ACTON •
MICKELSON •
van DAM, INC.

Consulting Scientists, Engineers, and Geologists

July 14, 1994

Mr. Terrence A. Fox
Ultramar Inc.
525 West Third Street
Hanford, California 93230

19030.02/7

Subject: Work Plan to Install Additional Monitoring, Air Sparging, and Vapor Extraction Wells--Beacon Station No. 720
1088 Marina Boulevard, San Leandro, California

Dear Mr. Fox:

Acton • Mickelson • van Dam, Inc. (AMV), has been authorized by Ultramar Inc. (Ultramar), to submit a work plan to install one additional monitoring well, one vapor extraction well, and six air sparging wells at the subject site (Figures 1 and 2). A total of eight monitoring wells have been installed on or adjacent to the site by other consulting firms. Installation of the additional ground water monitoring, vapor extraction, and air sparging wells is intended to assist in the monitoring of ground water and removal of petroleum hydrocarbon constituents from the soil and ground water beneath the site and adjacent properties.

Background Information

Investigations by other consultants and AMV have indicated that depth to ground water beneath the site has ranged from 12 to 17 feet below grade. According to information contained in the *Problem Assessment Report/Remedial Action Plan,* dated April 18, 1994 (AMV), depth to ground water in December 1993 ranged from 13.06 (MW-6) to 16.05 (MW-8) feet below grade. The direction of ground water flow has historically varied from northwest to southwest. Depth to ground water measurements made in December 1993 indicate a ground water flow direction toward the west-southwest. The highest concentrations of dissolved benzene in ground water samples have historically been reported from monitoring well MW-4 located approximately 20 feet downgradient of the UST basin (Figure 2).

Scope of Work

To assess the horizontal extent of dissolved petroleum constituents in ground water adjacent to the subject site, and to install extraction and sparging wells for proposed remediation activities, the following work is proposed:

4511 Golden Foothill Parkway, Suite 1
El Dorado Hills, California 95762

(916) 939-7550
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- Prepare a site-specific health and safety plan.
- Acquire necessary permits for the installation of the additional wells from applicable regulatory agencies.
- Drill one soil boring to 25 feet below grade and convert the soil boring to ground water monitoring/vapor extraction well MW-9 (assuming a depth to water of 15 feet below grade).
- Drill one soil boring to 14 feet below grade and convert the soil boring to vapor extraction well VW-1.
- Drill six soil borings to 28 feet below grade and convert the soil borings to air sparging wells SP-1 through SP-6.
- Collect soil samples at 5-foot intervals and/or at changes in lithology with a modified California sampler and classify recovered soil samples according to the Unified Soil Classification System (USCS).
- Screen the recovered soil samples in the field with a photoionization detector (PID) for the presence of organic vapors.
- Submit selected soil samples for chemical analysis based on field observations and PID readings. Soil samples will be analyzed for TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX) by a state-certified laboratory.
- Survey the elevation of the newly constructed well risers to within 0.01 foot relative to the existing monitoring wells.
- Measure water levels in all existing wells on or adjacent to the subject site.
- Develop the newly constructed monitoring and air sparging wells.
- Purge and sample the newly constructed monitoring wells.
- Submit a ground water sample from monitoring well MW-9 and air sparging wells SP-1 through SP-6 for analysis of BTEX and TPHg by a state-certified laboratory.

- Compile and review the collected data and prepare a report of the findings.

Soil Borings and Sampling

Soil borings of sufficient diameter to allow installation of one 4-inch-diameter monitoring well (MW-9), one 2-inch-diameter vapor extraction well (VW-1), and six 2-inch-diameter air sparging wells (SP-1 through SP-6) will be advanced to depths ranging from 14 to 28 feet below the ground surface. The soil borings will be advanced at or near the locations indicated on Figure 2 using continuous-flight, hollow-stem auger drilling techniques. Soil samples will be collected as the borings are advanced at 5-foot intervals and/or changes in lithology. The samples will be screened in the field for the presence of organic vapors using a PID. Soil cuttings will be stored on site on plastic (and covered with plastic) pending receipt of analytical results and characterization for disposal.

At least two soil samples collected from above the water table in each soil boring will be submitted to a state-certified laboratory for analysis of BTEX and TPHg. All analyses will be done using established state and federal EPA methodology. Drilling and sampling protocols are described in Enclosure A.

Well Construction, Depth to Water Measurements, and Ground Water Sampling

Proposed monitoring/extraction well MW-9 will be constructed with 20 feet of 4-inch-diameter polyvinyl chloride (PVC) well screen with 0.020-inch wide (#20) slots. Blank PVC casing will extend from the top of the screen to the surface. Proposed vapor extraction well VW-1 will be constructed with 10 feet of 2-inch-diameter PVC well screen emplaced above the water table. The annular space opposite the screened portion of each well will be backfilled with a gravel pack consisting of #3 Monterey sand or equivalent. The gravel pack will extend 2 feet above the screened interval in MW-9 and 1 foot above the screened interval of VW-1. In the annular space above the gravel pack, a 2-foot-thick bentonite seal will be installed. Above the bentonite seal, a cement grout with approximately 5 percent bentonite will be emplaced and will serve to inhibit movement of surface water downward through the well annulus.

Proposed air sparging wells SP-1 through SP-6 will be constructed with 5 feet of 2-inch-diameter PVC well screen with 0.020-inch wide slots. The screened casing will be installed at least 5 feet below the water table. Blank PVC casing will extend from the top of the screen to the surface. The annular space opposite the screened portion of each well will be backfilled with a gravel pack consisting of #3 Monterey sand or equivalent. The gravel pack will extend 1 foot above

the screened interval. In the annular space above the gravel pack, a bentonite seal will be installed to approximately 1 foot above the water table. Above the bentonite seal, a cement/bentonite grout will be emplaced to within 1 foot of the ground surface.

The well risers will be cut off below grade and flush-grade, watertight, well boxes will be installed at the surface. A watertight, locking, expansion well cap will be used to secure each well riser. Diagrams of typical well constructions are illustrated on Figures 3, 4, and 5.

After installation, the casing riser on each well will be surveyed to the existing on-site monitoring wells. Depth to water in each well will be measured, and the new wells will be developed, purged, and sampled in accordance with Alameda County Health Care Agency regulations. Purge water will be stored on site in 55-gallon drums pending disposal. Ground water samples will be submitted to a state-certified laboratory for analysis of BTEX and TPHg.

Results Report

After field activities are complete and after receipt of laboratory results, a report of the results will be prepared to document field activities, and present the analytical results. The report will include soil boring logs, soil sample analytical results, subsurface soil descriptions, depth to ground water measurements, ground water sample analytical results, and conclusions.

Schedule

Fieldwork to advance and sample the proposed borings, and install the proposed monitoring/vapor extraction/air sparging wells will commence within 10 working days of approval of this plan and receipt of the necessary permits for well installation. Permit applications to advance the soil borings will be submitted under separate cover to Alameda County.

We recommend that a copy of this plan be submitted to:

Mr. Scott Seery
Department of Environmental Health
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Local Program Coordinator for Alameda County
California Regional Water Quality Control Board,
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

If you have any questions, please call either of the undersigned at (916) 939-7550.

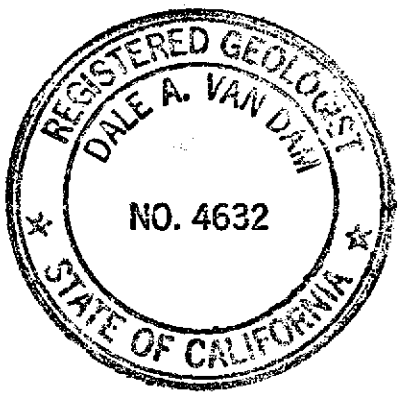
Sincerely,

ACTON • MICKELSON • van DAM, INC.

Steven A. Liaty
Staff Geologist

Dale A. van Dam
California Registered Geologist #4632

SAL:DAvD:maf
Enclosures



General Notes

Base Map from U.S.G.S.
San Leandro, California
7.5 Minute Topographic
Photorevised 1980

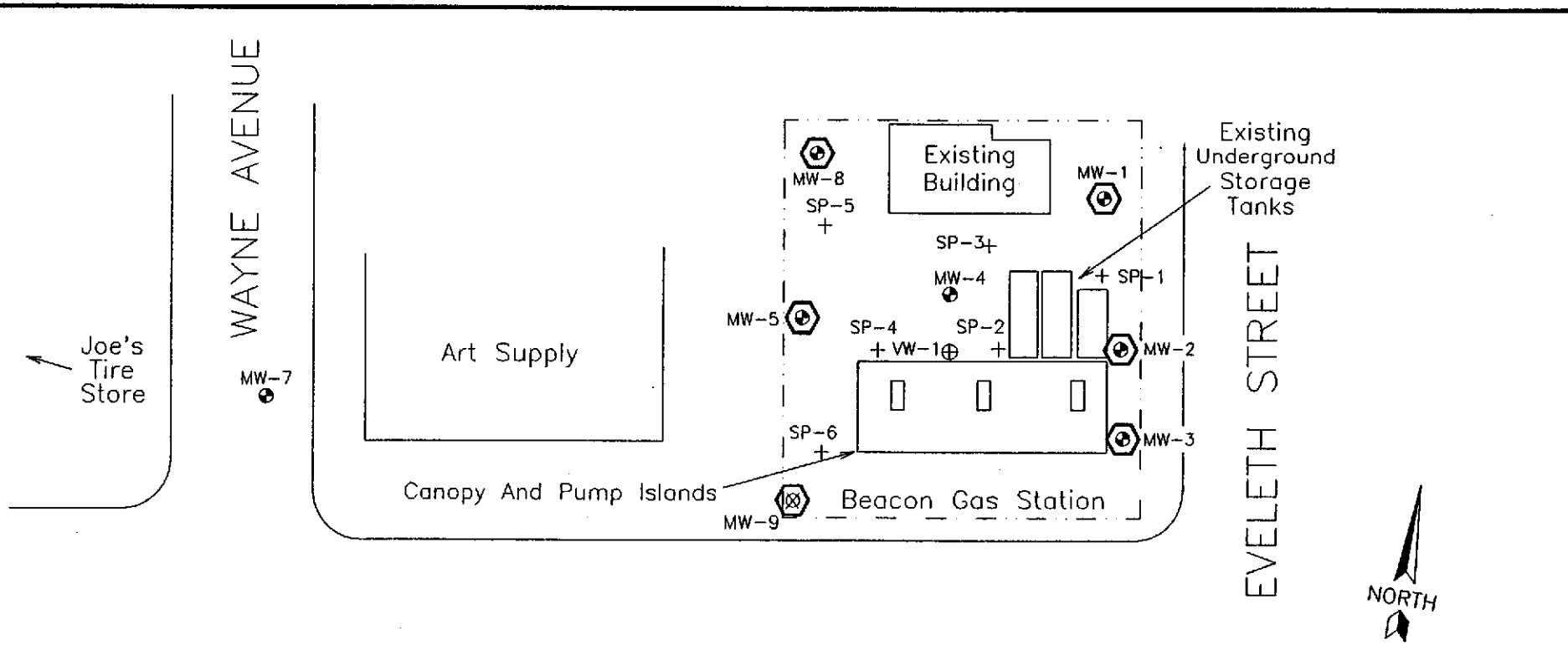
NORTH

QUADRANGLE LOCATION

0 2,000

Approximate Scale
(in feet)

FIGURE 1		
SITE LOCATION MAP BEACON STATION #720 1088 MARINA BOULEVARD SAN LEANDRO, CALIFORNIA		
Project No. 19030	Drawn DA	Acton • Mickelson • van Dam, Inc. Consulting Scientists, Engineers, and Geologists
File No. FIG1	Prepared SAL	4511 Golden Foothill Parkway, Suite 1 El Dorado Hills, California 95762 (916) 939-7550
Revision	Reviewed	



LEGEND

MW-6	Monitoring Well Location And Number
MW-9	Proposed Monitoring Well/ Vapor Extraction Well Location And Number
VW-1	Proposed Vapor Extraction Well Location And Number
MW-8	Monitoring Well/Vapor Extraction Well
SP-5	Proposed Sparge Well Location And Number

Note: Base Map Adapted From Environmental Geotechnical Consultants, Inc. Dated 12/92. All Dimensions And Locations Not Verified By AMV.

FIGURE 2
SITE MAP

BEACON STATION #720
1088 MARINA BOULEVARD
SAN LEANDRO, CALIFORNIA

Project No. 19030	Drawn LMC
File No. FIG8	Prepared SAL
Revision	Reviewed

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El Dorado Hills, California 95762
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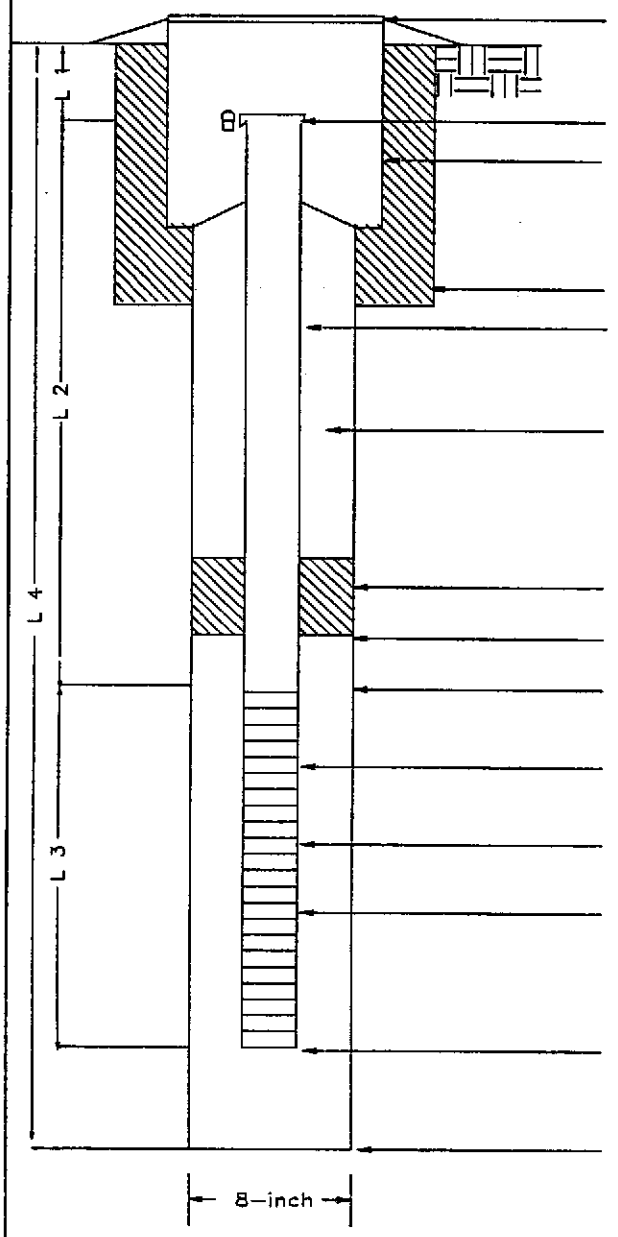
PROPOSED
MONITORING WELL
CONSTRUCTION DETAILS

PROJECT: BEACON STATION #720
1088 MARINA BOULEVARD
SAN LEANDRO, CA
19030.02

MONITORING WELL NO.: MW-9



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	12-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC, flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	2 feet
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 20 feet
Depth to Bottom of Monitoring Well	25 feet
Depth to the Bottom of Filter Sand	25 feet

L1 = 0.25
L2 = 4.75
L3 = 20.00
L4 = 25.00

Approximate Depth to Ground Water 15 feet

FIGURE 3

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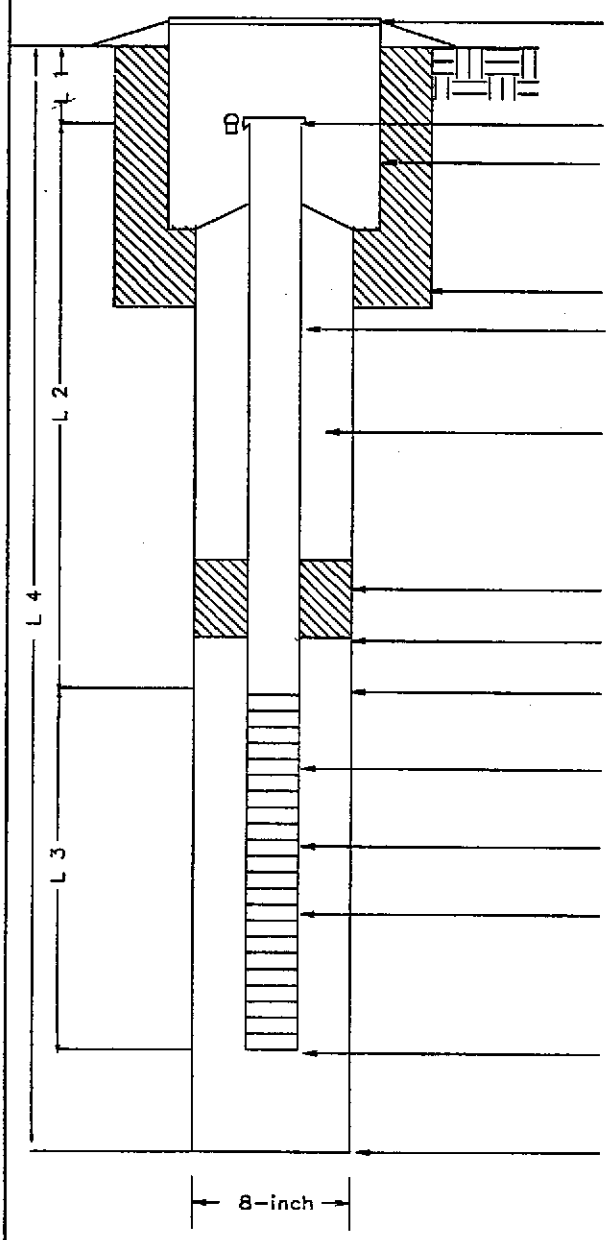
PROPOSED
VAPOR EXTRACTION WELL
CONSTRUCTION DETAILS

PROJECT: BEACON STATION #720
1088 MARINA BOULEVARD
SAN LEANDRO, CA
19030.02

VAPOR EXTRACTION WELL NO.: VW-1



Protective Casing	
Locking Water Tight Cap	
Flush Grade Well Construction	
Diameter and Mat'l	12-inch steel
Total length	12 inches
Length Above Ground	1/4 inch
Thickness and Type of Seal	2 feet, concrete
Diameter, Mat'l and Joint Type of Riser Pipe	2 inch, SCH 40 PVC, flush thread
Type of Backfill Around Riser	cement/ 5% bentonite grout
Thickness and Type of Seal	2 feet bentonite chips
Distance of Filter Sand Above Top of Screen	1 foot
Type of Filter Around Screen	#3 lonestar
Monitoring Well Mat'l	SCH 40 PVC
Screen Gauge/Slot Size	0.020 inch
Diameter and Length of Screen	2 inch, 10 feet
Depth to Bottom of Monitoring Well	14 feet
Depth to the Bottom of Filter Sand	14 feet

L1 = 0.25
L2 = 3.75
L3 = 10.00
L4 = 14.00

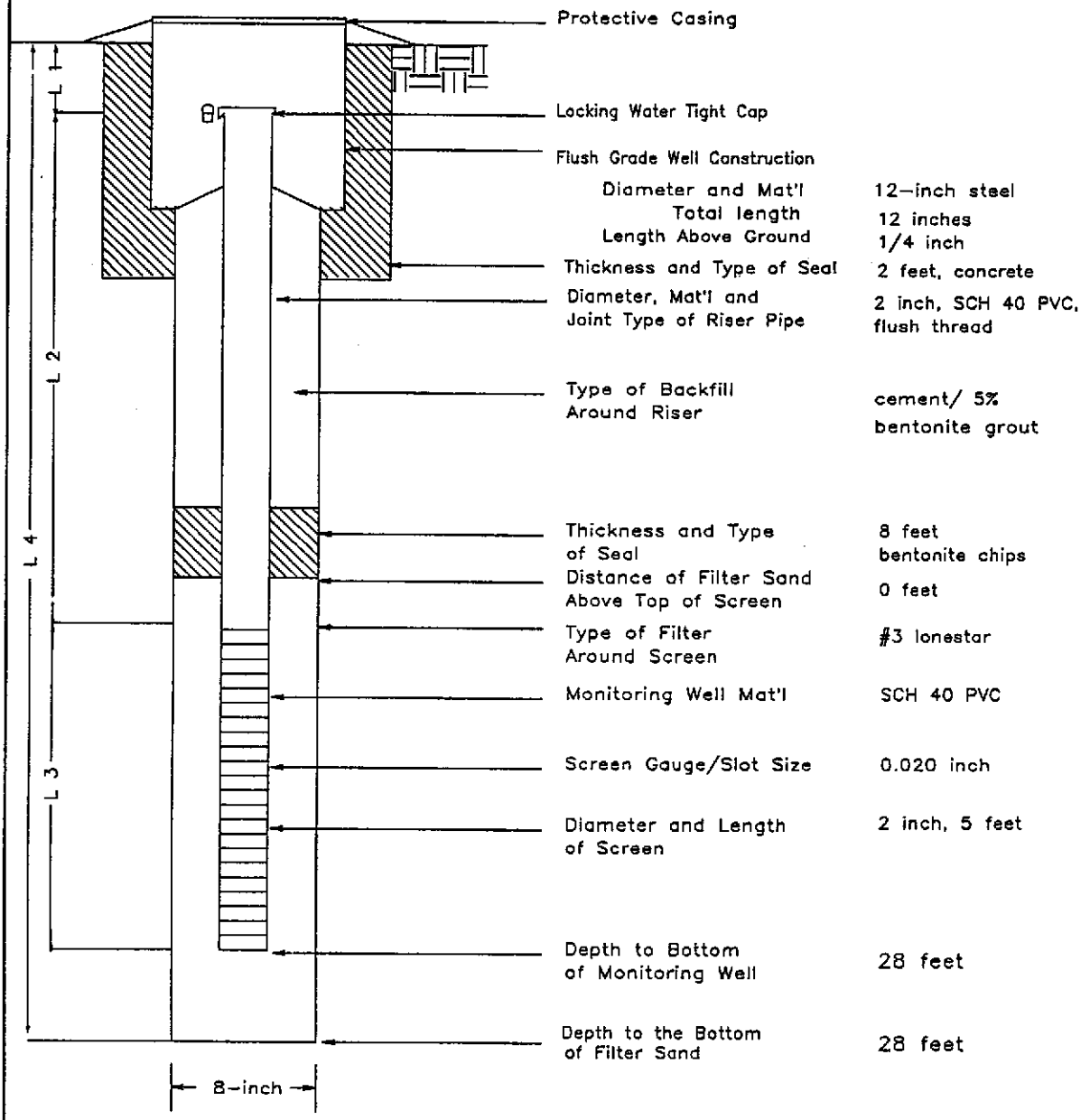
Approximate Depth to Ground Water 15 feet

FIGURE 4

PROPOSED
AIR SPARGING WELL
CONSTRUCTION DETAILS

PROJECT: BEACON STATION #720
1088 MARINA BOULEVARD
SAN LEANDRO, CA
19030.02

WELL NO.: SP-1 through SP-6



L1 = 0.25
L2 = 22.75
L3 = 5.00
L4 = 28.00

Approximate Depth to Ground Water 15 feet

FIGURE 5

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ENCLOSURE A

SAMPLING TECHNIQUES

ENCLOSURE A

SAMPLING TECHNIQUES

Proper sampling techniques must be followed to assure that samples represent actual field conditions and that samples are labeled, preserved, and transported properly to retain sample integrity. This exhibit describes procedures to be followed by Acton • Mickelson • van Dam, Inc. (AMV), during collection of samples of subsurface soil and ground water. Sampling guidance documents from the American Society of Testing and Materials (ASTM), U.S. Environmental Protection Agency (EPA), and California Environmental Protection Agency (Cal-EPA) will be followed for all sampling procedures. Actual sampling procedures to be employed will be based on field conditions and may differ from those described here.

1.0 EXPLORATION BORING/SOIL SAMPLING PROCEDURES

Soil borings and soil sampling will be performed under the direction of an AMV geologist. The soil borings will be advanced using a truck-mounted, hollow-stem auger drill rig.

Soil samples will be collected at 5-foot vertical intervals. Soil sampling will be done in accordance with ASTM 1586-84. Using this procedure, three 2-inch-diameter, 6-inch-length, brass tubes are placed in a California-type split-barrel sampler. The sampler is driven into the soil by a 140-pound weight falling 30 inches. After an initial set of 6 inches, the number of blows required to drive the sampler an additional 12 inches is known as penetration resistance, or the "N" value. The "N" value is used as an empirical measure of the relative density of cohensionless soils and the consistency of cohesive soils.

Upon recovery of the split-barrel sampler, the brass tubes containing the soil will be removed. One of the three brass tubes will be sealed at the ends with Teflon tape and plastic end caps. The sample will be labeled with an identification number, time, date, location, and requested laboratory analysis. The sample will then be placed in a plastic bag and stored at approximately 4° Celsius (C) in an ice chest for transport to the laboratory. Sample custody procedures outlined in Section 5.0 of this exhibit will be followed. This will be performed for each sample collection.

Soil in one of the brass tubes will be extracted upon recovery, placed in a plastic bag, and sealed for later screening for organic vapors using a photoionization detector (PID) or a flame ionization detector (FID). The remaining portion of the soil sample will be examined and a complete log of soil conditions will be recorded on a soil boring log (Enclosure A) using the Unified Soil Classification System (Enclosure B). The soil will be examined for grain size, color, and moisture content.

The split-barrel sampler will be cleaned to prevent cross-contamination for each sampling interval using procedures described in Section 3.0.

Soil borings will normally be advanced with 8- or 10-inch-diameter, hollow-stem augers. The soil generated from the soil borings will be wrapped in plastic sheeting and stored on site until characterized for disposal.

2.0 WATER LEVEL AND LIQUID-PHASE HYDROCARBON (LPH) THICKNESS MEASUREMENTS AND GROUND WATER SAMPLING

2.1 Water Level and LPH Thickness Measurements

The static water level and LPH thickness in each well will be measured prior to purging or sampling.

The depth to water/product will be measured using an electronic interface probe. The wire of the interface probe is marked at 0.01 foot intervals. One tone is emitted from the interface probe if LPH is encountered; another tone for water. The wire of the interface probe will be lowered slowly until LPH or water is encountered. At this point, the mark on the interface wire opposite the permanent reference point on the top of the well casing will be read to the nearest 0.01 foot and recorded. If the first encountered substance is LPH, the probe will be lowered until the tone corresponding to water is emitted. This depth will also be recorded. The difference between the two depths corresponds to the LPH thickness. The interface probe will be rinsed in a cleaning solution and deionized water between measurements in different wells.

A permanent reference point will be marked on the well casings. The permanent reference point on the well casings will be surveyed to a common reference point. All well casing riser elevations will be known to within 0.01 foot.

Prior to well development, a disposable bailer will be used to collect a sample of LPH, if present in a well, for subjective analysis. The sample will be collected by gently lowering the bailer approximately one-half the bailer length past the air/LPH interface. The appearance (color, opacity, "freshness") will be described and noted on field notes.

If LPH was encountered in the well, it was removed by bailing or pumping and the approximate volume of LPH removed was recorded. LPH thickness was then remeasured. If LPH was still present, the thickness was recorded and the well was not sampled. If LPH was not present, the well was developed, purged, and sampled as described below.

2.2 Well Evacuation

After the static water level in a well is determined and prior to collection of a ground water sample, stagnant water will be removed from the well casing and the surrounding gravel pack by bailing, pumping, or with a vacuum truck. At least three casing volumes of water will be removed from each well from which a sample was collected. The volume of water in the casing will be determined from the known elevation of the water surface, the well bottom elevation (as measured when the well is installed), and the well diameter.

If the well is bailed or pumped during purging, samples will be collected and field analyzed for pH, temperature, and specific conductance. The well will be considered stabilized when repeated readings of the following parameters are within the ranges indicated as follows:

- Specific conductance ±10 percent of the reading range
- pH ±0.1 pH unit
- Temperature ±0.5° C.

After stabilization, and after at least three well volumes are evacuated, a sample will be collected for analysis. The field container used for well stabilization measurements, and the pH, temperature, and conductivity probes will be rinsed between wells with deionized water.

All purge water will be containerized and properly handled and documented for disposal. If the containers are stored on site, a label specifying the date of purging, source, and the known or suspected nature of the contents will be affixed to each container.

2.3 Sample Collection, Preservation, and Handling

After purging, a new polyethylene disposable bailer will be used to collect samples for analysis. The bailer is attached to a new disposable rope and lowered slowly into the water to avoid agitation of the collected sample. Containers for volatile organics analyses will be filled completely so that no airspace remains in the vial after sealing.

All sample containers will be prewashed and prepared at the analyzing laboratory in accordance with quality assurance/quality control protocols of the laboratory. Only sample containers appropriate for the intended analyses will be used.

3.0 DECONTAMINATION AND DISPOSAL PROCEDURES

3.1 Equipment Decontamination

All equipment that comes in contact with potentially contaminated soil, drilling fluid, air, or water will be decontaminated before each use. Decontamination will consist of steam-cleaning, a high-pressure, hot-water rinse, or trisodium phosphate (TSP) wash and freshwater rinse, as appropriate.

Drilling and sampling equipment will be decontaminated as follows:

1. Drill rig augers, drill rods, and drill bits will be steam-cleaned prior to use and between borings. Visible soil, grease, and other impurities will be removed.

2. Soil sampling equipment will be steam-cleaned prior to use and between each boring. Prior to individual sample collection, any sampling device will also be cleaned in a TSP solution and rinsed twice in clean water. Any visible soil residue will be removed.

3. It is anticipated that disposable equipment will be used to collect water samples. If disposable equipment is not used, water sampling equipment will be decontaminated using methods described in Item 2 above for soil sampling equipment.

4. Water sampling containers will be cleaned and prepared by the respective analytical laboratories.

5. Stainless steel or brass soil sampling tubes will be steam-cleaned or washed in TSP solution and rinsed with clean water.

6. Field monitoring equipment (pH, conductivity, or temperature probes) will be rinsed with clean water prior to use and between samples.

4.0 FIELD MEASUREMENTS

Field data will be collected during various sampling and monitoring activities; this section describes routine procedures to be followed by personnel performing field measurements. The methods presented below are intended to ensure that field measurements are consistent and reproducible when performed by various individuals.

4.1 Buried Utility Locations

Prior to commencement of work on site, AMV will contact appropriate utility companies to have underground utility lines located. All work associated with the borings will be preceded by hand augering to a minimum depth of 5 feet below grade to avoid contact with underground utilities.

4.2 Lithologic Logging

A log of soil conditions encountered during the drilling and sample collection (Enclosure A) will be maintained using the Unified Soil Classification System (Enclosure B) by an AMV geologist. All boring logs will be reviewed by a California registered geologist.

The collected soil samples will be examined and the following information recorded: boring location, sample interval and depth, blow counts, color, soil type, moisture content (qualitative), and depth at which ground water (if present) is first encountered. Also recorded on the soil boring logs will be the field screening results derived from the use of a portable PID or FID.

4.3 Disposal Procedures

Soils and fluids that are produced and/or used during the installation and sampling of borings, and that are known or suspected to contain potentially hazardous materials, will be contained during the above operations. These substances will be retained on site until chemical testing has been completed to determine the proper means of disposal. Handling and disposal of substances known or suspected to contain potentially hazardous materials will comply with the applicable regulations of Cal-EPA, the California Department of Water Resources, and any other applicable regulations. Soils and fluids produced and/or used during the above-described operations that appear to contain potentially hazardous materials will be disposed of appropriately.

Residual substances generated during cleaning procedures that are known or suspected to pose a threat to human health or the environment will be placed in appropriate containers until chemical testing has been completed to determine the proper means for their disposal.

4.4 Conductivity, Temperature, and pH

Specific conductance, water temperature, and pH measurements will be made when a water sample is collected. Regardless of the sample collection method, a representative water sample will be placed in a transfer bottle used solely for field parameter determinations. A conventional pH meter with a combination electrode or equivalent will be used for field-specific conductance measurements. Temperature measurements will be performed using standard thermometers or equivalent temperature meters. Combination instruments capable of measuring two or all three of the parameters may also be used.

All instruments will be calibrated in accordance with manufacturer methods. The values for conductivity standards and pH buffers used in calibration will be recorded daily in a field notebook. All probes will be thoroughly cleaned and rinsed with fresh water prior to any measurements, in accordance with Section 3.1.

5.0 SAMPLE CUSTODY

This section describes standard operating procedures for sample custody and custody documentation. Sample custody procedures will be followed through sample collection, transfer, analysis, and ultimate disposal. The purpose of these procedures is to assure that (1) the integrity of samples is maintained during their collection, transportation, and storage prior to analysis and (2) post-analysis sample material is properly disposed of. Sample custody is divided into field procedures and laboratory procedures, as described below.

5.1 Field Custody Procedures

Sample quantities, types, and locations will be determined before the actual fieldwork commences. As few people as possible will handle samples. The field sampler is personally responsible for the care and custody of the collected samples until they are properly transferred.

5.1.1 Field Documentation

Each sample will be labeled and sealed properly immediately after collection. Sample identification documents will be carefully prepared so that identification and chain-of-custody records can be maintained and sample disposition can be controlled. Forms will be filled out with waterproof ink. The following sample identification documents will be utilized.

- Sample labels
- Field notebook
- Chain-of-custody forms

5.1.2 Sample Labels

Sample labels provide identification of samples. Preprinted sample labels will be provided. Where necessary, the label will be protected from water and solvents with clean label-protection tape. Each label will contain the following information:

- Name of collector
- Date and time of collection
- Place of collection
- AMV project number

- Sample number
- Preservative (if any)

5.1.3 Field Notebook

Information pertinent to a field survey, measurements, and/or sampling must be recorded in a bound notebook. Entries in the notebook should include the following:

- Name and title of author, date and time of entry, and physical/environmental conditions during field activity.
- Location of sampling or measurement activity.
- Name(s) and title(s) of field crew.
- Type of sampled or measured media (e.g., soil, ground water, air, etc.)
- Sample collection or measurement method(s).
- Number and volume of sample(s) taken.
- Description of sampling point(s).
- Description of measuring reference points.
- Date and time of collection or measurement.
- Sample identification number(s).
- Sample preservative (if any).
- Sample distribution (e.g., laboratory).
- Field observations/comments.
- Field measurements data (pH, etc.).

5.1.4 Chain-of-Custody Record

A chain-of-custody record will be filled out for and will accompany every sample and every shipment of samples to the analytical laboratories in order to establish the documentation necessary to trace sample possession from the time of collection. The record will contain the following information:

- Sample or station number or sample I.D.
- Signature of collector, sampler, or recorder.
- Date and time of collection.
- Place of collection.
- Sample type.
- Signatures of persons involved in the chain of possession.
- Inclusive dates of possession.

The laboratory portion of the form should be completed by laboratory personnel and will contain the following information:

- Name of person receiving the sample.
- Laboratory sample number.
- Date and time of sample receipt.
- Analyses requested.
- Sample condition and temperature.

5.1.5 Sample Transfer and Shipment

Samples will always be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving the samples will sign, date, and note the time on the chain-of-custody record. Samples will be packaged properly for shipment and dispatched to the appropriate laboratory for analysis. The chain-of-custody record will accompany each shipment. The method of shipment, courier name(s), and other pertinent information will be entered in the chain-of-custody record.

5.2 Laboratory Custody Procedures

A designated sample custodian will accept custody of the shipped samples and verify that the information on the sample label matches that on the chain-of-custody record. Information regarding method of delivery and sample conditions will also be checked on the chain-of-custody record. The custodian will then enter the appropriate data into the laboratory sample tracking system. The laboratory custodian may use the sample number on the sample label or may assign a unique laboratory number to each sample. The custodian will then transfer the sample(s) to the proper analyst(s) or store the sample(s) in the appropriate secure area.

Laboratory personnel are responsible for the care and custody of samples from the time they are received until the sample is exhausted. Once at the laboratory, the samples are handled in accordance with U.S. Environmental Protection Agency SW-846, Test Methods for Evaluating Solid Waste Physical/Chemical Methods, Third Edition, for the intended analyses. All data sheets, chromatographs, and laboratory records will be filed as part of the permanent documentation.

5.3 Corrections to Documentation

Original data recorded in field notebooks, chain-of-custody records, and other forms should be written in ink. These documents should not be altered, destroyed, or discarded, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made or found on a document, the individual making the corrections will do so by crossing a single line through the error, entering the correct information, and initialing and dating the change. The erroneous information will be obliterated. Any subsequent error(s) discovered on a document will be corrected. All corrections will be initialed and dated.

5.4 Sample Storage and Disposal

Samples and extracts should be retained by the analytical laboratory for 60 days after a written report is issued by the laboratory. Unless notified by the program manager, excess or unused samples should be disposed of by the laboratory in an appropriate manner consistent with applicable government regulations.