VERSAR

July 6, 2011

Reference: Work Plan for Sub-slab Vapor Sampling and Source Area Subsurface Investigation
Rodding Cleaning Services
2585 Nicholson Street, San Leandro, CA
Fuel Leak Case No. RO00000020
Versar Project No. 104422.4422.007

PERJURY STATEMENT

As the Responsible Party (RP) for this Site, I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Fred Schifferle

Fred Schifferle, Vice President
Responsible Party

7-12-11

Date

• SACRAMENTO AREA OFFICE •
7844 MADISON AVENUE, SUITE 167 • FAIR OAKS, CA 95628 • TELEPHONE (916) 962-1612 FAX (916) 962-2678

July 6, 2011

Mr. Mark E. Detterman, PG, CEG
Hazardous Materials Specialist
Alameda County Health Care Service Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: Work Plan for Sub-slab Vapor Sampling and Source Area Subsurface Investigation
Former Rodding Cleaning Services
2585 Nicholson Street, San Leandro, California
Fuel Leak Case No. RO00000020

Dear Mr. Detterman:

As requested, Versar, Inc. (Versar) has prepared this work plan, on behalf of the Sketchley Trust (Trust), to the Alameda County Health Care Service Agency, Environmental Health Department (ACEH) for supplemental characterization of total petroleum hydrocarbons (TPH) and related constituents of concern in the subsurface at the subject property (Site). This work plan has been prepared in response to the ACEH letter, dated July 30, 2010, requesting further assessment, provision of documents, an interim remedial action plan, revised groundwater monitoring and electronic submittals.

SITE BACKGROUND

The Site is located at 2585 Nicholson Street in San Leandro, California. Figure 1 shows the general Site location. The Site was previously owned by the Trust, which has been seeking regulatory closure since 2000. The Site is currently owned and occupied by Crane Works and consists of a single-story commercial office building at the north end of the property, and covered parking, materials storage and work areas over the western and southern edges of the property. Historically, the property was used for "rodding and cleaning". "Rodding and cleaning" refers to the mechanical and hydraulic removal of debris from underground pipes, typically sanitary sewers.

In 1991, one 1,000-gallon waste oil and one 8,000-gallon diesel fuel underground storage tanks (USTs) were removed from the Site, as well as the adjacent diesel fuel dispenser. Soil and groundwater samples collected during the UST removal activities identified total petroleum hydrocarbons (TPH) in the diesel, gasoline and oil ranges (-d, -g and -o) in both media. Reportedly, over-excavation was performed during UST removal activities. The excavation was

subsequently backfilled with pea-gravel and paved over in 1992. Figure 2 depicts the general Site layout and location of the dispenser and UST excavation.

In 1992, on-Site soil and groundwater investigations were performed comprising 19 borings and one monitoring well (MW-1) installed in the central portion of the Site. Groundwater samples were collected from MW-1 between 1992 and 1995. Free-floating product was observed to a maximum thickness of 1.25 inches during some of the sampling events. Oil absorbent socks were subsequently used to remove free-floating product from well MW-1.

In 1997 and 1998, limited investigations of soil and groundwater were performed on and off-Site. Adequate definition of petroleum hydrocarbons in soil and groundwater was considered to have been completed and the contaminant plume found to be relatively stable with minimal off-Site migration.

In April 1999, Versar installed four additional monitoring wells (MW-2 through MW-5) surrounding the Site to confirm and document plume stability. Versar detected TPH-g in the southern half of the Site, and groundwater was confirmed to be flowing in a southeasterly direction. Quarterly groundwater monitoring of all Site wells was performed between July 1999 and April 2001. Methyl tert-butyl ether (MTBE) was not detected during the monitoring events, and the ACEH granted no further analysis of the compound in their October 29, 1999 letter. Data from the groundwater monitoring documented limited fluctuation of petroleum constituents in source-area monitoring well MW-1, and only trace concentrations of the Site constituents of concern in cross- and down-gradient off-Site monitoring wells, MW-4 and MW-5.

In 2001, at the request of the ACEH, Versar performed additional research and evaluation, which was presented in the Versar letter dated May 15. The additional research and evaluation consisted of the following primary findings: 1) well survey and door-to-door survey of the surrounding area did not identify any groundwater wells proximal to the Site; 2) no preferential pathways, such as underground utilities, were associated with the Site; and 3) additional evidence and evaluation of plume characterization and stability was provided.

In a letter from the ACEH dated June 4, 2001, a reduction to the groundwater monitoring program was granted; comprising semi-annual monitoring of one well, MW-1. While analytical results for TPH-g and benzene in MW-1 have remained above prospective mitigation action levels. TPH-g concentrations over time appear to trend downward. The calculated direction of groundwater flow, based on information collected from all the Site wells, appeared to typically be southerly at a gradient equal to or less than 0.002 feet per foot.

In 2008, the ACEH requested an assessment of soil vapor condition at the Site pursuant to the presence of elevated concentrations of TPH-g and related aromatic hydrocarbons: benzene, toluene, ethylbenzene and xylenes (BTEX) in groundwater at the Site. The soil vapor assessment was completed in late 2009. A potential for impact to indoor air quality was indicated by the findings of the soil vapor survey. The source of the soil vapor concentrations appeared to be the areas of the former USTs and dispenser, with residual contaminants

distribution controlled by localized permeable sediments in the shallow subsurface, at or just below the groundwater table.

PURPOSE AND SCOPE

The work proposed is to assess through additional soil vapor, grab-groundwater and sediment sampling, bearing in mind that the Trust's remaining assets are very limited. Tasks proposed are: 1) the lateral extent of elevated soil vapor along the south property boundary with 2591 Nicholson Street; 2) the lateral extent of elevated soil vapor along the front of the on-Site office area; 3) further define the limit of the TPH plume to the east; 4) assess the former fuel dispenser location with a soil and grab-groundwater sampling boring; and 5) address vertical and lateral data gaps in sedimentary units influencing the distribution of TPH in soil vapor and shallow groundwater.

Completion of this work will be used to 1) define and characterize sedimentary structures controlling residual TPH lateral and vertical extents; 2) identify solutions to reduce residual on–Site contamination; 3) confirm and monitor soil vapor concentrations; and 4) identify solutions to mitigate soil vapor conditions adjacent to occupied buildings.

TASKS

The following tasks are proposed to address the goals of this investigation:

Task 1 – Supplemental Sub-Slab Soil Vapor Assessment

Five (5) sub-slab soil vapor well points are proposed. Three are proposed along the east and south sides of the office space in the northwest corner of the Site, and two are proposed along the property line adjacent to the adjoining building to the south.

Soil vapor wells are proposed to be installed at the five (5) locations depicted on Figure 3 to a depth of 8 inches below ground surface (bgs). Each well will be constructed of a six-inch by 0.5-inch stainless steel mesh screen set within the granular sub-base material beneath the concrete apron, with a 4-inch long, 0.25-inch diameter Teflon tube extending through the concrete apron to the surface. The wells will be inserted into one-inch diameter borings cored with concrete bit through the apron. The surface will be completed within the concrete apron using a flush-mount fixture with O-ring seal. Each screen is set in #2/12 sand with bentonite granules between the sand and concrete slab. The surface mount is set in cement. A diagram of the sub-slab vapor well system is attached; Versar's well installations will include the described 4-inch Teflon tube and mesh screen inserted into granular slab base material beneath the bottom of the slab.

Sub-slab soil gas samples will be collected from each of the five soil vapor wells a minimum of 48 hours after installation. A purge test is not required for sub-slab sample wells; three volumes is the default per the 2010 DTSC Advisory – Active Soil Gas Investigation. Samples will be

collected in one-liter summa canisters at a maximum rate of 100 milliliters per minute (ml/m) at a maximum vacuum of 100 inches water. Soil gas sample data sheets will be prepared during the sampling.

Task 2 – Source Area Subsurface Investigation

Based on Versar's review of historical investigations and assessment of data gaps in the subsurface conceptual site model (CSM), as summarized in Figure 4, eight borings (VB-1 through VB-8) to 15 feet bgs are proposed. As depicted in Figure 4, the borings are located to investigate 1) the former dispenser source area; 2) confirm the UST backfill as pea-gravel; 3) characterize the sediment profile to 15 feet bgs, which is a minimum of five feet beneath the top of a clay unit continuous across the Site; and 4) characterize the sediment units along the south and west property boundaries, down-gradient from the source area. With this boring data, a detailed three-dimensional model of the subsurface across the source area and down gradient extent within Site will be made available.

Prior to field work, a geophysical utility location service will be used to locate and identify subsurface sanitary sewer, storm sewer, electrical, cable and gas laterals associated with and adjoining the Site, as well as the utility main locations surrounding the Site. The former fuel dispenser, UST and dispenser piping area will be screened using electromagnetic, current induction and ground penetrating radar equipment. Soil boring locations may be adjusted based on the results of the utility survey and discussion with the ACEH.

Geotechnical samples are proposed to be collected from saturated and unsaturated sediments to characterize parameters controlling contaminant migration and modeling of soil vapor transport. Proposed analyses are moisture/density, sediment gradation, carbon content and permeability. Up to nine samples representative of the UST backfill, underlying confining clay unit and water-bearing sandy silt, sand and gravel, sand and clayey sand and gravel units will be tested.

Samples for constituents of concern are proposed in soil and groundwater. Soil samples will be collected at each boring from depths of 5 feet bgs (at the capillary fringe), and 10 and 15 feet bgs, within the underlying clay unit. Soil samples are proposed beneath the groundwater table to document attenuation of TPH with depth within the prospective confining layer. Groundwater grab samples will be collected from six (6) of the borings; at the former dispenser location, within the fabrication area, within the former UST excavation area, at each location along the west property line, and at the three southernmost borings along the south property line.

Task 3 – Groundwater Monitoring

Semi-annual monitoring of well MW-1 is currently required at the Site. Per the ACEH 30 July 2010 letter, semi-annual monitoring will continue, but monitoring of all five monitoring wells is to be performed. Based on a revised MTBE action level of 13 micrograms per liter (µg/L) for drinking water, since last monitored, MTBE is to be included in the groundwater analytical suite. The semi-annual groundwater analyses will, therefore, comprise the following: Total Petroleum

Hydrocarbons (TPH) as gasoline, diesel and motor oil ranges (-g, -d and –mo); and MTBE and the aromatic hydrocarbons benzene, toluene, ethylbenzene and xylenes (BTEX).

FIELD INVESTIGATION

The following general and Site-specific methodologies and procedures are proposed.

Permitting

A permit for the drilling of exploratory environmental borings and construction of soil vapor wells will be obtained from the Alameda County Public Works Agency, as required.

Utility Clearance

Underground Service Alert (USA) will be notified a minimum of 48-hours prior to field activities. A private underground utility locator will be used to locate utilities in the investigation area and clear all boring locations.

Project Health and Safety

A project-specific health and safety plan, included as Appendix A, has been prepared for the investigation activities at the Site. The plan will be reviewed by Versar field personnel and subcontractor staff prior to the start of field activities.

Drilling

Borings will be advanced using truck-mounted and/or limited access, direct-push drilling apparatus. Borings will be advanced using a dual-core system in approximately 3.5 to 4.0-inch borings. Sediments will be continuously cored at each location. Each borehole location will be initially cored using concrete coring equipment. Drillers shall have a water well driller C-57 license and experience in the subsurface sampling requirements of this project.

Decontamination Procedures

Down-hole equipment including drilling rods, bits, and sampling equipment will be thoroughly cleaned before and after drilling each borehole. Equipment will be steam-cleaned with water and laboratory-grade, non-phosphate surfactant, and double rinsed. Wastewater generated during this process will be stored on Site in appropriate containers pending disposal. Clean, disposable gloves will be worn by all field personnel when handling decontaminated equipment.

Field Measurements

Measurements to objects in the field will be made using a rolling wheel or flat measuring tape. Graduations will be in the standard system to an accuracy of one-half foot. Directions may be

determined using a hand-held Brunton compass, accurate to one-half degree. The locations of objects, such as buildings, pads, and borings, will be oriented with respect to distances and directions from permanent Site objects such as building or curb corners and survey monuments. Measurements of the depth to groundwater will be made using task-specific sounders to an accuracy of 1/100th of a foot, and related to the top of the well casing of permanent wells, and the surface of the Site concrete apron for temporary wells and borings.

Proposed Sampling Activities

The following sampling activities will be performed to enable chemical and physical analyses of soil and groundwater samples to meet project goals. With the exception of geotechnical analyses, the sampling activities are the same for each boring.

Soil Vapor Sampling

Soil vapor sampling will be performed in conformance with the March 2010 draft DTSC Advisory for Active Soil Gas Investigation guidance for collecting sub-slab soil gas samples. Samples will be collected following advised sample purge volume testing and techniques, leak check testing, and maximum purge rate and applied vacuum for sub-slab sampling (100 ml/minute and less than 100 inches of water, respectively).

Soil Sampling

Soil samples will be collected from each boring from within the clear plastic coring liner of the direct push drive barrel. Cores will be logged under the supervision of a California-licensed geologist in accordance with the Unified Soil Classification System, ASTM Standard D-2487. Samples will be cut, undisturbed, from the liner, capped at both ends in Teflon tape and pressure-fitted end caps, labeled, individually bagged and refrigerated on ice until transfer under chain of custody to the analytical laboratory. Soil adjoining the sampled interval will be screened in the field using photo-ionization detector (PID) calibrated a minimum of daily to 100 parts per million isobutylene standard gas, and zeroed to ambient air conditions.

Soil samples will be collected for soils testing analyses from representative sediment units and UST excavation backfill. Geotechnical analysis of the samples is proposed to characterize hydrogeologic conditions with respect to lateral and vertical flow of groundwater and migration of petroleum hydrocarbons. Geotechnical testing will comprise gradation with hydrometer by ASTM Method D422; bulk density by ASTM Method D2937; moisture by ASTM Method D2216; total organic carbon by the Walkley-Black method; permeability by ASTM Method D5084; and Atterberg limits by ASTM Method D4318.

Groundwater Sampling

Groundwater grab samples will be collected from temporary monitoring wells installed in six (6) of the direct push boreholes. Each well will be constructed of 1.5 to 2.0-inch inside diameter (ID), schedule 40 polyvinyl chloride (PVC). Joints will be screw-type without adhesive. Each

well will be constructed such that ten feet of 0.010-inch slotted screen extends across the surface of groundwater, with approximately two-thirds of the screen interval below the water table within the boring. No surface seal will be installed above the bentonite spacer; the well will be secured at grade with a steel plate and gasket, if left unattended.

Grab-groundwater samples will be collected from each well a minimum of one hour after installation using a low-flow, micro-purge technique to minimize turbidity. During micro-purging, measurements of pH, temperature, conductivity, dissolved oxygen and oxidation potential will be to assess the influx of representative groundwater into the well. Every effort will be made to collect groundwater as low as feasible in sediment content.

The temporary wells will be abandoned by using the PVC screen and casing as a tremie pipe and backfilling with cement with less than five percent bentonite to surface.

Chemical Sample Analyses

Soil vapor, soil and groundwater samples will be analyzed by a laboratory State ELAP-certified to perform the proposed analysis.

Based on the anticipated elevated BTEX concentrations, soil vapor samples will be sampled by EPA Method 8260 for volatile organic compounds (VOCs), including MTBE. Soil and groundwater samples will be analyzed for TPH in the ranges of gasoline, diesel fuel and motor oil, BTEX and MTBE by EPA Methods 8015C and 8021B.

Storage and Disposal of Wastes

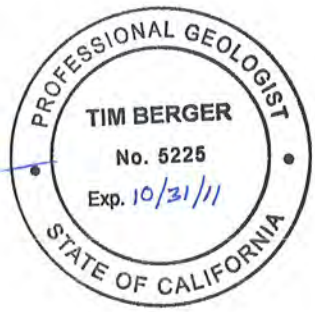
Drill cuttings and waste water generated during this investigation will be stored in steel, Department of Transportation-approved, 55-gallon drums. The containers will be stored in a secure location on Site. The contents of the drums and the dates of collection will be clearly marked on appropriate labels. All equipment, decontamination material, and disposable personal protective gear will also be placed in appropriate containers. The characteristics of these materials will be determined so that they may be properly disposed.

SCHEDULE

Upon our receipt of approval to perform the proposed work, Versar can complete the sub-slab soil vapor well installation, and soil vapor, soil and groundwater sampling and report preparation within 60 days. Based on the collected and reported data, Versar can prepare an Interim Remedial Action Plan within 60 days following submittal of the Site investigation report.

This work plan has been prepared by a California-licensed professional geologist. If you have any questions or require additional information, please contact me at (916) 863-9323, or tberger@versar.com.

Respectfully submitted,
Versar, Inc.



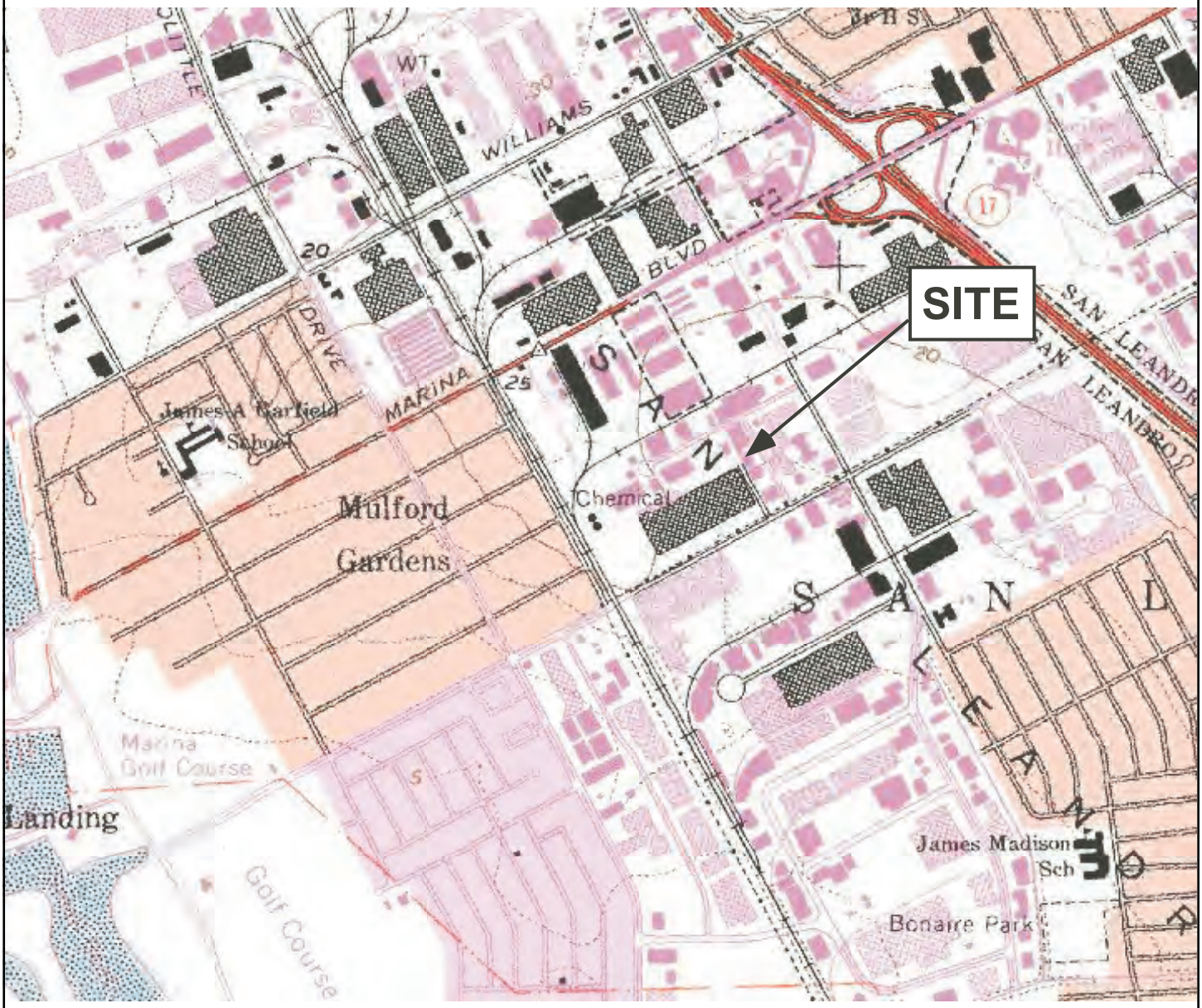
Tim Berger, P.G.
Program Manager
Western Region

Attachments: Figures
Subslab Vapor Well Point Diagram
Site Health and Safety Plan

VERSAR

FIGURES

NORTH



Ref. USGS 7.5 Minute Topographical Quadrangle Maps; San Leandro, Calif. c. 1959 Photorevised 1998

Dr. By:	TWB
Date:	6/20/11
Scale:	1 inch=2,000 feet
Versar Project No.	4422-007
Path/File :	P\BOFA\SANLEAN\REPORT\Fig1

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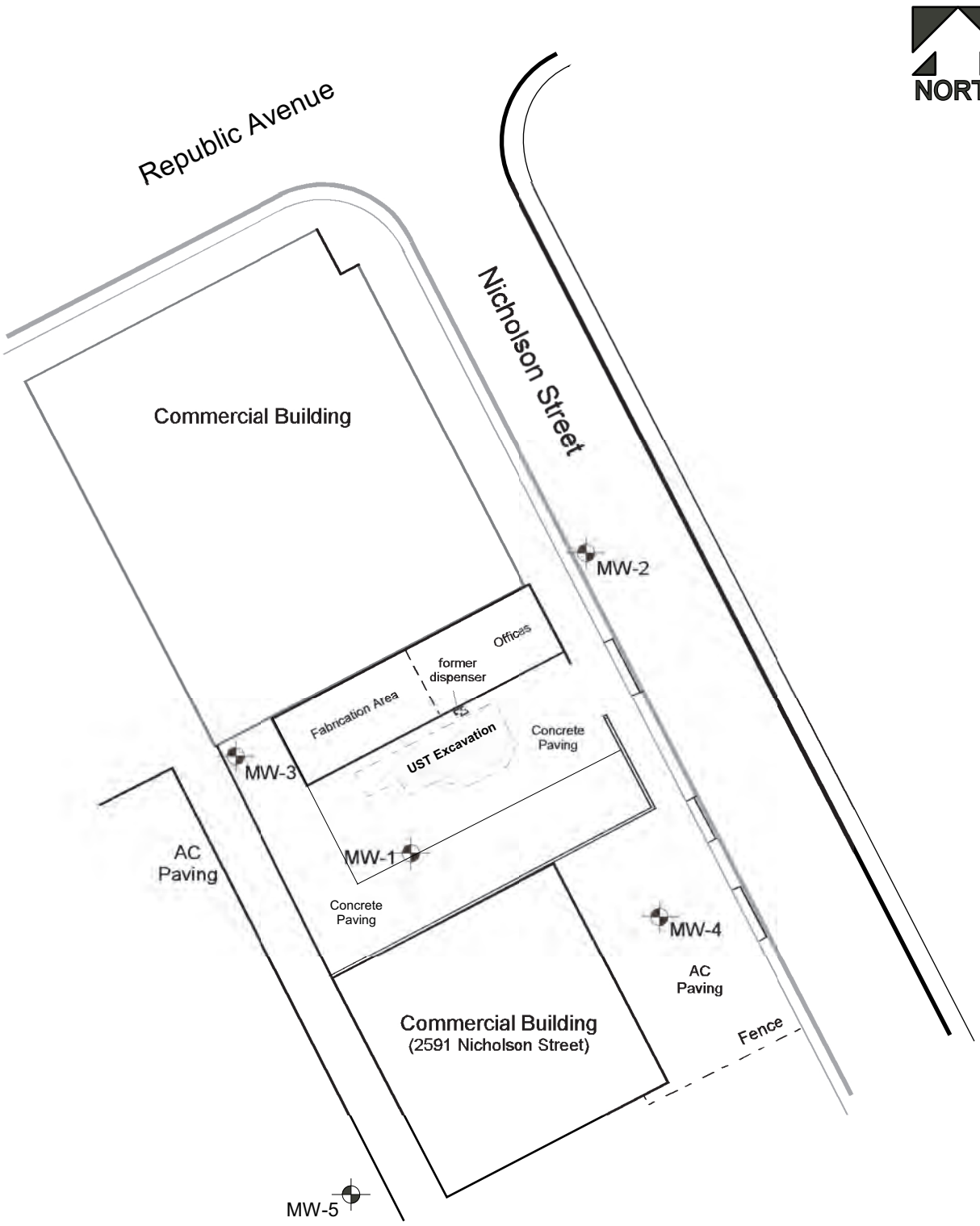
Fair Oaks, CA 95628
(916) 962-1612

SITE LOCATION
Former Rodding Cleaning Services
2585 Nicholson Street
San Leandro, California

Figure 1



LEGEND:

Existing Groundwater Monitoring Well

(Scale - Feet)

0 20 40 60

Dr. By: TWB	
Date: 06/13/2011	
Scale: 1 inch = 60 feet	
Versar Project No. 4422-007	
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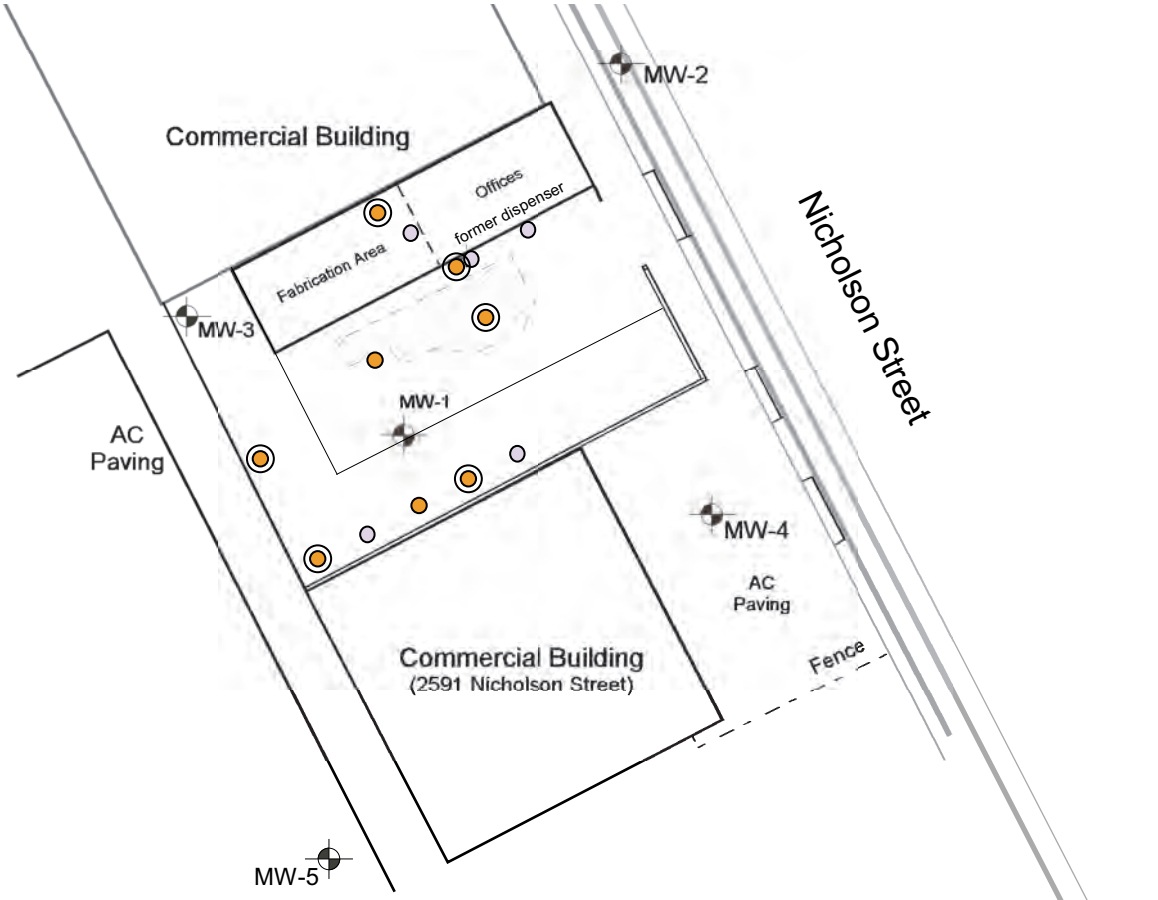
SITE LAYOUT

Former Rodding Cleaning Services
2585 Nicholson Street
San Leandro, California

Figure 2



LEGEND:

- Existing Groundwater Monitoring Well
- Proposed Soil Vapor Well
- Proposed Boring Location
- Proposed Grab-groundwater Sample Location

(Scale - Feet)

0 20 40 60

Dr. By: TWB	
Date: 06/23/2009	
Scale: 1 inch = 60 feet	
Versar Project No. 4422-007	
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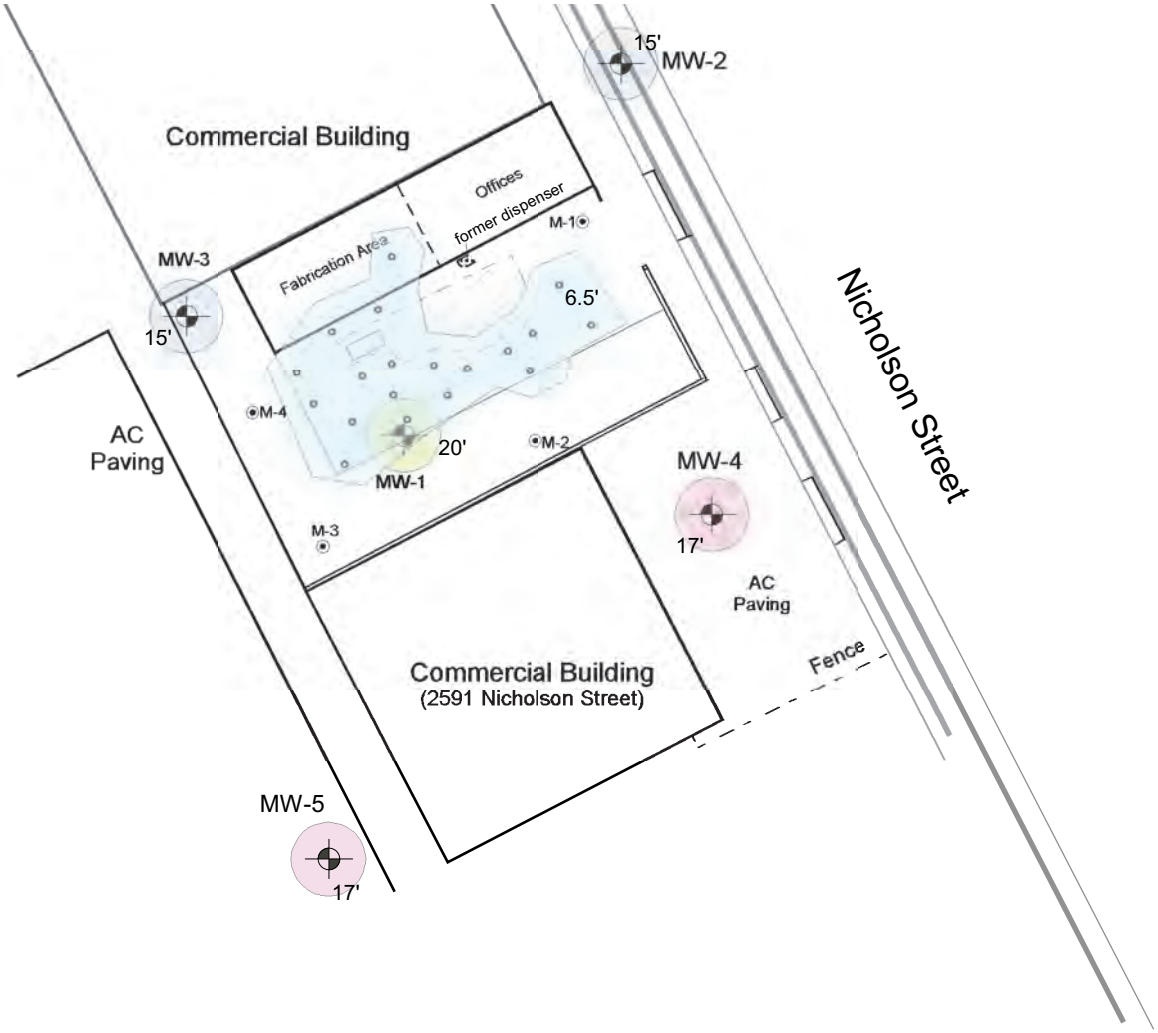
PROPOSED SOIL VAPOR WELL and SAMPLE LOCATIONS
Former Rodding Cleaning Services
2585 Nicholson Street
San Leandro, California

Figure 3



LEGEND:

- Existing Groundwater Monitoring Well
- Soil Sampling Points
- Area Explored to 6.5 feet below ground surface (bgs)
- Area Explored to 20 feet bgs
- Area Explored to 17 feet bgs
- Area Explored to 15 feet bgs

(Scale - Feet)

0 20 40 60

Dr. By: TWB	
Date: 06/23/2009	
Scale: 1 inch = 60 feet	
Versar Project No. 4422-007	
Path/File : P\BOFA\SanLean\Report\Fig2	

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ANALYSIS of SITE INVESTIGATION DEPTHS
Former Rodding Cleaning Services
2585 Nicholson Street
San Leandro, California

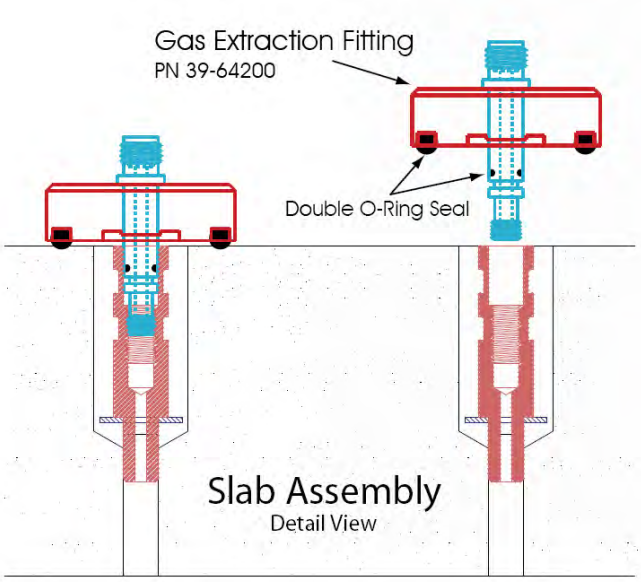
Figure 4

SUB-SLAB VAPOR WELL POINT DIAGRAM

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

VAPOR INTRUSION MONITORING SUB-SLAB SAMPLING SYSTEM

Sub-slab vapor monitoring has produced irregular data in the past due to possible leakage around the grouted probe or loose tubing connected to the summa can. SunStar's sub-slab probe and gas extraction fitting decreases or eliminates contamination from indoor air by creating a vapor-tight seal at the concrete slab using a secondary face-sealing o-ring. The sampler can also be directly connected to the summa can. A gauge on the sampler shows that the sampler is still under negative pressure during sample collection. To purge the sampler and sampling area a pre-flush canister is attached to the sampler for a set time.



The probe is installed and constructed by:

- Drilling a 3/8" pilot hole through the slab extending in to the soil.
- Next Drill a 1" bore (31/4inch) not to exceed slab to set the probe.
- Set probe & washer in the bore flush to surface & grout/cement the probe in place.
- Let seal set and vapors equilibrate for ~ 24 hrs

To order this sampling system for your project please contact SunStar.
(530) 304-5525

SITE HEALTH and SAFETY PLAN

SITE SAFETY PLAN

FOR

SUB-SLAB VAPOR SAMPLING and SOURCE AREA SUBSURFACE INVESTIGATION

Former Rodding Cleaning Services
2585 Nicholson Street
San Leandro, California 94577

Prepared for:

SKETCHLEY TRUST
Building D
2000 Clayton Road
Concord, CA 94520-2425

Prepared by:

Versar Project No. 104422.4422.007

July 6, 2011

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TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Background

Bank of America has retained Versar, Inc. (Versar) to conduct subsurface investigations of soil and groundwater, and installation of soil vapor well points at the former Rodding Cleaning property located at 2585 Nicholson Street, San Leandro, California 94577-4261 (Site).

1.2 Site Characterization

Client Name: Sketchley Trust

Location of Site: 2585 Nicholson Street, San Leandro, California

Client Contact Person(s): Mr. Fred Schifferle, Trust Fund Manager

Topography of the area surrounding the site:

Hilly ____ Flat __X_ Hummocky ____ Marshy ____
Mountainous ____ Other ____

Area affected:

Urban _X___ Rural ____ Residential ____ Industrial____ Commercial _X__ Other ____

Types of bodies of water bordering the Site, if any:

Stream ____ River ____ Pond ____ Lake ____ Bay ___
Ocean ____ Other ____ None __X__

Are the services being provided as a consequence of orders from local, state, or federal officials?

Yes _X__ No ____

1.3 Purpose

The primary purpose of this Site safety plan is to provide Versar field personnel and subcontractors with an understanding of the potential chemical and physical hazards that exist or may arise while the tasks of this project are being performed. The site safety plan follows the guidelines set forth in the Corporate Health and Safety Manual; the Injury Illness and Prevention Program (IIPP); and the Medical Monitoring Program. Additionally, the information contained herein will define the safety precautions necessary to respond to such hazards should they occur.

1.4 Objective

The primary objective is to ensure the well-being of all field personnel and the community surrounding the site. In order to accomplish this, project staff and approved subcontractors shall acknowledge and adhere to the policies and procedures established herein. Accordingly, all personnel assigned to this project shall read this site safety plan and sign the Agreement Statement in Section 8.1 to certify that they have read, understood, and agreed to abide by its provisions. All Versar personnel shall perform work in compliance with standards set forth in the Corporate Health and Safety Manual and the IIPP.

1.5 Hazard Determination

Serious ____ Moderate _X__ Low ___ Unknown ____

1.6 Level of Protection

__X_ Modified level D

The minimum acceptable level of protection at this site is a Modified Level D, as described in Section 5.0 entitled "Health and Safety Requirements."

1.7 Amendments

Any change in the scope of this project and/or site conditions must be amended in writing in Section 8.2 entitled Site Safety Plan Amendment Sheet and approved by the Regional Health and Safety Officer.

Proposed time frame for site work: Summer 2011

2.0 PROJECT PERSONNEL

Versar will oversee and act accordingly during all phases of the project. The following management structure will be instituted for the purpose of successfully and safely completing this project.

2.1 Project Manager: Tim Berger

The Project Manager will be responsible for implementing the project, the site safety plan, and the IIPP, and obtaining any necessary personnel or resources for the completion of the project. Specific duties will include:

- providing authority and resources to ensure that the Site Safety Officer is able to implement and manage safety procedures;

- preparing reports and recommendations about the project to clients and affected Versar personnel;

- ensuring that all persons allowed to enter the site (i.e. EPA, contractors, state officials, visitors) are made aware of the potential hazards associated with the substances known or suspected to be on site and are knowledgeable as to the on-site copy of the specific site safety plan;

- ensuring that the Site Safety Officer is aware of all of the provisions of this site safety plan and is instructing all personnel on site about the site practices and emergency procedures defined in the plan; and

- ensuring that the Site Safety Officer is making an effort to monitor the site safety and has designated a Field Team Leader to assist with the responsibility when necessary.

2.2 Regional Health and Safety Officer: Larry Kleinecke

The Regional Health and Safety Officer shall be responsible for the overall coordination and oversight of the site safety plan. Specific duties will include:

- approving the selection of the types of personal protective equipment (PPE) to be used on site for specific tasks;

- monitoring the compliance activities and the documentation processes undertaken by the Site Safety Officer as required in the Corporate Health and Safety Manual, the IIPP, and the Medical Monitoring Program;

- evaluating weather and chemical hazard information and making recommendations to the Project Manager about any modifications to work plans or personal protection levels in order to maintain personal safety;

- coordinating upgrading or downgrading of PPE with Site Safety Officer, as necessary, due to changes in exposure levels, monitoring results, weather, other site conditions;

- approving all field personnel working on site, taking into consideration their level of safety training, their physical capacity, and their eligibility to wear the protective equipment necessary for their assigned tasks (i.e. respirator fit testing results and Medical Monitoring Program requirements); and

- overseeing the air-monitoring procedures as they are carried out by site personnel for compliance with all company health and safety policies.

2.3 Site Safety Officer: Tim Berger

The Site Safety Officer shall be responsible for the implementation of the site safety plan and IIPP on site. Specific duties will include:

- monitoring the compliance of field personnel for the routing and proper use of the PPE that has been designated for each task;

- routinely inspecting PPE and clothing to ensure that it is in good condition and is being stored and maintained properly;

- stopping work on the site or changing work assignments or procedures if any operation threatens the health and safety of workers or the public;

- monitoring personnel who enter and exit the site and all controlled access points;

- reporting any signs of fatigue, work-related stress, or chemical exposures to the Project Manager and the Regional Health and Safety Officer within 24 hours, as directed in the Corporate Health and Safety Manual and the IIPP;

- dismissing field personnel from the site if their actions or negligence endangers themselves, co-workers, or the public and reporting the same to the Project Manager and the Regional Health and Safety Officer within 24 hours, as directed in the Corporate Health and Safety Manual and IIPP;

- reporting accidents or violations of the site safety plan to the Project Manager and/or Regional Health and Safety Manager within 24 hours, as directed by the Corporate Health and Safety Manual and the IIPP;

- knowing emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire and police departments, per the site safety plan;
- ensuring that all project-related personnel have signed the personnel agreement and acknowledgments form contained in this site safety plan;

- coordinating, upgrading, and downgrading of PPE with the Regional Health and Safety Officer, as necessary, due to changes in exposure levels, monitoring results, weather, and other site conditions; and

- performing air monitoring with approved instruments in accordance with requirements stated in this site safety plan.

2.4 Field Team Leader: Tim Berger

In the event that the Project Manager and the Site Safety Officer are not on the site, the Field Team Leader will assume all responsibility for enforcing safety procedures, as covered in this site safety plan, the Corporate Health and Safety Manual, and the IIPP.

2.5 Field Personnel

All field personnel shall be responsible for acting in compliance with all safety procedures outlined in this site safety plan, the Corporate Health and Safety Manual, and the IIPP. Any hazardous work situations or procedures should be reported to the Site Safety officer so that corrective steps can be taken. The Regional Health and Safety Officer and/or Site Safety Officer has the authority to halt any operation that does not follow the provisions of this site safety plan.

3.0 EMERGENCIES

In the event of an accident or emergency situation, immediate action must be taken by the first person to recognize the event. First aid equipment is located on site inside the Versar vehicle. Immediately after emergency procedures are implemented, notify (1) the Site Safety Officer and (2) the Project Manager and the Regional Health and Safety Officer about the situation.

3.1 Emergency Telephone Numbers

Immediate Emergencies:

Local Police:	911
Fire:	911
Ambulance:	911
Medical:	(707) 429-3600

Medical Emergency:

San Leandro Hospital
13855 East 14th Street
San Leandro, CA 94578
Phone: (510) 357-6500

(From Site: Take State Highway 12 West, towards Fairfield; exit at Pennsylvania Avenue; turn Right; drive two blocks; the hospital is on the right side on Pennsylvania, the address is on B Gale Wilson Boulevard)

Environmental Emergency:

Versar, Inc., Tim Berger	(916) 863-9323
F. Schifferle, Schetchley Trust	(925) 675-1978
OSHA	(800) 648-1003
Poison Control Center	(800) 532-2222
National Response Center	(800) 424-8802

3.2 Encountering Hazardous Situations (requiring evacuation)

Personnel encountering a hazardous situation shall **instruct others on site to evacuate the vicinity IMMEDIATELY** and call the (1) Site Safety Officer, (2) the Project Manager, and (3) the Regional Health and Safety Officer for instructions.

The site must not be re-entered until the situation has been corrected (i.e. appropriate back-up help, monitoring equipment, personal protective equipment is at the site).

Usual Procedures for Injury

A. Call for ambulance/medical assistance if necessary. Notify the receiving hospital of the nature of the physical injury or chemical overexposure. If a telephone is not available transport the person to the nearest hospital and have another person inform the hospital, at the nearest phone, of the route taken to the hospital and description of transporting vehicle.

B. Send/take this site safety plan, with the attached Material Safety Data Sheet (MSDS) if available, to the medical facility with the injured person. Complete the required forms.

C. If the injury is minor, proceed to administer first aid, and notify the Site Safety Officer, the Project Manager, and the Regional Health and Safety Officer. Complete the required forms.

D. Notify the Site Safety Officer, Project Manager, and Regional Health and Safety Officer of all accidents, incidents, or near miss situations. Ensure that all required procedures in the Corporate Health and Safety Manual and IIPP are followed.

3.3 Emergency Treatment

When transporting an injured person to a hospital, bring this site safety plan to assist medical personnel with injury diagnosis and treatment. In all cases of chemical overexposure, follow standard procedures as outlined below for poison management, first aid, and if applicable, cardiopulmonary resuscitation. Four different routes of exposure and their respective first aid/poison management procedures are outlined below:

A. Ingestion:

IMMEDIATELY transport the person to the nearest medical facility,
or call **911**

B. Inhalation/Confined Space:

DO NOT ENTER A CONFINED SPACE TO RESCUE A PERSON WHO HAS BEEN OVERCOME UNLESS PROPERLY EQUIPPED AND A STANDBY PERSON IS PRESENT.

C. Inhalation/Other:

Move the person from the containment environment. Initiate CPR, if necessary. Call, or have someone call, for medical assistance. Refer to Material Safety Data Sheet for additional specific information. If necessary, transport the victim to the nearest

hospital as soon as possible and have someone contact the hospital with the description of the transporting vehicle and route taken to the hospital.

D. Skin Contact:

IMMEDIATELY wash off skin with a large amount of water. Remove any contaminated clothing and rewash skin. Transport person to a medical facility, if necessary.

E. Eyes:
Hold eyelids open and rinse the eyes IMMEDIATELY with copious amounts of water for 15 minutes. If possible, have the person remove his/her contact lenses (if worn). Never permit the eyes to be rubbed. Transport the person to a hospital as soon as possible and notify the hospital of the route taken to their facility and the description of the transport vehicle.

4.0 CHEMICALS OF CONCERN

4.1 Chemical Hazards

Potential effects of any exposure are dependant on several factors such as: toxicity of substance, time frame of exposure, concentration of substance producing the exposure, general health of person exposed, and individual use of hazardous reduction methods.

4.1.1 Diesel fuel

Diesel fuel is a complex mixture of paraffinic, olefinic, napthenic and aromatic hydrocarbons. Diesel fuel oil is a dark semi-opaque liquid with a mild petroleum odor. Inhalation of excessive concentrations of vapor or mist can be irritating to the respiratory passages and can cause the following symptoms: headache, dizziness, nausea, vomiting, and loss of coordination. Prolonged or repeated skin contact may cause irritation of the hair follicles and block the sebaceous glands. This produces a rash of acne pimples and spots, usually on the arms and legs.

4.1.2 Gasoline

Gasoline is a complex mixture of hydrocarbons and additives. Chronic exposures or exposures to a high concentration of gasoline vapor may cause unconsciousness, coma and possibly death from respiratory failure. Exposure to low concentrations of gasoline vapor may produce flushing of the face, slurred speech, and mental confusion.

Gasoline constituents can be divided into five major groups: alkanes, alkenes, cycloalkenes, aromatics, and additives. The aromatics are the constituents generally regarded to be of the greatest toxic concern. The major aromatics in gasoline i.e. benzene, toluene, and xylenes. Of these, benzene is considered to be the most potent. All of these chemicals can also irritate the skin if repeated or prolonged skin exposure occurs.

4.1.3 Benzene

Benzene can enter the body through inhalation, ingestion, and skin contact. Studies have noted that chronic exposure to benzene vapor can produce neurotoxic and hemopoietic (blood system) effects. Other effects can include headache, dizziness, nausea, convulsions, coma, and possible death if exposure is not reversed. The most significant chronic effect of benzene is bone marrow toxicity. Although the cause-effect relationship is not fully understood, it is believed that there might be a strong association between chronic exposures to benzene and the development of leukemia.

4.1.4 Toluene

Inhalation exposure to toluene vapor can produce effects such as central nervous system depression. Depending on exposure factors, signs and symptoms can include headache, dizziness, fatigue, muscular weakness, lack of coordination, drowsiness, collapse, and possible coma. Studies have noted anemia could be a possible effect of chronic exposure to toluene. Toluene can be a skin and mucous membrane irritant and has been shown to cause liver and kidney damage when overexposure is significant.

4.1.5 Xylenes

Depending on exposure factors, inhalation of xylenes vapor may produce central nervous system excitation followed by depression. Exposure to xylene vapor can produce dizziness, staggering, drowsiness, and unconsciousness. At very high concentrations, xylenes vapor may produce lung irritation, nausea, vomiting, and abdominal pain. Xylene is not known to possess the chronic bone marrow toxicity of benzene, but liver enlargement and nerve cell damage have been noted from chronic overexposure. Ingestion exposures to xylenes can produce temporary liver damage and should be avoided.

4.1.6 Ethylbenzene

Ethylbenzene is an eye, mucous membrane, respiratory tract, and skin irritant. High air levels can cause central nervous system depression, sense of chest constriction, headache and dizziness. Skin contact may cause irritation, inflammation and first or second degree burns.

4.2 Physical Hazards

The physical hazards are those typically associated with general construction. Slips, trips, and falls are of primary concern in accident prevention. The contractor will exercise care to maintain good housekeeping practices within the work areas. The work areas will be closed off with caution tape and barricades when work is not in progress.

4.2.1 Heavy Equipment

The more severe accidents will be related to the use of heavy equipment. During activities, trucks, drilling, and steam cleaning equipment will be used. All heavy equipment used on this project will be in good working order and operated in accordance with recognized industry standard and Cal-OSHA Title 8, Subchapter 4, Construction Safety Orders. Safety maintenance checks of all equipment shall be conducted just prior to the start of each work day. All chains, cables, grounding equipment, lifting machinery shall be of sufficient grade or rating to handle the weights and conditions at the site. Employers and workers at the site shall comply with all Cal OSHA requirements including personal protection, safety, training, and safety planning rules. Drilling activities that pose imminent hazard to site personnel will not be permitted. All cables, slings, and locks will be inspected daily by the contractor to insure that they are in safe

working order. All cranes and backhoes will use side bracing when in operation to secure against lateral movement. Bracing will have secure footing.

4.2.2 Heat Stress

Heat stress results when the ability of the body to internally regulate heat buildup is exceeded. Heat stress can range from a rash to death. Symptoms of heat stress begin with malaise, weakness, mental fatigue, and sometimes rashes in moist areas of the body such as under arms. Symptoms progress to increased physical and mental fatigue, irritability, irrational behavior, and muscle cramps. A critical condition is signaled by cessation of sweating, cool dry skin, and fainting.

Workers will guard against heat stress by monitoring fluid intake and pulse, and incorporating body temperature monitoring and rest periods as the need arises. If prolonged or unusually hot conditions persist, work may be performed during evening and night hours.

5.0 HEALTH AND SAFETY REQUIREMENTS

5.1 Work Zone Access

Access in the situation that significant contamination is encountered within a 30-foot radius of any on-site operation is prohibited to all but Versar field personnel and subcontractors. Standard work practices, such as performing field activities in the upwind position, will be observed whenever possible. Personal protective equipment indicated in Section 5.4 will be worn by all onsite field personnel, including the subcontractor's personnel.

Exclusion Zones

Formal exclusion zones are not expected to be required. The site is fenced and will remain so throughout all field activities. Unauthorized personnel will not be permitted near the work zone area.

Decontamination Zone

A formal decontamination zone may be required. It would be sited in the upwind direction from the work zone area. Decontamination procedures are covered in Section 5.5. All site personnel will be required to follow the procedures as reported in the corporate Health and Safety Manual.

Support Zones

No formal requirements will be necessary for the support zone area, although the general practice of locating the zone in the upwind direction will be followed.

5.2 Air/Gas/Vapor Monitoring Procedures

The greatest potential hazards to safety and health at this site include:

1) Exposure to petroleum vapors and/or airborne dust through inhalation; and

2) Exposure to chemical contamination and/or airborne dust - through skin contact and ingestion.

In the event that soil and/or groundwater petroleum hydrocarbon contamination is encountered, ongoing air monitoring during project tasks will provide data to ensure that vapor concentrations are within acceptable ranges and will provide adequate selection criteria for respiratory and dermal protection.

- If PID/FID readings exceed 100 ppm in the breathing zone, an air purifying respirator with organic cartridges must be worn by all site workers within any area where monitoring results exceed 100 ppm.

- If PID/FID readings exceed 500 ppm in the breathing zone, the need for Level B protection will be evaluated and implemented as warranted. Personnel must leave the site immediately and contact the Site Safety Officer or the Regional Health and Safety Manager for further instructions.

- Respirator cartridges will be changed once per day as a minimum. This can be accomplished at the end of the work day during respirator decontamination. If odor breakthrough is detected while wearing the respirator or breathing becomes difficult, change cartridges immediately.

5.3 Action Levels/Level of Personal Protection Equipment (PPE)

Air monitoring instrument	LEVEL D <100 ppm	LEVEL C 100-500 ppm	LEVEL B >500 ppm

5.4 PPE

Modified Level D is the minimum acceptable level for this site. Modified Level D provides minimal dermal protection. Respiratory protection is optional unless air monitoring data indicates otherwise.

Modified Level D includes:

- coveralls/work uniform
- Tyvek (optional)
- Nitrile butyl-rubber or Viton gloves with disposable nitrile liner (optional)
- boots/shoes, leather or chemical resistant, with steel shank and approved toe protection
- approved safety glasses or chemical splash goggles if the potential for splash exists
- hard hat
- reflective traffic vest (if traffic, construction, or other related activities are present)
- hearing protection (as appropriate)
- respiratory protection (as necessary)

B. Additional equipment upgrade:

1. Protocols for upgrading

Once air monitoring data are complete and results are tabulated on the initial site entry, the Site Safety Officer and/or Regional Health and Safety Officer will determine if changes in PPE are needed.

2. Upgraded equipment

a. Respirators

Respirators with organic vapor cartridges shall be worn by all personnel if ionization detector readings exceed 100 units.

b. Other

Tyvek suits and appropriate gloves shall be worn if potential for dermal exposure exists while performing job tasks.

C. First Aid Equipment

First aid equipment for this site is the responsibility of the Site Safety Officer. Vehicles used for site work will be equipped with a first aid kit and safety equipment including:

- cones and flags
- barricades
- fire extinguisher
- water, suitable for drinking
- portable eye wash
- complete first aid kit

5.5 Decontamination Procedures

All operations conducted at this site have the potential to contaminate field equipment and PPE. To prevent the transfer of any contamination to vehicles, administrative areas, and other personnel, the following procedures must be followed:

1. Whenever possible, field equipment should be decontaminated with a solution of Alconox or Green Soap and thoroughly rinsed with water prior to leaving the site. This must be done outside a 10-foot radius of any work area or the hot zone.

2. Disposable PPE (for example, Tyvek suits, respirator cartridges) must be bagged and disposed of at the site.

Personal Decontamination

Level D: Segregated Equipment Drop
- wash/rinse outer boot (as appropriate)
- wash/rinse chemical resistant outer glove, then remove as appropriate
- remove and throw out inner disposable nitrile liner gloves in designated, lined receptacles

Level C: Segregated Equipment Drop
- wash/rinse outer boots
- wash/rinse chemical resistant outer gloves, then remove tape and gloves
- remove chemical resistant suit (remove by rolling down suit from the inside)
- remove outer boots
- remove first pair(s) of disposable gloves
- remove respirator, hard hat/faceshield and properly dispose of cartridges; wash respirator
- remove last pair of disposable nitrile liner gloves

Level B: Segregated Equipment Drop
- wash/rinse outer boots
- wash/rinse chemical resistant outer gloves
- cross hotline (into clean area) and change air tanks, then redress or
- cross hotline (into clean area)
- remove boots and gloves
- remove SCBA, if worn over chemical resistant suit
- if SCBA is worn under the suit, remove the chemical resistant suit, then the SCBA
- remove hard hat
- remove disposable nitrile liner gloves

5.6 Drilling Procedures

A digsafe number must be obtained from appropriate agency prior to drilling, excavation or trenching. To determine presence of subsurface metal utility lines, tanks and/or drums, a metal detector should be used before drilling on a site.

During the operation, two persons (one designated as "operator" and the other as the "helper") must be present at all times. The helper (whether Versar, Inc. personnel or subcontractors) must be instructed as to the whereabouts of the emergency shut-off switch. Every attempt must be made to keep unauthorized personnel from entering the work area. If this is not possible, the operation should be shut down until the area is cleared. The Site Safety

Officer or the Field Team Leader has the authority and responsibility to shut down the drilling operations whenever a hazardous situation is deemed present.

The arm of any equipment should maintain a preferred clearance of 20 feet from any overhead electrical cables, with 10 feet being the minimum. All operations will immediately cease during any hazardous weather conditions. Hard hats and safety boots shall be worn at all times.

5.7 Electrical Equipment and Ground Fault Circuit Interrupters

All electrical equipment and power cables used in and around wells or structures containing chemical contamination must be explosion-proof and/or intrinsically-safe and equipped with a three-wire ground lead that has been rated as explosion-proof for hazardous atmospheres (Class 1 Div 1&2). In accordance with OSHA 29 CFR 1926.404, approved ground fault circuit interrupters (GFCI) must be utilized for all 120 vault, single-phase, 15 and 20 amp receptacle outlets on the site that are in use by employees and that are not part of the permanent wiring as defined by the NEC 1987. Receptacles on the ends of the extension cords are not part of the permanent wiring and therefore, must be protected by GFCI's whether or not the extension cord is plugged into permanent wiring.

The GFCI is a fast-acting circuit breaker that senses small imbalances in the circuit caused by current leakage to ground, and in a fraction of a second, shuts off the electricity. However, the GFCI will not protect the employee from line-to-line contact hazards such as a person holding two "hot" wires or a hot and neutral wire in each hand. The GFCI does provide protection against the most common form of electrical hazard - the ground fault. It also provides protection against fires, overheating, and destruction of wire insulation.

GFCI's can be used successfully to reduce electrical hazards on construction sites. Tripping of GFCI's interruption of current flow, is sometimes caused by wet connectors and tools. It is good practice to limit exposure of connectors and tools to excessive moisture by using watertight or sealable connectors. Providing more GFCI's on shorter circuits can prevent tripping caused by the cumulative leakage from several tools or by leakages from extremely long circuits. (Adapted from OSHA 3007; Ground-Faulting Protection on Construction Sites - 1987.)

5.8 Fire Protection

Only approved metal or plastic cans will be used to transport and store flammable liquids. All gasoline and diesel-driven engines requiring refueling must be shut down and allowed to cool before filling. No open flame or spark is allowed in any area containing petroleum products or other flammable liquids. Due to elevated concentrations of TPH and benzene measured in soil gas beneath the Site concrete apron in certain locations, water vapor spray will be continuously used to suppress potential vapor and sparks during drilling operations.

Smoking will not be allowed during any Site operations.

5.9 General Health

Medicine and alcohol can increase the effects of exposure to toxic chemicals. Unless specifically approved by a qualified physician, prescription drugs should not be taken by personnel assigned to operations where the potential for absorption, inhalation, or ingestion of toxic substances exists.

Drinking and driving is prohibited at any time. Driving at excessive speeds is always prohibited. Skin abrasions must be thoroughly protected to prevent chemicals from penetrating the abrasion. It is recommended that contact lenses not be worn by persons working on the site.

6.0 EMPLOYEE TRAINING

All Versar employees with the potential for hazardous exposures are required to participate in an initial minimum of 40 hours of training to recognize, evaluate, and control site hazards. Three days of supervised field-training is also included within the initial training program. Project manager level and above must also participate in an additional eight-hour supervisory training course. Once employees have received the above training, they receive a certificate of completion and are scheduled for an eight-hour refresher training session within one year of their initial training. Versar training includes specific details on the following:

- regulatory requirements
- confined space entry
- respiratory protection
- hazard communication
- decontamination procedures
- incident command system
- first aid/CPR
- air monitoring
- toxicology
- Prop. 65 (California)
- fire technology
- PPE
- IIPP

7.0 MEDICAL MONITORING PROGRAM

All Versar, Inc. field personnel are required to have annual medical evaluations in accordance with the company's Health and Safety Program policy. Additional re-evaluation will be considered in the event of chemical over-exposure while working on this site.

The chemicals typical of this site can affect specific organ systems producing characteristic health effects. The medical evaluation will, therefore, focus on the liver, kidney, nervous system, blood systems, and skin and lung function. Laboratory testing will include complete blood count, and applicable kidney and liver function tests. Other tests include skin examination.

8.0 DOCUMENTATION

8.1 Site Safety Plan Agreement

In the situation that contamination is encountered which could come into contact with site development personnel, all details of this site safety plan will be implemented. Versar personnel have the authority to stop work performed by our subcontractors at this site if any work is not performed in accordance with the requirements of this site safety plan.

All Versar project personnel and subcontractor personnel are required to sign the following agreement prior to conducting work at the site.

A. I have read and fully understand the site safety plan and my individual responsibilities.

B. I agree to abide by the provisions of the site safety plan.

Name	Company	Date	Signature

8.2 Site Safety Plan Amendment Sheet

Project Name: _____

Project Number: _____

Location: _____

Changes in field activities or hazards:

Proposed Amendment:

Proposed By:_____ Date _____

Approved By:_____ Date _____
Project Manager

_____ Date _____
Regional Health & Safety Officer

Declined By:_____ Date _____

Amendment Effective Date _____

MAPQUEST

Total Time: 5 minutes **Total Distance: 2.26 miles**

A: 2585 Nicholson St, San Leandro, CA 94577-4216

START	**1:** Start out going NORTHWEST on NICHOLSON ST toward REPUBLIC AVE.	0.1 mi
	**2:** Turn RIGHT onto REPUBLIC AVE.	0.1 mi
	**3:** Turn LEFT onto MERCED ST.	0.2 mi
	**4:** Turn RIGHT onto MARINA BLVD.	1.0 mi
	**5:** Turn SLIGHT RIGHT onto SAN LEANDRO BLVD.	0.8 mi
	**6:** Turn RIGHT onto E 14TH ST/CA-185.	0.1 mi
END	**7:** End at 13855 E 14th St San Leandro, CA 94578	

B: San Leandro Hospital: 13855 E 14th St, San Leandro, CA 94578, (510) 357-6500

Total Time: 5 minutes **Total Distance: 2.26 miles**