November 9, 2010

Barbara Jakub, P.G.
Alameda County Health Care Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Work Plan Addendum For Soil Gas Sampling

SITE: Sheaff's Garage
5930 College Avenue, Oakland, California
ACHCSA Fuel Leak Case No. RO0000377
GGTR Project 7335

Dear Ms. Jakub:

On behalf of the Dr. Brian Sheaff and the William J Sheaff TTE Trust, Golden Gate Tank Removal, Inc. (GGTR) is pleased to submit the enclosed copy of our *October 29, 2010 Work Plan Addendum for Soil Gas Sampling* for the subject property located at 5930 College Avenue in Oakland, California. The subject addendum was requested in the Alameda County Health Care Services Agency's most recent letter (*Work Plan Denial for Fuel Leak Case No. RO0000377 and Geotracker Global ID T0600102112, Sheaf's Garage, 5930 College Avenue, Oakland, CA 94618*), dated August 3, 2010.

GGTR has uploaded an electronic copy of the document to the State Water Resources Control Board's GeoTracker Database System. A copy of the work plan has also been submitted to the William J Sheaff TTE Trust, care of Dr. Brian Sheaff. Should you have any questions, please contact us at your earliest convenience. In my absence from the office, I may be reached by cellular service at (415) 686-8846.

Sincerely,
Golden Gate Tank Removal, Inc.

Brent A. Wheeler
Project Manager

Enclosure/1

November 10, 2010

Barbara Jakub, P.G.
Alameda County Health Care Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Work Plan Addendum For Soil Gas Sampling

SITE: Sheaff's Garage
5930 College Avenue, Oakland, California
ACHCSA Fuel Leak Case No. RO0000377
GGTR Project 7335

Dear Ms. Jakub:

Upon my authorization, Golden Gate Tank Removal, Inc. has prepared a Work Plan Addendum for Soil Gas Sampling (October 29, 2010) for the above-referenced property. The subject addendum was requested in the Alameda County Health Care Services Agency's most recent letter (*Work Plan Denial for Fuel Leak Case No. RO0000377 and Geotracker Global ID T0600102112, Sheaf's Garage, 5930 College Avenue, Oakland, CA 94618*), dated August 3, 2010. GGTR has uploaded an electronic copy of the document to the State Water Resources Control Board's GeoTracker Database System. Should you have any questions, please contact Mr. Brent Wheeler, Project Engineer of GGTR at (415) 512-1555 at your convenience.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document are true and correct to the best of my knowledge.

Respectfully Submitted,

Dr. Brian Sheaff
William G. Sheaff TTE Trust

Distribution: (1) Addressee

November 30, 2010

Barbara Jakub, P.G.
Alameda County Health Care Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Work Plan Addendum For Soil Gas Sampling

SITE: Sheaff's Garage
5930 College Avenue, Oakland, California
ACHCSA Fuel Leak Case No. RO0000377
GGTR Project 7335

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Respectfully Submitted,

_____

Dr. Brian Sheaff
William G. Sheaff TTE Trust

Distribution: (1) Addressee

WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

Sheaffs Garage
5930 College Avenue
Oakland, California
ACHCSA Site # RO0000377

Prepared For:

Dr. Brian Sheaff
William G. Sheaff Trust
1945 Parkside Avenue
Concord, California 94519

Prepared By:

Golden Gate Tank Removal, Inc.
3730 Mission Street
San Francisco, California 94110

GGTR Project No. 7335
Date of Report: October 29, 2010

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WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

SHEAFFS GARAGE
5930 College Avenue, Oakland, CA
ACHCSA Site No. RO0000377

INTRODUCTION

Golden Gate Tank Removal, Inc. (GGTR) is pleased to submit this *Work Plan Addendum for Soil Gas Sampling*proposing additional investigation activities at the property located at 5930 College Avenue in Oakland, California (Site). Alameda County Environmental Health (ACEH) is the lead regulatory agency for the fuel leak case at the Site. The ACEH fuel leak case number for the Site is RO0000377 with the historical business name "Sheaffs Garage."The addendum was prepared in response to theAugust 3, 2010 letter issued by the ACEH requestingassessment of the vapor intrusion pathway at the Site. AppendixA contains figures for the Site. Figure 1 is a *Site Location Map* showing the general location of the subject property. Figure 2 is a *Site Vicinity Map* showing land use of the surrounding neighborhood. Figure 3 is a *Site Plan* showing the approximate location of the former underground storage tanks (UST), historical soil borings, and existing groundwater monitoring field points MW-1, MW-2, MW-3 and piezometer PW-1.

This addendum mainly presents new information pertaining to the assessment of vapor intrusion. For background information, refer to the original work plan document titled *Soil and Water Investigation Work Plan & Site Conceptual Model* dated June 1, 2009.In accordance with the technical comments presented in the aforementioned letter, the purpose of this work plan addendum is to describe the procedures used to conduct soil gas sampling and assess the potential for vapor intrusion to indoor air. The ACEH indicates that shallow soil (9 feet and above) contains benzene concentrations at 13 mg/kg and volatilization from soil to indoor air must be assessed before case closure will be considered. The following sections present the work plan addendum for performing the assessment of potential vapor intrusion. A copy of the ACEH correspondence dated August 3, 2010 is attached to this addendum in Appendix D titled Additional Documentation.

RELOCATION OF PROPOSED CPT BORING & WELL MW-5

In their August 3, 2010 letter, the ACEH requested that the proposed location of the deep CPT boring be relocated closer to the source area (of the former UST) in the vicinity of historical borings B2 / B10 and that proposed monitor well MW-5 be located within the groundwater plume between well MW-3 and historical boring location HB-6. GGTR has no objection to relocating the two borings as requested. Figure 4 titled *Proposed Work* shows the revised proposed locations of the CPT boring and monitor well MW-5.

ASSESSMENT OF POTENTIAL VAPOR INTRUSTION

To confidently assess the potential for vapor intrusion at the Site, GGTR recommends additional investigation work in the form of soil gas sampling. Soil gas is the atmosphere or air found in the pore spaces between soil particles. The primary concern at the Site is residual benzene (a constituent of gasoline fuel) that contaminates shallow soil. Based on the concentrations of residual benzene in soil, a potential contaminant exposure pathway may exist at the Site that may or may not be considered a risk to human health. The benzene-contaminated soil is currently located under concrete sidewalks and asphalt pavement where it is inaccessible to human contact. Soil contaminated with benzene becomes the source of benzene-contaminated soil gas when benzene vapor evaporates from the soil. Benzene-contaminated soil surrounds the former UST location and benzene-contaminated soil gas may be present in close proximity to the subject building.

The potential exposure pathway is via inhalation of hydrocarbons vapors from shallow soil by occupants inside the building (vapor intrusion). The phrase “vapor intrusion” refers to the process by which volatile chemicals such as benzene vapor migrate from subsurface soil gas into the indoor air of overlying buildings. The migration of benzene vapor into overlying buildings creates an indoor air exposure pathway. Exposure to benzene via the vapor inhalation pathway may be considered a potential risk to the health of future residents, workers, and other occupants who could breathe benzene vapor inside present or future buildings.The indoor air exposure pathway is the exposure pathway of greatest concern.According to the August 3, 2010 ACEH letter, additional action is warranted at the Site to address the potential vapor intrusion issue. The ACEH also indicates that the fuel leak case at the Site will not be considered for ‘case closure’ until the vapor intrusion risk is adequately assessed.

The purpose of this work plan is to propose additional site investigation to further assess the potential vapor inhalation pathway. In this work plan addendum, GGTR proposes additional exploratory borings to recover soil gas samples for the laboratory analysis of benzene and other volatile hydrocarbons. The results can then be directly compared to acceptable risk assessment criteria, which will be more indicative of the true risk, if any, to onsite occupants.The investigation is limited to collecting soil /soil gas samples and analyzing the samples for petroleum hydrocarbons and volatile organic compounds (VOC). As a contingency, GGTR is also providing procedures for installing sub-slab vapor points and collecting sub-slab vapor samples should the results of soil gas sampling indicate that a potential vapor intrusion risk exists at the Site. All work pertaining to this project will be conducted in general accordance with Alameda County corrective action guidelines and guidance published by the California Department of Toxic Substances Control (DTSC) titled *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* revised February 7, 2005, and

the California Environmental Protection Agency's (EPA) March 2010 *Draft Advisory – Active Soil Gas Investigation.*The proposed sampling locations are shown on Figure 4, *Proposed Work.* The following sections describe the procedures for the additional investigation work.

Scope/Sequence of Proposed Work

The general scope of work and sequence of activities described and recommended in this work plan addendum is outlined as follows:

- Obtain soil boring permit from the Alameda County Public Works Agency
- Obtain street excavation and/or minor encroachment permits for boring installed in the sidewalk along College Avenue from the City of Oakland Department of Public Works Engineering Division
- Outline the proposed work area and boring locations in white surface paint and notify Underground Service Alert to clear for exterior subsurface utilities.
- Revise the existing Site Health & Safety Plan for proposed soil gas sampling field work
- Using portable direct-push drilling equipment, drill to a depth of five feet below grade at four (4) proposed locations labeled as borings SG-1, SG-2, SG-3, and SG-4
- Log a continuous soil profile in each borehole beginning at grade surface and continuing to the total depth of each boring estimated at 5 feet below grade
- Collect four (4) discrete soil samples from the proposed boring locations SG-1, SG-2, SG-3, and SG-4 at a depth of five (5) feet below grade for laboratory analyses and physical testing
- Submit all soil samples to a stationary State-certified environmental laboratory for chemical analysis; submit selected soil samples for physical property testing
- Collect four (4) soil gas samples at a depth of five feet from the location of soil gas borings SG-1, SG-2, SG-3, and SG-4; soil gas samples will be analyzed onsite by a State-certified mobile laboratory
- Analyze data and if warranted, return to Site to collect sub-slab vapor samples at boring locations SG-1, SG-2, SG-3 and SG-4; collect ambient outdoor air sample for comparison to sub-slab sample analysis results
- Upload all investigative analytical data and the professional well survey to the State GeoTracker Database System
- Profile and transport all solid (soil cuttings, if any) and liquid waste to respective State-licensed disposal facilities
- Interpret all data and prepare a report summarizing the activities, findings, risk assessment, and conclusions of the additional site characterization activities.
- Based upon results of the investigation, propose a feasibility study to address potential remedial action at the Site.

The following sections provide additional discussion of the proposed investigation activities listed above.

Pre-Field Work Activities

GGTR will obtain a drilling permit from of the Alameda County Public Works Agency, an excavation/minor encroachment permit from the City of Oakland Office of Planning & Building, and if warranted, a parking permit from the Oakland Traffic Control Department. GGTR will notify all property owners and tenants as well as the ACEH of all scheduled work activities. At least 72 hours before commencing field activities, GGTR will visit the Site and outline the proposed work areas in white surface paint and subsequently notify Underground Service Alert (USA) to locate and mark any subsurface utilities extending through the designated work areas. GGTR will prepare a traffic control plan should partial or complete closure of the parking lane and/or sidewalk along the College Avenue frontage be warranted.

GGTR will revise the existing Community Site Health & Safety Plan, if necessary, to reflect the additionally proposed activities. GGTR will notify the property owners, tenants, and regulatory agency representatives of all scheduled fieldwork and arrange and schedule all drilling and laboratory subcontractor services.

The following table presents a summary of the proposed borings and sampling activities:

Boring ID	*Boring Depth*	*Sample Type*	*Sample Depth*	*Laboratory Analysis*
SG-1	5	Soil & soil gas	Soil &soil gas at 5 feet	TO-14A
SG-2	5	Soil & soil gas	Soil &soil gas at 5 feet	TO-14A
SG-3	5	Soil & soil gas	Soil &soil gas at 5 feet	TO-14A
SG-4	5	Soil & soil gas	Soil &soil gas at 5 feet	TO-14A

Prior to commencing drilling activities, GGTR will conduct a tailgate safety meeting with all Site personnel addressing all information provided in the Community Site Health & Safety Plan.

Drilling Activities and Soil Sampling

Each soil boring will be drilled by a California-licensed Water Well Drilling Contractor (C-57) using a limited access, direct-push drill rig equipped with 2¼-inch-diameter steel, concentrically-cased percussion drill tubes. While simultaneously casing the borehole with the outer drill tubes, soil samples will be collected in each boring using a 1.5-inch-diameter, butyrate plastic, tube-lined, core sampler (inner tube) driven in 2- to 4-foot increments into relatively undisturbed soil. GGTR proposes collecting soil samples (for chemical analysis) in each borehole at five feet and and/or at shallower depths showing an obvious distinct change in soil discoloration/contamination. GGE will classify and log all soil extracted from each borehole using the Unified Soil Classification System and Munsell Rock Color Chart, and monitor and record the organic vapor concentrations of selected soil samples using aMiniRae® photo ionization detector (PID) or other similar organic vapor analyzer. All borings will be logged under the supervision of a California-registered Civil

Engineer/Geologist. At two boring locations, a grab sample of representative soil will be collected from the recovered soil for the laboratory determination of particle size distribution, organic carbon, and moisture content. This information will be utilized in future calculations of vapor intrusion risk assessment, if needed, at the Site.

All down-hole drilling and sampling equipment will be cleaned between each boring location using a non-phosphate Alconox® solution and double rinsed using clean, potable water. Equipment wash and rinse water will be transferred to a separate D.O.T-approved storage container. All containers will be sealed and appropriately labeled as non-hazardous waste and securely stored onsite pending future disposal at respective licensed-disposal facilities. Soil samples retained for laboratory analysis will be immediately sealed with Teflon tape and plastic caps, appropriately labeled, and placed in a cooler chilled to approximately 4º Centigrade.

Soil GasSampling

GGTR will collect soil gassamples from the proposed boring locations at a depth of five feet below grade. The soil gassamples will be collected to assess the potential impact of volatilized petroleum hydrocarbons from impacted shallow soil and shallow groundwater to indoor air building space. A soil gassample will collected at each location following the procedures provided in Appendix B, *Field Methods for Soil GasSampling,* and in general accordance with the EPA's March 2010 *Draft Advisory – Active Soil Gas Investigation*.The appropriate purge volume will be determined using a step purge volume testing program before sampling begins with test volumes of 1, 3, 7 and 10 volumes. As above, all soil gas samples will be analyzed onsite by a State-certified mobile laboratory.

As discussed in the attached Appendix B, *Field Methods for Soil Gas Sampling*, soil gas sampling may be accomplished using semi-permanent vapor probe installation. The drive rod is removed from the borehole and a semi-permanent vapor probe constructed in the bottom of the borehole at the target depth of five feet. General probe construction is presented in Figure 1 of Appendix B.The soil gas sample is collected from the tubing of the vapor probe. The vapor probe may be left installed for follow up confirmation sampling at 3, 6 or 12 months following initial sampling. The vapor probe is allowed to equilibrate for at least 30 minutes prior to purging and sampling activities.

A step purge test will be performed on the first borehole to determine the appropriate purge volume for this Site. Step purge testing should be performed in a borehole within the source area. Prior to purging, a leak check will be performed at each sampling point to ensure an appropriate seal between the sampling train and probe interface. After a sufficient volume of vapor has been evacuated from the sampling assembly to insure collection of a representative sample, a vapor sample will be collected in a gas-tight glass syringe and transferred directly to an on-site mobile analytical laboratory. Soil gas samples will be collected by inserting a syringe needle through the wall of the silicon tubing attached to the above ground end of the sample tubing and extracting a 10-cc aliquot of soil vapor. Purge and sample flow rates will be maintained at approximately 100-200 milliliters per minute, and at a vacuum less than 100 inches of water. The samples will be analyzed by an on-site mobile laboratory for VOC constituents as soon as possible following sample collection (generally within 30 minutes of sample collection). New tubing will be used at each sampling location. Between vapor sample locations, the metal push-rod assembly will be washed and triple-rinsed with potable water free of VOCs.

One duplicate soil gas sample will be collected at a rate of one duplicate per 10% of total samples using the onsite mobile laboratory. If required, additional duplicate samples may also be collected for analysis using Summa canisters. If utilized, GGTR will use two laboratory-supplied 1-liter Summa Canisters per each soil gas sample collected at the site. The soil gascanisters will be appropriately labeled and submitted under chain of custody command to a State-certified laboratory for analysis. Laboratory reporting limits for specific chemicals of concern shall be below applicable ESLs or other approved risk levels.

Sub-Slab Vapor Sampling

Based on the results of soil gas sampling, GGTR may elect to return to the Site and collect sub-slab vapor samples at the approximate locations of SG-1 thru SG-4 as shown in Figure 4, Proposed Work. The vapor probes will be constructed according to the procedures in Appendix C, *Methods for Sub-Slab Vapor Sampling*. The sub-slab vapor probes will be preassembled at Torrent Laboratory, Inc., constructed with chromatography grade stainless steel tubing (6 inch length) and Swagelok compression fittings, and shipped to GGTR's office prior to mobilization to the field. When installed, each vapor probeswill be sealed at its superior end (Swagelok fitting assembly) with a female, threaded, stainless steel cap. A typical sub-slab vapor probe assembly is shown in Appendix C.

The concrete floor at each vapor probe installation point is pre-washed using a sponge and solvent-free potable tap water prior to installation of the probe. GGTR will hammer-drill a 1-inch diameter hole approximately 1 inch into the concrete slab, followed with a 3/8-inch-diameter drill hole to just above the base of the slab. Using a rigid wire to ensure that the probe hole did not penetrate the base of the slab, GGTR will remove the concrete dust from the hole with a small vacuum and damp rag. GGTR will then carefully drill through the remainder of the concrete slab, penetrating an additional 2 inches into the sub-slab material in order to create an open space for complete insertion of the probe and facilitate vapor sampling. GGTR will clean the larger diameter portion of the drill hole and surrounding slab surface with a damp rag only. GGTR will then immediately insert the vapor probe assembly into the drill hole flush to grade, and carefully place well-mixed quick-drying cement slurry within the annular space between the probe and the upper 1-inch-diameter drill hole to ensure an adequate seal. The cement is allowed to cure for at least 24 hours prior to sampling.

GGTR will collect sub-slab vapor samples from the proposed vapor probes at a depth of approximately 0.5 feet bgs (directly beneath the concrete floor slab) using the procedures in Appendix C. The concrete floor at each vapor probe installation will again be pre-washed with solvent-free rinse water prior to vapor sampling. GGTR will utilize laboratory-supplied 1-liter Summa Canisters for each vapor sample collected at the Site. Prior to sub-slab vapor sampling at each location, a leak check will be performed using the purge, sample, and leak check canisters and manifold system provided by Torrent Laboratory. Following connection of the canisters to the manifold system, the purge vacuum canister is opened and the leak check is performed for approximately 10 to 15 minutes. The sample, purge, and leak check canisters are placed within a shroud enclosure constructed of two plastic rubber maid storage containers, and sealed with non-adhesive, pliable, Styrofoam pipe insulation. The purge and sample canisters are connected into a manifold using an inline 0.2-micron filter, a flow controller preset at a 50 milliliters/minute flow rate, a dual valve assembly, and vacuum gauge. The manifold and the superior portion of the sub-slab

vapor probe (at grade surface) is connected using laboratory supplied Teflon tubing and the provided Swagelok compression fittings.

The leak check canister is connected to a separate manifold system consisting of a 0.2-micron filter, flow controller, vacuum gauge, and a single valve assembly. In accordance with U.S. EPA guidance, GGTR will initially purge 2 liters of air from each sample probe until purge canister gauge readings decrease to 20 inches of mercury (vacuum). GGTR will then close the purge canister and open the sample and leak detection canisters, seal the shroud enclosure, and begin sample collection. Every three to four minutes, GGTR will spray the leak detector compound (1,1-difluoroethane; CAS #75-37-6) within the interior of the shroud enclosure for approximately 5 to 10 seconds, while continuously monitoring the interior atmospheric concentration of the shroud with a MiniRae® photo ionization detector (PID).

In lieu of using 1,1-difluoroethane, GGTR may elect to use Isopropyl alcohol (IPA) as a leak check compound. A small section of cotton gauze saturated with IPA would be placed within the shroud enclosure during the sampling event and the interior concentration would be monitored/recorded continuously utilizing a PID. A separate 1-liter Summa Canister and single manifold system would be placed in the shroud enclosure for sample collection and analysis of IPA only.

Sub-slab sampling is terminated at each location when the sample canister vacuum gauge shows approximately 10 inches of mercury (adequate sample volume according to Torrent Laboratory). GGTRwill then remove the Teflon tubing at grade surface and replace the stainless steel threaded cap (female insert) at each vapor probe location. The vapor probes are left installed at the Site to allow for additional future sample collection, if warranted. Field data forms will be recorded for each sub-slab vapor sampling location. The canisters are appropriately labeled and submitted for laboratory analysis of volatile organic compounds (VOC) under chain of custody command to Torrent Laboratory in Milpitas, California.

Ambient Air Sampling

As a part of the recovery of sub-slab vapor samples, GGTR proposes to recover an 8-hour outdoor ambient air sample using the procedures described in Appendix C called *Methods for Sub-Slab Vapor Sampling*. The outdoor air sample will be recovered from the sidewalk on the College Avenue frontage.The results of the laboratory analysis of the ambient air sample will be compared to the results from sub-slab vapor sampling to determine if a potential vapor intrusion risk exists. The procedure for making this comparison is presented in Appendix C.

In-Door Air Sampling

Should the laboratory analysis of gas and sub-slab vapor samples reveal concentrations of contaminants above regulatory action levels, then indoor air sampling may be warranted. However, the Site is an active automobile repair facility and ambient air concentrations of gasoline fuel and petroleum products containing benzene, etc. are expected to be above regulatory agency screening levels for vapor intrusion to indoor air. Such indoor air samples would not be representative of vapor intrusion from subsurface soil. In this work plan addendum, GGTR does not propose to collect indoor air samples as a part of the assessment of vapor intrusion.

Backfilling of Open Boreholes

Immediately following sampling activities in all soil borings without semi-permanent vapor probes, GGTR will direct the subcontracted driller to extract drill tubes from each borehole and backfill with neat Portland cement up to approximately 0.5 fbg. The balance of each borehole will be backfilled with appropriate surface material (i.e., concrete, asphalt, etc.) to restore original site conditions. Any boreholes containing water will be backfilled by pumping Portland cement (6 gallons water per 94-pound bag of Portland cement) through a tremie pipe and grouting upward from the bottom of the boring. Gravity flow of grout through a funnel will not be allowed. Any water discharging the boring during grouting will be managed as a hazardous waste (contained and collected with absorbent for placement in 55-gallon drums). The balance of each borehole will be backfilled with appropriate surface material (i.e., concrete, asphalt, etc.) to restore original site conditions. In boreholes fitted with semi-permanent vapor probes, the vapor probe and tubing will be pulled from the hole and the hole sealed at the surface with cement.

SAMPLING & ANALYSIS PLAN

General Sampling Procedures

All sampling equipment will be cleaned between each location using a non-phosphate Alconox® solution and double rinsed using clean, potable water. Equipment wash and rinse water will be transferred to a separate D.O.T-approved storage container. All containers will be sealed and appropriately labeled as non-hazardous waste and securely stored onsite pending future disposal at respective licensed-disposal facilities. Soil samples retained for laboratory analysis will be immediately sealed with Teflon tape and plastic caps, appropriately labeled, and placed in a cooler chilled to approximately 4º Centigrade.

Soil Sample Laboratory Analysis

GGTR will submit thesoil samples from borings SG-1 thru SG-4 under formal chain of custody command to Torrent Laboratory Inc., (CA ELAP #1991)in Milpitas, California for laboratory analysis of the following fuel constituents:

- Total Petroleum Hydrocarbons (TPH) as Gasoline (TPH-G; EPA 8260B)
- Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX; EPA 8260B)
- Methyl Tertiary-Butyl Ether (MTBE; EPA 8260B)

Torrent will complete all volatile organic analyses within the 14-day required time limit for analysis.

Two selected soil samples from SG-1 thru SG-4 will also be submitted to Cooper Testing Laboratory of Palo Alto, California for testing of particle size distribution, organic carbon and moisture content.

Soil Gas Sample Laboratory Analysis

TEG Mobile Laboratory (TEG; Rancho Cordova, California) will be utilized for onsite analysis of soil gas samples. The soil vapor samples will be collected using a low-dead volume soil vapor

sampling system and immediately analyzed for volatile organic compounds. The soil gas sample(s) will be analyzed using the following California Department of Health Services approved methods:

- Modified EPA Method TO-3 (TPH-G)&TO-14A GC/MS Full Scan (BTEX & MTBE)
- Modified EPA Method TO-14A (1,1-Difluoroethane; Leak Check Compound)
- ASTM Method D 1946 (Methane, Carbon Dioxide, and Oxygen; Atmospheric Testing Gases)

Approximately 10% duplicate soil gas samples will be analyzed onsite by TEG. If warranted, duplicate soil gas samples collected in 1-liter Summa canisters will also be submitted under chain of custody command to Torrent Laboratory Inc. for chemical analysis.

Sub-Slab Vapor Sample Laboratory Analysis

GGTR will submit sub-slab vapor and ambient air samples under chain of custody command to Torrent Laboratory for chemical analysis. The soil vapor and air samples will be analyzed using the following California Department of Health Services approved methods:

- Modified EPA Method TO-3 (TPH-G)& TO-14A GC/MS Full Scan (BTEX & MTBE)
- Modified EPA Method TO-14A (1,1-Difluoroethane; Leak Check Compound)
- ASTM Method D 1946 (Methane, Carbon Dioxide, and Oxygen; Atmospheric Testing Gases)

Approximately 10% duplicate soil gas samples will be submitted for chemical analysis under chain of custody command to Torrent Laboratory.

WASTE MANAGEMENT

Because direct-push drilling technology will be utilized during the investigation, no drill cuttings will be generated at the Site. If drill cuttings are generated during the additional soil boring activities, the cuttings will be stored in a 55-gallon solid waste drum and then temporarily stored onsite in the secure rear outdoor storage lot. Pending receipt of the composite drum soil sample analysis, GGTR will subsequently profile and transport the waste to an appropriate licensed disposal facility under uniform waste manifest. A copy of the solid waste manifest will be included in the technical report.

The equipment washwater and rinse water generated during the investigation activities will be transferred to 55-gallon D.O.T.-approved steel drums and stored onsite in a secure area. All waste water containers will be sealed and appropriately labeled and securely stored onsite pending future disposal at respective licensed-disposal facilities. The liquid waste will be profiled for disposal/recycling under uniform waste manifest following receipt of the laboratory results of groundwater sample analysis. Clearwater Environmental Management, Inc. will be utilized to pump the liquid waste from the drums for transport under Uniform Waste Manifest to a State-certified disposal/recycling facility.

GEOTRACKER ELECTRONIC SUBMITTAL

GGTR will direct the analytical laboratories to submit all analytical data in electronic deliverable format (EDF) via the Internet. All soil/soil gas sample analytical data will be uploaded to the State

Water Resources Control Board's GeoTracker Database System. Also, a revised site plan, boring logs, and construction log of each newly-installed vapor boring well, as well as a copy of the report of findings will be uploaded in Portable Data Format (PDF) to the State GeoTracker Database.The appendices of the resulting technical report will include a copy of each associated GeoTracker Upload Confirmation Form.

REPORT PREPARATION

Following the completion of all field work, GGTR will compile all field and analytical data to be used in preparation of a technical report that discusses the activities and findings of the investigation.A section discussing the results of the soil gas investigation will be included in the investigation report. Based on the results of the soil gas sampling and particle size distribution testing, the report will include an evaluation of the potential for vapor intrusion at the Site. The report will also present conclusions and recommendations for further action or case closure. The report will be placed on the ACHCSA's FTP Website for regulatory review and comment.

SCHEDULE

GGTR anticipates beginning the additional field activities within two to three weeks of receiving client authorization to proceed, based upon permit acquisition and subcontracted driller availability. The aforementioned report should be available within 45 to 60 days following receipt of all soil and groundwater analytical results.

HEALTH AND SAFETY PLAN

All contractors will be responsible for operating in accordance with the most current requirements of State and Federal Standards for Hazardous Waste Operations and Emergency Response (Cal. Code Regs., tit. 8, section 5192; 29 CFR 1910.120). Onsite personnel are responsible for operating in accordance with all applicable regulations of the Occupational Safety and Health Administration (OSHA) outlined in the State General Industry and Construction Safety Orders (Cal. Code Regs., tit. 8) and Federal Construction Industry Standards (29 CFR 1910 and 29 CFR 1926), as well as other applicable federal, state and local laws and regulations. All personnel shall operate in compliance with all California OSHA requirements.

In addition, California OSHA's Construction Safety Orders (especially Cal. Code Regs., tit. 8, sections 1539 and 1541) will be followed as appropriate. Specific requirements are identified below:

- At least 72 hours prior to initiating field work, GGTR will surface mark all proposed work area(s) in white marking paint and notify Underground Service Alert (USA). All subsurface utility agencies must mark-out all underground utility locations extending through general work area(s), and if high priority subsurface utilities are present within 10 feet of proposed excavation(s), GGTR will meet with specific utility agencies to identify exact locations (Title 8, Section 1541).

- Worksite traffic controls and warning sign placement must conform to the requirements of the State Department of Transportation's California Manual on Uniform Traffic Control Devices for Streets and Highways, September 26, 2006 (Title 8, Sections 1598 & 1599).

GGTR has previously prepared a site-specific Health & Safety Plan (HASP) for the Site in accordance with current health and safety standards as specified by the federal and California OSHAs and may have been submitted as part of previous work plans. The HASP will be reviewed and updated if needed for the current investigation work.The provisions of the HASP are mandatory for all personnel of the proposed project and its contractors who are at the Site. The contractor and its subcontractors doing fieldwork in association with this work plan will either adopt and abide by the HASP or shall develop their own safety plans which, at a minimum, meet the requirements of this HASP. All onsite personnel shall read the HASP and sign the "Plan Acceptance Form" before starting daily Site activities.

LIMITATIONS

It should be understood that all environmental assessments are inherently limited in that conclusions are drawn and recommendations developed from information obtained from limited research and visual observations. Subsurface conditions change significantly with distance and time and therefore may differ from the conditions implied by subsurface investigation. It must be noted that no investigation can absolutely rule out the existence of any hazardous or petroleum substances at a given site. Existing hazardous materials and contaminants can escape detection using these methods. The work performed in conjunction with this assessment and the data developed are intended as a description of available information at the dates and location given. GGTR professional services have been performed, with findings obtained and recommendations prepared in accordance with customary principles and practices in the field of environmental science, at the time of the assessment.

This warranty is in lieu of all other warranties either expressed or implied. GGTR is not responsible for the accuracy of information reported by others or the independent conclusions, opinions or recommendations made by others based on the field exploration presented in this report. The findings contained in this report are based upon information contained in previous reports of corrective action activities performed at the subject property and based upon site conditions as they existed at the time of the investigation, and are subject to change. The scope of services conducted in execution of this phase of investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document and any of its information presented herein is at the sole risk of said user. The figures, drawings and plates presented in this document are only for the purposes of environmental assessment and no other use is recommended. No other third party may rely on this report, figures or plates for any other purpose.

REPORT DISTRIBUTION

All reports that are prepared during the continuing work on this project will be submitted to:

Alameda County Health Care Services Agency
Environmental Health Services, Environmental Protection (LOP)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
Attention: Ms. Barbara Jakub — (1 Electronic Copy via ACHCSA FTP)
(1 Electronic Copy via GeoTracker)

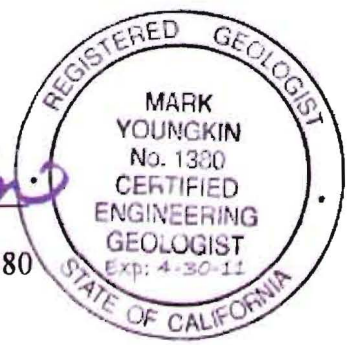
William G Sheaff Trust
c/oDr. Brian R. Sheaff, D.D.S.
1945 Parkside Drive
Concord, California 94519 — *(1 Copy, Bound)*

CERTIFICATION

This work plan addendum has been prepared in accordance with generally accepted environmental practices exercised by professional geologists, scientists, and engineers. No warranty, either expressed or implied, is made as to the professional advice presented herein. The findings conclusions, and recommendations contained in this document are based upon information contained in previous reports of corrective action activities performed at the subject property and based upon site conditions as they existed at the time of the investigation, and are subject to change.

The conclusions presented in this document are professional opinions based solely upon visual observations of the subject property and vicinity, and interpretation of available information as described in this report. The scope of services conducted in execution of this investigation may not be appropriate to satisfy the needs of other users and any use or reuse of this document and any of its information presented herein is at sole risk of said user.

Golden Gate Tank Removal, Inc.



Mark Youngkin
Registered Geologist, CEG No.1380

Brent A. Wheeler
Project Engineer

APPENDIX A

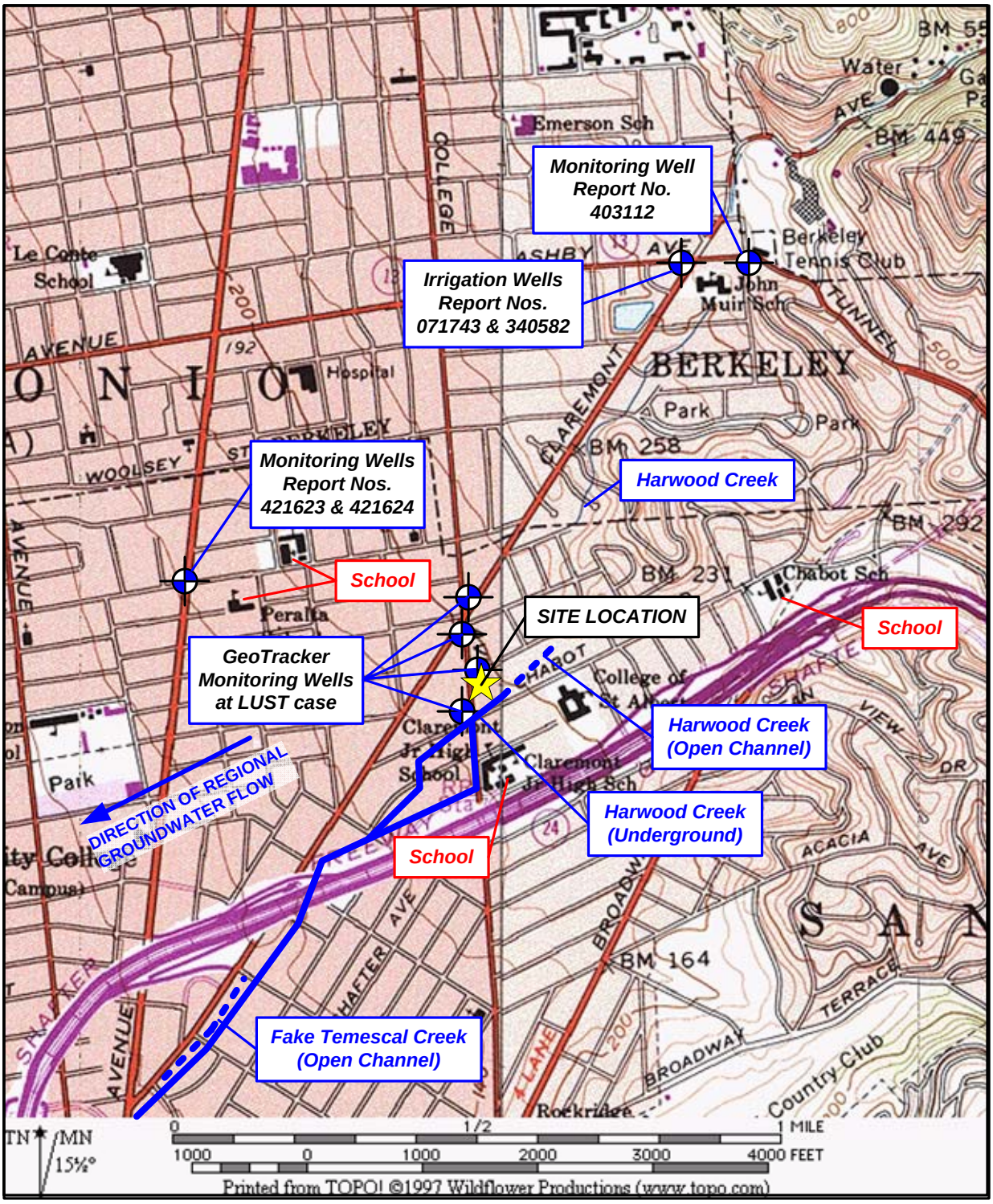
FIGURES

WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

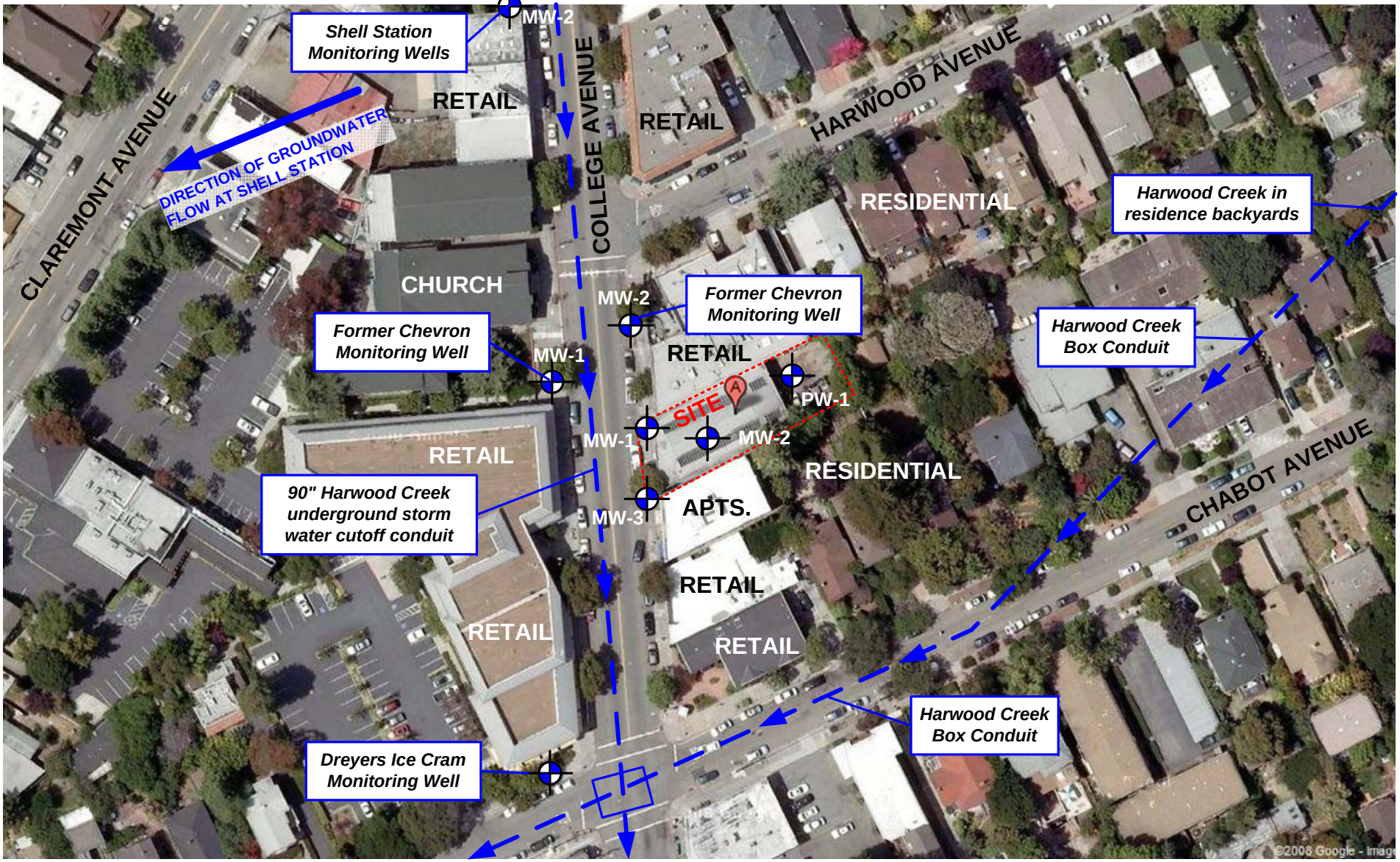
Sheaffs Garage
5930 College Avenue
Oakland, California
ACHCSA Site # RO0000377



GOLDEN GATE TANK REMOVAL, INC.
3730 Mission, San Francisco, California 94110
Phone (415) 512-1555 Fax (415) 512-0964

SITE LOCATION MAP
Showing Potential Sensitive Receptors
5930 College Avenue, Oakland, California

GGTR Project No. 7335	October 2010	**Figure 1**



Base Map from Google Maps, 2008, at a scale of about 1"=100 feet with North to top of map.

GOLDEN GATE TANK REMOVAL, INC.
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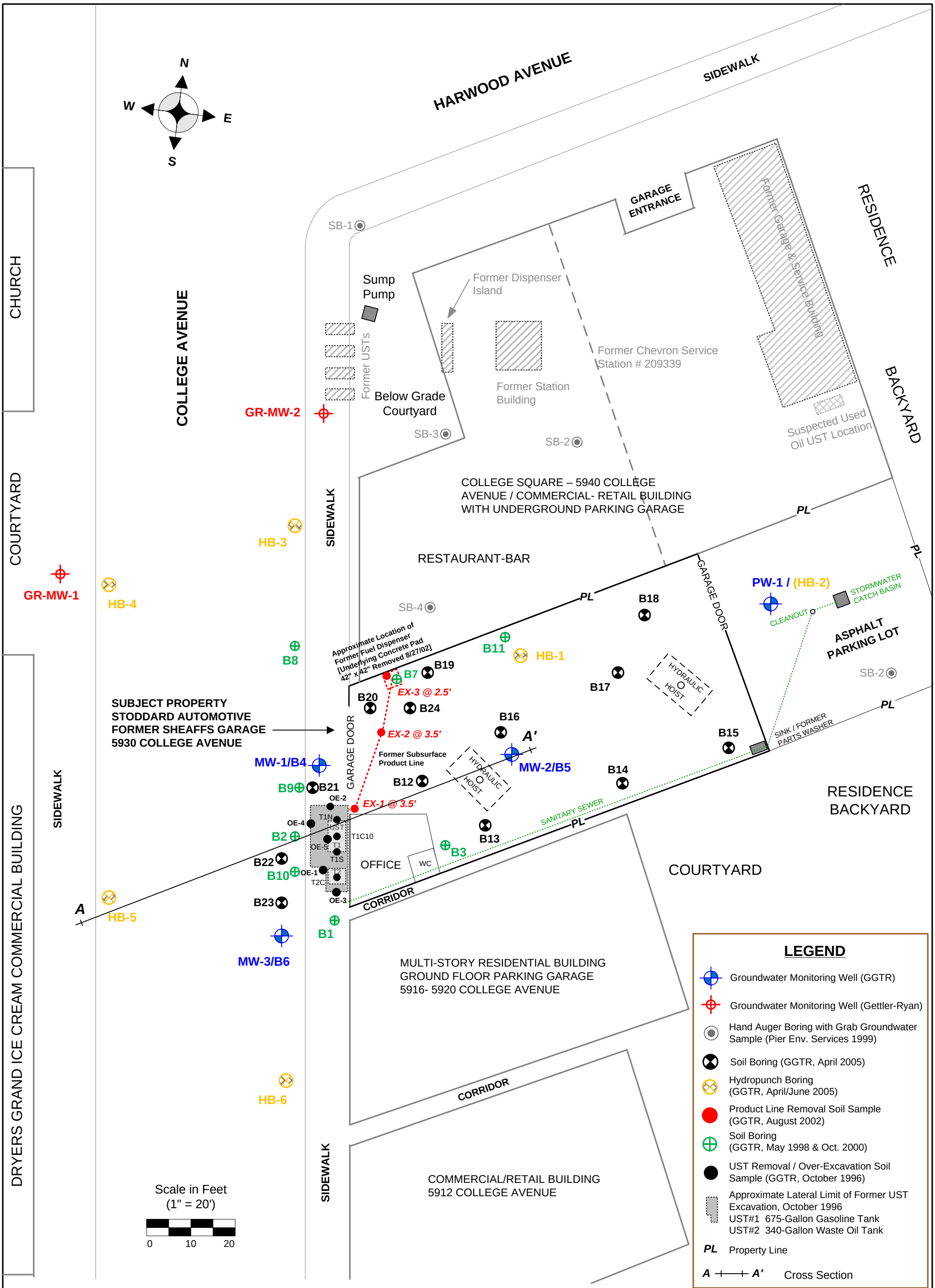
SITE VICINITY MAP

Sheaffs Garage
5930 College Avenue, Oakland, California

GGTR Project No. 7335	October 2010	**FIGURE 2**



GOLDEN GATE TANK REMOVAL, INC.
3730 Mission Street, San Francisco, CA 94110
Phone (415) 512-1555 Fax (415) 512-0964

SITE PLAN

Sheaffs Service Garage
5930 College Avenue, Oakland, CA 94618

GGTR Project No. 7335	Figure By: ed (07/08); revised my 01/09	October 2008	**Figure 3**

N
W
E
S

HARWOOD AVENUE
SIDEWALK
RESIDENCE
BACKYARD
GARAGE ENTRANCE
TWO-STORY COMMERCIAL BUILDING
WITH UNDERGROUND PARKING GARAGE
5940 COLLEGE AVENUE
TWO-STORY COMMERCIAL BUILDING
RESTAURANTS, RETAIL AND OFFICES
FORMER CHEVRON SERVICE STATION
5940 COLLEGE AVENUE
COLLEGE SQUARE
RESTAURANT-BAR
Sump Pump
Below Grade Courtyard
COLLEGE AVENUE
SIDEWALK
GR-MW-2
CHURCH
COURTYARD
GR-MW-1
HB-4
HB-3
B8
Approximate Location of
Former Fuel Dispenser
[Underlying Concrete Pad
42" x 42" Removed 8/27/02]
B11
HB-1
B18
GARAGE DOOR
PW-1 / (HB-2)
B25
STORMWATER CATCH BASIN
CLEANOUT
B26
B7
B19
EX-3 @ 2.5'
B17
HYDRAULIC HOIST
ASPHALT PARKING LOT
SUBJECT PROPERTY
STODDARD AUTOMOTIVE
FORMER SHEAFFS GARAGE
5930 COLLEGE AVENUE
B20
B24
SG-4
B16
EX-2 @ 3.5'
B15
B27
GARAGE DOOR
Former Subsurface
Product Line
MW-1/B4
MW-2/B5
HYDRAULIC HOIST
B14
SINK / FORMER PARTS WASHER
B9
B21
B12
OE-2
EX-1 @ 3.5'
RESIDENCE
BACKYARD
SANITARY SEWER
OE-4
T1N
UST
OFFICE
T1C10
B13
B2
B3
SG-1
CPT-1
OE-5
T1
T1S
WC
SG-3
COURTYARD
B22
MW-4
B10
OE-1
T2
T2C
OE-3
CORRIDOR
B23
HB-5
B1
SG-2
MW-3/B6
MULTI-STORY RESIDENTIAL BUILDING
GROUND FLOOR PARKING GARAGE
5916- 5920 COLLEGE AVENUE
MW-5
CORRIDOR
HB-6
SIDEWALK
COMMERCIAL/RETAIL BUILDING
5912 COLLEGE AVENUE
MULTI-TENANT COMMERCIAL/ RETAIL BUILDING

Scale in Feet
(1" = 20')
0 10 20

LEGEND

- CPT-1 — Proposed CPT Boring
- SG-1 — Proposed Soil Gas Sample
- MW-5 — Proposed Monitor Well
- B25 — Proposed Soil Boring
- Groundwater Monitoring Well (GGTR)
- Groundwater Monitoring Well (GR)
- Soil Boring (GGTR, April 2005)
- Hydropunch Boring (GGTR, April/June 2005)
- Product Line Removal Soil Sample (GGTR, August 2002)
- Soil Boring (GGTR, May 1998 & Oct. 2000)
- UST Removal / Over-Excavation Soil Sample (GGTR, October 1996)

GOLDEN GATE TANK REMOVAL, INC.
3730 Mission Street, San Francisco, CA 94110
Phone (415) 512-1555 Fax (415) 512-0964

PROPOSED WORK (Revised Oct 2010)
Sheaffs Service Garage
5930 College Avenue, Oakland, CA 94618

GGTR Project No. 7335	*Figure By: ed (07/08); revised my 10/10*	*October 2010*	***Figure 4***

APPENDIX B

FIELD METHODS FOR SOIL GAS SAMPLING

WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

Sheaffs Garage
5930 College Avenue
Oakland, California
ACHCSA Site # RO0000377

APPENDIX B

FIELD METHODS FOR SOIL GAS SAMPLING

WORK PLAN ADDENDUM

Sheaffs Garage
5930 College Avenue, Oakland, California
ACHCSA Site # RO0000377

Introduction

For evaluating the risk associated with vapor intrusion to indoor air, soil gas data are the preferred contaminant data set, where practical. Active soil gas investigations are useful to obtain vapor phase data at sites potentially affected by volatile organic compounds (VOCs), including chlorinated and aromatic compounds. The data can be used to identify the source and determine the spatial distribution of VOC contamination at a site, or to estimate indoor air concentrations for risk assessment purposes.

Pre-field Activities

An access agreement will be obtained from the property owner or adjacent property owner for the soil gas sampling activities. Prior to mobilization, the project manager will notify the property owners, tenants, and regulatory agency representatives of all scheduled fieldwork and arrange and schedule all drilling and laboratory subcontractor services. The project manager will verify that no significant precipitation (1/2 inch or more) has occurred in the last five days at the Site. Prior to commencing drilling and sampling activities, the field manager will conduct a tailgate safety meeting with all site personnel addressing information as provided in the Community Site Health & Safety Plan.

Soil Gas Sampling with Nested Vapor Probes

Using limited access small-diameter hydraulic ramset equipment, drill 2¼-inch borehole to target soil gas sampling depth of five feet using a dual-tube drive rod and outer tube assembly. At target depth of five feet, drive rod is removed and a nested vapor probe is constructed while simultaneously removing the outer drill tube. Figure 1 shows a generic construction diagram of a typical nested vapor probe. Procedure is repeated to add additional vapor probes at five foot intervals within borehole. Borehole diameter and traffic box are sized larger for multi-probe construction. According to existing guidelines, the purge volume test, leak test, and soil gas sampling should not be conducted for at least 30 minutes following probe installation. Common knowledge is that more consistent results occur when longer vapor probe equilibration times are used and periods of up to 24-72 hours appear to be used.

Construction of Nested Vapor Probes

Figure 1 titled Vapor Probe Construction Diagram shows a schematic representation of a nested vapor probe containing four individual screened vapor probes. A similar construction would be utilized for installations involving two or three screened vapor probes. A 3- to 8-inch diameter borehole will be drilled using direct push or hollow stem auger drilling equipment. The uncased borehole will be drilled to the final depth depending on number of screened vapor probes to be installed.

At each target depth (e.g., 5, 10, 15 or 20 feet), a screened 1 to 3-inch vapor probe is installed on the end of 1/4-inch Teflon tubing. The screened probe is encased in a 12-inch thick sand pack. Approximately 12 inches of dry granular bentonite pellets are placed on top of the sand pack. Approximately three feet of hydrated granular bentonite is place above the dry granular bentonite. Additional screened vapor probes are placed above the hydrated bentonite following a similar construction procedure. Portland cement is placed above the upper-most screened vapor probe on top of 12 inches of hydrated bentonite to form a surface seal. The top of the tubing is capped and contained within a flush-mounted well box with cover and placed in concrete to prevent surface water infiltration.

Soil Gas Sampling of Nested Vapor Probes

To allow the soil vapor conditions to approach ambient conditions after probe emplacement, purging of soil vapor will not be done until equilibration has occurred (at least 24 hours). Step purge tests of one, three, seven, and ten purge volumes will be initially conducted to determine the purge volume to be applied at all sampling points. The soil vapor sample tubing will then be purged of the approximate volume of the sample tubing using a vacuum pump set at a rate of approximately 100-200 milliliters per minute, and at a vacuum less than 100 inches of water. A tracer gas (i.e., isopropyl alcohol or similar) will be used to enrich the atmosphere in the immediate vicinity of the sampling location where the sampling tubing intersects the ground surface in order to test the borehole seal and estimate the amount of ambient air that may be inadvertently drawn into the sample. Purge volumes will include the internal volume of tubing and the annular space around the probe tip.

After a sufficient volume of vapor has been evacuated from the sampling assembly to insure collection of a representative sample, a sample will be collected in a glass syringe and transferred directly to an on-site mobile analytical laboratory. Soil vapor samples will be collected by inserting a syringe needle through the wall of the silicon tubing attached to the above ground end of the sample tubing and extracting a 10-cc aliquot of soil vapor. According to the *March 2010 CalEPA Draft Advisory – Active Soil Gas Investigation*, the soil gas samples should be analyzed within 5 minutes of collection by an on-site mobile laboratory. New Teflon tubing will be used at each sampling location.

The results of the soil vapor analysis may be confirmed with duplicate soil vapor samples (at a rate of 10% of the soil vapor samples) recovered with syringe and submitted for chemical analysis to the onsite mobile laboratory. The results of the soil vapor analysis may additionally be confirmed with duplicate soil vapor samples (at a rate of 10% of the soil vapor samples) collected in Summa canisters and submitted for chemical analysis under chain of custody command to Torrent Laboratory, Inc. of Milpitas, California.

Soil Gas Sampling with Direct Push Systems

Using a Geoprobe System® or similar small-diameter hydraulic ramset equipment, drill a borehole to the target soil gas sampling depth of five feet below surface grade. DTSC guidance recommends five feet as the minimum depth for soil gas sampling due to the barometric pumping issue and continue at five foot intervals. For probes installed with the direct push method where the drive rod remains in the ground, purge volume test, leak test, and soil gas sampling should not be conducted for at least 20 minutes following probe installation. For probes installed with the direct push method where the drive rod does not remain in the ground, purge volume test, leak test, and soil gas sampling should not be conducted for at least 30 minutes following probe installation.

1. Connect the PRT adaptor tubing to approximately 10-15 feet of 0.25” OD (0.17” ID) Teflon tubing, install a vapor tight valve on the other end of the tubing, close the vapor tight valve, and seat the PRT adaptor into the bottom of the lead drill rod. The tubing is non-reusable and discarded after collection of each soil gas sample.

2. Install the PRT adaptor according to the specific procedures specified in the Geoprobe System® PRT manual provided by the manufacturer.

3. Hydraulically push the drill rod to the target soil gas sampling depth then raise the drill rod approximately 6 inches to expose the inlets of the soil gas probe.

4. Place hydrated bentonite around the drill rod to inhibit surface air migration down to the outer portion of the drill rod (do not place dry bentonite into hole).

5. Collect sample according to the procedures discussed below in section Soil Gas Sampling.

6. At the conclusion of soil gas sampling, remove the drill rod and sampling apparatus and backfill borehole with Portland cement. After each use, drive rods and other reusable components are properly decontaminated to prevent cross contamination using a 3-stage wash and rinse.

Soil Gas Sampling With Summa Canister

Field personnel will utilize a laboratory-supplied Summa Canister (10% canister cleaning certification) for the "whole air" grab sample collected at the site. The analytical laboratory will supply the certified-clean Summa canister and associated equipment (flow regulator, particulate filter, vacuum gauges). The field manager will inspect the borehole for obvious indications of excessive moisture or free water. No water is allowed inside the Summa Canisters.

The following procedure will be used to conduct the soil gas sampling:

1. Verify size or capacity of Summa Canister provided by the laboratory. Two sizes are commonly available: one liter and six liter. Canister shape varies by model. Each size of canister will have the same initial vacuum. Size must be verified by inspecting shipping documentation. Keep all canisters out of direct sunlight. Don a new pair of sampling gloves prior to each individual sample – to avoid cross contamination with alcohol or leak testing compounds.

2. A laboratory-supplied Summa Canister (10% canister cleaning certification) is used to collect a "whole air" grab sample at the site. Two Summa canisters will be utilized during the soil vapor collection consisting of a sample canister and a purge canister. The laboratory cleaned vacuum gauge will be checked for zero reading and equilibrated if necessary (it does not seem to matter if there is air in the vacuum gauge). The Summa canister vacuum will be checked immediately before use to verify a vacuum of 29.9 inches of mercury (minimum of 25 in Hg as provided by laboratory). An additional Summa Canister and single manifold system may be placed in the shroud enclosure for sample collection and analysis of IPA only.

   The procedure for confirming the initial vacuum pressure is as follows:

   a. Confirm canister bellows valve is closed clockwise and remove brass cap.

   b. Attach vacuum gauge and attach brass cap to side of gauge tee fitting.

   c. Open and close valve quickly (a few seconds).

   d. Read vacuum on the gauge (target vacuum is 29.9 inches (in) of mercury (Hg) with minimum vacuum of 25 inches Hg required).

e. Record gauge reading on "Initial Vacuum" column of chain-of custody form and field data sheet. Verify that canister bellows valve is closed.

3. A vacuum gauge with tee fitting is connected to the ¼" stainless steel bellows valve fitting of the sample canister. About one foot of 0.25" OD (0.17" ID) Teflon tubing is connected to the tee fitting on each gauge. The ends of the tubing are connected to a third tee fitting (junction). All connection fittings use 0.25" Swagelok® type fittings (9/16 inch wrench). A new pair of sampling gloves is worn during assembly of sampling apparatus. Fittings will not be over-tightened – finger tight plus ¼ turn with wrench is adequate.

4. Teflon® or Nylaflow® (nylon) tubing (0.25" OD) and 0.25" Swagelok® type fittings are used to assemble a sampling train. One passive critical orifice flow restrictor provided by the laboratory will be connected to the borehole side of the tee junction. The passive flow restrictor is pre-set by the laboratory to provide a 30 minute sampling interval at 26.6 ml per minute flow rate (pre-configured for a one liter Summa canister with 800 ml target volume) or 167 ml per minute flow rate (pre-configured for 6-liter canister with 5000 ml target volume). In each case, flow rate will not exceed 50 ml per minute for sub-slab sampling and 200 ml per minute for soil gas sampling. A vacuum of <100" of water should be maintained throughout sampling.

5. A laboratory supplied 2 or 7 micron particulate filter is connected to the borehole side of the flow restrictor. On some laboratory supplied equipment, the flow regulator and particulate filter are pre-assembled in a single case with fittings at each end. According to the laboratory, the 7 micron particulate filter does not restrict flow but the 2 micron size does restrict flow significantly and is considered in the pre-configured flow rate. The 2 micron filter is used with one liter canisters. The vapor-tight valve is connected to the borehole side of the filter.

6. The connections between the summa canisters and vapor tight valve will be vacuum tested for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the sampling train assembly. The test is terminated if gauge vacuum cannot be maintained for 10 minutes. The onsite regulatory agency inspector monitors the leak testing results. If the leak test fails and cannot be rectified in a timely manner, then the vapor sampling may have to be re-scheduled.

7. A step purge volume test will initially be conducted at the first sample location by collecting and analyzing a sample for target compounds after purging 1, 3, 7, and 10. The sample purge volume with the highest target contaminant concentration will be utilized for all subsequent samples. A purge volume of seven (7) is proposed for this soil gas sampling. Upon successful vacuum testing, the vapor tight and purge canister valves are opened to passively withdraw seven volumes of ambient air from the sampling train tubing and fittings. A purge volume for a setup assuming about 15 feet of 0.25" OD (0.17" ID) tubing (4.46 ml per foot internal volume). The purge volume is estimated at approximately 67 ml (4.46 ml per foot x 15 feet). Seven purge volumes would be about 468 ml requiring 17.5 minutes purging at a flow rate of 26.6 ml (cc) per minute (1 liter canister) or about 2.8 minutes purging at a flow rate of 167 ml per minute (6 liter canister). Assuming an initial canister vacuum of 29.9 in Hg, then a 468 ml purge volume would result in a final vacuum gauge reading of 15.9 in Hg [29.9 in Hg – (0.0299 in Hg/ml x 468 ml)] for a 1 liter canister, or 27.5 in Hg [29.9 in Hg – (0.004983 in Hg/ml x 468 ml)] for a 6 liter canister. Actual purge volume, purge time, and final vacuum gauge reading will be calculated in the field based on as-built construction. The termination of purging is based on the final vacuum gauge reading (not time). Upon completion of purging, the purge canister and vapor tight valves are closed.

8. Leak testing on the borehole side of the vapor tight valve will be performed during the sample collection. Isopropyl alcohol (2-Propanol) saturated gauze, cotton, or paper towel is placed near

the down-hole side of the vapor tight valve (also any additional fittings and around the blank vapor rod floor seal if required by onsite inspectors). Note: Only one or two drops of alcohol are applied to the cotton gauze at a time by using an eye dropper. The liquid alcohol is not allowed to contact the fitting or tubing to avoid liquid penetration – only vapor should be in contact with the fitting or tubing. The gauze is held in close PROXIMITY to the fitting (but not touching) for several seconds. Sample gloves are replaced for each sample collected.

9. Sample canister(s) should be placed within a clean sample shroud, and sealed appropriately during actual sample collection. The procedure for collecting a vapor sample is as follows:
   a. Place a small section of gauze with IPA within sample shroud.
   b. Open vapor tight valve and bellows valve on sample canister(s) ½ turn and record initial start time. Seal shroud with appropriate material (e.g., foam pipe insulation).
   c. Collect sample for approximately 30 minutes until vacuum gauge reaches approximately 5 in Hg.
   d. Continuously monitor and record interior shroud VOC (IPA) concentration using a PID throughout sampling duration.
   e. Close vapor tight valve and canister bellows valve by hand tightening knob clockwise. Do not over-tighten the bellows valve on canister – ½ turn is sufficient. Record finish time on field data sheet.
   f. Remove vacuum gauge and replace the laboratory supplied brass cap (i.e., Swagelok ¼ inch plug) to the inlet of the canister bellows valve assembly. Do not over-tighten – ½ turn is sufficient.
   g. Verify and record final vacuum of sample canister(s) - target is 5 “Hg but 5-10” Hg mercury is acceptable.
10. Fill out canister sample tag and replace in box. Fill out chain-of-custody and relinquish samples properly.
11. The vapor sample canister(s) will be appropriately labeled and submitted for laboratory analysis under chain of custody command. The chain-of-custody record contains the final vacuum of the sample and the canister-flow controller serial numbers. Do not stick labels onto the surface of the Summa canisters. Store canisters out of direct sunlight. Cooling or refrigeration of canisters is not needed – store at room temperature.

Only one duplicate sample will be collected during the sampling activity if required. The duplicate sample will be collected separately using the procedures above. Optionally, an additional tee fitting can be added to the sample canister tubing adjacent to the vacuum gauge. The duplicate sample canister will be connected to the tee with tubing. During sampling both the sample and duplicate canisters will be opened simultaneously following the procedures discussed above. Sampling time would be adjusted to correct for the additional sampling volume.

Soil Gas Sample Analysis for Summa Canister

Summa canisters will be delivered to the laboratory by vehicle transport (courier or package delivery service - no air travel) within 48 hours of sample collection. Vapor samples will not be chilled in a cooler or refrigerated during storage or transport. The chain-of-custody record will accompany the canisters during storage and transport. Summa canister samples will be laboratory analyzed within 14 days of vapor sample collection (well within the 30 day limit stated by the laboratory). Laboratory reporting limits for specific chemicals of concern shall be below applicable environmental screening levels (ESLs)

promulgated by the California Regional Water Quality Control Board San Francisco Bay Region in November 2007.

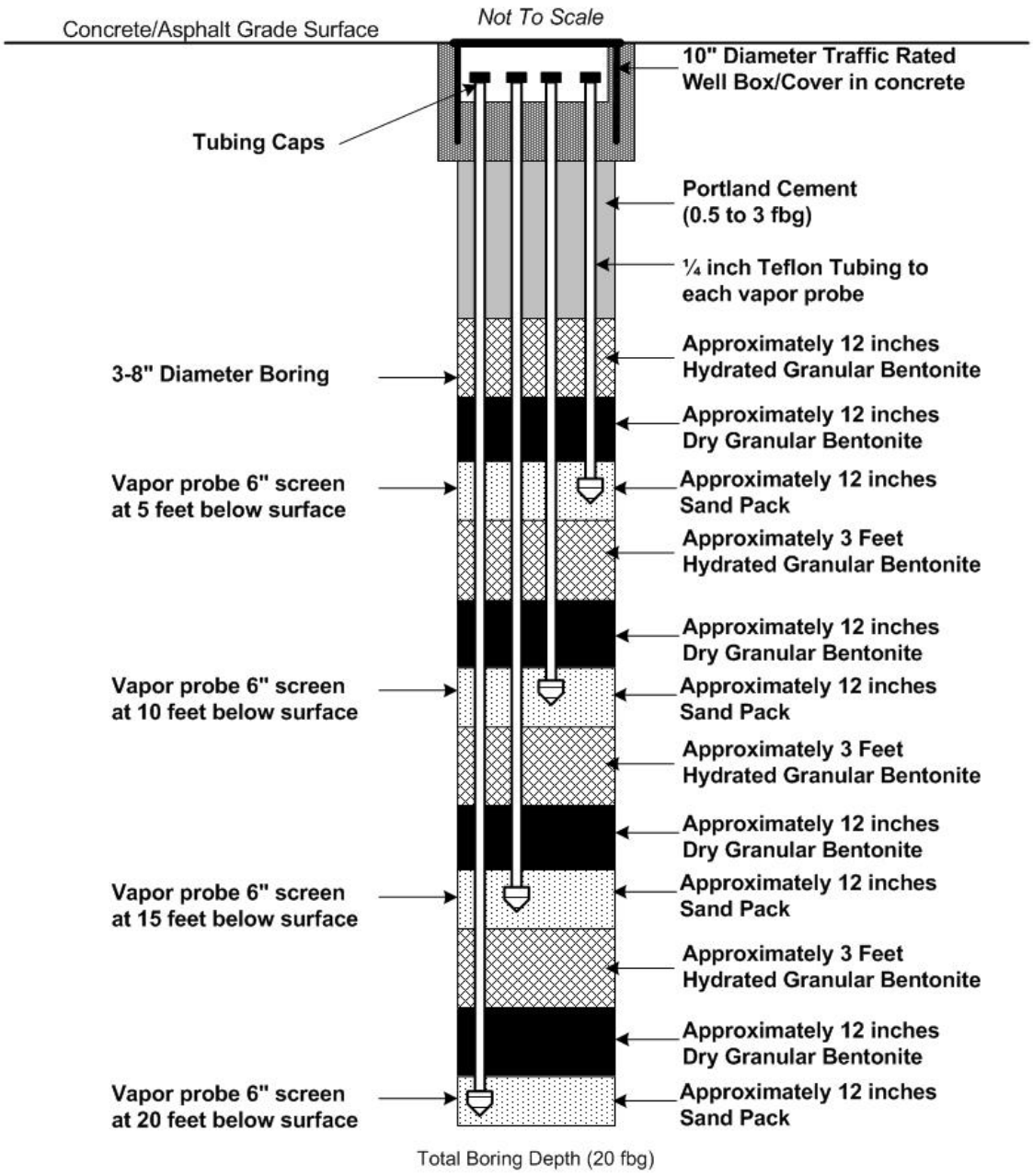
References

California Department of Toxic Substances Control (DTSC) and Los Angeles Regional Water Quality Control Board (LARWQCB), January 28, 2003, Advisory - Active Soil Gas Investigations.

California Department of Toxic Substances Control (DTSC), December 15, 2004 (revised February 7, 2005), Interim Final, Guidance For The Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air.

California Environmental Protection Agency (CalEPA), March 2010 Advisory – Active Soil Gas Investigation (DRAFT).

Nested Soil Vapor Probe
Construction Schematic



GOLDEN GATE TANK REMOVAL 3730 Mission Street, San Francisco, CA 94110 Phone (415) 512-1555 Fax (415) 512-0964	**VAPOR PROBE CONSTRUCTION DIAGRAM** Soil Gas Surveys	
GGTR Soil Gas Projects	*Not To Scale*	***Figure 1***

APPENDIX C

FIELD METHODS FOR SUB-SLAB VAPOR SAMPLING

WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

Sheaffs Garage
5930 College Avenue
Oakland, California
ACHCSA Site # RO0000377

APPENDIX C

FIELD METHODS FOR SUB-SLAB VAPOR SAMPLING

WORK PLAN ADDENDUM

Sheaffs Garage
5930 College Avenue, Oakland, California
ACHCSA Site # RO0000377

Pre-field Activities

If warranted, Golden Gate Tank Removal, Inc. (GGTR) will initially obtain an access agreement from the property owner or adjacent property owner for the sub-slab vapor sampling activities. GGTR will notify the property owners, tenants, and regulatory agency representatives of all scheduled fieldwork and arrange and schedule all drilling and laboratory subcontractor services. GGTR will verify that no significant precipitation (1/2 inch or more) has occurred in the last five days at the Site. Prior to drilling activities on concrete foundation slabs, GGTR will remove surface floor coverings and pressure-wash the concrete floor. Any containers of volatile chemicals will be removed and the work area ventilated to reduce any ambient volatile chemical vapors. An organic vapor analyzer (PID type) will be used to screen the work area and any obvious features for hydrocarbon vapors. Prior to commencing drilling and sampling activities, GGTR will conduct a tailgate safety meeting with all site personnel addressing information provided in the Community Site Health & Safety Plan.

Procedure for Temporary Sub-Slab Vapor Probe Installation

The following procedures are used to install one temporary sub-slab soil vapor sampling probe.

1. One of two methods is used to drill the borehole as follows (assuming a 6-inch concrete slab thickness):
    a. An electric drill with a spline bit is used to drill an approximately 1 inch diameter hole in the concrete floor slab. To minimize dust entering the borehole, a shop vacuum will be used to remove cuttings and dust prior to complete penetration of the slab. No water will be used during the spline bit drilling operation. A 1-inch diameter hole will be extended 3 inches below the bottom of the concrete slab in sub-slab fill material or gravel. The bit will be removed and dust vacuumed out of the hole for 3-5 seconds. Care will be taken not to penetrate into native soil beneath the slab.
    b. A 1-inch diameter core hole is drilled to a depth of 5 inches (slightly less than total slab thickness). After the core is removed, cooling water introduced during coring will be removed using shop vacuum and absorbent towels. Once the hole is dry, a rotary-hammer with a ¾-inch bit will be used to penetrate the remaining concrete (usually 1 inch). As soon as the slab is breached and 2-3 three inches of underlying backfill penetrated, the rotary-hammer bit will be removed and dust vacuumed out of the hole for 3-5 seconds. Care will be taken not to penetrate into native soil beneath the slab.
2. Immediately following completion of drilling activities, a Thermo® 580B Organic Vapor Analyzer or Photo Ionization Detector will be used to measure any hydrocarbon vapor that may

be present in the borehole. If significant vapor is detected, then a semi-permanent sampling point may optionally be installed instead of a temporary probe. Figure 1 (Appendix C) *Schematic of Sub-Slab Vapor Probes* illustrates the various vapor sampling probes that may be utilized.

3. GGTR will measure the concrete slab thickness (assumed to be 6 inches). New 0.25" OD (0.17" ID) Teflon or stainless steel tubing is inserted in the borehole to reach the base of the slab. The polyethylene tubing above ground will be connected to a vapor tight valve.
4. The borehole will be sealed using the following method. The borehole is grouted with hydrated bentonite in the borehole annular space from the probe tip extending upward to the concrete floor surface (about 5 inches). The bentonite is hydrated prior to placing seal around probe pipe.

   Following installation of the temporary soil vapor sampling probe, at least 30 minutes will elapse to allow the bentonite to congeal and subsurface vapor conditions to equilibrate prior to collecting a vapor sample.
5. Upon completion of the vapor sampling, the temporary vapor probe will be extracted from the bore hole and the bore hole completely grouted and finished with concrete flush to the existing floor.

Procedure for Semi-Permanent Sub-Slab Vapor Point Installation

If initial hydrocarbon vapor screening reveals obvious soil vapor occurs beneath the concrete slab, GGTR may optionally install one semi-permanent sub-slab vapor sampling point. The semi-permanent sampling point would replace the temporary sampling probe discussed above. The sampling point would be installed generally according to DTSC guidance - Soil Gas Sampling Directly Under Building Foundations (Sub-slab Sampling), Vapor Intrusion Guidance Document – Final Interim (December 15, 2004).

GGTR would utilize the following procedure to install a semi-permanent sub-slab soil vapor sampling point:

1. GGTR would drill a 1-inch diameter hole in the concrete floor slab as discussed above for temporary probes. To accommodate a recessed or flush surface termination, the hole is enlarged to approximately 1-1/2" diameter at the surface to leave enough room for the recessed fitting on the blank probe pipe and treaded cap.
2. GGTR would install a vapor point consisting of nominally 0.25" OD diameter stainless steel pipe. A suitable commercially available vapor point with a permeable probe tip may also be installed at the discretion of GGTR. If needed, a Teflon® sealing disk is placed between the probe tip and the blank pipe.
3. Sand is placed in the borehole to cover about one inch of the vapor probe tip to prevent bentonite/cement from obstructing the probe tip. Approximately 2 inches of hydrated bentonite is used to seal the borehole annular space directly above the probe tip and sand pack. The blank probe pipe is tightly sealed to the foundation slab with approximately 4 inches of quick-setting contaminant-free cement. The bentonite and cement would be allowed to cure at least 30 minutes before vapor sampling.
4. The vapor probe would be finished with a recessed threaded cap so the probe completion is flush with the foundation slab. The installation is finished to minimize tripping hazard.
5. Upon completion of all required vapor sampling, the semi-permanent vapor probe would be decommissioned by removal of piping and grouting with concrete.

Vapor Sampling

GGTR will utilize a laboratory-supplied 1-liter Summa Canister (10% canister cleaning certification) for the "whole air" grab sample collected at the site. The analytical laboratory will supply the certified-clean Summa canister and associated equipment. GGTR will assemble and leak-check the sampling apparatus prior to mobilizing to the field. Figure 2 (Appendix C) *Schematic of Sub-Slab Vapor Sampling* illustrates the proposed vapor sampling train construction.

GGTR will utilize the following procedure to conduct the sub-slab soil vapor sampling:

1. GGTR will utilize a laboratory-supplied 1-liter Summa Canister (10% canister cleaning certification) for the "whole air" grab sample collected at the site. Two 1-liter Summa canisters will be utilized during the soil vapor collection consisting of a sample canister and a purge canister. The laboratory cleaned vacuum gauge will be checked for zero reading and equilibrated if necessary. The Summa canister vacuum will be checked immediately before use to verify a vacuum of 29.9 inches of mercury (minimum of 25 in Hg as provided by laboratory). An additional Summa Canister and single manifold system may be placed in the shroud enclosure for sample collection and analysis of IPA only.

   The procedure for confirming the initial vacuum pressure is as follows:

   a. Confirm canister bellows valve is closed clockwise and remove brass cap.
   b. Attach vacuum gauge and attach brass cap to side of gauge tee fitting.
   c. Open and close valve quickly (a few seconds).
   d. Read vacuum on the gauge (target vacuum is 29.9 inches (in) of mercury (Hg) with minimum vacuum of 25 inches Hg required).
   e. Record gauge reading on "Initial Vacuum" column of chain-of custody form and field data sheet. Verify that canister bellows valve is closed.

2. GGTR will attach a vacuum gauge with tee fitting to the bellows valve fitting of both the purge and sample canister. About one foot of 0.25" OD (0.17" ID) Teflon tubing is connected to the tee fitting on each gauge. The ends of the tubing are connected to a third tee fitting (junction). All connection fittings use 0.25" Swagelok® type fittings (9/16 inch wrench). A new pair of sampling gloves is worn during assembly of sampling apparatus. Fittings will not be over-tightened – finger tight plus ¼ turn with wrench is adequate.
3. Teflon tubing (0.25" OD) and 0.25" Swagelok® type fitting is used to assemble a sampling train. One passive critical orifice flow restrictor provided by the laboratory will be connected to the borehole side of the tee junction. The passive flow restrictor is pre-set by the laboratory to provide a 30 minute sampling interval at 26.6 ml per minute flow rate (pre-configured for a one liter Summa canister with 800 ml target volume). Flow rate will not exceed 50 ml per minute and a vacuum of <100" of water should be maintained throughout sampling.
4. A laboratory supplied 2 micron particulate filter is connected to the borehole side of the flow restrictor. The vapor-tight valve is connected to the borehole side of the filter.
5. The connections between the summa canisters and vapor tight valve will be vacuum tested for 10 minutes by opening and closing the purge canister valve to place a test vacuum on the sampling train assembly. The test is terminated if gauge vacuum cannot be maintained for 10 minutes. The onsite regulatory agency inspector monitors the leak testing results. If the leak test fails and cannot be rectified in a timely manner, then the vapor sampling may have to be re-scheduled.

6. Upon successful vacuum testing, the vapor tight and purge canister valves are opened to passively withdraw three volumes of ambient air from the sampling train tubing and fittings. A purge volume for a setup assuming about 10 feet of 0.25" OD (0.17" ID) tubing (4.46 ml per foot internal volume). The purge volume is estimated at approximately 45 ml (4.46 ml per foot x 10 feet). Three purge volumes would be about 135 ml requiring 5 minutes purging at a flow rate of 26.6 ml (cc) per minute. Assuming an initial canister vacuum of 29.9 in Hg, then a 135 ml purge volume would result in a final vacuum gauge reading of 25.8 in Hg [29.9 in Hg – (0.0299 in Hg/ml x 135 ml)]. Actual purge volume, purge time, and final vacuum gauge reading will be calculated in the field based on as-built construction. The termination of purging is based on the final vacuum gauge reading (not time). Upon completion of purging, the purge canister and vapor tight valves are closed.
7. Leak testing on the borehole side of the vapor tight valve will be performed during the sample collection using one of two methods as follows:
    a. Rubbing alcohol (2-Propanol) saturated gauze, cotton, or paper towel is placed on the down-hole side of the vapor tight valve (also any additional fittings and around the blank vapor rod floor seal if used). Alcohol will be dropped on the gauze every five minutes.
    b. Leak detection compounds, such as 1,1-difluorothane or tetrafluoroethane, which are found in "dust-off" sprays, will be regularly discharged around all tubing joints where leakage of ambient air into the system could potentially occur. These compounds were selected as the leak detection compounds because they are non-toxic gases that are easily identifiable during analysis and do not occur at contaminated sites. Therefore, they do not interfere with the quantitative analysis of VOCs.
8. Sample canister(s) should be placed within a clean sample shroud, and sealed appropriately during actual sample collection. The procedure for collecting a vapor sample is as follows:
    a. Place a small section of gauze with IPA within sample shroud.
    b. Open vapor tight valve and bellows valve on sample canister(s) ½ turn and record initial start time. Seal shroud with appropriate material (e.g., foam pipe insulation).
    c. Collect sample for approximately 30 minutes (pre-set flow rate of 176 ml/minute) until vacuum gauge reaches approximately 5 in Hg (just over 5000 ml sample recovery).
    d. Continuously monitor and record interior shroud VOC (IPA) concentration using a PID throughout sampling duration.
    e. Close vapor tight valve and canister bellows valve by hand tightening knob clockwise. Do not over-tighten the bellows valve on canister – ½ turn is sufficient. Record finish time on field data sheet.
    f. Remove vacuum gauge and replace the laboratory supplied brass cap (i.e., Swagelok ¼ inch plug) to the inlet of the canister bellows valve assembly. Do not over-tighten – ½ turn is sufficient.
    g. Verify and record final vacuum of canister (5-10 Hg mercury is acceptable) using vacuum verification procedure described above.
    h. Fill out canister sample tag and pack in box. Fill out chain-of-custody and relinquish samples properly.
9. The vapor sample canister will be appropriately labeled and submitted for laboratory analysis under chain of custody command. The chain-of-custody record contains the final vacuum of the sample and the canister-flow controller serial numbers.

10. Only one duplicate sample will be collected during the sampling activity if required. The duplicate sample will be collected separately using the procedures above. Optionally, an additional tee fitting would be added to the sample canister tubing adjacent to the vacuum gauge. The duplicate sample canister will be connected to the tee with tubing. A separate vacuum gauge would be added to the duplicate canister. During sampling both the sample and duplicate canisters will be opened simultaneously following the procedures discussed above. Sampling time would be adjusted to correct for the additional sampling volume.

Vapor Sample Analysis

The Summa canister will be delivered to the laboratory by vehicle transport (courier or package delivery service - no air travel) within 48 hours of sample collection. Vapor samples will not be chilled in a cooler or refrigerated during storage or transport. The chain-of-custody record will accompany the canisters during storage and transport. Laboratory reporting limits for specific chemicals of concern shall be below applicable environmental screening levels (ESLs) promulgated by the California Regional Water Quality Control Board San Francisco Bay Region in November 2007. Summa canister samples will be laboratory analyzed within 14 days of vapor sample collection (well within the 30 day limit stated by the laboratory).

Indoor and Ambient Air Sampling

In accordance with DTSC guidance, indoor air and ambient air samples will be collected in SUMMA canisters and will be analyzed by US EPA Method TO-15 only for chemicals detected in the previous sub-slab vapor samples. GGTR will utilize one laboratory-supplied 6-liter Summa Canisters per each sample collected at the site. Analysis is planned to include SIM so detection limits will be lower than the risk-based target concentrations for indoor air. Since the buildings are planned to be leased to commercial interests, the indoor air samples will be collected over an eight-hour period. The building's ground floors are vacant and no central ventilation and heating systems are present, so in accordance with the DTSC guidance, the building will be sampled as a closed structure.

At each sampling location, sample inlets will be approximately three feet above the floor. When the sampling canisters are requested from the laboratory, the sampling duration will be specified so that the laboratory can pre-set the flow controller rates. By providing the appropriate pressure to the laboratory, the laboratory can simulate the proper pressure and set flow controllers accordingly. A fixed-flow controller is set to collect 5 liters (L) of sample over the time interval so that a net negative pressure is maintained in the canister. The flow rate for a 6-L canister collecting an 8-hour composite sample would be approximately 13.35 milliliters per minute.

Ambient air samples will be collected in order to provide verification that the laboratory is able to detect low ambient levels of COCs and to help determine how sources outside of the buildings may impact indoor air quality. Ambient air samples will also be collected over an 8-hour period, but they will be stared to initiate collection one to two hours before indoor air samples and terminate collection approximately 30 minutes before the indoor air samples, per the DTSC Guidance. Per DTSC guidance to reflect the source air for the building, collection of the two ambient air samples will begin one to two hours before initiation of indoor air sampling. Ambient air samples will be collected outside the building on the San Pablo Avenue sidewalk. The samplers will be secured or monitored to prevent disturbance over the course of the sampling period. The ambient air sampling location was selected to avoid physical features such as other buildings and hillsides that could block wind on the sides of the building, as recommended in the DTSC guidance. Wind direction will be assessed on the day of sampling and ambient air locations may be adjusted, if necessary, so that the ambient sample location is generally upwind of the building throughout the sample collection period.

The indoor air risks will be compared with the risks calculated for ambient air and the ratios of the compounds detected in subsurface soil gas and indoor air will be assessed. Together, this information will be used to determine if the constituents and levels detected in indoor air are representative of ambient air or other potential sources and to evaluate the significance of the indoor air risk. This information will be used to determine if mitigation measures are necessary to reduce potential risks to future building occupants. To achieve the DTSC Guidance recommendation for analyses over seasonal differences, a second round of indoor air samples will be collected within 3 to 6 months after the initial sample if required by the local regulatory agency. Per U.S. EPA Guidance, the ratios of VOCs in indoor air samples will be compared to the ratios of the same VOCs in sub-slab samples to distinguish subsurface-derived VOCs from non-subsurface sources (i.e., indoor air and ambient air sources). If these ratios are different then the VOCs in indoor air are not originating from the sub-slab vapor (i.e., vapor intrusion is not a complete pathway) and those chemicals will not be included in the evaluation of risk due to vapor intrusion. The risks of chemicals detected in ambient air samples and indoor air samples will be calculated and/or compared to ESL screening levels. The risk associated with chemicals in ambient air will be included in the assessment of the significance of indoor air risk.

If no chemicals on the analyte list are detected in any of the indoor air samples or ambient air samples from a single round, then GGTR will discuss the results with the laboratory and ascertain if other VOCs were detected but not reported by the laboratory. If no VOCs were detected, in keeping with the DTSC Guidance, the data will be rejected and the sampling event repeated

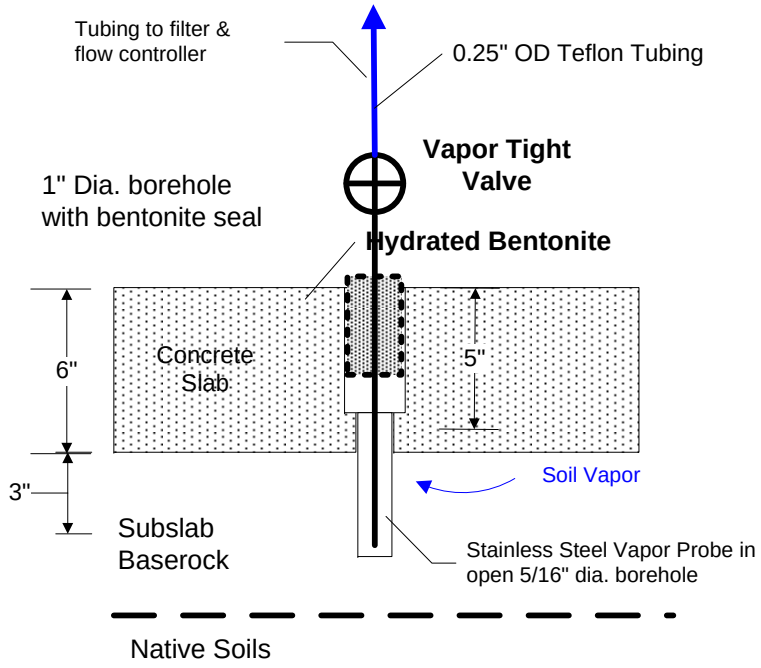
Per Department of Toxic Substances Control ("DTSC") guidance, a trip blank will be submitted for each day of air sampling. An extra evacuated canister will be sent from the laboratory with the canisters in which the air samples will be collected. The trip blank canister will be placed in the building when the other air samples are being collected, but it will remain under vacuum and will be filled by the laboratory after the return of the now full sample canisters. Although the DTSC guidance requires a trip blank, if the trip blank canister fails (i.e., if compounds are detected in the trip blank), it will indicate that the vacuum was fully not maintained on that particular canister; it will not necessarily indicate that any of the other sample canisters have failed.

Sub-Slab Vapor and Indoor Air Sample Analysis

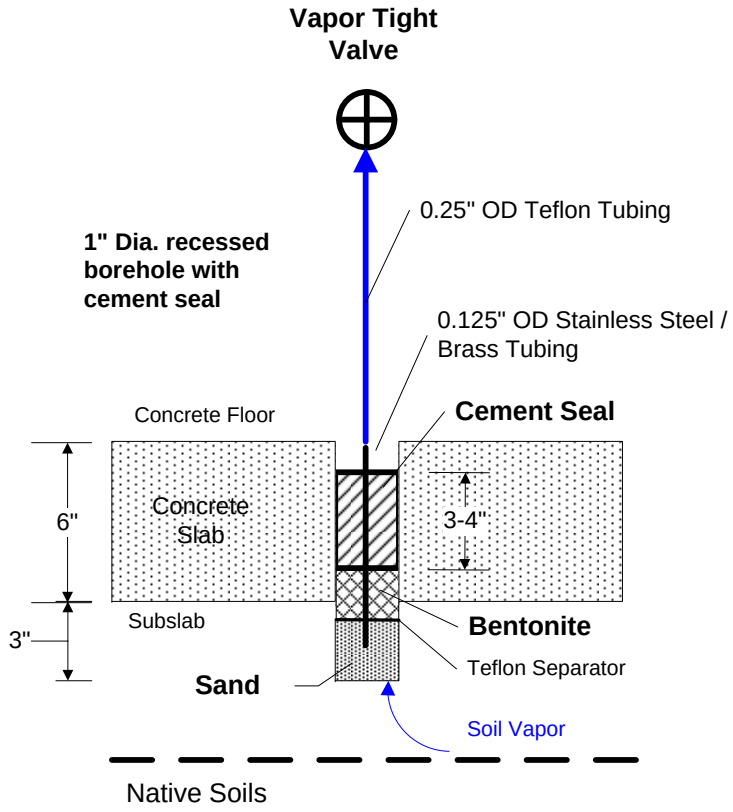
The Summa canister will be delivered to the laboratory by vehicle transport (courier or package delivery service - no air travel) within 48 hours of sample collection for analysis. Vapor samples will not be chilled in a cooler or refrigerated during storage or transport. The chain-of-custody record will accompany the canisters during storage and transport. Summa canister samples will be laboratory analyzed within 14 days of vapor sample collection (well within the 30 day limit stated by the laboratory). Laboratory reporting limits for specific chemicals of concern shall be below applicable environmental screening levels (ESLs) promulgated by the California Regional Water Quality Control Board San Francisco Bay Region on February 2005.

Waste Management

No significant soil or liquid hazardous waste is expected to be generated during the drilling, vapor probe installation, or vapor sampling activities.



Temporary Vapor Probe with Bentonite Seal



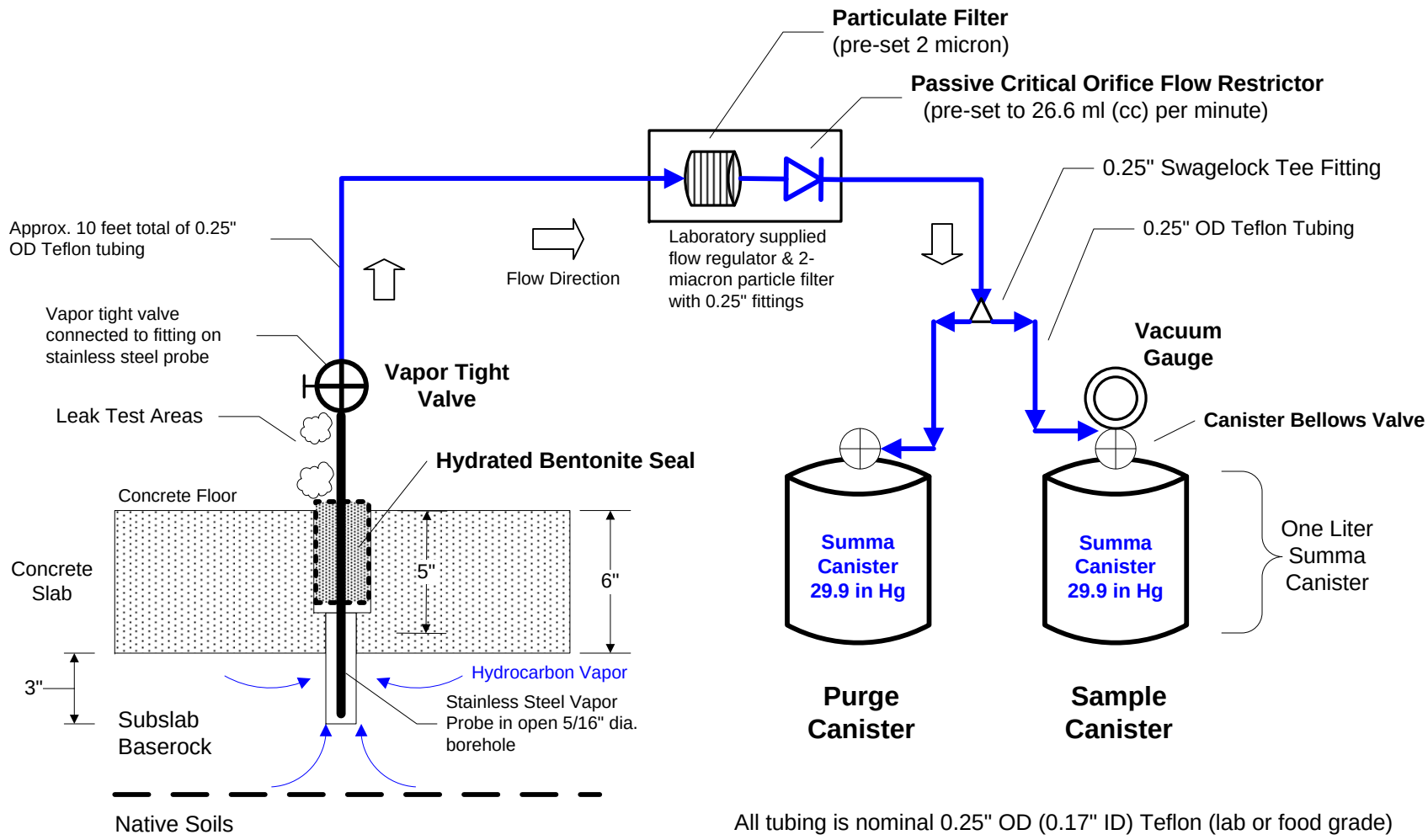
Semi-Permanent Vapor Probe with grout Seal

NOT TO SCALE - SKETCH ONLY

Golden Gate Environmental, Inc.
San Francisco, CA

Schematic of Subslab Vapor Probes

Drawing by MY	October 2010	**Figure 1**



Laboratory Analysis, Summa canisters, flow restrictor, particulate filter, bellows valves, and vacuum gauges provided by Air Toxics Ltd

All tubing is nominal 0.25" OD (0.17" ID) Teflon (lab or food grade)
All fittings are 0.25" Swagelock type (9/16 wrench)
Purge volume = length of tubing X 4.46 ml / foot internal volume
Flow rate is pre-set by laboratory to 26.6 ml (cc) per minute for a 30 minute sample time to recover 800 ml sample with final vacuum of 5 inches Hg

NOT TO SCALE - SKETCH ONLY

Golden Gate Environmental, Inc.
San Francisco, CA

Schematic of Sub-Slab Vapor Sampling

Drawing by MY	October 2010	**Figure 2**

APPENDIX D

MISCELLANEOUS DOCUMENTATION

WORK PLAN ADDENDUM

FOR

SOIL GAS SAMPLING

Sheaffs Garage
5930 College Avenue
Oakland, California
ACHCSA Site # RO0000377

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

ENVIRONMENTAL HEALTH DEPARTMENT
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

August 3, 2010

Dr. Brian Sheaff (via e-mail: drsheaff@pacbell.net)
William J Sheaf TTE Trust
1945 Parkside Drive
Concord, CA 94519

Subject: Work Plan Denial for Fuel Leak Case No. RO0000377 and Geotracker Global ID T0600102112, Sheaff's Garage, 5930 College Avenue, Oakland, CA 94618

Dear Dr. Brian Sheaff:

Thank you for the recently submitted document entitled, "Soil and Water Investigation Work Plan & Site Conceptual Model," dated June 2, 2009, which was prepared by Golden Gate Tank Removal for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned report/work plan for the above-referenced site.

The work plan/SCM proposes additional investigation to address data gaps defined in the SCM including installing additional soil borings and wells and resurveying. However, the above-mentioned report does not include a plan to assess the vapor intrusion pathway either at the site or at the adjacent building. Therefore, the scope of work presented in the work plan is not complete and cannot be approved at this time. ACEH requests that you address the following technical comments and send us a work plan addendum/revised work plan as requested below.

The above-mentioned report does not include a plan to assess the vapor intrusion pathway either at the site or at the adjacent building. Therefore, an adequate evaluation could not be performed. ACEH requests that you address the following technical comments and send us an addendum as requested below.

TECHNICAL COMMENTS

1. **Boring and Well Locations** – We request that the location of the deep CPT boring be relocated closer to the source area (the former UST) in the vicinity of B2 and B10. We request that MW-5 be located witin the plume between MW-3 and HB-6.

2. **Vapor Sampling** – The potential for vapor intrusion to indoor air must be adequately evaluated before case closure will be evaluated. The RWQCB ESLs do not contain look up tables for volatilization from soil but instead requires that vapor data be collected to determine

the potential for vapor intrusion. Shallow soil (9 feet and above) has benzene concentrations at 13 mg/kg. Volatilization from soil was not adequately evaluated in the SCM, leaving this data gap unassessed. Please submit a work plan addendum for soil vapor sampling by the date requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Barbara Jakub), according to the following schedule:

- **October 3, 2010** – Soil and Water Investigation Work Plan Addendum

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosure: Responsible Party(ies) Legal Requirements/Obligations
ACEH Electronic Report Upload (ftp) Instructions

cc: Brent Wheeler, Golden Gate Tank Removal, 3730 Mission St., San Francisco, CA 94110 (via e-mail: b.wheeler@ggtr.com)
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Barbara Jakub, ACEH (*Sent via E-mail to:* barbara.jakub@acgov.org)
GeoTracker, e-files

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- **Signature pages and perjury statements must be included and have either original or electronic signature.**
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape, Safari, and Firefox browsers will not open the FTP site.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.