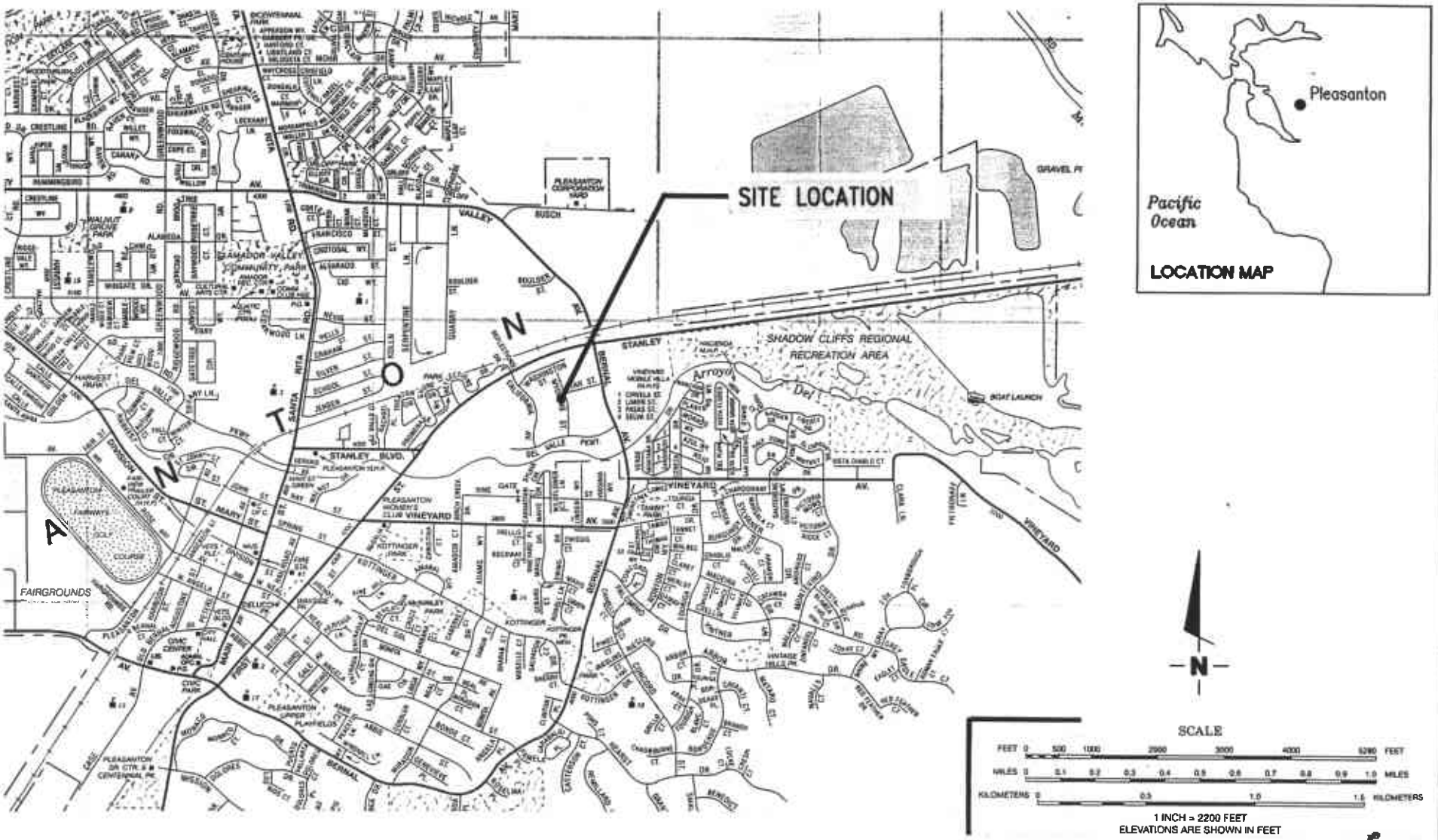
Implementation of the proposed scope of work will commence upon receipt of regulatory approval.

REFERENCES

Gettler-Ryan Inc., 2001, Limited Subsurface Investigation Report for Can-Am Plumbing Inc., 151 Wyoming Street, Pleasanton, California: Report No. 948162.02-2, dated February 1, 2001.

Gettler-Ryan Inc., 1999, Work Plan for Limited Subsurface Investigation at Can-Am Plumbing Inc., 151 Wyoming Street, Pleasanton, California: Report No. 948162.02-1, dated December 2, 1999.

Gettler-Ryan Inc., 1999, Compliance Soil Sampling Report for Can-Am Plumbing Inc. at 151 Wyoming Street, Pleasanton, California: Report No. 1113.01, dated July 6, 1999.



Base Map: AAA Map for Pleasanton, Dublin and Vicinity dated 1997

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Dublin, CA 94568

VICINITY MAP
Can-Am Plumbing Inc.
151 Wyoming Street
Pleasanton, California

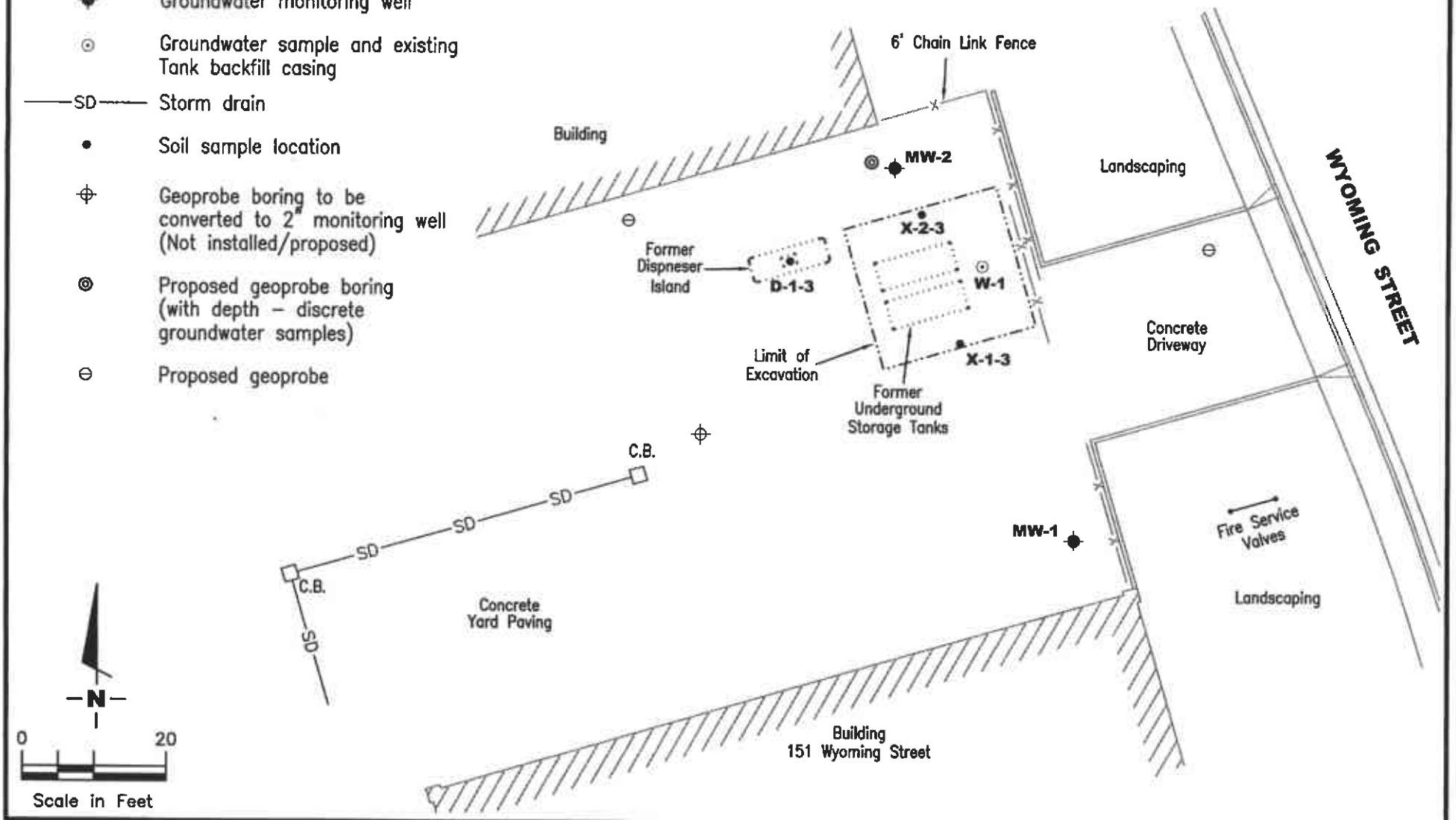
FIGURE 1

JOB NUMBER 948162 | REVIEWED BY | DATE 12/99 | REVISED DATE

JUN 8 2001

EXPLANATION

- Groundwater monitoring well
- Groundwater sample and existing Tank backfill casing
- SD — Storm drain
- Soil sample location
- Geoprobe boring to be converted to 2" monitoring well (Not installed/proposed)
- Proposed geoprobe boring (with depth – discrete groundwater samples)
- Proposed geoprobe



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SITE PLAN
Can-Am Plumbing Inc.
151 Wyoming Street
Pleasanton, California

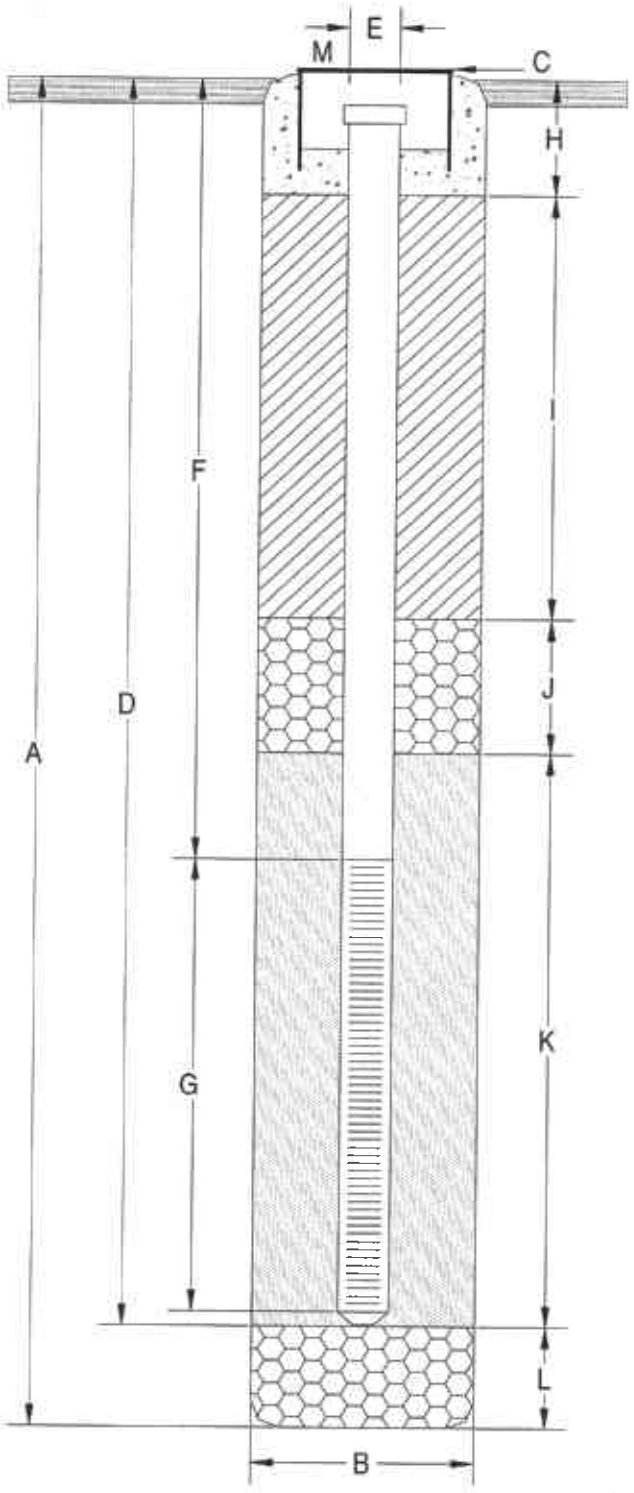
FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
948162.03		6/02	

FILE NAME: P:\ENVIRO\CAN-AM\948162\A01-CAN-AM.DWG | Layout Tab: Work Plan 6-02

WELL CONSTRUCTION DETAIL

JUN 28 2002



A Total Depth of Boring 30 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow-Stem Augers

C Top of Casing Elevation _____ ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project-Datum

D Casing Length 30 ft.
Material PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 15 ft.

G Perforated Length 15 ft.
Perforated Interval from 15 to 30 ft.
Perforation Size 0.02 in.

H Surface Seal from 0 to 1 ft.
Seal Material Concrete

I Backfill from 1 to 11 ft.
Backfill Material Portland Cement Grout

J Seal from 11 to 13 ft.
Seal Material Bentonite

K Gravel Pack from 13 to 30 ft.
Pack Material RMC Lonestar #3 Sand

L Bottom Seal None ft.
Seal Material N/A

M _____

Note: Depths measured from ground surface.

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Proposed Monitoring Well Construction
Can-Am Plumbing, Inc.
151 Wyoming Street
Pleasanton, California

FIGURE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
948162.03	DL	06/17/02		

APPENDIX A

Gettler-Ryan Inc. Field Methods And Procedures

GETTLER-RYAN INC.

FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan Inc. (GR) is conducted in accordance with GR's Health and Safety Plan (revised January 16, 1995) and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the contents of these plans prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples are collected from the soil boring with a split-barrel sampling device fitted with 2-inch-diameter, clean brass tube or stainless steel liners. The sampling device is driven approximately 18 inches with a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler each successive 6 inches is recorded on the boring log. The encountered soils are described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with Teflon sheeting or aluminum foil, capped, labeled, and place in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

a. depth relative to underground storage tanks and existing ground surface
b. depth relative to known or suspected groundwater
c. presence or absence of contaminant migration pathways
d. presence or absence of discoloration or staining
e. presence or absence of obvious gasoline hydrocarbon odors
f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing soil from the tip of the sampling device or sample liner into a clean ziplock bag and sealing the bag. After approximately twenty minutes, the bag is opened and the atmosphere within the bag tested using a PID. Head-space screening results are recorded on the boring log. Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Construction of Monitoring Wells

Monitoring wells are constructed in the exploratory soil borings with Schedule 40 polyvinyl chloride (PVC) casing. All joints are thread-joined; no glues, cements, or solvents are used in well construction. The screened interval is constructed of machine-slotted PVC well screen which generally extends from the total well depth to a point above the groundwater. An appropriately-sized sorted sand is placed in the annular adjacent to the entire screened interval. A bentonite seal is placed in the annular space above the sand, and the remaining annular space is sealed with neat cement or cement grout.

Wellheads are protected with water-resistant traffic-rated vault boxes placed flush with the ground surface. The top of the well casing is sealed with a locking waterproof cap. A lock is placed on the well cap to prevent vandalism and unintentional introduction of materials into the well.

Measurement of Water Levels

The top of the newly-installed well casing is surveyed by a California-licensed Land Surveyor to mean sea level (MSL). Depth-to-groundwater in the well is measured from the top of the well casing with an electronic water-level indicator. Depth-to-groundwater is measured to the nearest 0.01-foot, and referenced to MSL.

Well Development and Sampling

The purpose of well development is to improve hydraulic communication between the well and the surrounding aquifer. Prior to development, each well is monitored for the presence of floating product and the depth-to-water is recorded. Wells are then developed by alternately surging the well with a vented surge block, then purging the well with a pump or bailer to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized. After the wells have been

developed, groundwater samples are collected. Well development and sampling is performed by GR.

Storing and Sampling of Drill Cuttings

Drill cuttings are stockpiled on plastic sheeting or stored in drums depending on site conditions and regulatory requirements. Stockpile samples are collected and analyzed on the basis of one composite sample per 100 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and them driving the stainless steel or brass sample tube into the stockpiled material with a hand, mallet, or drive sampler. The sample tubes are then covered on both ends with Teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.