GETTLER-RYAN INC.

TRANSMITTAL

TO: Mr. David De Witt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

DATE: September 9, 2002
PROJ:#: 140106.06
SUBJECT: Work Plan
Former Tosco Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

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	September 9, 2002	Work Plan For Subsurface Investigation

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COMMENTS:

Enclosed is one copy of the referenced Work Plan. 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, 2nd Floor, Alameda, CA 94502.

GETTLER-RYAN INC.

September 9, 2002

Mr. David B. De Witt
Phillips Petroleum Company
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

Subject: **Work Plan For Subsurface Investigation, Tosco (76) Service Station No. 7004, 15599 Hesperian Boulevard, San Leandro, California.**

Mr. De Witt:

At the request of Tosco Corporation, a subsidiary of Phillips Petroleum Company (Tosco), Gettler-Ryan Inc. (GR) has prepared this work plan for the advancement of five Geoprobes® at the subject site. This work is proposed to further define the degree and extent of petroleum hydrocarbon-impacted groundwater in the vicinity of monitoring well MW-3. The scope of work was requested by the Alameda County Environmental Health Services (ACEHS) in a letter to Tosco dated August 27, 2002.

SITE DESCRIPTION

The subject site is a former service station located on the northwest corner of the intersection of Hesperian Boulevard and Lewelling Boulevard in San Leandro, California (Figure 1). The site is a paved lot located within a Target Department Store complex and immediately adjacent to a former Kragen Auto Parts store. The site was formerly a Gemco Department Store and Service Station dispensing petroleum fuel prior to the purchase by Target. Operation of a facility dispensing 76 branded product was initiated in 1984. The subject site was most recently a 76 branded Service Station with two gasoline underground storage tanks (USTs), two fuel dispenser islands, and a station kiosk. All aboveground and subsurface facilities related to the service station have been removed. A total of six groundwater monitoring wells and one aquifer test/recovery well exist at and around the site. The nearest surface water body is San Lorenzo Creek located approximately 800 feet south of the site. Topography in the site vicinity is flat-lying, at an elevation of approximately 38 feet above mean sea level (MSL). Former locations of pertinent site features are shown on Figure 2.

Geology and Hydrogeology

Based on review of regional geological maps (U.S. Geological Survey Professional Paper 943 "Flatland Deposits of the San Francisco Day Region, California – Their Geology and Engineering Properties and their importance to Comprehensive Planning, " by E.J. Helley and K.R. Lajoie, 1979), the subject site is underlain by Holocene aged coarse -grained alluvium. This alluvium is described as typically consisting of unconsolidated, moderately sorted, permeable sand and silt, with a thickness ranging from less than 10 feet to as much as 50 feet.

Based on the results of subsurface studies, the site and vicinity are underlain by clayey and gravelly fill material to a depth of 1.5 to 5.5 feet below ground surface(bgs). The fill is in turn underlain by alluvium to the maximum

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explored depth of 29.5 feet bgs. This alluvium consists of interbedded silt and clay with two somewhat laterally continuous sand units. These sand units are located at approximately 8 to 12 feet bgs (unsaturated) and 15 to 23 feet bgs (saturated). The sand units are comprised of sands, silty sand and clayey sand.

Depth to groundwater has historically fluctuated between approximately 12 and 18 feet bgs. Groundwater flow direction has ranged from west-southwest to west-northwest at a hydraulic gradient of 0.006 to 0.017 feet/feet.

PROPOSED SCOPE OF WORK

To complete the definition of the degree and extent of hydrocarbon-impacted groundwater in the vicinity of MW-3, GR proposes to advance five Geoprobes® at the locations shown of Figure 2. One of the proposed locations is inside the former Kragen Auto Parts Store. Tosco is in the process of obtaining permission to install the final Geoprobe® boring with the building. Grab groundwater samples will be collected from each of the borings. GR Field Methods and Procedures are included in Appendix A. 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 Alameda County Public Works. The proposed boring locations will be marked and a private line locator will be contracted to locate subsurface utilities in the vicinity of the proposed boring locations. Underground Service Alert (USA) will be notified a minimum of 48 hours prior to drilling.

Task 2. Boring Installation

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 analyses, prepare boring logs, and collect groundwater samples for chemical analyses. The soil borings will be advanced using a Geoprobe® rig utilizing direct push technology.

Soil samples for lithologic description and possible chemical analysis will be collected continuously to develop an accurate profile of subsurface hydrogeologic conditions. 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 analyses will depend on site conditions and field screening data, we anticipate a minimum of one soil sample, from the soil/groundwater interface, will be submitted for chemical analysis as described in Task 4.

Drill cuttings will be stockpiled at the site pending disposal. Stockpiled cuttings will be placed on and covered with plastic sheeting. Four soil samples from 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, then analyzed as described in Task 4. Drill cuttings will be transported by a Tosco-approved hauler to the Allied Waste Inc. Forward Landfill, located in Manteca, California.

Task 3. Groundwater Sampling

A grab groundwater sample will be collected form each boring through temporary PVC well screen, in accordance with GR Field Methods and Procedures (Appendix A). The groundwater samples 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 gasoline (TPHg) by Environmental Protection Agency (EPA) Method 8015/Modified, benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021. In addition, groundwater samples collected will be analyzed for: 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 8021), and total lead (EPA Method 6010).

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 Tosco for their use and distribution to the ACEHS.

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.

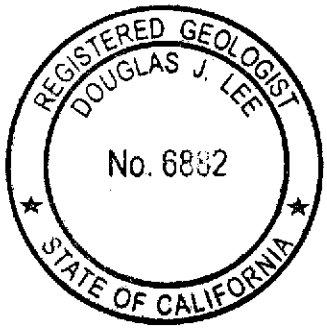
SCHEDULE

Implementation of the proposed scope of work will commence upon receipt of regulatory approval and the soil boring installation permits.

If you should have any questions regarding this work plan, please do not hesitate to contact us at (925) 551-7555.

Sincerely,
Gettler-Ryan Inc.

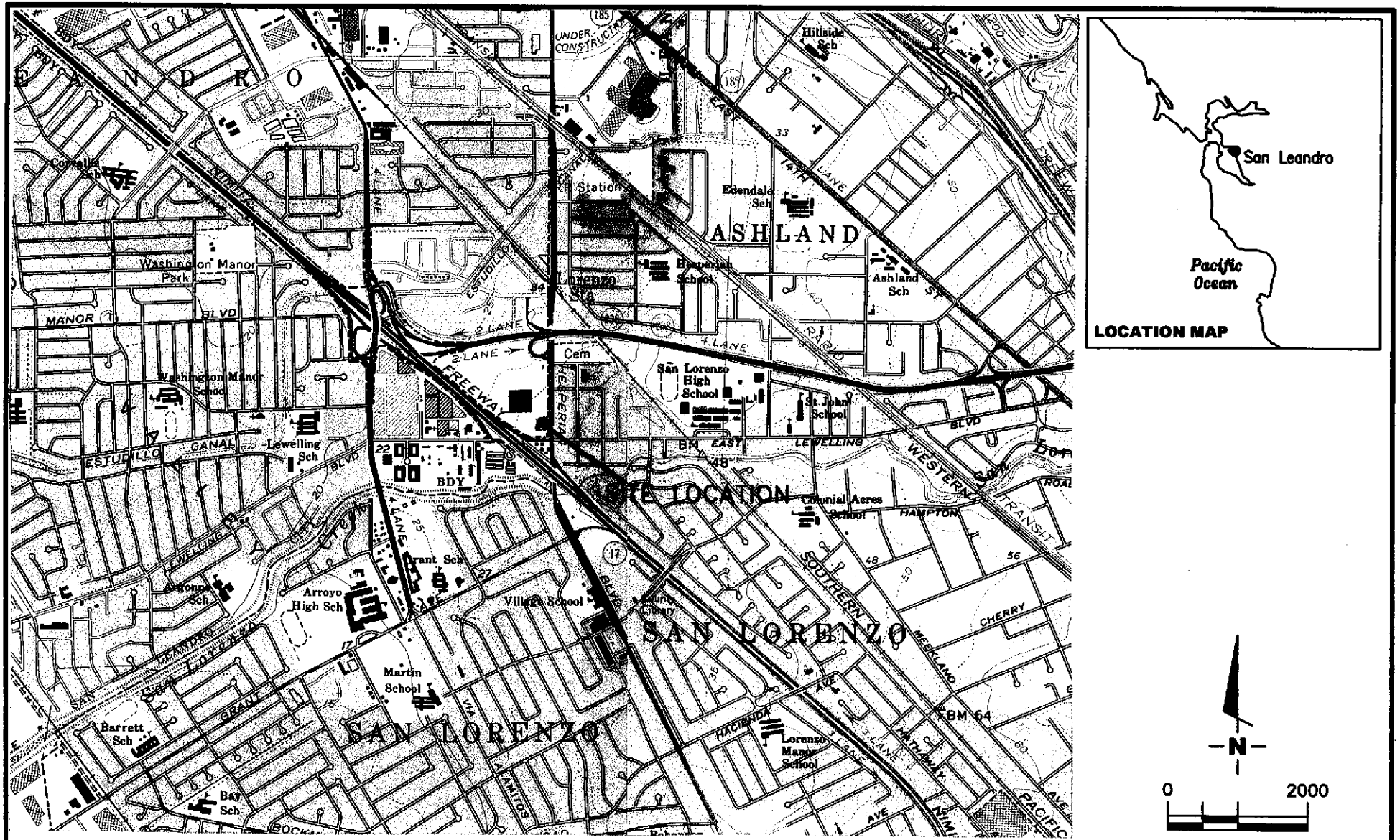
Andrew Smith
Staff Geologist



Douglas J. Lee
Senior Geologist
R.G. No. 6882

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

cc: Mr. Scott Seery – Alameda County Environmental Health Services



Source: USGS Topographic Map, San Leandro and Hayward, 7.5

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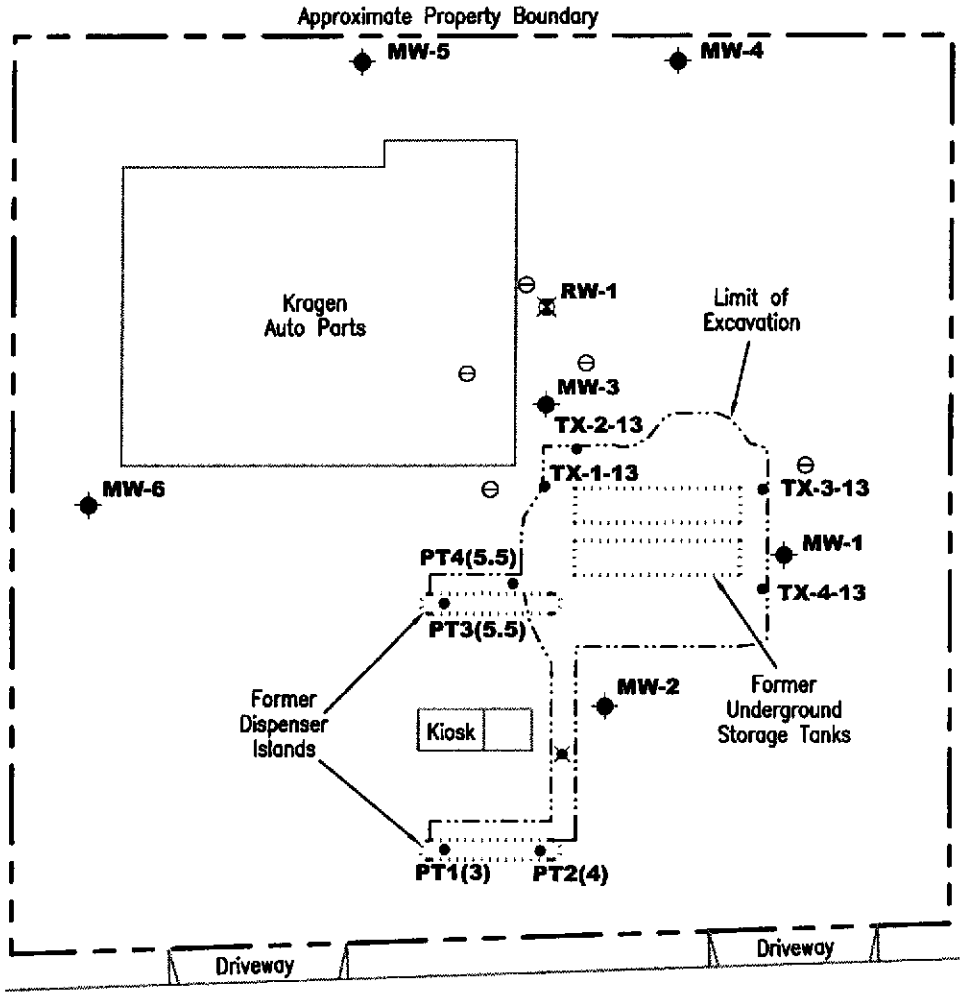
VICINITY MAP
Former Tosco (76) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
140106		8/00	

FILE NAME: P:\ENVIRO\TOSCO\7004\A00-7004-VIC.DWG | Layout Tab: CA



EXPLANATION

- Groundwater monitoring well
- Aquifer testing well
- Soil sample location
- Sample attempted pea gravel too deep to reach native soil
- Proposed geoprobe

N

0 40

Scale in Feet

Source: Figure modified from drawing provided by MPDS Services Inc..

GETTLER - RYAN INC.
6747 Sierra Ct., Suite J
Dublin, CA 94568 (925) 551-7555

SITE PLAN
Former Tosco (76) Service Station No. 7004
15599 Hesperian Boulevard
San Leandro, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
140106.06		8/02	

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APPENDIX A
GR 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 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 (MSL).

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.

Groundwater Monitoring and Sampling

Decontamination Procedures

All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. During field sampling, equipment placed in a well are decontaminated before purging or sampling the next well by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water.

Water-Level Measurements

Prior to sampling each well, the static water level is measured using an electric sounder and/or calibrated portable oil-water interface probe. Both static water-level and separate-phase product thickness are measured to the nearest ±0.01 foot. The presence of separate-phase product is confirmed using a clean, acrylic or polyvinylchloride (PVC) bailer, measured to the nearest ±0.01 foot with a decimal scale tape. The monofilament line used to lower the bailer is replaced between borings with new line to preclude the possibility of cross-contamination. Field observations (e.g. product color, turbidity, water color, odors, etc.) are noted. Water-levels are measured in wells with known or suspected lowest dissolved chemical concentrations to the highest dissolved concentrations.

Sample Collection and Labeling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection. Samples of groundwater are collected from the surface of the water in each well or boring using the teflon bailer or a pump. 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 Monitoring and Sampling

Decontamination Procedures

All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. During field sampling, equipment placed in a well are decontaminated before purging or sampling the next well by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water.

Water-Level Measurements

Prior to sampling each well, the static water level is measured using an electric sounder and/or calibrated portable oil-water interface probe. Both static water-level and separate-phase product thickness are measured to the nearest 0.01 foot. The presence of separate-phase product is confirmed using a clean, acrylic or polyvinyl chloride (PVC) bailer, measured to the nearest 0.01 foot with a decimal scale tape. The monofilament line used to lower the bailer is replaced between borings with new line to preclude the possibility of cross-contamination. Field observations (e.g. product color, turbidity, water color, odors, etc.) are noted. Water-levels are measured in wells with known or suspected lowest dissolved chemical concentrations to the highest dissolved concentrations.

Sample Collection and Labeling

Samples of groundwater are collected from the surface of the water in each well or boring using the Teflon bailer or a pump. 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.

GETTLER-RYAN INC.

FIELD METHODS AND PROCEDURES
GEOPROBE®

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 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

Collection, preservation, and analysis of samples is performed in accordance with the California Code of Regulations Title 23, Division 3, Chapter 16, *Underground Tank Regulations* (June 2001), the Central Valley Regional Water Quality Control Board's *Tri-Regional Board Staff Recommendations for Preliminary Investigation And Evaluation Of Underground Tank Sites* (August 1990), Environmental Protection Agency *SW-846 Methods* (November 2000), and local agency guidelines.

Soil borings are advanced 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 under the supervision of a California Registered Geologist. Soil samples obtained with a Geoprobe® rig are collected from the soil boring with a split-barrel or solid-barrel sampling device fitted with 1.5-inch-diameter, clean brass or acrylic tubes. The Geoprobe® drives the sampling device approximately 24 to 48 inches, and the filled sampler is then retrieved from the boring. The encountered soils are described using the Unified Soil Classification System (ASTM 2488-93) and the Munsell Soil Color Chart or GSA Rock Color Chart. Upon completion, the boring is backfilled to ground surface with neat cement

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting, capped, labeled, and placed in a cooler with blue ice for preservation to 48C628C. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to a California state-certified hazardous material testing laboratory. Samples are selected for chemical analysis based in part on:

a. depth relative to underground storage tanks and existing ground surface
b. depth relative to known or suspected groundwater
c. depth relative to areas of known hydrocarbon impact at the site
d. presence or absence of contaminant migration pathways
e. presence or absence of discoloration or staining
f. presence or absence of obvious gasoline hydrocarbon odors
g. 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 soil samples. This test procedure involves placing a small amount of the soil to be screened in a sealable plastic bag. The bag is warmed in the sun to allow organic compounds in the soil sample to volatilize. The PID probe is inserted through the wall of the bag and into the headspace inside, and the meter reading is recorded in the field notes. An alternative method involves placing a plastic cap over the end of the sample tube. The PID probe is placed through a hole in the plastic cap, and vapors with the covered tube measured. Head-space screening is performed and results recorded as reconnaissance data only. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Grab Groundwater Sampling

Grab samples of groundwater are collected from the boring using a parastaltic pump or micro-bailer. With the parastaltic pump, new Tygon® tubing is placed in the pump prior to collection of each sample. The tubing is lowered into the boring through the GeoProbe equipment after groundwater has been allowed to collect. The parastaltic pump is used to evacuate water from the boring where it is discharged to laboratory-supplied containers appropriate for the anticipated analyses. With the micro-bailer, the cleaned bailer is lowered through the GeoProbe equipment into the groundwater. The bailer is allowed to fill, then is brought to the surface where the water is decanted into the sample container. The micro-bailer may also consist of a clean piece of tubing with a check valve at the bottom. The tubing is pumped up and down to bring the water sample to the surface and discharge the sample to the appropriate container.

Following collection of the groundwater sample, the sample bottles are then labeled and placed in chilled storage for transport to the analytical laboratory. A chain-of-custody form is initiated in the field and accompanies the groundwater samples to the analytical laboratory.

Soil Vapor Sampling

Soil vapor samples are collected by advancing the Geoprobe® to a discrete depth. Once the desired depth is attained, a 1/4-inch polyethylene tubing is threaded through the inside diameter of the drive rods and connected either to a tedlar bag or summa canister. The bottom portion of the drive rod is retracted and a vacuum is induced to purge a soil vapor sample. Used tubing is discarded after each sample.