AUGEAS

Alameda County
JAN 14 2003
Environmental Health

January 9, 2003

Mr. Scott Seery
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: Addendum to Workplan for Additional Site Investigation at Dublin Retail Center, 7900-7916 Dublin Boulevard, Dublin, California

Dear Mr. Seery:

As requested, please find enclosed one copy of the above-referenced addendum for the subject site.

Should you have any questions, please contact us at (831) 425-8007 or (650) 726-7700.

650-787-8005 cell

Sincerely,
AUGEAS CORPORATION

Joe Mangine
Project Geologist

cc: Mark A. Mason, Marcus & Millichap

POST OFFICE BOX 940, HALF MOON BAY, CA 94019 T: 650-726-7700 F: 650-726-1217
POST OFFICE BOX 1541, SANTA CRUZ, CA 95061 T: 831-425-8007 F: 831-425-8006
1712 PICASSO AVENUE, STE. A, DAVIS, CA 95616 T: 530-297-7480 F: 530-297-7475
POST OFFICE BOX 91930, SANTA BARBARA, CA 93190 T: 650-726-7700 F: 650-726-1217

AUGEAS

Alameda County
JAN 14 2003
Environmental Health

January 9, 2003

Mr. Mark Mason
750 Battery Street, Suite 500
San Francisco, California 94111

SUBJECT: Addendum to Workplan for Additional Site Investigation at Dublin Retail Center, 7900-7916 Dublin Boulevard, Dublin, California

Dear Mr. Mason:

On behalf of Mark Mason (property manger for Allan Sebanc [property owner]), Augeas Corporation (Augeas) has prepared this addendum to the November 19, 2002 Workplan for Additional Site Investigation at the above-referenced property. This addendum was prepared pursuant to a discussion with Scott Seery at the Alameda County Environmental Health Services (ACEHS) on January 8, 2003 requesting additional work. The purpose of the proposed work is to further define the extent of petroleum hydrocarbons in soil and groundwater beneath the subject site. All proposed work will be conducted in accordance with the November 19, 2002 Workplan for Additional Site Investigation as well as guidelines established by the California Regional Water Quality Control Board (CRWQCB), City of Dublin, ACEHS, Zone 7 Alameda County Flood Control and Water Conservation District, and Augeas Corporation's Standard Operating Procedures (SOPs) in Appendix A.

Additional Proposed Work

As directed, one (1) additional Geoprobe® soil boring (GP-6) will be advanced to a depth of approximately 30 feet bgs to the south of the existing site building and former USTs and dispenser islands (Figure 2). Drilling and sampling activities will be performed in accordance with details described in the November 19, 2002 Workplan for Additional Site Investigation.

Additionally, all submitted soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd) by EPA Method 8015M, benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021, fuel oxygenates (including MTBE) by EPA Method 8260M, and ethanol, methanol, 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260M.

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References

Augeas Corporation, November 19, 2002, "Workplan for Additional Site Investigation at Dublin Retail Center, 7900-7916 Dublin Boulevard, Dublin, California."

Limitations

This addendum was prepared under the supervision of a registered geologist. Site conditions are subject to change with time; therefore, our conclusions result only from the interpretation of present conditions and available site information. This addendum was prepared in accordance with accepted professional standards and technical procedures as certified below.

Should you have any questions, please contact Augeas at (831) 425-8007 or (650) 726-7700.

Sincerely,
AUGEAS CORPORATION

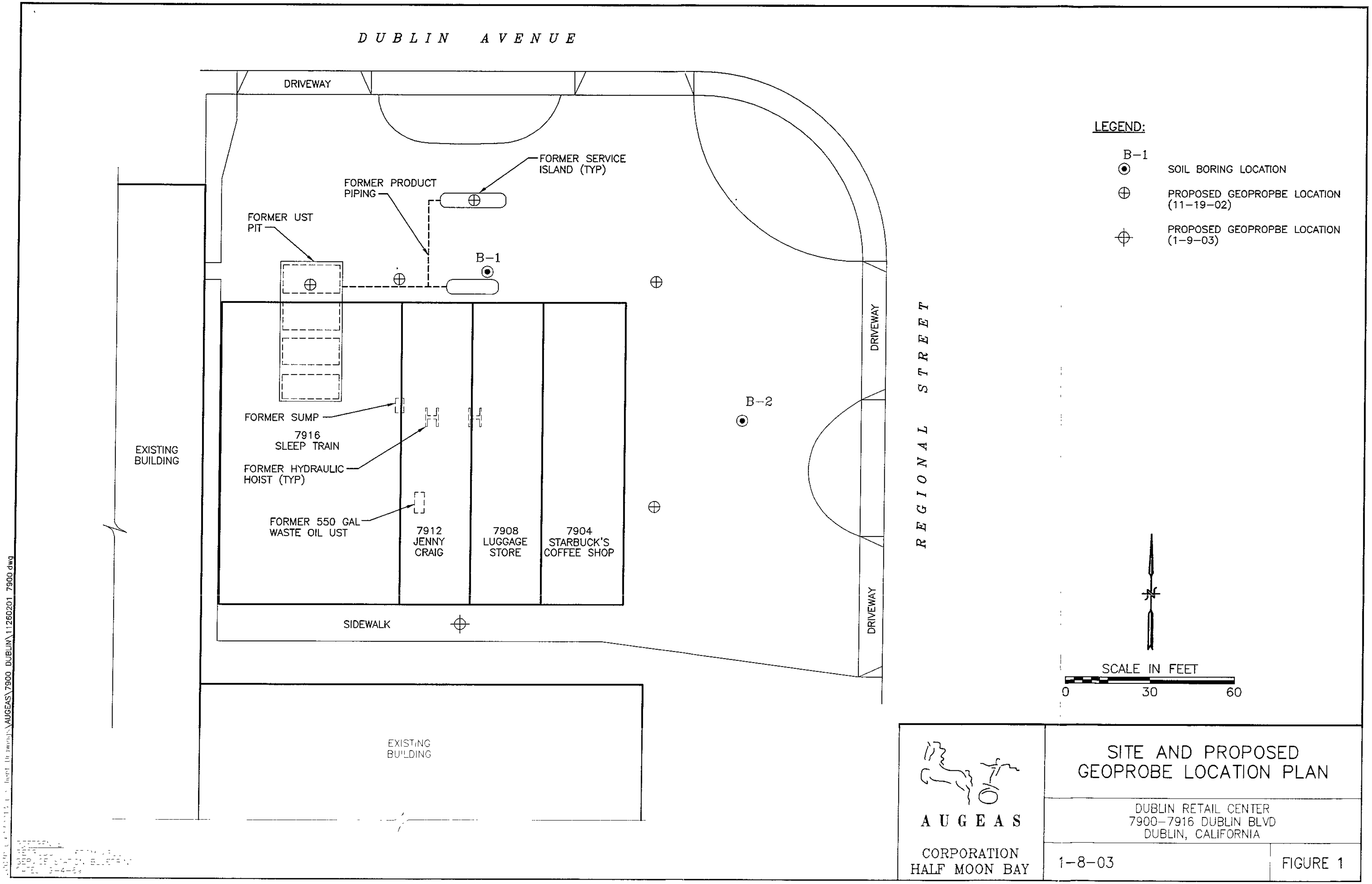
Joe Mangine
Project Geologist

Keith M. McVicker, R.G. 6767
Vice President

REGISTERED GEOLOGIST
KEITH M. McVICKER
No. 6767
STATE OF CALIFORNIA

enclosures: Figure 1, Site and Proposed Geoprobe Location Plan
Appendix A: Augeas Corporation's Standard Operating Procedures

Figure


DUBLIN AVENUE
DRIVEWAY
FORMER SERVICE ISLAND (TYP)
FORMER PRODUCT PIPING
FORMER UST PIT
B-1
B-2
FORMER SUMP
7916 SLEEP TRAIN
FORMER HYDRAULIC HOIST (TYP)
FORMER 550 GAL WASTE OIL UST
7912 JENNY CRAIG
7908 LUGGAGE STORE
7904 STARBUCK'S COFFEE SHOP
EXISTING BUILDING
SIDEWALK
EXISTING BUILDING
DRIVEWAY
DRIVEWAY
REGIONAL STREET
LEGEND:
B-1 SOIL BORING LOCATION
PROPOSED GEOPROPBE LOCATION (11-19-02)
PROPOSED GEOPROPBE LOCATION (1-9-03)
N
SCALE IN FEET
0 30 60
AUGEAS
CORPORATION
HALF MOON BAY
SITE AND PROPOSED GEOPROBE LOCATION PLAN
DUBLIN RETAIL CENTER
7900-7916 DUBLIN BLVD
DUBLIN, CALIFORNIA
1-8-03
FIGURE 1

Appendix A

Augeas Corporation's
Standard Operating Procedures

AUGEAS CORPORATION'S
STANDARD OPERATING PROCEDURES

Geoprobe Boring Installations and Sampling

Geoprobe soil borings are installed by pushing a clean, 2.5-inch diameter, 5-foot long, steel core barrel into undisturbed soil. The core barrel, equipped with a new, clean acetate liner, is pushed with the aid of a hydraulic hammer. The soil sample is collected in the acetate liner. The core barrel is removed from the borehole and the acetate liner is removed from the core barrel. The desired interval is immediately cut from the acetate liner, capped with Teflon® sheets and plastic caps. The sample is then labeled and placed on ice in a cooler. The core barrel is washed with an Alconox® solution and rinsed between each boring. These procedures minimize the potential for cross contamination and volatilization of volatile organic compounds (VOCs) prior to chemical analysis.

A portion of each sample is retained for field screening purposes. A small amount of soil (approximately 1 ounce) is placed in a plastic bag and placed in the sun for approximately 15 minutes. The bag is then pierced by the tip of a portable photo-ionization detector (PID) and the air in the bag is analyzed for total volatile hydrocarbons. The purpose of the field screening is to qualitatively determine the presence or absence of chemical organic compounds in order to aid in the selection of samples to be analyzed at the laboratory. The data is then recorded on the boring logs at the depth corresponding to the sampling point.

The remainder of the acetate liner is then cut open and examined for lithology according to the Unified Soil Classification System under the supervision of a California Registered Geologist. Job location, boring location, boring name, date, soil types, observations and activities are recorded on the boring logs.

Upon completion of each soil boring, the hole is filled with a cement grout and bentonite mixture from the bottom of the boring to surface grade. The purpose of grouting the hole is to prevent future surface contamination from having a conduit to the groundwater table.

Water Sampling

Once the borings are advanced to the desired depth, water samples are collected. If the boring stays open, a clean stainless steel bailer is lowered into the boring to retrieve water samples. If the boring does not stay open, a new, clean, temporary, well casing and screen will be lowered into the boring to aid in water sample collection. The water is then carefully transferred from the bailer into the sample containers. The containers are then capped, labeled and placed on ice. After the water samples are collected, the temporary well casing and screen are removed from the boring and properly disposed of.

Dual Wall Sampling System

The Dual Wall split spoon or window sheath sampler is loaded with the desired sample liner/liners and installed inside the outer casing. Simultaneously, the outer drive casing and inner split spoon sample barrel are advanced 2, 4, or 5 feet, depending on sampling system application. As these tools are advanced, the inner sampling barrel collects the soil core sample. This sampler is then retrieved while the outer casing remains in place, protecting the integrity of the hole. A new sampler is lowered into place, and advanced further to collect the next soil sample. This process continues until a desired depth has been reached. The dual wall sampling system also provides discrete depth soil and groundwater sampling. Using a locked drive point, the dual wall sampling system is advanced, displacing the soils until a desired depth has been reached.

Hollow Stem Auger Drilling

During hollow stem auger drilling, soil samples are collected in 2-inch by 6-inch long brass tubes. Three brass tubes are placed in an 18-inch long split-barrel (spoon) sampler of the appropriate inside-diameter. The split-barrel sampler is driven its entire length, either hydraulically or using a 140-pound hammer, or until refusal is encountered. The sampler is extracted from the borehole and the brass tubes are immediately trimmed and capped with Teflon® sheets and plastic caps. The samples are then sealed, labeled, and placed in chilled storage (refrigerated) for delivery, under chain of custody to the state-certified analytical laboratory. These procedures minimize the potential for cross contamination and volatilization of volatile organic compounds (VOCs) prior to chemical analysis.

One soil sample collected at each sampling interval is analyzed in the field using either a portable photo-ionization detector (PID), flame ionization detector, organic vapor analyzer, catalytic gas detector, or an explosimeter. The purpose of the field screening is to qualitatively determine the presence or absence of chemical organic compounds in order to select the samples to be analyzed at the laboratory. The soil sample is sealed in either a brass tube, glass jar, or plastic bag to allow for some volatilization of VOCs. The PID is then used to measure the relative concentrations of VOCs within the container's headspace. The data is recorded on both field notes and the boring logs at the depth corresponding to the sampling point.

Other soil samples are collected to document the soil and/or stratigraphic profile beneath the project site, and estimate the relative permeability of the subsurface materials. All drilling and sampling equipment are decontaminated prior to use; all equipment is either steam cleaned or washed in solution and rinsed twice in de-ionized water prior to use at each site and between boreholes to minimize the potential for cross-contamination.

In the event the soil samples cannot be submitted to the analytical laboratory on the same day of collection, the samples will be temporarily stored in a chilled ice cooler, or in a refrigerator at Augeas Corporation's office.

All soil borings are backfilled with a mixture of neat cement with 5% bentonite powder to surface grade.

SOIL CLASSIFICATION

Soil samples are classified according to the Unified Soil Classification System. Representative portions of the samples may be submitted under chain of custody to a state-certified analytical laboratory for further examination and verification of the in-field classification and analysis of soil mechanical and/or physical properties. The soil types are indicated on logs of either excavations or borings together with depths corresponding to the sampling points and other pertinent information.

MONITORING WELL INSTALLATION AND WELL DEVELOPMENT

1. Hollow Stem Auger Technique

Boreholes for monitoring wells are drilled using a truck-mounted, hollow-stem auger drill rig. The borehole diameter will be a minimum of 4-inches larger than to outside diameter of the casing when installing well screen. The hollow-stem auger provides minimal interruption of drilling while permitting soil sampling at desired intervals. Soil samples are collected by either hammering (with a 140-pound drop hammer) or hydraulically pushing a conventional spit-barrel sampler containing pre-cleaned 2-inch diameter brass tubes. An Augeas geologist or engineer will continuously log each borehole during drilling and will constantly check drill cuttings for indications of both the first recognizable occurrence of groundwater and volatile organic compounds using either a portable photoionization detector (PID), flame ionization detector (FID), or an explosimeter. The sampler is rinsed between samples and either steam cleaned or washed with all other drilling equipment between borings to minimize the potential for cross contamination.

Monitoring wells are cased with threaded, factory-perforated and blank Schedule 40 polyvinyl chloride (PVC). The perforated interval consists of slotted casing, generally with 0.02-inch wide by 1.5-inch long slots, with 42 slots per foot. A PVC cap may be secured to the bottom of the casing with stainless steel screws; no solvents or cements are used. Centering devices may be fastened to the casing to ensure even distribution of filter material and grout within the borehole annulus. The well casing is thoroughly washed and/or steam cleaned, or may be purchased as pre-cleaned, prior to installation.

After setting the casing inside the hollow-stem auger, sand or gravel filter material is poured into the annular space to fill from boring bottom to generally 1 foot above the perforated interval. A 1 - to 2-foot thick bentonite plug is set above this filter material to prevent grout from infiltrating the filter pack. Neat cement containing about 5 percent bentonite is then tremmied into the annular space from the top of the bentonite plug to near surface. A traffic-rated vault is installed around each wellhead for wells located in parking lots or driveways, while steel "stovepipes" are usually set over wellheads in landscaped areas.

After installation, the wells are thoroughly developed to remove residual drilling materials from the wellbore, and to improve well performance by removing fine material from the filter pack that may pass into the well. Well development techniques used may include pumping, surging, bailing, swabbing, jetting, flushing, and airlifting. All development water is collected either in drums or tanks for temporary storage, and properly disposed of pending laboratory analytical results. To minimize the potential of cross contamination between wells, all development equipment is either steam cleaned or properly washed prior to use. Following development, the well is allowed to stand undisturbed for a minimum of 24 hours before its first sampling.

GROUNDWATER PURGING AND SAMPLING

Groundwater monitoring wells will be monitored, purged, and sampled to assess groundwater flow characteristics and quality. Groundwater monitoring, purging, sampling, handling, and preservation protocols will be performed in accordance with these standard operating procedures (SOPs), as well as local county and state guidelines. Quality assurance/quality control (QA/QC) procedures will be implemented to monitor and document analytical laboratory procedures. The following sections describe the procedures for specific groundwater monitoring, sampling, and analytical activities.

SAMPLE IDENTIFICATION AND CHAIN-OF-CUSTODY PROCEDURES

Sample identification and chain-of-custody procedures ensure sample integrity as well as document sample possession from time of collection to ultimate disposal. Each sample container submitted for analysis is labeled to identify the job number, date, time of sample collection, a sample number unique to the sample, any in-field measurements made, sampling methodology, name(s) of on-site personnel, and any other pertinent field observations also recorded on the field excavation or boring log.

Chain-of-custody forms are used to record possession of the sample from time of collection to arrival at the laboratory. During shipment, the person with custody or the samples will relinquish them to the next person by signing the chain-of-custody form(s) and noting the date and time. The sample control officer at the laboratory will verity sample integrity, correct preservation, confirm collection in the proper container(s), and ensure adequate volume for analysis.

When these conditions are met, the samples will be assigned unique laboratory log number(s) for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in the legally-required log book maintained in the laboratory. The sample description, date received, clients name, and fly other relevant information will also be recorded.

Sample Handling and Labeling
To avoid any possible chemical or physical change in a sample during collection and transport, the sample containers will consist of non-reactive materials and be lab-certified clean prior to sampling activities. Sample containers to be used for laboratory analysis will consist of 40-milliliter (ml) glass vials and/or 1-liter amber bottles depending upon requested chemical analysis. Samples will be collected until each container is completely full in order to maintain anaerobic conditions. Samples collected for analysis will be carefully placed into the 40-ml glass vials having Teflon®® septum lids. The liter bottles will be filled to prevent any air bubbles from being present in each vial after sealing the septum lid. Confirmation of the lack of air bubbles will be verified by inverting each vial.

Sample bottles will be labeled with the project name (site location), well number, time and date of sampling, and sampler's initials. All samples will be immediately placed into an insulated chilled ice cooler for temporary storage and transport to the laboratory. The ice chests will contain sufficient packing material which will protect the integrity of the samples for transportation. Samples will be handled in accordance with appropriate chain-of-custody procedures, as discussed herein.

Sample Preservation and Acidification
Sample preservation will be utilized in order to retard the physical and chemical alternations of unstable constituents within the sample medium. Sample preservation methods are limited and are generally intended to perform the following functions:

- Retard biological action;
- Retard hydrolysis of chemical compounds and complexes;
- Reduce volatility of constituents;
- Reduce absorption effects.

Preservation is usually limited to pH control, chemical addition, filtration, refrigeration, and freezing.

The glass vials and bottles used for the collection of groundwater samples for laboratory analyses will be acidified by the analytical laboratory prior to shipment of the sample bottles to the site. The glass vials will typically contain hydrochloric acid (HCL) for aromatic volatile organic compounds, or other preservative depending on contaminant, to act as a bacterial inhibitor for the chemical compound analyzed. Problems associated with sample preservation will be documented, as appropriate.

Temperature Control
Groundwater samples submitted for laboratory analyses will be sealed in proper sample containers, and then temporarily stored in an insulated ice chest containing crushed ice for transport to the analytical laboratory. Placement of the groundwater samples into a chilled ice chest inhibits bacterial growth in the samples and also slows the chemical and biological changes of a sample exposed to an oxidizing atmosphere. A thermometer indicating maximum temperature variances will be inserted into the ice chest(s) for documentation purposes during inspection at the time of delivery at the analytical laboratory.

Chain-of-Custody Documentation
Chain-of-custody (COC) procedures will be implemented for documenting and tracking the handling of soil and/or groundwater samples. The term "chain of custody" refers to a procedure of written documentation of sample acquisition, handling, and shipping of all samples potentially intended for enforcement or legal purposes. COC documents will include the following information:

- Company name and address;
- Project name and address;
- Name of project manager;
- Laboratory name;
- Name of sampler(s);
- Sample identification number, location, matrix, and type and number of sample container(s);
- Date and time of sample collection; and
- Required analysis and turnaround/reporting time

Field sampling personnel will visually inspect the groundwater samples to ensure that the samples are correctly labeled and that the sample integrity is maintained with no apparent leakage or incorrect packaging. Field sampling personnel will complete and sign the COC prior to sample transfer. The COC will accompany the samples to the analytical laboratory. This form will be placed inside a sealed, plastic bag and packed into the ice chest.

Whenever the samples are transferred from one party to another, both parties will sign the COC and record the date and time of transfer. COC records will be signed and completed between both parties prior to the sample shipment off-site to the designated state-certified analytical laboratory. After the samples are submitted to the laboratory, they will be assigned unique laboratory log numbers for identification throughout analysis and reporting. The log numbers will be recorded on the chain-of-custody forms and in a logbook maintained by the laboratory. The sample description, date received, name of client, and other relevant information will also be recorded.

After the samples are analyzed, a copy of each completed form will accompany the data transmittal from the analytical laboratory. Completed COC forms will be reviewed by Augeas prior to insertion into the project files/reports.

Laboratory Coordination

The analytical laboratory will be contacted at least 48 hours prior to receipt of the samples. Following drop-off or shipment of the samples, a sample custodian at the laboratory will accept the samples and verify the receipt of the samples on the accompanying COC forms. The samples will be tracked on a laboratory sample custody log consisting of serially numbered, standard laboratory tracking report sheets. At least 24 hours after sample shipment, the laboratory will then be contacted to verify receipt of the samples and the estimated turnaround time for analysis. However, this final step may not be necessary if the samples are picked up by a courier from the laboratory, or the samples are delivered directly to the laboratory by the sampler. In the event the water samples cannot be submitted to the analytical laboratory on the same day of collection (i.e. due to weekends or holidays), the samples will be temporarily stored in either a chilled ice cooler or in a refrigerator at Augeas Corporation's office until the first opportunity for submittal to the laboratory.

Laboratory Analytical Quality Assurance/Quality Control (QA/QC)

In addition to routine instrument calibration, replicates, spikes, blanks, spiked blanks, and certified reference materials are routinely analyzed at method-specific frequencies to monitor precision and bias.
Additional components of the laboratory QA/QC program included the following:

- Participation in state and federal laboratory accreditation/certification programs;
- Participation in both U.S. EPA Performance Evaluation studies and inter-laboratory performance evaluation programs;
- Standard operating procedures describing routine and periodic instrument maintenance; and
- Multi-level review of raw laboratory and client reports.

Decontamination and Waste Containerization

Various types of bailers will be used to purge monitoring wells and to obtain groundwater samples. Purging equipment will be decontaminated prior to use at each monitoring well. Groundwater samples will be obtained using the portable, dedicated sample bailers. Equipment used for water quality monitoring will also be decontaminated, where necessary and practical. Decontamination procedures on water quality monitoring equipment will be dependent upon equipment manufacturers' instructions and specifications. Decontamination procedures will take place at a pre-designated on-site location. Decontamination procedures will be recorded in the field logbook.

Decontamination procedures of the well purging equipment will be accomplished by rinsing the equipment in Liquinox® and water solution, followed by a triple rinse using de-ionized water. De-ionized water will be used for each rinse of the equipment. Rinsing of the equipment will take place with the use of 5-gallon buckets, that will placed on top of plastic sheeting laid along the ground surface in the pre-designated on-site decontamination location.

Water generated during well purging will be placed into DOT-approved 55-gallon waste drums. Excess water generated during groundwater sampling will also be placed into these waste drums. Waste drums containing the purge water and any excess water will be sealed and labeled, and then moved to a temporary centralized storage area, as designated by the manager of the site facilities. The drums will be labeled with the project name (site location), date of generation, well number, and type of matrix (i.e., purged groundwater). Arrangements for transport and disposal of the water will be made upon receipt of the analytical results. The water will be transported and disposed at an approved transport, storage, and disposal (TSD) facility. Health and safety equipment, such as Tyvek suits and nitrile gloves, worn during monitoring will also be placed into a 55-gallon waste drum at each facility.