

**ExxonMobil Environmental Services Company**  
4096 Piedmont Avenue #194  
Oakland, California 94611  
510 547 8196 Telephone  
510 547 8706 Facsimile

**Jennifer C. Sedlachek**  
Project Manager

**RECEIVED**

2:10 pm, Jun 19, 2009

Alameda County  
Environmental Health

**ExxonMobil**

June 19, 2009

Ms. Barbara Jakub  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: Former Mobil Station 04FGN, 14994 East 14<sup>th</sup> Street, San Leandro, California  
Fuel Leak Investigation Site No. RO0000422

Dear Ms. Jakub:

Attached for your review and comment is a copy of the *Work Plan Addendum* for the above-referenced site. The letter, prepared by ETIC Engineering, Inc. of Pleasant Hill, California, is submitted in response to your letter dated April 20, 2009 which requested the addendum.

Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or comments, please contact me at 510.547.8196.

Sincerely,



Jennifer C. Sedlachek  
Project Manager

Attachment: Work Plan Addendum

- c: w/ attachment:  
Ms. Jana Gluckman – property owner
  
- c: w/o attachment:  
Mr. Bryan Campbell - ETIC Engineering, Inc.

19 June 2009

Ms. Jennifer C. Sedlachek  
ExxonMobil Environmental Services Company  
4096 Piedmont Avenue #194  
Oakland, California 94611

Subject: Work Plan Addendum  
Former Mobil Station 04FGN, 14994 East 14<sup>th</sup> Street, San Leandro, California  
Fuel Leak Investigation Site No. RO0000422

Dear Ms. Sedlachek:

ETIC Engineering, Inc. (ETIC) has prepared this Work Plan Addendum for ExxonMobil Environmental Services Company on behalf of ExxonMobil Oil Corporation for former Mobil Station 04FGN, 14994 East 14<sup>th</sup> Street, San Leandro, California. This Work Plan Addendum was prepared in response to a request by the Alameda County Health Care Services Agency (ACHCSA) dated 20 April 2009 (Appendix A).

A Risk Assessment Work Plan and Preferential Pathway Survey, dated October 2008, was previously submitted for the site (ETIC 2008). The work plan included a proposed risk assessment for the evaluation of potential vapor intrusion risks resulting from potential exposure to hydrocarbons beneath the site. The work plan included a scope of work for the installation and sampling of five soil vapor monitoring wells (Figure 1). The work plan also included a conduit study and a discussion of nearby sensitive receptors other than wells including nearby creeks, water bodies, and wetlands.

In their letter, the ACHCSA approved the locations of the proposed soil vapor monitoring wells and requested the submittal of a work plan addendum which clarifies technical comments. The ACHCSA comments are shown in bold and responses to those comments are detailed below:

1. **As per the DTSC Advisory – Active Soil Gas Investigation (28 January 2003), use dry granular bentonite immediately above the sand pack to prevent the hydrated bentonite grout from infiltrating rather than bentonite chips as shown on your diagram and hydrated bentonite above the dry granular bentonite rather than neat cement grout.** The soil vapor monitoring wells will be constructed with dry granular bentonite immediately above the sand pack and hydrated bentonite will be placed above the dry granular bentonite. Refer to Figure 2 for a revised well construction diagram and Appendix B for construction details.
2. **Please explain how your tracer compound will be applied. The tracer compound needs to be present during the entire sampling collection period in case a leak develops during that period.** A tracer composed of helium gas will be used and checked in the field as part of the sample collection procedures to ensure that there is an airtight connection at the well head and that ambient air does not enter the well. Refer to Appendix B for the revised field protocols.

3. **In addition to oxygen, samples collected for leak detection should include carbon dioxide.** The samples collected from the soil vapor monitoring wells will be submitted to the laboratory and analyzed for oxygen and carbon dioxide; however, the leak test will be accomplished in the field using helium gas following the procedures outlined in Appendix B.
4. **Per DTSC advisory, do not store the soil vapor samples in an ice-filled cooler.** The soil vapor samples will not be stored in an ice-filled cooler.

In addition, the ACHCSA requested that while advancing the proposed soil borings for soil vapor well installation adjacent to the used-oil tank, that the analyses of the following compounds be included:

- Volatile organic compounds (VOCs) including chlorinated hydrocarbons by EPA Method 8260 for soil samples,
- Metals (Cd, Cr, Pb, Ni, and Zn) by ICAP or AA for soil samples, and
- Chlorinated VOCs (EPA Method 8260 or TO-15) analysis for the soil vapor samples.

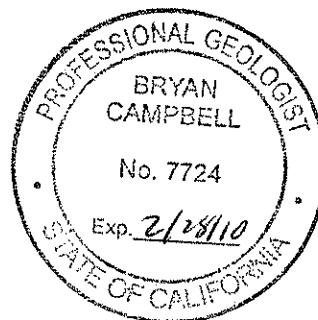
Well VW2 will be installed close to the location of the former used-oil tank (Figure 1). The compounds listed above will be added to the compounds proposed in the work plan for the soil and soil vapor samples collected from VW2. In addition, a soil sample collected during the installation of well VW4 will be analyzed for metals (Cd, Cr, Pb, Ni, and Zn) by ICAP or AA in order to gauge the relative background concentrations of those metals for comparison to the analysis of metals for the soil sample from VW2.

If you have any questions, please contact ETIC at (925) 602-4710 (ext. 24 for Bryan Campbell).

Sincerely,



Bryan Campbell, P.G. #7724  
Senior Geologist



Attachments:

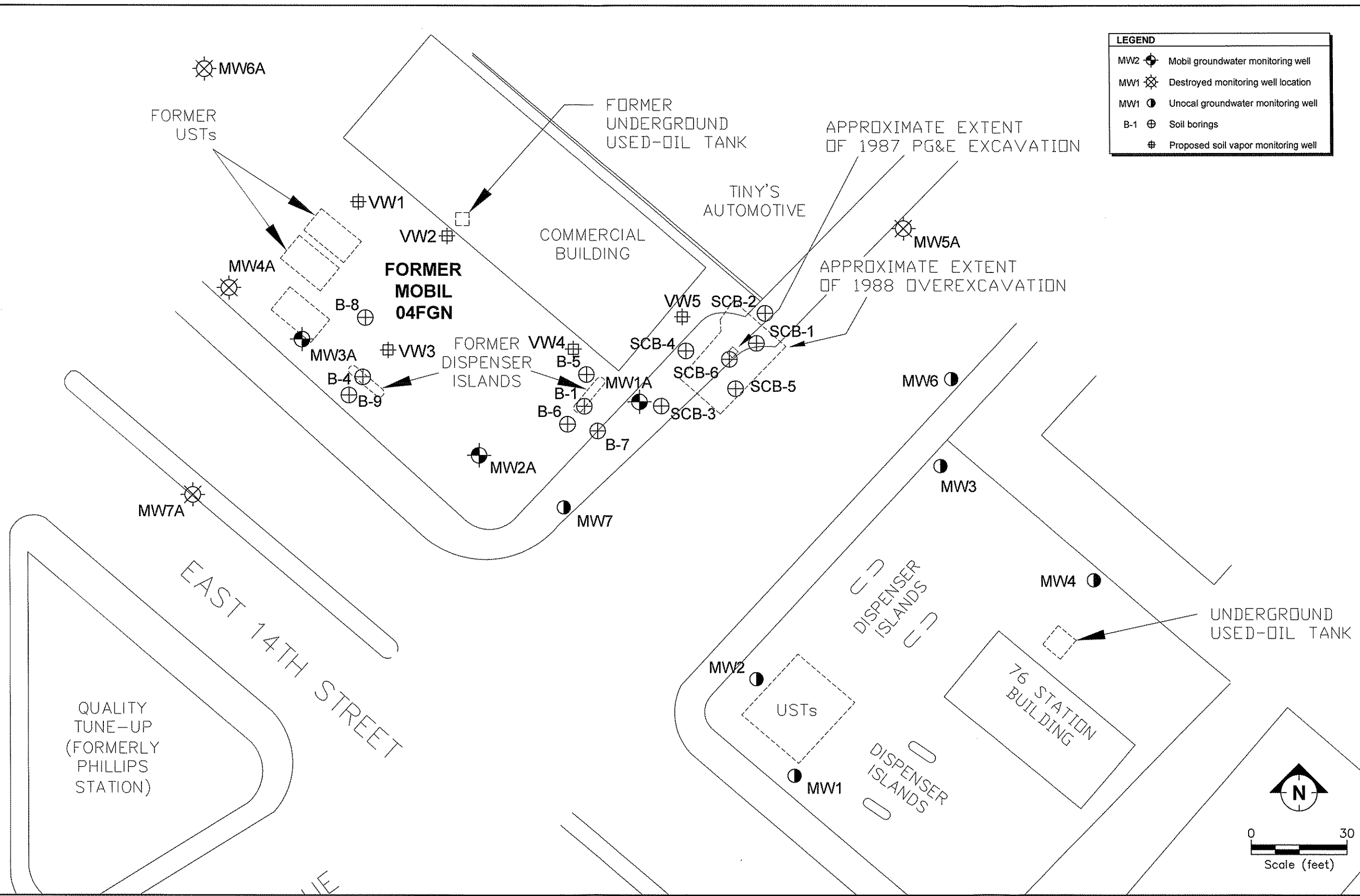
- Figure 1: Site Map Showing Proposed Soil Vapor Monitoring Wells
- Figure 2: Well Completion Diagram for Proposed Soil Vapor Monitoring Wells
- Appendix A: Regulatory Correspondence
- Appendix B: Field Protocols

#### References

ETIC (ETIC Engineering, Inc.). 2008. Risk Assessment Work Plan and Preferential Pathway Survey. Former Mobil Station 04FGN, 14994 E 14<sup>th</sup> Street, San Leandro, California. October.

## **Figures**

LEGEND	
MW2	Mobil groundwater monitoring well
MW1	Destroyed monitoring well location
MW1	Unocal groundwater monitoring well
B-1	Soil borings
#	Proposed soil vapor monitoring well



SITE MAP SHOWING PROPOSED SOIL VAPOR MONITORING WELLS  
 FORMER MOBIL STATION 04FGN  
 14994 EAST 14th STREET  
 SAN LEANDRO, CALIFORNIA

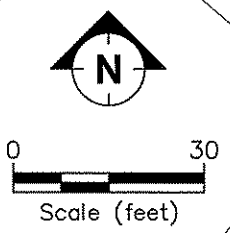
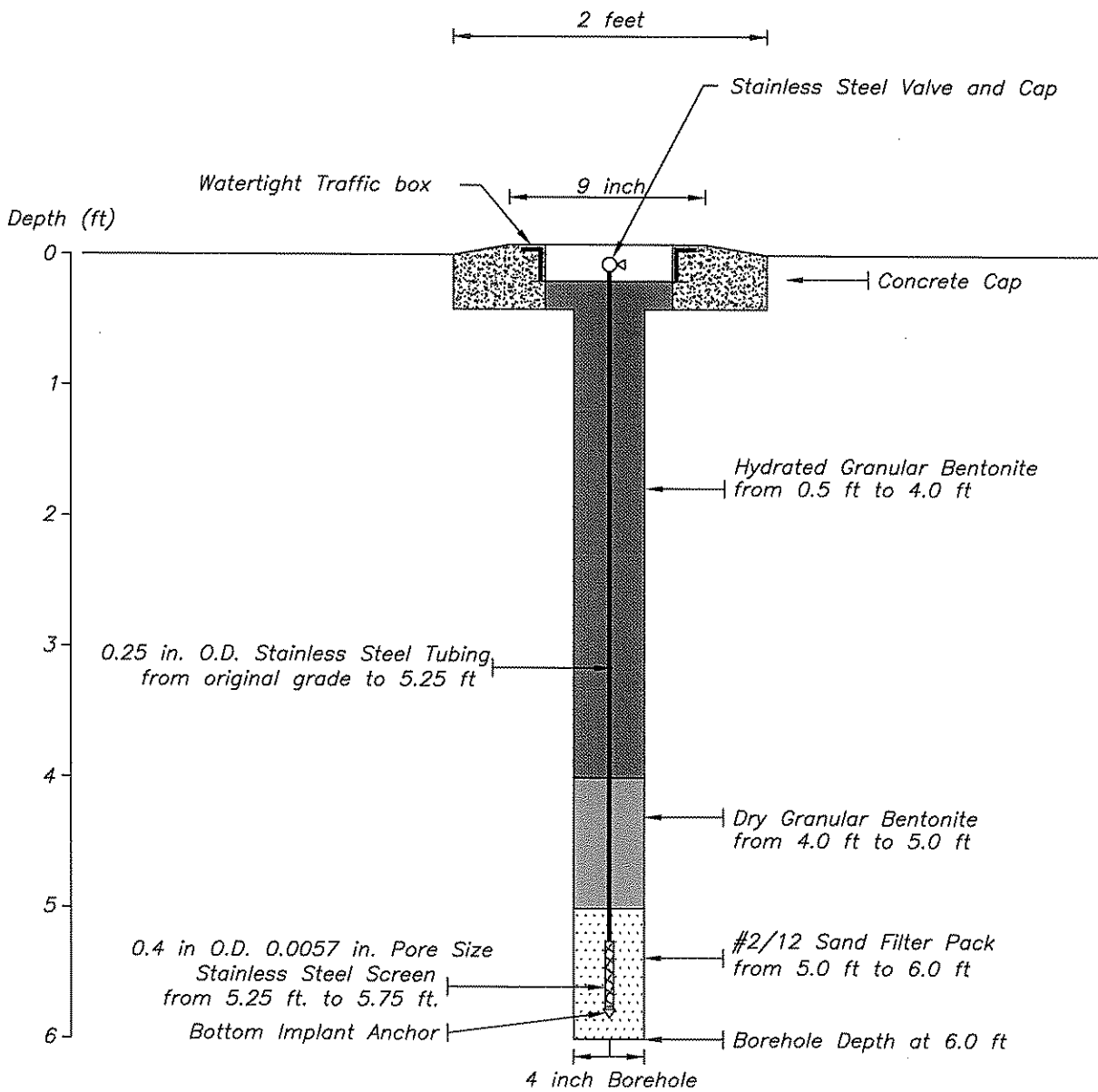


FIGURE:  
**1**

FILENAME: prop1008.DWG 10/14/06





O.D. Outer Diameter



WELL COMPLETION DIAGRAM FOR  
 PROPOSED SOIL VAPOR MONITORING WELLS  
 FORMER MOBIL STATION 04FGN  
 14994 EAST 14TH STREET, SAN LEANDRO, CALIFORNIA

FIGURE:

2

**Appendix A**  
**Regulatory Correspondence**



04 FGN

RECEIVED  
APR 23 REC'D  
ETIC ENGINEERING

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

April 20, 2009

Ms. Jennifer Sedlachek  
ExxonMobil  
4096 Piedmont Ave.  
Oakland, CA 94611

Jana Gluckman  
2110 Stonehaven Drive  
Los Altos, CA 94024

Subject: Fuel Leak Case No. RO0000422 and Geotracker Global ID T0600100912, Mobil #04-FGN, 14994 E 14<sup>th</sup> St, San Leandro, CA 94578

Dear Ms. Sedlachek and Ms. Gluckman:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the most recent document entitled, *Risk Assessment Work Plan and Preferential Pathway Survey*, dated October 30, 2008 and the *Quarterly Groundwater Monitoring Report, Fourth Quarter 2008* dated January 30, 2009 prepared by ETIC Engineering.

We request that you address the following technical comments and submit a brief work plan addendum that addresses the technical comments below.

#### TECHNICAL COMMENTS

1. **Soil Vapor Well Installation and Sampling** - ACEH approves the locations of your proposed soil vapor wells. However, we request additional clarification on the following items and request that you submit a brief addendum addressing the following;
  - As per the DTSC *Advisory – Active Soil Gas Investigations* (January 28, 2003), use dry granular bentonite immediately above the sand pack to prevent the hydrated bentonite grout from infiltrating rather than bentonite chips as shown on your diagram and hydrated bentonite above the dry granular bentonite rather than neat cement grout.
  - Please explain how your tracer compound will be applied. The tracer compound needs to be present during the entire sample collection period in case a leak develops during that period. Please submit this information in a brief work plan addendum requested below.
  - In addition to oxygen, samples collected for leak detection should include carbon dioxide.
  - Per DTSC advisory, do not store the soil vapor samples in an ice-filled cooler.



2. **Waste-Oil Tank Sampling.** ACEH's August 25, 2008, letter, we requested further information on the waste-oil tank removal. After a search of San Leandro files, ETIC discovered that only one soil sample was collected from the waste-oil tank. This sample was only analyzed for volatile hydrocarbons and extractable hydrocarbons. Both samples were below the detection limits. However, guidelines for waste-oil tank sampling include many other compounds, including metals. While advancing the proposed soil borings for soil vapor well installation adjacent to the waste-oil tank, please include volatile organic compounds (VOCs) including chlorinated hydrocarbons by EPA Method 8260 and metals (Cd, Cr, Pb, Ni, and Zn) by ICAP or AA for soil samples and include chlorinated VOCs (EPA Method 8260 or TO-15) analysis for the vapor samples.

#### TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Barbara Jakub), according to the following schedule so that we can complete our closure review for this site:

- **June 19, 2009** –Work Plan Addendum

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](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.

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Sincerely,



Barbara Jakub, P.G.  
Hazardous Materials Specialist

Ms. Sedlachek and Ms. Gluckman  
RO0000422  
April 20, 2009, Page 4

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Mr Bryan Campbell, ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA  
94523  
Donna Drogos, ACEH  
Barbara Jakub, ACEH  
File

<b>Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)</b>	<b>ISSUE DATE:</b> July 5, 2005
	<b>REVISION DATE:</b> December 16, 2005
	<b>PREVIOUS REVISIONS:</b> October 31, 2005
<b>SECTION:</b> Miscellaneous Administrative Topics & Procedures	<b>SUBJECT:</b> Electronic Report Upload (ftp) Instructions

Effective **January 31, 2006**, 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

- Entire report including cover letter must be submitted to the ftp site as a **single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- 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)

#### Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

#### 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](mailto:dehloptoxic@acgov.org)  
or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of ftp site Coordinator.
  - 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 and Firefox browsers will not open the FTP site.
  - b) Click on File, then on Login As.
  - 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](mailto: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 at 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)

**Appendix B**  
**Field Protocols**

## **PROTOCOLS FOR INSTALLATION AND SAMPLING OF SOIL VAPOR WELLS**

### **SUBSURFACE CLEARANCE SURVEY PROCEDURES**

Prior to drilling, the proposed locations of borings will be marked with white paint. Underground Service Alert (USA) will be contacted prior to subsurface activities and a “ticket” will be issued for this investigation. USA members will mark underground utilities in the delineated areas using standard color code identifiers.

Once USA has marked the site, all proposed borehole locations will be investigated by subsurface clearance surveys to identify possible buried hazards (pipelines, drums, tanks). Subsurface clearance surveys use several geophysical methods to locate shallow buried man-made objects. The geophysical methods include electromagnetic induction (EMI) profiling, ground penetrating radar (GPR), and/or magnetic surveying. The choice of methods depends on the target object and potential interference from surrounding features.

Prior to drilling, all boreholes will be cleared of underground utilities to a depth of at least 4 feet below ground surface (bgs) in “non-critical zones” and to 8 feet bgs in “critical zones”. Critical zones are defined as locations that are within 10 feet from the furthest edge of any underground storage tank (UST), within 10 feet of the product dispenser islands, the entire area between the UST field and the product dispenser islands, and within 10 feet of any suspected underground line. An 8- to 12-inch-diameter circle will be cut in the surface cover at each boring location. A hole will then be cleared at each boring location using a 4-inch diameter hand auger.

### **SOIL SAMPLING**

Shallow soil samples are collected using a 6-inch long sample barrel connected to a slide hammer and containing a 6-inch long stainless steel sample sleeve. After driving the hammer 6 inches, the rods and sample barrel are withdrawn from the borehole and the sample sleeve is removed.

Soil from the hand auger is removed and placed in a sealed plastic bag. The soil is scanned with an organic vapor analyzer (OVA) equipped with a flame ionization detector (FID) or photoionization detector (PID) and the readings are noted on the soil boring logs. The remaining soil from the hand auger is examined and classified according to the Unified Soil Classification System (USCS).

Soil samples are delivered, under chain of custody, to a laboratory certified by the California Department of Health Services (DHS) for analyses.

### **SOIL VAPOR WELL INSTALLATION PROCEDURES**

The vapor wells are constructed with 0.25-inch-diameter stainless steel tubing connected to 0.4-inch-diameter vapor sampling implant with a 0.0057-inch pore screen size stainless steel screen and bottom implant anchor. All connections are sealed with Swagelok® type fittings. A filter pack of 1 foot of #2/12 sand is placed at the screened interval and above and below the screen for each well. The wells are then sealed with 1 foot of dry granular bentonite followed by hydrated granular

bentonite to just below ground surface. The tubing is sealed at the surface with a stainless steel Swagelok® valve and a stainless steel cap.

The wells are finished at the surface with a slightly raised, watertight steel traffic-rated box set in concrete. The lid on the traffic-rated box is bolted to the rim of the well box.

## **SOIL VAPOR SAMPLING PROCEDURES**

To allow for subsurface conditions to equilibrate, the wells are not disturbed for a period of at least 48 hours.

To ensure air-tight connections between the tubing, sampling port, valves, and other connections, a vacuum tightness test is performed on each well. The test consists of the application of a vacuum and monitoring of vacuum tightness using vacuum gauges and/or flow meter for 5 to 10 minutes. A leak would be evident if the vacuum gauges registered a decrease in the vacuum.

A purge test will be conducted for one well. The selected well should be the one with the highest expected concentrations. The test consists of the collection of vapor samples using Tedlar bags after purging the well of one (1), three (3), and seven (7) purge volumes by drawing vapor into the Tedlar bag using a vacuum chamber and vacuum pump. The purge volume is estimated based on the internal volume of the tubing used, the volume of the screen, and the voids in the sand pack within the annular space around the screen. The samples are collected through a particulate filter and flow controller which regulates the flow of soil vapor to no more than 200 milliliters per minute. The purge test samples are analyzed in the field using a PID. The results of the purge test are used to dictate the purge volume to be used during the sampling of subsequent wells.

The vapor samples are collected in 1-liter stainless steel Summa canisters. The samples are collected through a particulate filter and flow controller which regulates the flow of soil vapor to no more than 200 milliliters per minute. To ensure an air-tight connection at the well head and that ambient air does not enter the well at the well head, a tracer is applied. The tracer used is helium gas. To apply the tracer, a small shroud is placed over the well head and the tracer gas is allowed to fill the shroud at a constant rate. A hand-held detector is used in the field to measure the tracer within the shroud. Vapor is drawn into a Tedlar bag from the well using a vacuum chamber and vacuum pump. A leak will be evident if the concentration of the tracer in the well exceeds 10% of the concentration of the tracer in the shroud.

The 1-liter Summa canisters are labeled and packaged for delivery to a state-certified laboratory for chemical analysis. The initial pressure and the final pressure readings taken from the gauges on the Summa canisters are recorded. A small vacuum of about 5 inches of mercury is left inside the sample canister and is recorded on the chain-of-custody. Upon receipt, the laboratory will check the pressure in the sample canister and compare it to the pressure recorded on the chain-of-custody for quality control purposes.