GETTLER-RYAN INC.

TRANSMITTAL

TO: Ms. Marie Schweickert
515 South Livermore Ave.
Livermore, CA 94550

DATE: November 6, 2003
PROJ:#: 948209.01
SUBJECT: Work Plan
Marie Schweickert Property
515 South Livermore Ave.
Livermore, CA 94550

FROM:
Douglas J. Lee
Project Manager
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	November 6, 2003	Work Plan for Limited Subsurface Investigation

THESE ARE TRANSMITTED as checked below:

[X] For review and comment [ ] Approved as submitted [ ] Resubmit _ copies for approval

[X] As requested [ ] Approved as noted [ ] Submit _ copies for distribution

[ ] For approval [ ] Return for corrections [ ] Return __ corrected prints

[X] For Your Files

COMMENTS:

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

cc: Ms. Roseanne Garcia-La Grille, Alameda County Environmental Health Services, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

GETTLER-RYAN INC.

November 6, 2003

Ms. Marie Schweickert
515 South Livermore Avenue
Livermore, California 94550

Subject: **WORK PLAN FOR LIMITED SUBSURFACE INVESTIGATION**
Marie Schweickert Property, 515 South Livermore Avenue, Livermore, California

Ms. Schweickert:

At your request, Gettler-Ryan Inc. (GR), has prepared this Work Plan for the installation of one Geoprobe® soil boring at the subject site. The purpose of this work is to determine if soil and groundwater beneath the former heating oil underground storage tank (UST) pit have been impacted by petroleum hydrocarbons. This Work Plan was prepared in response to the Alameda County Environmental Health Services (ACEHS) in a letter dated October 27, 2003. The proposed work includes:

- preparing a site safety plan;
- obtaining the required drilling permit from the Alameda County Flood Control and Water Conservation District (Zone 7 Water Agency);
- installing one Geoprobe® soil boring;
- collecting and submitting selected soil and grab groundwater samples for chemical analysis; and
- preparing a report presenting the observations and analytical data associated with the investigation.

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 Underground Storage Tank Regulations*, the California Regional Water Quality Control Board (CRWQCB) *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, and the ACEHS guidelines.

SITE DESCRIPTION

The subject site is a single-family residence located at 515 South Livermore Avenue in Livermore, California (Figure 1). One 350-gallon heating oil UST was located in the rear portion of the property. Pertinent site features and the location of the former UST are shown on Figure 2.

The site is situated at approximately 500 feet above mean sea level on very gently sloping, northwest-trending topography. The closest surface water is Arroyo Mocho Creek, which is located 2,700 feet south of the site. Arroyo Las Positas is located 7,700 feet northwest of the site. Based on the topography, the regional groundwater flow direction is inferred to be to the northwest.

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PREVIOUS ENVIROMENTAL WORK

On July 29, 2003, GR conducted compliance soil sampling during removal of one 350-gallon steel home heating oil UST (Figure 2). Upon removal, the UST was visually inspected by GR personnel for evidence of failure. No holes or cracks were observed in the UST.

One soil sample, labeled TP-1(5), was collected at the base of the UST excavation at approximately 5 feet bgs (Figure 2). In addition, one four part composite sample, designated as COMP-1(A,B,C,D), was collected from the stockpile. Total Petroleum Hydrocarbons as diesel (TPHd) range hydrocarbons were detected in soil sample TP-1(5) at 36 parts per million (ppm). Soil sample COMP-1(A,B,C,D) contained TPHd at 29 ppm. Benzene, Toluene, ethylbenzene, and total xylenes (BTEX) and Total Oil and Grease (O&G) were not detected in soil samples TP-1(5) or COMP-1(A,B,C,D).

The analytical results of the soil samples were submitted to Mr. Paul Smith of the Livermore – Pleasanton Fire Department. Based on the analytical results of the soil samples, Mr. Smith approved the backfilling of the excavation with the soil from the stockpile and approximately 4 yards of clean, imported fill.

PROPOSED SCOPE OF WORK

In order to determine if soil and groundwater beneath the former UST pit have been impacted by petroleum hydrocarbons, GR proposes to install one Geoprobe® at the location shown on Figure 2. Soil and a grab groundwater sample will be collected from the Geoprobe. All fieldwork will be conducted in accordance with GR's Field Methods and Procedures (Appendix A).

The proposed Geoprobe soil boring will be advanced within the confines of the fenced backyard at the subject site. To accomplish this task, a track-mounted, limited access Geoprobe rig will be brought in through an existing gate and positioned over the proposed boring location. The soil boring will be advanced initially using the direct-push method. If the direct-push method is unsuccessful due to difficult drilling conditions or excessive depth to groundwater, the rig will be converted to drill with hollow-stem augers in an effort to achieve the target depth of the first encountered groundwater. To perform this scope of work, GR proposes the following tasks:

Task 1 Pre-Field Activities

GR will prepare a site-specific safety plan, and obtain the necessary drilling permit from the Zone 7 Water Agency. The proposed Geoprobe location will be marked and Underground Service Alert (USA) will be notified a minimum of 48 hours prior to drilling.

Task 2 Geoprobe® Installation

One geoprobe will be installed at the location shown on Figure 2. Drilling activities will be performed by a California-licensed driller (C-57 license). A GR geologist will observe drilling, collect soil samples for lithologic description and chemical analysis, prepare a boring log, and collect a groundwater sample for chemical analyses. The soil boring will be advanced using a Geoprobe® rig utilizing direct-push technology. If difficult drilling conditions prevent the advancement of the Geoprobe tools to the desired depth, hollow-stem augers will be used to complete the soil boring.

Soil samples for lithologic description and possible chemical analysis will be collected continuously to develop an accurate profile of subsurface hydrogeologic conditions. If drilling with hollow-stem augers is required, then soil samples will be collected at 5-foot intervals at a minimum. Soil from selected sample intervals 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. Screening data will be recorded on the boring logs.

Selected soil samples will be submitted for chemical analyses. Although the actual number of samples submitted for chemical analysis will depend on site conditions and field screening data, we anticipate a minimum of three soil samples will be submitted for chemical analysis as described in Task 4.

Task 3 Groundwater Sampling

A grab groundwater sample will be collected from the Geoprobe boring. Groundwater sampling will be performed using a hydropunch groundwater sampling tool or by installing a temporary 1-inch diameter PVC slotted casing into the boring. The grab groundwater sample will be collected using a stainless steel bailer and decanted into the appropriate laboratory supplied containers, as described in GR's Field Methods and Procedures (Appendix A). The groundwater sample will be analyzed as described in Task 4.

Task 4 Laboratory Analyses

All samples will be submitted to a California-certified Hazardous Materials Testing Laboratory. Soil and groundwater samples will be analyzed for Total Petroleum Hydrocarbons as diesel (TPHd) by Environmental Protection Agency (EPA) Method 8015/Modified, benzene, toluene, ethylbenzene, total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.

Task 5 Reporting

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

PROJECT STAFF

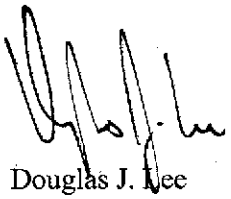
Mr. Douglas J. Lee, Project Manager (California Registered Geologist No. 6882) will provide technical oversight and review of the work and will supervise and direct field and office operations. GR employs a staff of geologist, engineers, and technicians who will assist with the project.

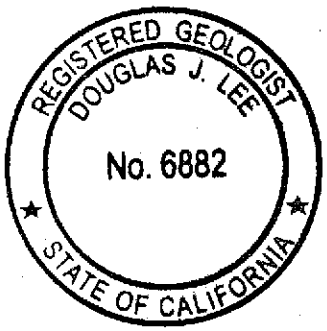
SCHEDULE

Implementation of the proposed scope of work will commence upon receipt of regulatory approval and the drilling permit from the Zone 7 Water Agency.

If you should have any questions regarding this report, please feel free to call GR at (925) 551-7555.

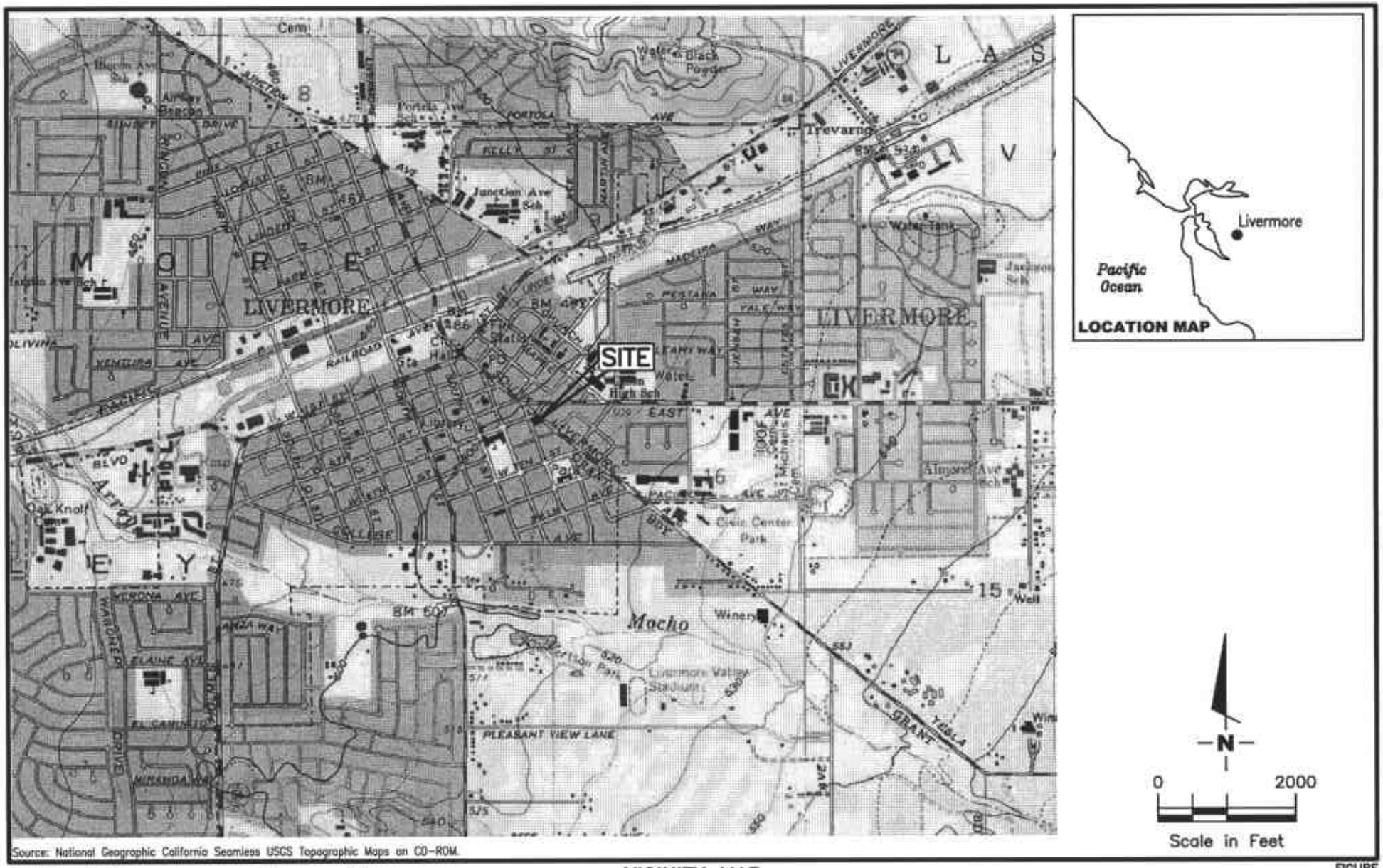
Sincerely,
Gettler-Ryan Inc.





Douglas J. Lee
Project Manager
R.G. 6882

Attachments: Figure 1 - Vicinity Map
Figure 2 - Site Plan
GR Field Methods and Procedures



Source: National Geographic California Seamless USGS Topographic Maps on CD-ROM.

GETTLER - RYAN INC.
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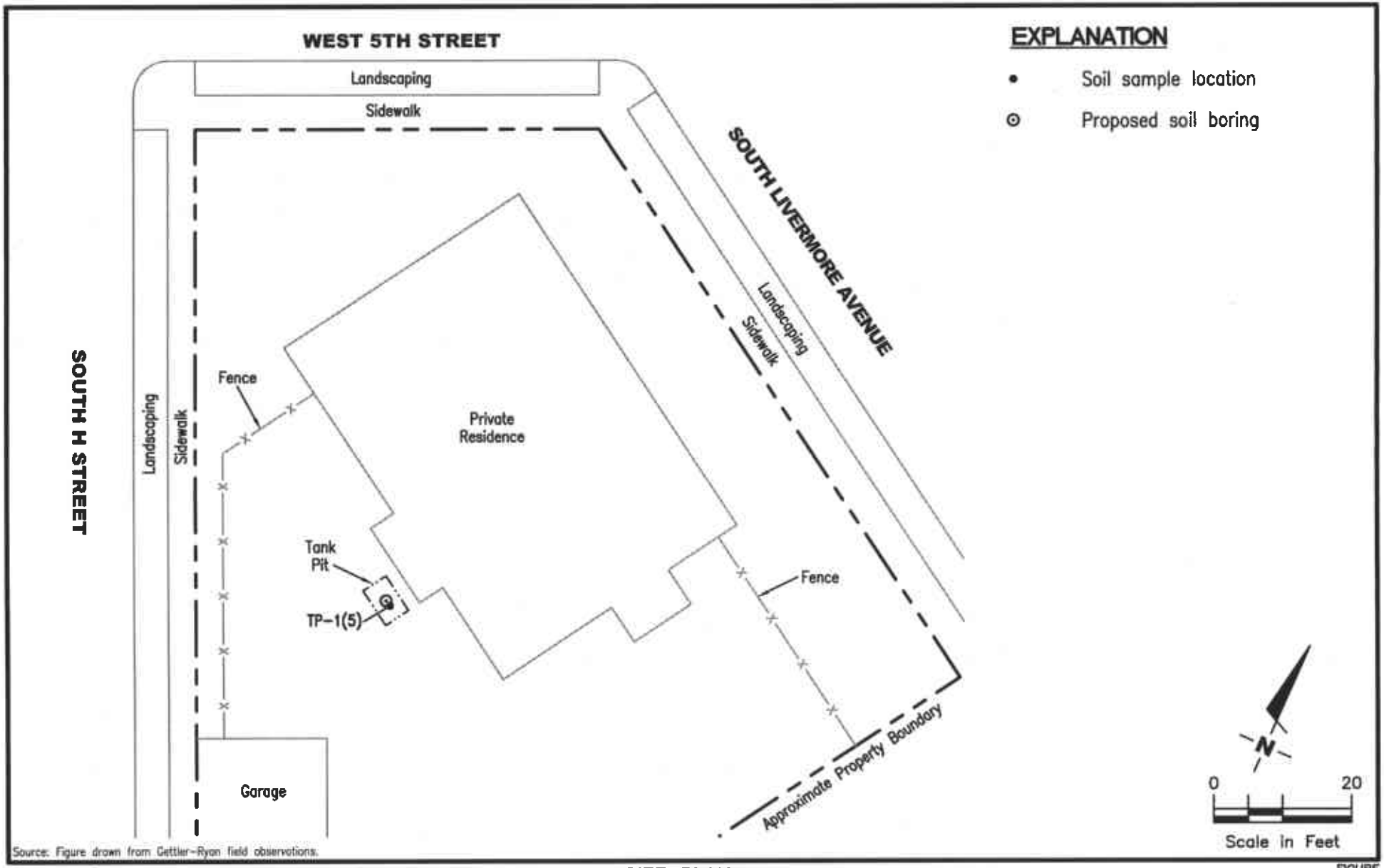
Dublin, CA 94568 (925) 551-7555

VICINITY MAP
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209		11/03	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\VIC-MARIE SCHWEICKERT.DWG | Layout Tab: Vic Map



Source: Figure drawn from Gettler-Ryan field observations.

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SITE PLAN
Marie Schweickert Property
515 South Livermore Avenue
Livermore, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
948209.1		11/03	

FILE NAME: P:\ENVIRO\MARIE SCHWEICKERT PROPERTY\A03-MARIE SCHWEICKERT.DWG | Layout Tab: Tank Rem. 11-03

GETTLER - RYAN
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 and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the of these plans contents 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

Exploratory 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 exploratory soil boring with a split-barrel sampler or other appropriate sampling device fitted with clean brass 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 soil is 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 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. 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 some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. 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.

Stockpile Sampling

Stockpile samples consist of four individual sample liners collected from each 100 cubic yards (yd^3) of stockpiled soil material. Four arbitrary points on the stockpiled material are chosen, and discrete soil sample is collected at each of these points. Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless steel or brass tube into the stockpiled material with a wooden mallet or hand driven soil sampling device. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, placed in the 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.

Construction of Monitoring Wells

Monitoring wells are constructed in the exploratory 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 space adjacent to the entire screened interval. A bentonite transition 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 cap. A lock is placed on the well cap to prevent vandalism and unintentional introduction of materials into the well.

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 50 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 then driving the stainless 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.

Wellhead Survey

The top of the newly-installed well casing is surveyed by a California-licensed Land Surveyor to mean sea level (M.S.L.).

Well Development

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

Grab Groundwater Sampling

A Hydropunch® groundwater sampling tool or temporary PVC casing installed in the boring may be used to facilitate grab groundwater sample collection. Samples of groundwater are collected from the surface of the water in the Hydropunch® or temporary casing using a teflon bailer. The water samples are then gently poured into laboratory-cleaned containers and sealed with teflon-lined caps, and inspected for air bubbles to check for headspace. The samples

are then labeled by an adhesive label, noted in permanent ink, and promptly placed in an ice storage. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.

Groundwater Sampling

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using a MMC flexi-dip (or comparable) interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, static water level measurements are collected with the interface probe and are also recorded in the field notes.

After water levels are collected and prior to sampling, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or polyvinyl chloride bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Tosco Marketing Company, the purge water and decontamination water generated during sampling activities is transported to Tosco - San Francisco Area Refinery, located in Rodeo, California.

GETTLER-RYAN INC.

FACSIMILE COVER SHEET

DATE: 11-6-03

TO: Ms. Roseanne Garcia-La Grille
COMPANY: Alameda County Environmental Health
FAX: (510) 337-9335

RE: Marie Schwieckert, 515 S. Livermore Ave., Livermore, California

FROM: Doug Lee

PHONE: (925) 551-7444 Ext. 123
FAX: (925) 551-7888

10 PAGES INCLUDING COVER

Attached is a brief work plan as requested in your October 27, 2003 correspondence regarding the referenced site. I will send you a hardcopy via overnight service. I was hoping you could review it within the next couple of days. Our client is in bind with the escrow on the sale her property being extended for this work. This has placed her in a very bad position, so GR is trying to help expedite the work. We are tentatively scheduled, pending your approval, to drill the proposed soil boring on Thursday, November 13, 2003.

If there are any problems with this transmission, please call (925) 551-7555.

GETTLER-RYAN INC.

November 6, 2003

Ms. Marie Schweickert
515 South Livermore Avenue
Livermore, California 94550

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