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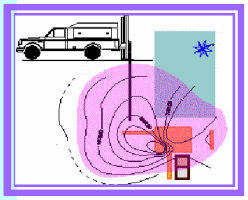

April 25, 2008

Steven Plunkett
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Subject: **Addendum to the Remedial Action Plan (RAP) using High Vacuum Dual Phase Extraction (HVDPE) and Workplan for Remediation Well Installation Related to Past Gasoline Discharges to Soil & Groundwater associated with the Former Underground Storage Tank Site located at the Former Bill Chun Service Station @ 2301 Santa Clara Avenue, Alameda, CA 94501**

Mr. Plunkett;

This technical report supercedes the previously approved Remedial Action Plan (RAP) which had proposed a fixed system whereas this addendum proposes to utilize Calclean's Mobile system which employs High Vacuum Dual Phase Extraction (HVDPE). Although the December 2007 Groundwater Monitoring Report demonstrates that the dissolve plume of gasoline constituents is exhibiting natural attenuation, the concentrations below the Flower Shop could pose a human health risk. Since the dissolved gasoline related plume has diminished significantly, and is now more localized at lower concentrations than what existed when the initial RAP was designed, the CalClean mobile system can now provide a more focused approach. As a result, this technical report addresses how the mobile system will be used to extract contaminants identified in groundwater that are interpolated to be below the Flower Shop as well as remove the benzene identified in soil located in the vicinity of the northeast end of the Towata Property.

It is proposed that HVDPE and air sparging of existing and new wells will be provided by CalClean. In addition, this mobile HVDPE unit will provide a measured application without the need for making a large initial capital investment which is typical for more conventional technology.

Sincerely,

Franklin J. Goldman

REGISTERED GEOLOGIST
FRANKLIN J. GOLDMAN
CERTIFIED HYDROGEOLOGIST
NO. 466
STATE OF CALIFORNIA

Franklin J. Goldman

Certified Hydrogeologist No. 466

Addendum to the RAP

PRIOR TO INITIATING HVDPE OPERATIONS

A permit will be obtained from the EBMUD to discharge treated groundwater to the sewer system. Treated groundwater will be sampled, analyzed by a State Certified laboratory, and discharged according to limitations set by the permitting agency.

DESCRIPTION OF PROPOSED HVDPE OPERATION

Site remediation HVDPE system activities will employ a truck-mounted mobile extraction and treatment unit that will be operated, 24-hours per day, over numerous multi-day extraction events. Fluid flow rates, vacuum pressures, vapor Gasoline Range Organics (GROs), and water samples will be taken for analysis at scheduled intervals at various points throughout the process. Sampling activities will be more frequent at the beginning of the test period and will gradually be decreased over time. When subsequent GRO concentrations reach a steady state of less than 10% of the initial starting concentrations, the extraction test will end and the treatment unit de-mobilized. The system will be used to extract volatile hydrocarbon compounds (VOCs) from the vadose zone, above the sustained groundwater level, as well as dissolved hydrocarbons entrained during groundwater extraction performed to lower the water level to expose the smear zone. CalClean, Inc.'s (CalClean) mobile HVDPE unit is comprised of a truck mounted high vacuum liquid ring blower connected to a propane fired thermal oxidizer.

The HVDPE system is reported to be capable of generating an air flow rate of 450-cubic feet per minute (CFM) and a maximum vacuum of 29 inches of mercury. The system is also capable of extracting from a maximum of six (6) wells at one time and can treat up to 100 pounds of petroleum hydrocarbon containing vapors per hour. The total pounds of hydrocarbons removed from soil and groundwater will be monitored over a period of time and reported after the process is complete. The system is already permitted for use at various locations throughout the Bay Area Air Quality Management District (BAAQMD).

RATIONAL FOR VAPOR EXTRACTION WELL LOCATIONS

The CalClean system can connect up to six (6) extraction wells and two (2) air sparge wells at one time. The CalClean system will connect hoses to the well heads of existing extraction wells EW-13, 14, 15, and 17 as well as monitor wells MW-11 (4 inch diameter PVC casing), BF and BG. Also, a new four (4) inch diameter dual-phase extraction well DP-18 will be installed in the vicinity of borehole BE which identified high concentrations of benzene in soil between approximately 7 and 17 feet bgs. In addition, air sparge wells AS-1 and AS-2 will be installed on site and on the Towata property in order to better mobilize contaminants from below the plumes identified.

The system will be connected to one or more of the eight (8) HVDPE wells (EW-13, 14, 15 and 17, MW-11, BF, BG, and DP-18 [proposed]) (See Figure 1 for map of proposed vapor remediation well locations). The two air sparge wells will be brought on-line after some initial data is obtained from operation of six extraction wells and evaluated for a baseline performance. The 30-foot diameter spacing (i.e. a 15-foot vapor extraction radius of influence), shown on Figure 2, was chosen based upon field pilot testing as reported in the Groundwater and Vapor Pilot Testing Report approved by ACDEH. The vapor extraction well spacing, as shown on figure 1, was chosen to provide lateral coverage of benzene in soil at hot spots that could pose a threat to human health. Since we do not know if all of the wells will be effective, prior to start-up, we will need more than one option to rely upon. Other existing wells may be used for vapor extraction and air sparging.

RATIONAL FOR GROUNDWATER EXTRACTION WELL LOCATIONS

The CalClean system can connect up to six (6) groundwater extraction wells at one time. The CalClean system will connect hoses to the well heads of existing extraction wells EW-13, 14, 15, and 17, monitor wells MW-11 (4 inch diameter PVC casing), BF and BG as well as proposed dual-phase extraction well DP-18 (See Figure 2 for map of proposed groundwater remediation well locations). The direction of the capture zones is based upon the latest groundwater gradient flow estimated from March 08 water level measurements. This gradient flow direction is generally consistent with those identified during past groundwater monitoring events. The groundwater extraction well locations and spacing, as shown on figure 2, was chosen to provide lateral coverage of benzene in water that was identified during the March 08 groundwater monitoring event that could pose a threat to human health. Since we do not know if all of the wells will be effective, prior to start-up, we will need more than one option to rely upon. Other existing wells may be used for groundwater extraction.

COLLECTION AND EVALUATION OF FIELD DATA DURING THE PROPOSED HVDPE OPERATION

Periodically, throughout each extraction event, physical parameters including vacuum, temperature, vapor flow rate, and the volume of groundwater extracted will be recorded on field logs. Hydrocarbon vapor inlet gas concentrations will be measured in parts per million by volume [ppmv] using a Horiba MEXA-324JU field analyzer which has been calibrated for hexane. In addition, depth to groundwater will be measured with an electronic water level sounder to the nearest 100th of a vertical foot to qualitatively gauge the relative drawdown, periodically, in monitoring wells.

The responsibilities of the parties will be as follows:

1. **CalClean personnel will be responsible for collecting the raw field data and transmitting the data to Qualtech Engineering (Qualtech), Inc., via electronic format using forms (See Appendix A for Field Data Forms for Extracted Vapor and Groundwater and Air Sparging Field Data) to be supplied prior to start-up. The data collected and recorded on the data forms for the air sparge well will be the air pressure (around 20 psi)**

and volume flow rate (around 2-5 scfm) being pumped into the well. The air flow rate from the sparging blower will be fixed as long as the GRO concentrations do not drop off. The back pressure will be measured on each extraction well head in operation as long as the GRO concentrations do not decrease significantly. The flow rate and pressure will be recorded, along with the time, for each extraction well in operation. The flow rate and pressure will not likely fluctuate significantly if short circuiting is not occurring. If short circuiting does occur between the air sparge well and a specific vapor extraction well, as demonstrated by decreasing GRO concentration, then the one well will be shut off and connection with another well, or wells, will be employed.

2. **CalClean will provide rubberized traffic ramps that bridge over the extraction hoses so that vehicle can drive over them. No trenching will be necessary.**

3. **Qualtech will analyze the data periodically (i.e., daily/weekly) to determine if effective clean up is being achieved. Once Qualtech determines that the system has reached a steady-state with minimal contaminant recovery rates, Qualtech will inform CalClean and Goldman & Associates that the system should be shut down. Depending on the concentrations of contaminants in the extracted water and soil gas, the initial operational run will be approximately 30 days. Thereafter, the DPE equipment will be de-mobilized. At a minimum of 7-10 days prior to the second extraction period, groundwater samples will be taken to compare against prior water samples. Approximately 30 days after the initial extraction period, two (2), five-day rebound tests, running at full operational capacity, will be implemented, to validate the efficacy of the system. A status/update report shall be provided after each operational run providing an approximation of contaminant mass removed from the area through the DPE system. After three rounds of remediation, or earlier as needed, the remediation system will be evaluated for closure or continued remediation. Upon shutdown of the system, Qualtech will publish the contaminant removal totals for each extraction period to CalClean and Goldman & Associates in a post-extraction technical report.**

4. **Goldman & Associates (G&A) will conduct periodic field inspections of the site during the test period including verification of the Radius of Influence. G&A will assist Qualtech as necessary in interpreting the data reported by CalClean and will be responsible for distributing each post-extraction report to the Responsible Party and Regional Board staff. G&A will also be responsible for coordinating and scheduling subsequent extraction events with CalClean, Qualtech, and Regional board staff.**

SOIL VAPOR TEST DATA PLAN

Soil vapor will be extracted from each of the six (6) wells on site. The required system data to be collected are:

1) vapor flow rates from each well,

2) vacuum pressure at each wellhead, and

3) GRO concentrations from each well.

Flow rates will be multiplied by GRO readings to calculate mass rates of total contaminant removal. This data will be plotted to denote the characteristic extraction curve for each well. When all wells are ready for shut-off, the entire mobile extraction system will be shut-off and de-mobilized.

GROUNDWATER TEST DATA PLAN

Groundwater will be extracted in order to expose the vadose zone and increase the effectiveness of the vapor extraction. The primary groundwater data to be monitored are:

1) GRO in individual well water,

2) GRO in combined well water to suction tank,

3) well water flow rate, and

4) water levels in each extraction well. Water levels will be monitored to ensure effective exposure of the vadose zone. Groundwater extraction rates and GRO data will be monitored to assess contaminant removal rates through this stream.

Prior to introducing vapor extraction, the groundwater level will be lowered by dewatering as much as possible. Initially, 1-inch or 1.25-inch diameter PVC pipe stinger hoses will be lowered to the level of the groundwater in each of the HVDPE wells. As groundwater is extracted, the PVC pipe stinger hoses will be lowered gradually until they reach the full depth of the well. These groundwater extraction procedures will induce a cone of depression, at each well, to form corresponding zones of effective drawdown and capture that will expose the smear zone of the former capillary fringe and adjacent saturated zone where petroleum hydrocarbons are most concentrated in the soil and are adsorbed to soil particles. The cone of depression exerted in the vicinity of each of the wells will aid in the performance of high vacuum vapor extraction and recovery of petroleum hydrocarbon vapors from the newly exposed soil.

During the initial operation of the HVDPE, within the first measurement period, "magnehelics," will be placed at several observation wells to accurately determine the vacuum radius of influence for each extraction well. Periodically, the depth to groundwater will be measured in several observation wells to determine groundwater drawdown and the zone of capture. If necessary, in order to resolve any groundwater extraction anomalies, drawdown versus time data

may be collected, plotted on semi-log and/or log paper, graphed, curve-matched, and evaluated for aquifer characteristics and/or well efficiency.

Extracted groundwater will be separated out and temporarily stored onsite. The groundwater will be initially treated by the use of air sparging and heating while under high vacuum when collected in the inlet tank. Upon approval of the City sewer discharge permit, the extracted groundwater will be treated using a granular activated carbon water treatment system. The water treatment system will utilize a minimum of at least two 500-lb. carbon canisters connected in series to treat the water prior to discharge onsite. A water meter will be placed in the outlet piping to record the amount the water discharged. A water sampling port will be placed in the outlet piping for periodic collection of verification water samples in accordance with the discharge limitations permit. Based upon the existing soil types and the measurements of the depth to water, it is estimated that groundwater could be extracted at a rate of up to approximately 3 to 5 gallons per minute.

Soil vapor samples will also be collected from the sample ports at each HVDPE well within 15 minutes after the initial start up of the system. Combined vapor samples will also be collected on the first day of extraction and periodically (minimum monthly) thereafter during the event. Final vapor samples will be collected from each HVDPE well just prior to the end of each extraction event. Monthly vapor samples will be analyzed for GROs (EPA Method 8015), and BTEX/MTBE (EPA Method 8021). Quarterly combined well and individual extraction well vapor samples will be analyzed for GRO (EPA Method 8015) and for BTEX and fuel oxygenates (EPA Method 8260).

Reporting on Proposed HVDPE Operations

Qualtech will prepare quarterly progress reports documenting the results of the HVDPE activities. Initially, monthly reports may be submitted depending upon the progress of cleanup. The report will include a description of the field methodologies and the extraction results as well as conclusions regarding the effectiveness of the operation to date and recommendations concerning the steps and activities necessary to attain corrective action goals. Qualtech will schedule and coordinate field activities and will re-evaluate HVDPE extraction activities at periodic intervals.

Workplan for Remediation Well Installation

Procedures for Soil Sampling Prior to HVDPE Well Installation

The one (1) extraction well (DP-18) location will be marked at the site in white paint prior to the commencement of drilling excavation activities for Underground Service Alert. Each soil boring location will be hand augered to a depth of at least five (5) feet bgs prior to excavation to avoid causing damage to underground piping and utility lines.

All borehole logging will be performed by a State of California licensed field geologist who will keep a detailed hydrostratigraphic log of each borehole, noting lithologic changes, hydrogeological characteristics, sample locations, and well construction. Soil sampling will be performed, where appropriate, in order of identify significant changes in soil hydrostratigraphy and to provide a sufficient representation of the distribution of contaminants in the subsurface. Soil samples will be collected from a general minimum average distribution of (5) foot vertical intervals as well as from other depths as determined according to the feedback provided by the soil stratigraphy and hydrogeologic characteristics encountered.

Soil samples will be collected with a two (2) inch inner diameter, three (3) foot long, split spoon sampler, depending upon the soil stratigraphy and contaminants encountered. The soil samples will be obtained by the compressive force of a 140 lb hammer dropped from a height of 18 inches. The soil samples will be extruded into six (6)-inch long steel or brass sample liners. Soil samples will be chosen for lab analyses based upon obvious olfactory and visual evidence of contamination and or by photoionization detector (PID) screening and/or at significant changes in hydrostratigraphic horizons.

Each soil sample will be collected and covered at each end of the metal cylinder with Teflon sheets and sealed with plastic end caps. The soil samples will be labeled with a non-toxic ink field marker as to the depth and location the sample was collected, the sample number, and the project name and inserted into a plastic Zip-Lock bag and then placed into an ice chest for transport back to the laboratory. The chain-of-custody will be similarly designated and included with the date and time the sample was collected as well as the depth interval. Soil samples will be analyzed for Gasoline Range Organics (GRO) and BTEX, five (5) oxygenates and two (2) lead scavengers by EPA Method 8260b.

The extraction well will be excavated to a depth of 17 feet bgs with an 11 inch diameter width hollow-stem auger by a C-57 licensed drilling contractor. The two air sparge wells AS-1 and AS-2 will be drilled to depths of 25 and 27 feet bgs, respectively, with a six (6) inch diameter hollow-stem auger to mobilize contaminants from below the known depths of the plumes.

The sampler will be decontaminated before and after each use by rinsing with an Alconox solution wash and fresh tap water rinse. All rinseate water, purge water, and soil waste will be stored in 55 gallon DOT approved drums. The drums will be stored onsite until authorization for transport to legal point of disposal is made.

RATIONALE FOR PROPOSED WELL CONSTRUCTION

The proposed four inch diameter groundwater extraction well (DP-18) will be screened from 5 to 17 feet bgs based upon relatively high concentrations of benzene identified in soil between 7 and 17 feet bgs during the installation of soil

borings BA and BE drilled in May of 2005. Air sparge well AS-1 will be screened between 23 and 25 feet so that it will be injecting air into the sand identified below the contamination identified in soil borings BA and BE drilled in May of 2005.

Air sparge well AS-2 will be screened between 25 and 27 feet so that it will be injecting air into the sand identified below the contamination (i.e. relatively high concentrations of benzene identified in soil between 7 and 17 feet) identified during the installation of groundwater extraction wells EW-12 and EW-15 drilled in October 2002 and January 2004, respectively (See Figure 1 for map of showing high concentrations of hydrocarbons in soil) & (See Figure 3 for proposed HVDPE well construction details).

PROCEDURES FOR WELL INSTALLATION

The groundwater extraction well will be excavated to a depth of 17 feet bgs with an 11 inch diameter width hollow-stem auger by a C-57 licensed drilling contractor. The soil boring will receive a four (4) inch diameter threaded PVC blank casing and a four (4) inch diameter threaded PVC casing with a 0.01 inch slotted screen from 5 to 17 feet bgs. The No. 3 sand will be slowly poured down the annular space and tagged with a down-hole tape until sufficiently settled to within one foot above the top of the screen. The augers will be gradually pulled up and the top of the sand measured for depth to make sure there is no bridging. A bentonite seal will then be place on top of the sand, from 3 to 4 feet. The bentonite pellets will be hydrated gradually in place, in the annular space, as they are dropped to the top of the sand and tagged with a measuring tape to secure the proposed depth and thickness. A County approved grout will be tremmied, from the bottom up. A Type II cement county approved cement bentonite grout will then be tremmied from the bottom up, from 2 to 3 feet bgs, to within approximately 1 foot from the top of the surface cover. The grout will be allowed to cure for 48 hours before applying a continuous concrete pour to be placed on top of the grout to the surface where it will be finished with a flush concrete apron finish around a well box and locking well cap (See Figure 3 for proposed HVDPE well construction detail). Note: The air sparge well will be excavated with a 6 inch diameter width hollow-stem auger and will receive a (1) inch diameter threaded PVC blank and screened casing with a 0.02 inch slotted screen. The air sparge wells will be constructed in the same general manner as that performed for the groundwater extraction well with the following exceptions: AS-1 will be screened between 23 and 25 feet bgs, will have one foot of sand above the top of the screen and will have a two foot thick bentonite seal on top of the sand. AS-2 will be screened between 25 and 27 feet bgs, will have one foot of sand above the top of the screen and will have a two foot thick bentonite seal on top of the sand. The air sparge wells will be drilled with a six inch diameter hollow-stem auger (See Figure 3 for proposed Air Sparge well construction details). The completed wells will then be developed 48 hours after the well heads have been constructed.

WATER DEPTH MEASUREMENT AND LAND SURVEY

A water level meter will be used to measure the depth to groundwater in the newly constructed wells. The measurements will be read to the nearest 100th of a foot from the top of casing.

A certified land survey of the top of casing locations and elevations will be performed and tied into the previously surveyed wells, building corners, and property lines. The survey data will be incorporated into subsurface investigation technical report submittal. The survey data will also be submitted to Geotracker.

WELL DEVELOPMENT

The newly installed well will be swabbed, bailed and pumped by a qualified field technician from Blaine Tech Services until the water is relatively clear 48 or more hours after well installation is completed.

WELL PURGING

48 hours after well development is completed, a water level meter will be used to measure the depth to groundwater in the newly installed extraction well prior to sampling. The measurements will be read to the nearest 100th of an inch from the top of casing. The air sparge well will not be purged or sampled.

The wells will then be purged to obtain a representative groundwater samples. Each well will be purged of approximately three (3) borehole volumes allowing the water level to recover to at least 80% of the original, static level. Temperature, electrical conductivity, and pH will be monitored during each purging, so that the three parameters are within a 10% error difference from one another, over a minimum of three consecutive readings. The data will be used to verify that water has been removed from well casing storage and that the well water is representative of the aquifer, prior to sampling. Well development logs will be provided in the technical report.

GROUNDWATER SAMPLING AND LABORATORY ANALYSIS

Water samples will be collected by lowering a weighted plastic disposable check valve bailer down the center of each PVC well casing after the static water level has recovered to at least 80% of its original static water level. The bailer will be lowered to the bottom of the well casing and pulled to the surface to be decanted from the bottom of the bailer by temporarily unplugging the check valve until water flows freely into the glass sample container. Water samples will be contained in 40-milliliter VOA vials for GRO and a full 8260b analysis. The samples will be labeled and stored on ice at 4 degrees centigrade until delivered, under chain-of-custody procedures, to a State-certified analytical laboratory. All samples will be analyzed by appropriate and applicable EPA test methods and Alameda County approved detection limits.

Limitations

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analyses, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the field investigation and interpretations by others and are therefore subject to change. The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretations of available information as described in this report. All users of this technical report, recognize that the limited scope of services performed in the execution of this evaluation may not be appropriate and/or sufficient to satisfy the needs and\ or requirements of any/or all local, state, and/or federal regulatory agencies, or of other users. Any use or reuse of this document or its findings, conclusions and/or recommendations presented herein, is done so at the sole risk of the said user.

Figure 1

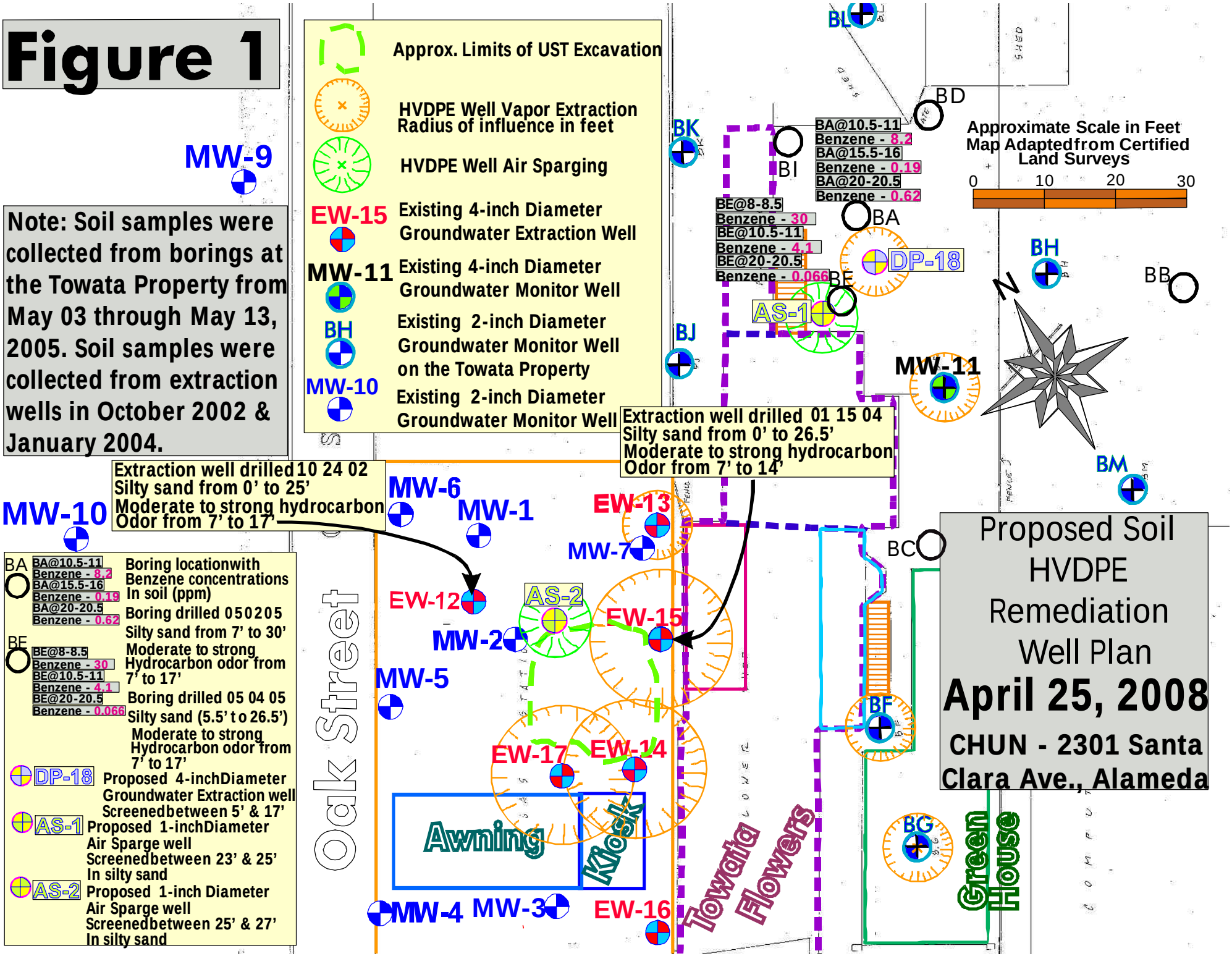
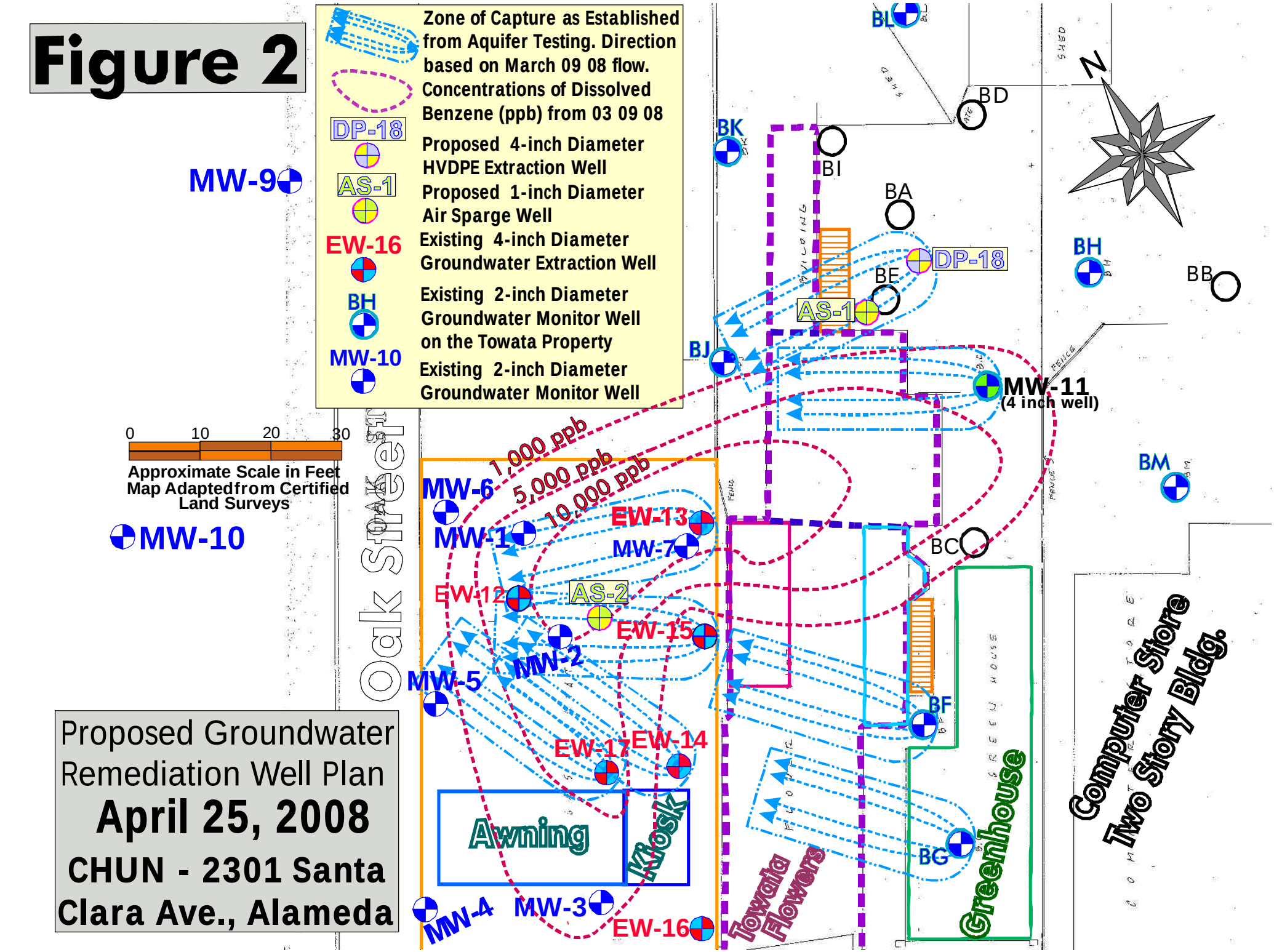

MW-9
Note: Soil samples were collected from borings at the Towata Property from May 03 through May 13, 2005. Soil samples were collected from extraction wells in October 2002 & January 2004.
Approx. Limits of UST Excavation
HVDPE Well Vapor Extraction Radius of influence in feet
HVDPE Well Air Sparging
EW-15 Existing 4-inch Diameter Groundwater Extraction Well
MW-11 Existing 4-inch Diameter Groundwater Monitor Well
BH Existing 2-inch Diameter Groundwater Monitor Well on the Towata Property
MW-10 Existing 2-inch Diameter Groundwater Monitor Well
Extraction well drilled 10 24 02
Silty sand from 0' to 25'
Moderate to strong hydrocarbon Odor from 7' to 17'
Extraction well drilled 01 15 04
Silty sand from 0' to 26.5'
Moderate to strong hydrocarbon Odor from 7' to 14'
BA BA@10.5-11 Benzene - 8.2 BA@15.5-16 Benzene - 0.19 BA@20-20.5 Benzene - 0.62
Boring locationwith Benzene concentrations In soil (ppm)
BE BE@8-8.5 Benzene - 30 BE@10.5-11 Benzene - 4.1 BE@20-20.5 Benzene - 0.066
Boring drilled 050205
Silty sand from 7' to 30'
Moderate to strong Hydrocarbon odor from 7' to 17'
Boring drilled 05 04 05
Silty sand (5.5' t o 26.5')
Moderate to strong Hydrocarbon odor from 7' to 17'
DP-18 Proposed 4-inchDiameter Groundwater Extraction well Screenedbetween 5' & 17'
AS-1 Proposed 1-inchDiameter Air Sparge well Screenedbetween 23' & 25' In silty sand
AS-2 Proposed 1-inch Diameter Air Sparge well Screenedbetween 25' & 27' In silty sand
Approximate Scale in Feet
Map Adaptedfrom Certified Land Surveys
0 10 20 30
N
Proposed Soil HVDPE Remediation Well Plan
April 25, 2008
CHUN - 2301 Santa Clara Ave., Alameda
Oak Street
Awning
Kiosk
Towata Flowers
Green House
MW-10
MW-6
MW-1
MW-7
MW-2
MW-5
MW-4
MW-3
MW-11
EW-13
EW-12
EW-15
EW-17
EW-14
EW-16
AS-1
AS-2
DP-18
BA
BE
BI
BJ
BK
BL
BD
BC
BF
BG
BH
BB
BM

Figure 2



Proposed Groundwater Remediation Well Plan

April 25, 2008

CHUN - 2301 Santa Clara Ave., Alameda

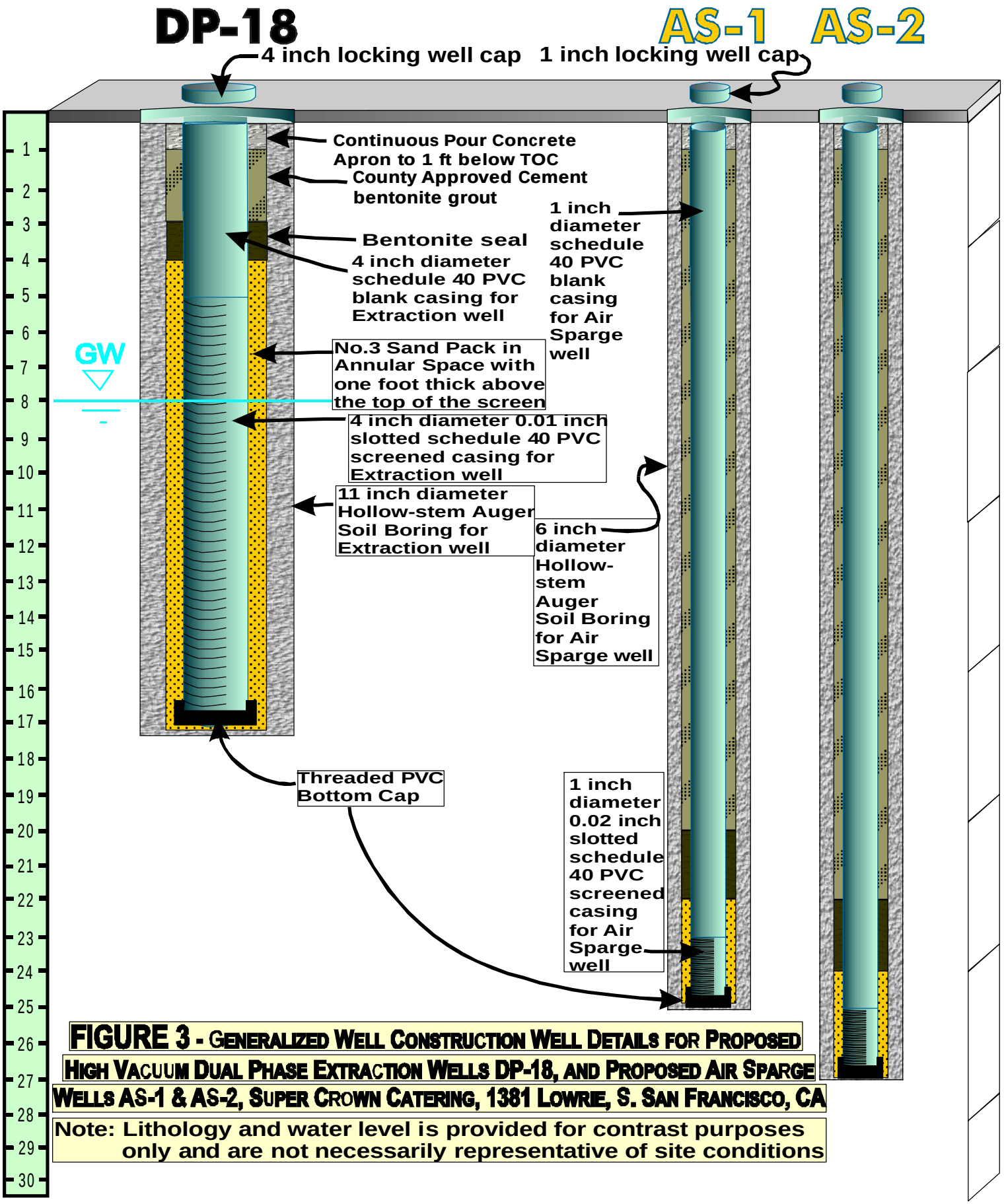


FIGURE 3 - GENERALIZED WELL CONSTRUCTION WELL DETAILS FOR PROPOSED HIGH VACUUM DUAL PHASE EXTRACTION WELLS DP-18, AND PROPOSED AIR SPARGE WELLS AS-1 & AS-2, SUPER CROWN CATERING, 1381 LOWRIE, S. SAN FRANCISCO, CA

Note: Lithology and water level is provided for contrast purposes only and are not necessarily representative of site conditions

Appendix A

Data Table Forms

TABLE 1. SOIL VAPOR EXTRACTION DATA

	15 MINUTES AFTER START OF SYSTEM			12 HOURS AFTER START OF SYSTEM		
Well	Initial Flow (1) SCFM	Initial Vacuum (2) inHg	Initial TPHg (3) ppmV	12H Flow SCFM	12H Vacuum inHg	12H TPHg ppmV
DP-1						
DP-2						
DP-3						
DP-4						
MW1R						
Combined Inlet						
Combined Outlet						

	24 HOURS AFTER START OF SYSTEM			48 HOURS AFTER START OF SYSTEM		
Well	24H Flow SCFM	24H Vacuum inHg	24H TPHg ppmV	48H Flow SCFM	48H Vacuum inHg	48H TPHg ppmV
DP-1						
DP-2						
DP-3						
DP-4						
MW1R						
Combined Inlet						
Combined Outlet						

	72 HOURS AFTER START OF SYSTEM			5 DAYS HOURS AFTER START OF SYSTEM		
Well	72H Flow SCFM	72H Vacuum inHg	72H TPHg ppmV	5D Flow SCFM	5D Vacuum inHg	5D TPHg ppmV
DP-1						
DP-2						
DP-3						
DP-4						
MW1R						
Combined Inlet						
Combined Outlet						

	10 DAYS AFTER START OF SYSTEM			15 DAYS HOURS AFTER START OF SYSTEM		
Well	10D Flow SCFM	10D Vacuum inHg	10D TPHg ppmV	15D Flow SCFM	15D Vacuum inHg	15D TPHg ppmV
DP-1						
DP-2						
DP-3						
DP-4						
MW1R						
Combined Inlet						
Combined Outlet						

(1) - Measured by hand-held velocity meter at a common point of known pipe cross-section at least 15 pipe diameters downstream from any pipe fitting or other flow disturbing device.
(2) - Measured by magnahelic vacuum pressure gauge connected to the wellhead cover.
(3) - Measured using a Horiba MEXA-324JU field analyzer, calibrated for hexane.

TABLE 2. GROUNDWATER EXTRACTION DATA

	1 HOUR AFTER STABLE DRAW-DOWN			24 HOURS AFTER STABLE DRAW-DOWN		
Well	**Initial Flow (1) GPM**	**Water Level (2) Ft. BGS**	**Initial TPHg (3) ppm**	**24H Flow GPM**	**24H Water Level Ft. BGS**	**24H TPHg ppm**
DP-1	-			-		-
DP-2	-			-		-
DP-3	-			-		-
DP-4	-			-		-
MW1R	-			-		-
Combined Inlet		-	-			
Combined Outlet		-	-			
	72 HOURS AFTER STABLE DRAW-DOWN			7 DAYS AFTER STABLE DRAW-DOWN		
Well	**72H Flow GPM**	**72H Water Level Ft. BGS**	**72H TPHg ppm**	**5D Flow GPM**	**5D Water Level Ft. BGS**	**5D TPHg ppm**
DP-1	-		-	-		-
DP-2	-		-	-		-
DP-3	-		-	-		-
DP-4	-		-	-		-
MW1R	-		-	-		-
Combined Inlet			-			
Combined Outlet			-			
	14 DAYS AFTER STABLE DRAW-DOWN			21 DAYS AFTER STABLE DRAW-DOWN		
Well	**10D Flow GPM**	**10D Water Level Ft. BGS**	**10D TPHg ppm**	**10D Flow GPM**	**10D Water Level Ft. BGS**	**10D TPHg ppm**
DP-1	-			-		
DP-2	-			-		
DP-3	-			-		
DP-4	-			-		
MW1R	-			-		
Combined Inlet			-			-
Combined Outlet			-			-

(1) - Measured by in-line, volumetric displacement flow meter with totalizer (See. 4119K41 Polycarbonate Cold-Water Totalizer 0.25-15 GPM Flow Range, 1/2" NPT Male)

(2) - Measured by electronic water level sounder to the nearest 100th of a vertical foot.

(3) - Take a grab-sample using a 40-milliliter VOA vials and analyze for TPH-g, MTBE, BTEX, four (4) other oxygenates and at a certified lab.

TABLE 3.

AIR SPARGING FIELD DATA SHEET

DATE:	TIME:	SPARGING AIR RATE CFM	BLOWER DISCH. PRESSURE PSIG	COMMENTS