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Reference:

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 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.

A handwritten signature in cursive script that reads 'Fred Schifferle'.

Fred Schifferle - Manager, Sketchley Trust  
Responsible Party

• SACRAMENTO AREA OFFICE •

5330 PRIMROSE DRIVE, SUITE 147 • FAIR OAKS, CA 95628 • TELEPHONE (916) 962-1612 FAX (916) 962-2678



May 31, 2012

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

Dear Mr. Detterman:

Enclosed please find Versar, Inc.'s report titled *Sub-slab Vapor Sampling and Source Area Subsurface Investigation, Former Rodding Cleaning Service, 2585 Nicholson Street, San Leandro, California* for your review. Versar has prepared this report on behalf of the Sketchley 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 report has been prepared in response to the ACEH letter, dated July 30, 2010, requesting further assessment of the Site. Please contact me at (916) 863-9323 should you have any questions or comments regarding this report.

Sincerely,

A handwritten signature in blue ink that reads "Tim Berger".

Tim Berger, R.E.A., P.G.  
Program Manager  
Western Region

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*Sub-slab Vapor Sampling and Source Area  
Subsurface Investigation*

---

**FORMER RODDING CLEANING SERVICE  
2585 NICHOLSON STREET  
SAN LEANDRO, CALIFORNIA**



*Prepared for:*

**ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502**

Versar Project No. 104422.4422.007

May 31, 2012

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*Sub-slab Vapor Sampling and Source Area  
Subsurface Investigation*

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**FORMER RODDING CLEANING SERVICE  
2585 NICHOLSON STREET  
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ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Versar Project No. 104422.4422.007

May 31, 2012

This document has been prepared in accordance with accepted scientific and engineering practices and procedures and Versar, Inc.'s Quality Assurance Program.

Prepared by:   
Larry Kleinecke, R.E.A. II  
Senior Project Manager  
05/31/2012  
Date

Approved by:   
Tim Berger, R.E.A., P.G.  
Program Manager  
Versar - Southwest Region  
05/31/2012  
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## FOREWORD

This report was prepared by Mr. Larry Kleinecke, Senior Project Manager, and reviewed by Mr. Tim Berger, Project Manager and Professional Geologist (P.G.) and Hydrogeologist (H.G.) in the State of California.

Prepared by:

A handwritten signature in blue ink, appearing to read 'Larry Kleinecke'.

Larry Kleinecke  
Senior Project Manager  
Southwest Division

Reviewed by:

A handwritten signature in blue ink, appearing to read 'Tim Berger'.

Tim Berger, P.G. No. 05225  
Program Manager  
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# SECTION 1.0

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## EXECUTIVE SUMMARY

Versar, Inc. (Versar) has performed a Sub-slab Vapor Sampling and Source Area Subsurface Investigation (Investigation) of the Former Rodding Cleaning Service facility located in San Leandro, Alameda County, California (Site). Versar has prepared this report 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 report has been prepared in response to the ACEH letter, dated July 30, 2010, requesting further assessment of the Site, and an additional letter dated October 5, 2011 further defining ACEH requirements of the investigation.

This Phase 2 investigation has identified TPH in the gasoline and diesel fuel ranges, and BTEX concentrations in soil, soil vapor or groundwater at concentrations exceeding applicable action levels promulgated by local, state and federal environmental authorities. MTBE has not been identified as present or a constituent of concern at the Site.

Evaluation of the analytical data and distribution of concentrations of constituents of concern in the three media indicates the following:

- Concentrations of TPH and BTEX in soil are closely related to their concentrations in groundwater; however, residual TPH and BTEX may be present in vadose zone soil in the near vicinity of the former fuel dispenser
- In groundwater, TPH and BTEX concentrations are largest at the south property boundary (boring B-1), in the downgradient direction. However, TPH/BTEX concentrations are nearly absent from well MW-4 which is less than 50 feet distant in the down and cross-gradient directions. Elevated concentrations of BTEX are also found at the west property boundary, and near the former fuel dispenser. The second highest concentration of TPH is located within the former UST excavation and at the north property boundary.
- In soil vapor, concentrations of BTEX were identified at sub-slab vapor well SV-4, located within the offices portion of the Site building near the former fuel dispenser. The other interior building sub-slab vapor wells, SV-3 and SV-5, contained much lower concentrations of benzene and negligible concentrations of TEX.



# SECTION 2.0

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## BACKGROUND INFORMATION

Versar, Inc. (Versar) has performed this Sub-slab Vapor Sampling and Source Area Subsurface Investigation (Investigation) of the Former Rodding and Cleaning facility located in San Leandro, Alameda County, California (Site). The Site location is shown in Figure 1, Site Location Map. The purpose of this investigation is to characterize the lateral extent of elevated soil vapor along the south property boundary with 2591 Nicholson Street; the lateral extent of elevated soil vapor in the on-Site office area; further define the TPH plume to the east; assess the former fuel dispenser location with a soil and grab-groundwater sampling boring; and address vertical and lateral data gaps in sedimentary units influencing the distribution of constituents of concern (COC) in soil, soil vapor and shallow groundwater.

The scope of work for this project included installing and sampling five sub-slab soil vapor monitoring wells and advancing eight borings to collect soil and grab-groundwater samples for analysis. The boring locations are depicted on Figure 2, Site Layout.

### **2.1 Background**

The Site is located at 2585 Nicholson Street in San Leandro, California. The nearest cross street is Republic Avenue. The Site is currently occupied by Crane Works and consists of a single-story commercial office building at the north end of the property, and covered parking/work areas over the western and southern edges of the property. Crane Works fabricates overhead crane lifts such as bridge cranes, monorails, jib cranes, gantry cranes, lite-rail systems, load beams, spreader beams, and special application lifting devices. The Crane Works facility comprises a small building containing offices, rest and work spaces in the northwest corner of the property, a covered fabrication and machine shop, covered parking and materials supply and work area along the periphery of the property, and an open courtyard entry and driveway in the center of the property. The entire property except the building office space is surfaced with a four- to six-inch concrete slab.

Two underground storage tanks (USTs) were removed from the Site in 1991. Soil and groundwater samples collected during the UST removal activities identified total petroleum hydrocarbons (TPH) as diesel and gasoline (-d and -g) in both media. Reportedly, over-excavation was performed during UST removal activities.

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 the free-floating product.

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

be 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; 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 monitoring showed 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 November 1999, Versar performed a Risk-Based Corrective Action (RBCA) analysis of residual petroleum hydrocarbons in groundwater at the Site. The RBCA analysis was re-performed for soil in Versar's letter *Additional Research and Evaluation*, dated May 15, 2001. The purpose of the RBCA analyses was to determine the magnitude of risk, if any, to human health associated with Site soil and groundwater contamination. The analyses were prepared using conservative default parameters and existing Site data. Versar's RBCA analyses found that residual concentrations of aromatic hydrocarbons in first-encountered groundwater at the location of maximum impact (MW-1) do not present an actionable risk to human health in a commercial/industrial setting.

At the request of the ACEH, Versar performed additional research and evaluation, which was presented in the Versar letter, dated May 15, 2001. 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 the soil vapor condition at the Site pursuant to the presence of 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.

## **2.2 Site Physical Setting**

The topography of the Site and surrounding area is characterized by flat urban land. According to the United States Geological Survey (USGS) 7.5 minute series topographic map of San Leandro, CA, Quadrangle, rev. 1980, the property is approximately 15 feet above mean sea level (msl), and slopes gently to the south-southeast.

From Site and adjacent soil boring logs, sediments beneath the Site comprise silt and clay loams, with significant percentages of sand in some areas. Sediments appear to fine downward. The geology of the region is reportedly characterized by mixed alluvial, lake, playa, and terrace deposits generated by erosional activities during the Pleistocene and Holocene periods. Soil boring logs are included in Attachment III. Groundwater occurs between five and seven feet below the surface, and flows in a southerly direction.

## **2.3 Purpose**

The purpose of this Investigation is to further assess the character and extent of petroleum from a UST release at the Site through supplemental soil vapor, grab-groundwater and sediment sampling.

## **2.4 Scope of Work**

In response to the ACEH letters of July 2010 and October 2011, and in conformance with the resulting work plan and work plan addendum, Versar has conducted a sub-slab soil vapor, soil and groundwater investigation at the Site. The tasks completed are listed below. Boring and sample locations are depicted in Figure 2.

### **2.4.1 Soil Investigation**

- Versar advanced eight borings (B-1 through B-8) and collected at least three soil samples from each boring at depths of typically five, ten and fifteen feet bgs.
- Soil samples were analyzed for the following: total petroleum hydrocarbons (TPH) as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE) by U.S. Environmental Protection Agency (EPA) method SW8021B/8015Bm; TPH as diesel (TPH-d) and motor oil (TPH-mo) using EPA method SW8015B.

### **2.4.2 Groundwater Investigation**

- Versar collected grab-groundwater samples from six of the eight boring locations.
- Groundwater samples were analyzed for the following: TPH-g, BTEX, and MTBE by EPA method SW8021B/8015Bm; TPH-d and TPH-mo using EPA method SW8015B.

### **2.4.3 Soil Vapor Investigation**

- Versar installed and sampled five sub-slab soil vapor monitoring wells.

- Five soil vapor samples and one ambient air sample were collected from beneath the facility entryway off Nicholson Street were analyzed for the following: TPH-g, BTEX and MTBE by EPA method TO-15 and the Fixed Gases oxygen, nitrogen, methane and carbon dioxide by ASTM standard method D1946-90.

# SECTION 3.0

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## FIELD INVESTIGATION

### **3.1 Permitting**

Prior to performing the field investigation a permit for the work was obtained from Alameda County Environmental Health Services. The permit was approved on March 2, 2012 and is included as Appendix A to this report.

### **3.2 Utility Clearance**

Utility clearance for the Site comprised marking the investigation area and notifying Underground Service Alert (USA), Ticket #116660, and performing a private utility search. Underground utilities along the street were identified and marked by USA. Specific boring locations within the property, both inside and outside of Site buildings, were cleared by the private utility locator. No utilities were encountered during the investigation.

### **3.3 Project Health and Safety**

Versar prepared a Site-specific health and safety plan (HSP) prior to performing the field investigation. A Site Safety Officer (SSO) was designated during the field investigation. The SSO was responsible for adherence to the HSP and was present during all field activities. The HSP field review signature page is included in Appendix B to this report.

### **3.4 Decontamination Procedures**

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

### **3.5 Field Screening**

Soil samples were field screened using a Photo-Ionization Detector (PID). The PID was calibrated before use in the field. The calibration was performed using a reference gas of 100 parts per million (ppm) isobutylene, which is the standard for fuel hydrocarbon screening. The PID utilized a 10.6 eV lamp which provides the most direct reading of fuel hydrocarbons and related aromatics.

The results of PID field screening, as well as visual indicators of contamination such as staining, sheen, and product presence as encountered, were used in selecting soil samples for laboratory analysis.

### **3.6 Field Activities**

Field activities comprised drilling soil borings at eight locations and installing five sub-slab soil vapor wells within the boundaries of the Site and collecting soil, groundwater and soil vapor samples for laboratory analysis. Tables 1 through 3 summarize the sample locations and analytical test results. Figures 2 through 5 depict the locations of soil borings and analytical results.

#### **3.6.1 Soil Borings**

All soil borings were performed using direct-push method drilling equipment at the locations shown in Figure 2. Borings were extended to depths between 15 and 16 feet below ground surface (bgs). A drilling log was created for each boring describing the soil profile, sample collection locations, field observations and photoionization detector (PID) readings. The boring logs are included in Appendix C.

The Site pavement membrane comprises 6-inch thick concrete. Soil boring locations were cored by a concrete coring vendor using a four-inch diameter diamond concrete coring bit prior to drilling with direct push equipment.

Each soil boring was abandoned by filling with neat cement containing up to five percent powdered bentonite. Borings were filled to the surface, allowed to settle and topped off. Soil cuttings and decontamination water were contained in 55-gallon DOT-approved drums for later disposal. Each drum was labeled with appropriate information including the contents and date of collection. Alameda County inspected the abandoned borings for permit compliance, no deficiencies were identified.

#### **3.6.2 Soil Sampling**

At least three soil samples were collected from each boring. Prior to sample collection, observations were made of the soil profile to determine if evidence of contamination was apparent. If no evidence of contamination was observed or contamination was consistent throughout, samples were collected from predetermined depths. All soil samples were screened using a PID prior to collection. Drilling logs were created for each boring and are presented in Appendix C.

Soil samples collected using direct push were retained within the acetate core barrel liner, and capped at each end using Teflon tape and plastic caps, labeled appropriately and stored in sealed plastic bags. The samples were placed on ice in a cooler prior to transferring custody to the contract laboratory. All samples were handled following chain-of-custody protocols from collection through analysis.

#### **3.6.3 Groundwater Sampling**

Grab groundwater samples were collected from six of the eight borings, B-1, B-3 through B-6 and B-8. In each of the six borings was inserted a 0.010-slotted PVC pipe with filter sock to ensure continued access to the water bearing unit and reduce groundwater sample turbidity.

Well screens were set from 10 to 15 feet bgs. Grab-groundwater samples were collected with a peristaltic pump, using new dedicated tubing for each well. The samples were carefully collected into the appropriate sample container, with preservative as appropriate.

### **3.6.4 Soil Vapor Sampling**

Five sub-slab soil vapor wells (SV-1 through SV-5) were installed at the Site to a depth of seven (7) inches beneath the bottom of the concrete slab. Sub-slab vapor well locations were cored using a 1.25-inch diameter concrete coring bit, concrete cores were five to six-inches thick. The sub-slab vapor wells were constructed by installing within the granular material below the concrete slab a 0.5-inch by 0.75-inch perforated tip centered in a 2-inch long by 1.25-inch diameter sand pack with 0.25-inch Teflon tubing extending to a 0.25-inch diameter by 4-inch long stainless steel flush mounted fixture. A 1-inch dry bentonite seal was placed between the sand pack and concrete seal set to the surface.

An equipment leak test (shut-in test) was performed prior to collection of each sample. The test consisted of assembling the above-ground sampling manifold apparatus and evacuating the lines to a measured vacuum, then shutting the vacuum in by closing valves on opposite ends of the sampling train. The vacuum gauge connected to the line was observed for at least one minute. If any observable loss of vacuum occurred, the fittings were adjusted and the test performed again. The equipment was then attached to the well and a calculated three purge volumes of soil vapor were removed. The leak detection compound 1,1-difluoroethane, was used in combination with a shroud placed over the sampling equipment. Each vapor sample was collected at a flow rate of 50 milliliters per minute (ml/min) in accordance with the state Department of Toxic Substances Control (DTSC) guidelines for sub-slab sampling. Each sample was collected into an evacuated one-liter Summa canister.

Each of the five soil vapor samples from the sub-slab wells, and one ambient air sample, were collected from the facility entryway off Nicholson Street were analyzed for the following: TPH-g, BTEX and MTBE by EPA method TO-15 and the Fixed Gases oxygen, nitrogen, methane and carbon dioxide by ASTM standard method D1946-90.

### **3.7 Storage and Disposal of Wastes**

Wastes collected during the investigation comprised soil cuttings and decontamination water, and related trash. All subsurface-derived wastes collected were placed into 55-gallon, DOT-approved drums and stored at the Site pending disposal. The wastes collected and stored at the Site comprised one partially full drum of soil and three full drum of water. The contents of the drum and the date of collection were clearly marked on an appropriate label. Trash was disposed to a municipal receptacle.

# SECTION 4.0

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## LABORATORY ANALYSIS

Soil and grab-groundwater samples were submitted to a California state-certified laboratory for chemical analyses; McCampbell Analytical Inc. (McCampbell) (ELAP Certificate No. 1644). Soil vapor samples were submitted to SunStar Laboratories, Inc. (SunStar), (Environmental Laboratory Accreditation Program [ELAP] Certificate No. 2250). All samples were analyzed within instrument and accuracy limits defined by the method. The samples were collected, placed in containers, preserved, and analyzed within the time constraints consistent with applicable United States Environmental Protection Agency (USEPA), California EPA, and industry practices. Samples were delivered under Versar's chain-of-custody protocol. Custody of the samples began at the time of sample collection and was maintained by the sampling team until the samples were relinquished to the laboratory.

Soil and grab-groundwater samples were analyzed for the following: TPH-g, BTEX, and MTBE by EPA method SW8021B/8015Bm; TPH-d and TPH-mo were analyzed using EPA method SW8015B. The results of analytical testing for soil and groundwater are summarized in Tables 1 and 2, respectively. The laboratory reports and chain-of-custody documentation are presented in Appendix D.

Soil vapor samples were analyzed by SunStar using EPA Method TO-15 for TPH-g, BTEX and MTEBE and oxygen, nitrogen, methane and carbon dioxide by ASTM method D1946-90. The results of the analytical laboratory testing for soil vapor are summarized in Table 3. The laboratory reports and chain-of-custody documentation are included in Appendix D.



# SECTION 5.0

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## INVESTIGATIVE FINDINGS

The findings of this monitoring event are presented in the following sections. Tabulated summarized analytical results are presented in Tables 1, 2 and 3. The laboratory analytical report and chain-of-custody documentation are presented in Appendix D.

### 5.1 Soil Samples

Soil samples were typically collected from three five-foot intervals from each of the eight borings. Figure 3 illustrates the detected concentrations of TPHs and VOCs in soil.

#### *TPH Analysis*

Petroleum hydrocarbons were detected in soil in each of the eight borings. Gasoline range hydrocarbons were detected from 1.1 to 5,700 mg/kg. Diesel range hydrocarbons were detected from 2 to 3,000 mg/kg. Motor oil range hydrocarbons were detected from 5.3 to 790 mg/kg. An exception was noted in boring B-8 at 15 feet bgs, where TPH-g and TPH-d concentrations were significant, at 5,000 and 1,400 mg/kg, respectively.

The highest concentrations of TPH were typically encountered between 5 and 9 feet bgs, corresponding with the soil groundwater interface zone and capillary fringe. The highest concentrations of TPH-g were identified in borings B-4, B5 and B-8.

The highest concentration of TPH-d was identified at boring B-8, followed by B-4, B-5, B-7 and B-8. The highest concentrations of TPH-mo were identified at borings B-6 and B-7.

#### *BTEX Analysis*

BTEX were detected in soil in each of the eight borings. Benzene was detected from 0.0054 to 13 mg/kg. Toluene was detected from 0.0058 to 44 mg/kg. Ethylbenzene was detected from 0.016 to 110 mg/kg. Xylenes were detected from 0.014 to 290 mg/kg.

The highest concentrations of BTEX were typically encountered between 5 and 9 feet bgs, corresponding with the soil groundwater interface zone and capillary fringe. An exception was noted in boring B-8 at 15 feet bgs, where ethylbenzene and xylene concentrations were higher than at 10-feet bgs.

The highest concentrations of benzene were identified in borings B-5 and B-8. The highest concentration of toluene was identified in boring B-8. The highest concentration of ethylbenzene were identified in boring B-8., followed by borings B-5 and B-7. The highest concentrations of xylenes were identified in boring B-8, followed by borings B-4 and B-2.

#### *MTBE Analysis*

MTBE was not detected in any of the soil samples collected from the Site.

## 5.2 Groundwater Samples

Grab-groundwater samples were collected from six borings, borings B-2 and B-7 were not sampled. Figure 4 illustrates the detected concentrations of TPHs and VOCs in groundwater.

### *TPH Analysis*

Petroleum hydrocarbons were detected in groundwater each of the six borings sampled. Gasoline range hydrocarbons were detected from 17,000 to 120,000 µg/l. Diesel range hydrocarbons were detected from 2,200 to 59,000 µg/l. Motor oil range hydrocarbons were detected from 350 to 11,000 µg/l.

The highest concentration of TPH-g was identified in boring B-1, followed by borings B-4 and B-8. The highest concentration of TPH-d was identified at boring B-6, followed by borings B-5 and B-8. The highest concentrations of TPH-mo were identified at borings B-6 and B-5, respectively.

### *BTEX Analysis*

BTEX were detected in groundwater in each of the six borings sampled. Benzene was detected from 62 to 9,300 µg/l. Toluene was detected from 35 to 15,000 µg/l. Ethylbenzene was detected from 110 to 2,800 µg/l. Xylenes were detected from 30 to 15,000 µg/l.

The highest concentrations of benzene were identified in borings B-1 and B-5. The highest concentration of toluene was identified in boring B-1, followed by boring B-4. The highest concentrations of ethylbenzene were identified in borings B-1, B-4 and B-8. The highest concentrations of xylenes were identified in borings B-1 and B-4, followed by boring B-8.

### *MTBE Analysis*

MTBE was not detected in any of the grab-groundwater samples collected from the Site. However, due to the high concentrations of BTEX, the MTBE reporting limits ranged from 250 to 500 µg/l.

## 5.3 Soil Vapor Samples

Samples of sub-slab soil vapor were collected from five permanent soil vapor wells installed at the Site on April 10, 2012. Figure 5 illustrates the detected concentrations of TPH-g, VOCs and fixed gases in sub-slab soil vapor. Soil vapor samples were analyzed for TPH-g, BTEX, MTBE and fixed gases indicative of biological degradation of petroleum hydrocarbons.

Five soil vapor samples were collected on April 25<sup>th</sup> from sub-slab soil vapor wells. Benzene was detected in each of the soil vapor wells. TPH-g and m,p-xylenes were detected in four of the five wells. Ethylbenzene and o-xylene were detected in three of the five wells, and toluene was detected in one well, SV-4.

Gasoline range hydrocarbon concentrations were detected from 10,000 to 13,000,000  $\mu\text{g}/\text{m}^3$ . Benzene was detected from 21 to 330,00  $\mu\text{g}/\text{m}^3$ . Toluene was detected 6,800  $\mu\text{g}/\text{m}^3$ . Ethylbenzene was detected from 6.9 to 40,000  $\mu\text{g}/\text{m}^3$ . Total xylenes were detected from 16 to 155,000  $\mu\text{g}/\text{m}^3$ . MTBE was not detected in soil gas sampled at the Site.

Methane was detected in the wells ranging in concentration from 7.3 to 56,000  $\mu\text{g}/\text{m}^3$ . Carbon dioxide concentrations ranged from <1.0 percent in SV-5 to 7.84 percent at SV-3. Oxygen concentrations ranged from 4.97 percent in SV-3 to 18.2 percent at SV-1. Nitrogen concentrations ranged from 67.3 percent in SV-5 to 91.2 percent at SV-3.

# SECTION 6.0

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## CONCLUSIONS

Versar, Inc. (Versar) has performed a Phase II Sub-slab Vapor Sampling and Source Area Subsurface Investigation of the former Rodding Cleaning Services facility at 2585 Nicholson Street in the city of San Leandro, Alameda County, California (Site).

This Phase 2 investigation has identified TPH in the gasoline and diesel fuel ranges, and BTEX concentrations in soil, soil vapor or groundwater at concentrations exceeding applicable action levels promulgated by local, state and federal environmental authorities. MTBE has not been identified as present or a constituent of concern at the Site.

Evaluation of the analytical data and distribution of concentrations of constituents of concern in the three media indicates the following:

- Due to the depth to groundwater of 5-7 feet bgs, constituents of concern in soil measured during this investigation are likely significantly influenced by groundwater. Versar noted trace to no concentrations of TPH and BTEX at 5 feet bgs in borings B-3, B-4 and B-8. The highest concentrations of TPH and BTEX at 5 feet bgs were identified in boring B-5, at the former fuel dispenser location.
- The area of boring B-1 at the south property boundary contains the highest total concentrations of TPH and BTEX components in groundwater. This direction is downgradient from the former USTs location and shallow sediments may include sandy horizons comprising a preferential direction for contaminant migration. Versar notes that groundwater monitoring well MW-4, which is within 50 feet down and cross gradient of B-1, shows little to no impact by TPH and BTEX.
- The area of B-4, at the east property boundary, has the second highest total concentration of BTEX in groundwater, whereas the second highest concentrations of TPH are found at B-6 and B-8. B-5 has the next highest total concentrations of BTEX and TPH in groundwater.
- Soil vapor concentrations of TPH-g and BTEX are highest around sub-slab soil vapor wells SV-4 and SV-5. The volatile total BTEX components in the samples are approximately 20 percent of fresh gasoline total BTEX concentrations. An elevated concentration of benzene is also identified at SV-2 at the south property boundary (as opposed to SV-1 further west along the property boundary).

# SECTION 7.0

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## STATEMENT OF LIMITATIONS

The data presented and the opinions expressed in this report are qualified as follows:

- The sole purpose of the investigation and of this report is to assess the physical characteristics of the Site with respect to the presence or absence of oil or hazardous materials and substances in the environment as defined in the applicable state and federal environmental laws and regulations and to gather information regarding current and past environmental conditions at the Site.
- Versar derived the data in this report primarily from visual inspections, examination of records in the public domain, and interviews with individuals with information about the Site. The passage of time, manifestation of latent conditions, or occurrence of future events may require further exploration at the Site, analysis of the data, and reevaluation of the findings, observations, conclusions, and recommendations expressed in the report.
- In preparing this report, Versar has relied upon and presumed accurate certain information (or the absence thereof) about the Site and adjacent properties provided by governmental officials and agencies, the Client, and others identified herein. Except as otherwise stated in the report, Versar has not attempted to verify the accuracy or completeness of such information.
- The data reported and the findings, observations, conclusions, and recommendations expressed in the report are limited by the Scope of Services. The Scope of Services was defined by the requests of the Client, and the availability of access to the Site.
- The findings, observations, conclusions, and recommendations expressed by Versar in this report are limited to the information obtained and should not be considered an opinion concerning the compliance of any past or current owner or operator of the Site with any federal, state, or local law or regulation. No warranty or guarantee, whether expressed or implied is made with respect to the data reported or findings, observations, conclusions, and recommendations expressed in this report. Further, such data, findings, observations, conclusions, and recommendations are based solely upon Site conditions in existence at the time of investigation.
- This report has been prepared on behalf of the Client, and is subject to and issued in connection with the Agreement and the provisions thereof.

# SECTION 8.0

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## REFERENCES

California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Integrated Risk Assessment Section. 2005. *Human-Exposure-Based Screening Numbers Developed to Aid Estimation of Cleanup Costs for Contaminated Soil*. November 2004, January 2005 Revision.

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Alameda County Health Care Services Agency, Environmental Health Department, Environmental Protection. 2011. *Letter Request for Work Plan Addendum; Fuel Leak Case No. RO0000020, (Global ID# T0600101153), Rodding Cleaning Services, 2585 Nicholson Street, San Leandro, CA 94577*. October 5

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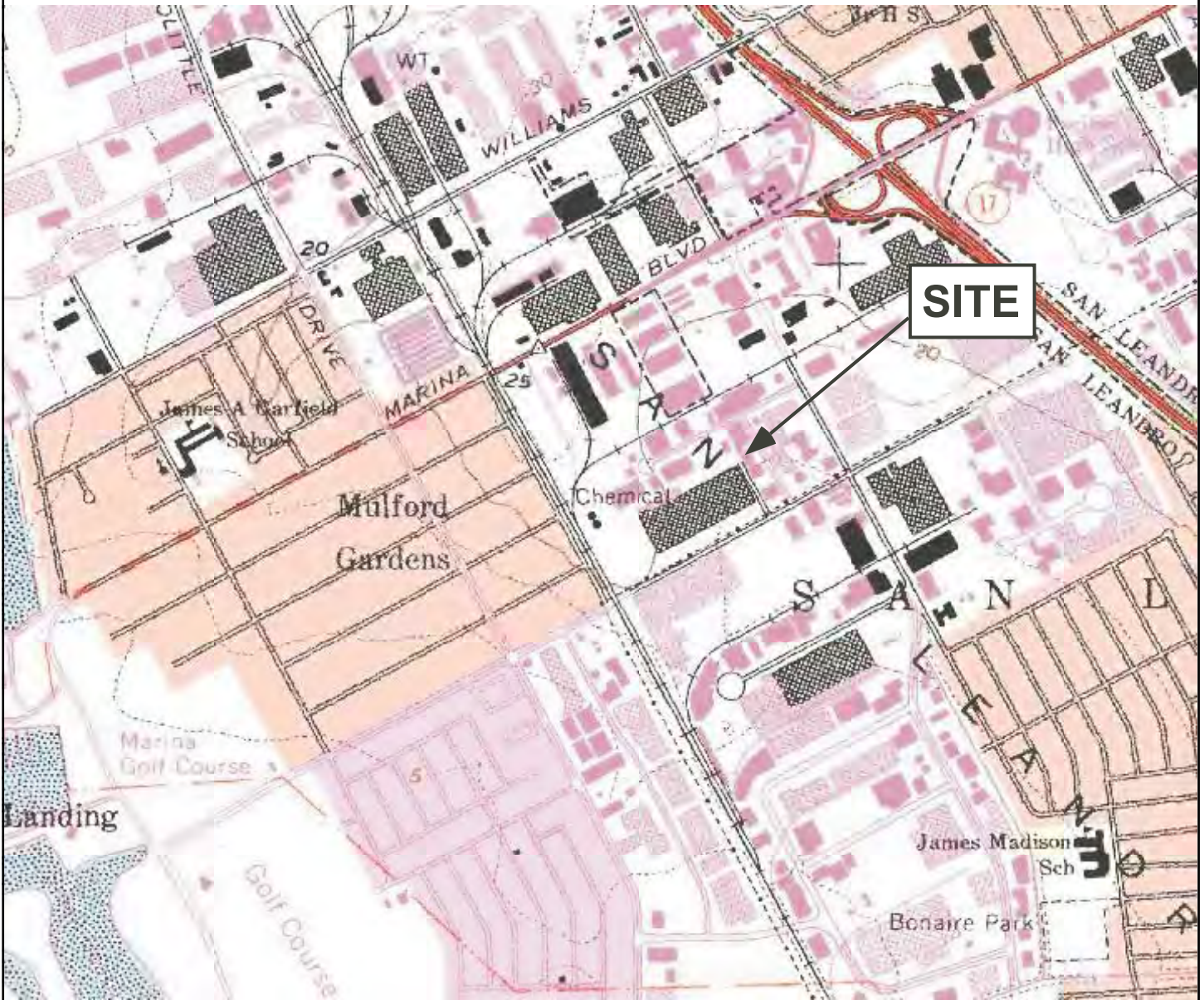
Versar. 2012. *Groundwater Monitoring Report April 2012, 2585 Nicholson Street, San Leandro, California, ES#305582*. Versar Project No. 104422.4422.007. Prepared for Sketchley Trust., Concord, California. May 17.

## **FIGURES**

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

Dr. By: TWB
Date: 6/20/08
Scale: 1 inch=2,000 feet
Versar Project No. 4422-006
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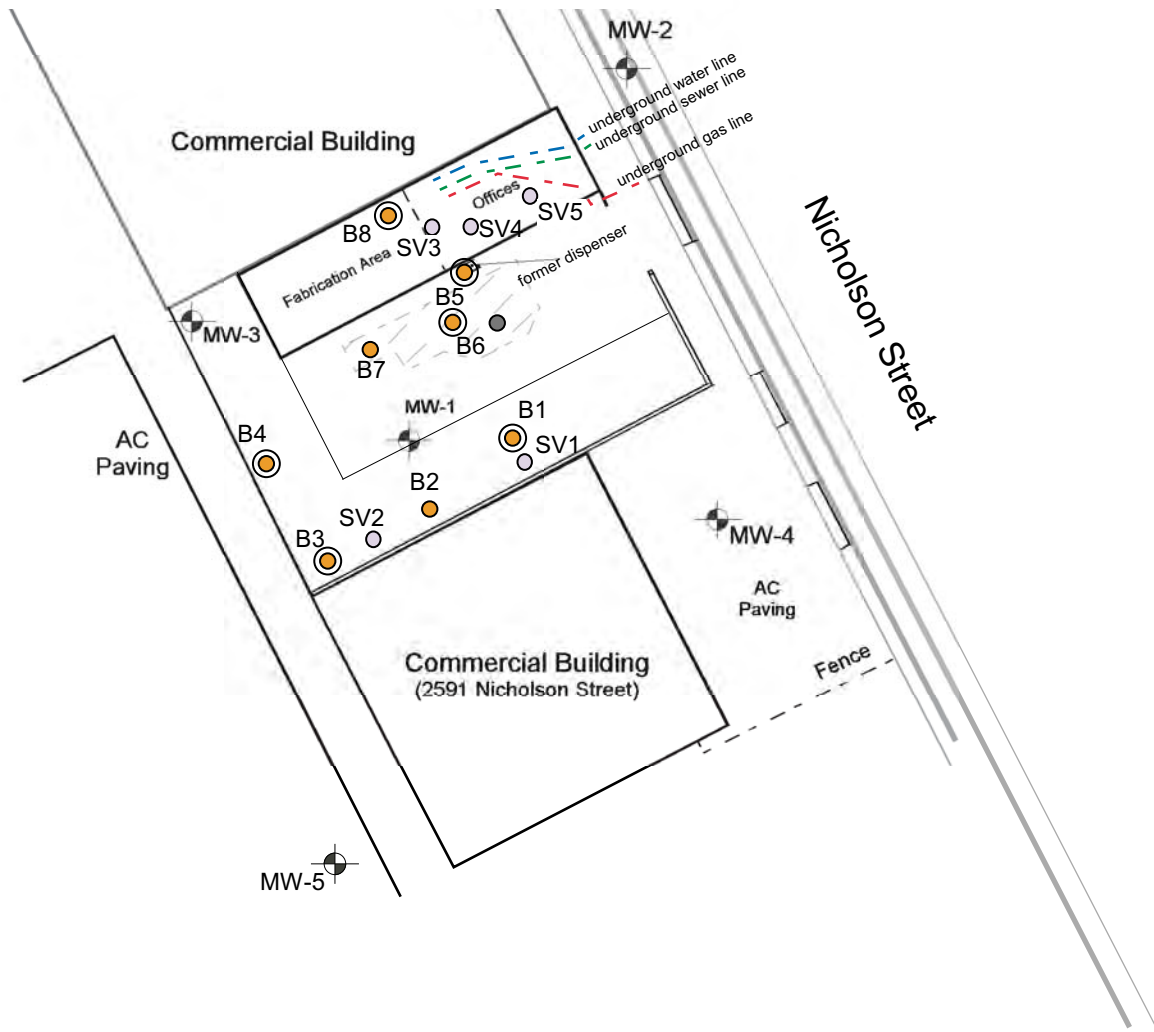


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**SITE LOCATION**  
2585 Nicholson Street  
San Leandro, California

**Figure**  
**1**

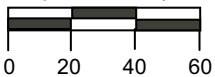




**LEGEND:**

- Existing Groundwater Monitoring Well
- Soil Vapor Well
- Boring Location
- Grab-groundwater Sample Location
- Initial Attempted B-6 Location

(Scale - Feet)



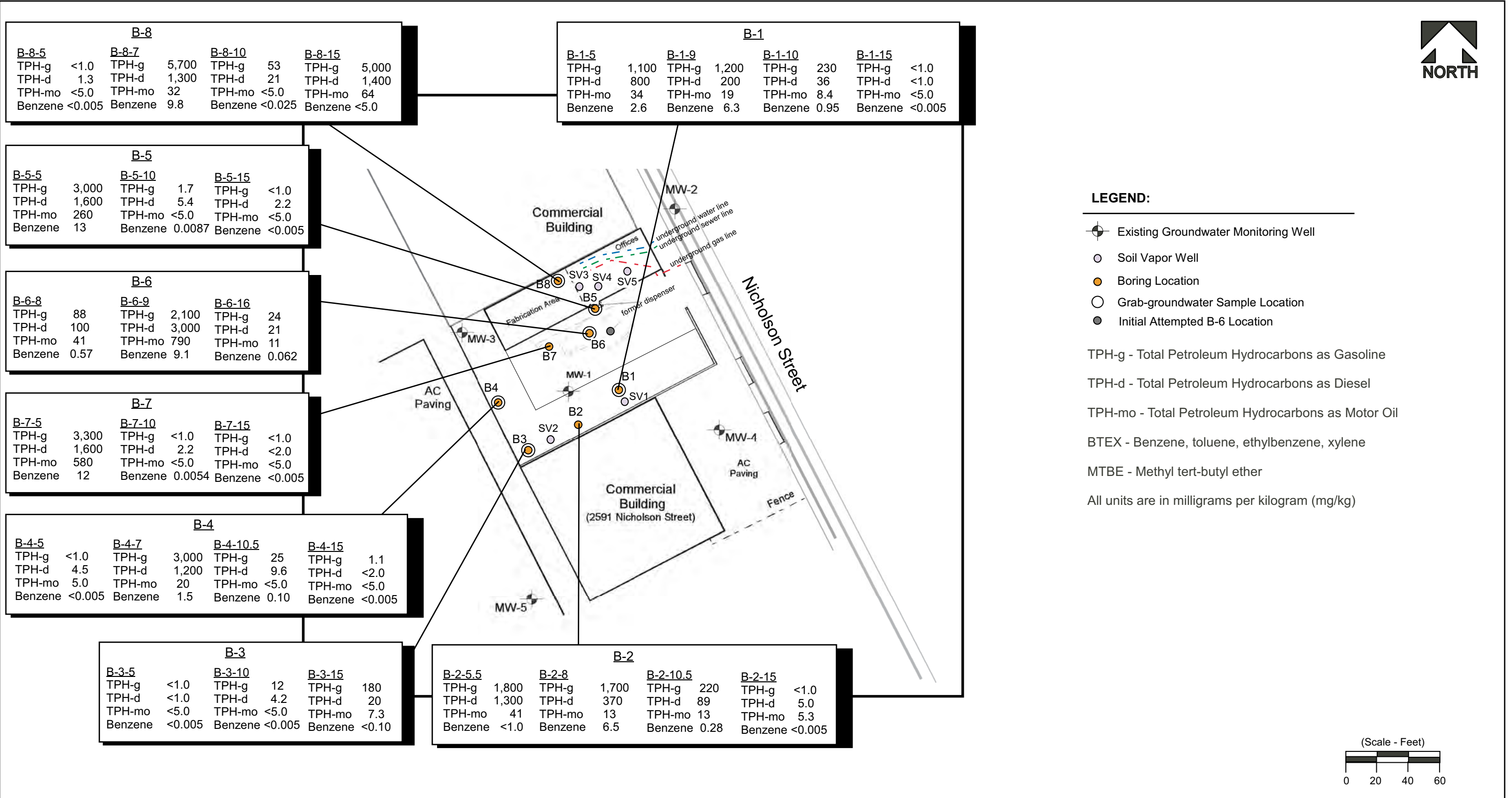
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Versar Project No. 4422-007
Path/File : P:\BOFA\SanLean\Report\Fig2



**SOIL VAPOR WELL and BORING LOCATIONS**

Former Rodding Cleaning Services  
2585 Nicholson Street  
San Leandro, California

**Figure 2**



B-8			
<u>B-8-5</u>	<u>B-8-7</u>	<u>B-8-10</u>	<u>B-8-15</u>
TPH-g <1.0	TPH-g 5,700	TPH-g 53	TPH-g 5,000
TPH-d 1.3	TPH-d 1,300	TPH-d 21	TPH-d 1,400
TPH-mo <5.0	TPH-mo 32	TPH-mo <5.0	TPH-mo 64
Benzene <0.005	Benzene 9.8	Benzene <0.025	Benzene <5.0

B-1			
<u>B-1-5</u>	<u>B-1-9</u>	<u>B-1-10</u>	<u>B-1-15</u>
TPH-g 1,100	TPH-g 1,200	TPH-g 230	TPH-g <1.0
TPH-d 800	TPH-d 200	TPH-d 36	TPH-d <1.0
TPH-mo 34	TPH-mo 19	TPH-mo 8.4	TPH-mo <5.0
Benzene 2.6	Benzene 6.3	Benzene 0.95	Benzene <0.005

B-5		
<u>B-5-5</u>	<u>B-5-10</u>	<u>B-5-15</u>
TPH-g 3,000	TPH-g 1.7	TPH-g <1.0
TPH-d 1,600	TPH-d 5.4	TPH-d 2.2
TPH-mo 260	TPH-mo <5.0	TPH-mo <5.0
Benzene 13	Benzene 0.0087	Benzene <0.005

B-6		
<u>B-6-8</u>	<u>B-6-9</u>	<u>B-6-16</u>
TPH-g 88	TPH-g 2,100	TPH-g 24
TPH-d 100	TPH-d 3,000	TPH-d 21
TPH-mo 41	TPH-mo 790	TPH-mo 11
Benzene 0.57	Benzene 9.1	Benzene 0.062

B-7		
<u>B-7-5</u>	<u>B-7-10</u>	<u>B-7-15</u>
TPH-g 3,300	TPH-g <1.0	TPH-g <1.0
TPH-d 1,600	TPH-d 2.2	TPH-d <2.0
TPH-mo 580	TPH-mo <5.0	TPH-mo <5.0
Benzene 12	Benzene 0.0054	Benzene <0.005

B-4			
<u>B-4-5</u>	<u>B-4-7</u>	<u>B-4-10.5</u>	<u>B-4-15</u>
TPH-g <1.0	TPH-g 3,000	TPH-g 25	TPH-g 1.1
TPH-d 4.5	TPH-d 1,200	TPH-d 9.6	TPH-d <2.0
TPH-mo 5.0	TPH-mo 20	TPH-mo <5.0	TPH-mo <5.0
Benzene <0.005	Benzene 1.5	Benzene 0.10	Benzene <0.005

B-3		
<u>B-3-5</u>	<u>B-3-10</u>	<u>B-3-15</u>
TPH-g <1.0	TPH-g 12	TPH-g 180
TPH-d <1.0	TPH-d 4.2	TPH-d 20
TPH-mo <5.0	TPH-mo <5.0	TPH-mo 7.3
Benzene <0.005	Benzene <0.005	Benzene <0.10

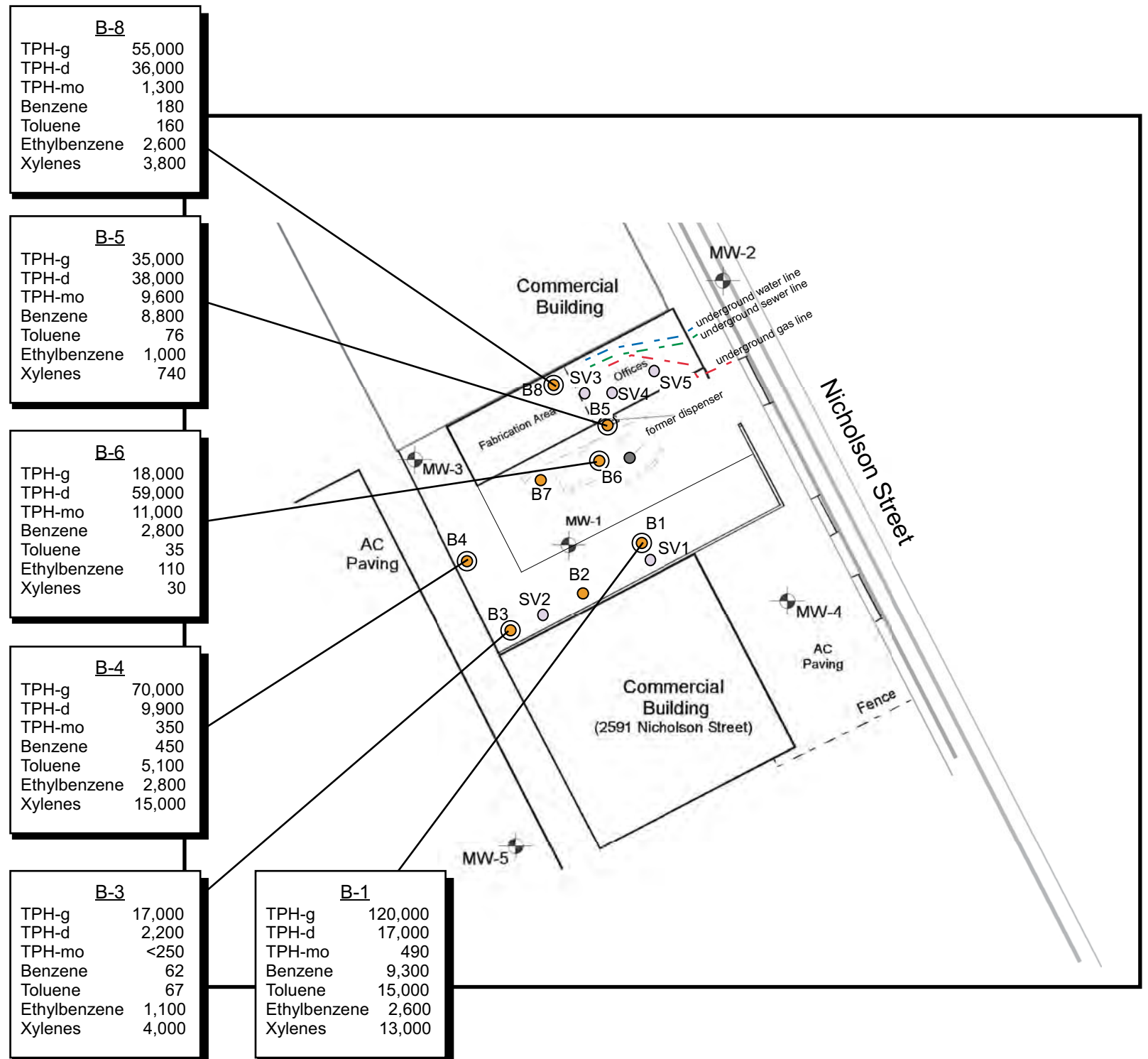
B-2			
<u>B-2-5.5</u>	<u>B-2-8</u>	<u>B-2-10.5</u>	<u>B-2-15</u>
TPH-g 1,800	TPH-g 1,700	TPH-g 220	TPH-g <1.0
TPH-d 1,300	TPH-d 370	TPH-d 89	TPH-d 5.0
TPH-mo 41	TPH-mo 13	TPH-mo 13	TPH-mo 5.3
Benzene <1.0	Benzene 6.5	Benzene 0.28	Benzene <0.005

Dr. By: NH  
 Date: 05/16/2012  
 Scale: 1 inch = 60 feet  
 Versar Project No.: 104422.4422.007

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**SOIL SAMPLING ANALYTICAL RESULTS**  
**APRIL 2012**  
 FORMER RODDING CLEANING SERVICES  
 2585 NICHOLSON STREET  
 SAN LEANDRO, CALIFORNIA

**Figure 3**



**B-8**

TPH-g	55,000
TPH-d	36,000
TPH-mo	1,300
Benzene	180
Toluene	160
Ethylbenzene	2,600
Xylenes	3,800

**B-5**

TPH-g	35,000
TPH-d	38,000
TPH-mo	9,600
Benzene	8,800
Toluene	76
Ethylbenzene	1,000
Xylenes	740

**B-6**

TPH-g	18,000
TPH-d	59,000
TPH-mo	11,000
Benzene	2,800
Toluene	35
Ethylbenzene	110
Xylenes	30

**B-4**

TPH-g	70,000
TPH-d	9,900
TPH-mo	350
Benzene	450
Toluene	5,100
Ethylbenzene	2,800
Xylenes	15,000

**B-3**

TPH-g	17,000
TPH-d	2,200
TPH-mo	<250
Benzene	62
Toluene	67
Ethylbenzene	1,100
Xylenes	4,000

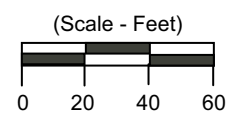
**B-1**

TPH-g	120,000
TPH-d	17,000
TPH-mo	490
Benzene	9,300
Toluene	15,000
Ethylbenzene	2,600
Xylenes	13,000

**LEGEND:**

- Existing Groundwater Monitoring Well
- Soil Vapor Well
- Boring Location
- Grab-groundwater Sample Location
- Initial Attempted B-6 Location

TPH-g - Total Petroleum Hydrocarbons as Gasoline  
 TPH-d - Total Petroleum Hydrocarbons as Diesel  
 TPH-mo - Total Petroleum Hydrocarbons as Motor Oil  
 BTEX - Benzene, toluene, ethylbenzene, xylene  
 MTBE - Methyl tert-butyl ether  
 All units are in micrograms per liter (µg/L)



Dr. By: NH  
 Date: 04/27/2012  
 Scale: 1 inch = 60 feet  
 Versar Project No.: 104422.4422.007

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**GRAB-GOUNDWATER ANALYTICAL RESULTS**  
**APRIL 2012**  
 FORMER RODDING CLEANING SERVICES  
 2585 NICHOLSON STREET  
 SAN LEANDRO, CALIFORNIA

**Figure 4**





SV-5	
TPH-g	23,000
Benzene	780
Toluene	<190
Ethylbenzene	<220
Xylenes	<220
Leak Detection	<140
Methane (ppm)	560
Carbon Dioxide	ND
Oxygen	14.1%
Nitrogen	67.3%

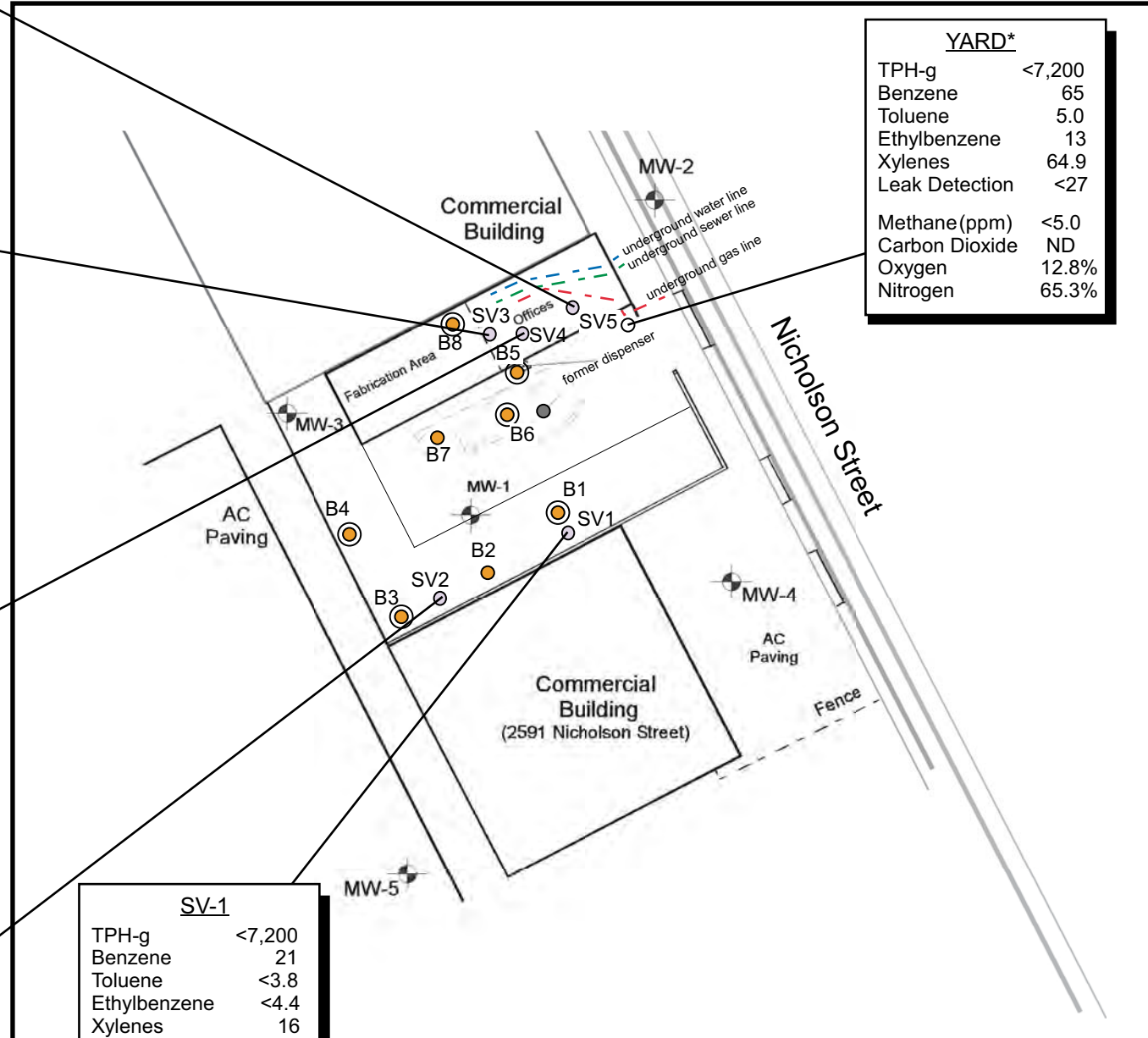
SV-3	
TPH-g	10,000
Benzene	78
Toluene	<3.8
Ethylbenzene	6.9
Xylenes	32.8
Leak Detection	670
Methane (ppm)	7.3
Carbon Dioxide	7.84%
Oxygen	4.97%
Nitrogen	91.2%

SV-4	
TPH-g	13,000,000
Benzene	330,000
Toluene	6,800
Ethylbenzene	40,000
Xylenes	155,000
Leak Detection	<140
Methane (ppm)	56,000
Carbon Dioxide	7.54%
Oxygen	6.13%
Nitrogen	89.5%

SV-2	
TPH-g	13,000
Benzene	420
Toluene	<3.8
Ethylbenzene	81
Xylenes	420
Leak Detection	3,700
Methane (ppm)	46
Carbon Dioxide	3.01%
Oxygen	13.4%
Nitrogen	82.8%

SV-1	
TPH-g	<7,200
Benzene	21
Toluene	<3.8
Ethylbenzene	<4.4
Xylenes	16
Leak Detection	700
Methane (ppm)	<5.0
Carbon Dioxide	1.36%
Oxygen	18.2%
Nitrogen	82.7%

YARD*	
TPH-g	<7,200
Benzene	65
Toluene	5.0
Ethylbenzene	13
Xylenes	64.9
Leak Detection	<27
Methane (ppm)	<5.0
Carbon Dioxide	ND
Oxygen	12.8%
Nitrogen	65.3%



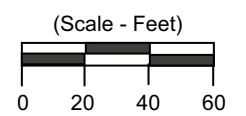
**LEGEND:**

- Existing Groundwater Monitoring Well
- Soil Vapor Well
- Boring Location
- Grab-groundwater Sample Location
- Initial Attempted B-6 Location

TPH-g - Total Petroleum Hydrocarbons as Gasoline  
 ppm - Parts per Million

Unless otherwise noted, all units are in micrograms per liter ( $\mu\text{g}/\text{m}^3$ )

\* Ambient air sample



Dr. By: NH  
 Date: 05/4/2012  
 Scale: 1 inch = 60 feet  
 Versar Project No.: 104422.4422.007

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**SOIL VAPOR ANALYTICAL RESULTS  
 APRIL 2012  
 FORMER RODDING CLEANING SERVICES  
 2585 NICHOLSON STREET  
 SAN LEANDRO, CALIFORNIA**

**Figure  
 5**

## TABLES

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Table 1  
Analytical Results for Soil Samples  
2585 Nicholson Street  
San Leandro, California

Boring No.	Date	Sample Depth (feet)	TPH-g (C6-C12) (mg/kg)	TPH-d (C10-C23) (mg/kg)	TPH-mo (C18-C36) (mg/kg)	MTBE (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)
B-1	4/10/2012	5.0	<b>1,100</b>	<b>800</b>	<b>34</b>	<1.0	<b>2.6</b>	<b>22</b>	<b>16</b>	<b>82</b>
		9.0	<b>1,200</b>	<b>200</b>	<b>19</b>	<5.0	<b>6.3</b>	<b>44</b>	<b>25</b>	<b>120</b>
		10.0	<b>230</b>	<b>36</b>	<b>8.4</b>	<1.0	<b>0.95</b>	<b>0.61</b>	<b>2</b>	<b>4.9</b>
		15.0	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
B-2	4/10/2012	5.5	<b>1,800</b>	<b>1,300</b>	<b>41</b>	<10	<1.0	<b>14</b>	<b>19</b>	<b>140</b>
		8.0	<b>1,700</b>	<b>370</b>	<b>13</b>	<5.0	<b>6.5</b>	<b>29</b>	<b>35</b>	<b>160</b>
		10.5	<b>220</b>	<b>89</b>	<b>13</b>	<1.7	<b>0.28</b>	<b>0.27</b>	<b>2.5</b>	<b>3.9</b>
B-3	4/10/2012	5.0	<1.0	<1.0	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
		10.0	<b>12</b>	<b>4.2</b>	<5.0	<0.05	<0.005	<b>0.030</b>	<b>0.016</b>	<b>0.039</b>
		15.0	<b>180</b>	<b>20</b>	<b>7.3</b>	<1.0	>0.10	<b>0.27</b>	<b>0.81</b>	<b>1.4</b>
B-4	4/11/2012	5.0	<1.0	<b>4.5</b>	<b>5.0</b>	<0.05	<0.005	<0.005	<0.005	<0.005
		7.0	<b>3,000</b>	<b>1,200</b>	<b>20</b>	<5.0	<b>1.5</b>	<b>20</b>	<b>47</b>	<b>260</b>
		10.5	<b>25</b>	<b>9.6</b>	<5.0	<0.10	<b>0.10</b>	<b>0.10</b>	<b>0.49</b>	<b>1.1</b>
B-5	4/11/2012	5.0	<b>3,000</b>	<b>1,600</b>	<b>260</b>	<5.0	<b>13</b>	<b>4.8</b>	<b>59</b>	<b>77</b>
		10.0	<b>1.7</b>	<b>5.4</b>	<5.0	<0.05	<b>0.0087</b>	<0.005	<0.005	<0.005
		15.0	<1.0	<b>2.2</b>	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
B-6	4/11/2012	8.0	<b>88</b>	<b>100</b>	<b>41</b>	<0.50	<b>0.57</b>	<b>0.13</b>	<b>0.17</b>	<b>0.36</b>
		9.0	<b>2,100</b>	<b>3,000</b>	<b>790</b>	<3.3	<b>9.1</b>	<b>4</b>	<b>3.5</b>	<b>3.2</b>
		16.0	<b>24</b>	<b>21</b>	<b>11</b>	<0.05	<b>0.062</b>	<b>0.059</b>	<b>0.043</b>	<b>0.088</b>
B-7	4/11/2012	5.0	<b>3,300</b>	<b>1,600</b>	<b>580</b>	<10	<b>12</b>	<b>5.1</b>	<b>56</b>	<b>5.9</b>
		10.0	<1.0	<b>2.2</b>	<5.0	<0.05	<b>0.0054</b>	<b>0.012</b>	<0.005	<0.005
		15.0	<1.0	<b>2</b>	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
B-8	4/10/2012	5.0	<1.0	<b>1.3</b>	<5.0	<0.05	<0.005	<0.005	<0.005	<0.005
		7.0	<b>5,700</b>	<b>1,300</b>	<b>32</b>	<25	<b>9.8</b>	<b>3.7</b>	<b>110</b>	<b>290</b>
		10.0	<b>53</b>	<b>21</b>	<5.0	<0.25	<0.025	<b>0.035</b>	<b>0.80</b>	<b>1.3</b>
		15.0	<b>5,000</b>	<b>1,400</b>	<b>64</b>	<50	<5.0	<5.0	<b>65</b>	<b>58</b>
<b>Regional Water Quality Control Board (San Francisco Region) ESLs*</b>										
Shallow Soils (<10 feet bgs)			83	83	2,500	0.023	0.044	2.9	3.3	2.3
Deep Soils (>10 feet bgs)			83	83	5,000	0.023	0.044	2.9	3.3	2.3

**Notes and Abbreviations**

- TPH-d = total petroleum hydrocarbons as diesel.
- TPH-g = total petroleum hydrocarbons as gasoline.
- TPH-mo = total petroleum hydrocarbons as motor oil.
- MTBE = Methyl tert-butyl ether
- mg/kg = milligrams per kilogram.
- \* = stoddard solvent/mineral spirit
- Bold** = greater than reporting limit
- Positive analytical result above the ESL**
- = not analyzed
- < = Constituent was not detected above the laboratory detection limit.
- ESL = Environmental Screening Level

\* = ESLs are found in Tables A and C of the "Environmental Screening Levels Lookup Tables" dated May 2008. The ESLs are for commercial/industrial use and groundwater is a current or potential source for drinking water.

Table 2  
Analytical Results for Grab-Groundwater Samples  
2585 Nicholson Street  
San Leandro, California

Boring No.	Date	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	MTBE (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
B-1	4/11/2012	<b>120,000</b>	<b>17,000</b>	<b>490</b>	<500	<b>9,300</b>	<b>15,000</b>	<b>2,600</b>	<b>13,000</b>
B-3	4/11/2012	<b>17,000</b>	<b>2,200</b>	<250	<250	<b>62</b>	<b>67</b>	<b>1,100</b>	<b>4,000</b>
B-4	4/11/2012	<b>70,000</b>	<b>9,900</b>	<b>350</b>	<500	<b>450</b>	<b>5,100</b>	<b>2,800</b>	<b>15,000</b>
B-5	4/11/2012	<b>35,000</b>	<b>38,000</b>	<b>9,600</b>	<500	<b>8,800</b>	<b>76</b>	<b>1,000</b>	<b>740</b>
B-6	4/11/2012	<b>18,000</b>	<b>59,000</b>	<b>11,000</b>	<300	<b>2,800</b>	<b>35</b>	<b>110</b>	<b>30</b>
B-8	4/10/2012	<b>55,000</b>	<b>36,000</b>	<b>1,300</b>	<500	<b>180</b>	<b>160</b>	<b>2,600</b>	<b>3,800</b>
Prospective Action Levels									
SFRWQCB ESL Levels*		210	210	210	13	1	150	300	1,800
California Primary MCL		--	--	--	13	1	150	300	1,750

Notes and Abbreviations:

< = Constituent was not detected above the laboratory detection limit.

**Bold** = Greater than the Reporting Limit

**Grey background** = Positive analytical result above the ESL

TPH-g = total petroleum hydrocarbons as gasoline (C6-C12).

TPH-d = total petroleum hydrocarbons as diesel (C13-C28).

TPH-mo = total petroleum hydrocarbons as motor oil (C29-C40).

MTBE = Methyl tert-butyl ether

µg/L = micrograms per liter, equivalent to part per billion (ppb).

-- = not available

ESL = Environmental Screening Level

\* = ESLs are for found in Tables F3 and I4 of the "Environmental Screening Levels Lookup Tables" dated May 2008. The groundwater ESLs are drinking water screening levels and the surface water ESLs are gross contamination ceiling levels.

MCL = California Primary Maximum Contaminant Level.

Table 3  
Analytical Results for Soil-Vapor Samples  
2585 Nicholson Street  
San Leandro, California

Sample Location	Date	Leak Detection Compound <sup>1</sup> µg/m <sup>3</sup>	TPH-g µg/m <sup>3</sup>	Benzene µg/m <sup>3</sup>	Toluene µg/m <sup>3</sup>	Ethylbenzene µg/m <sup>3</sup>	m,p-Xylenes µg/m <sup>3</sup>	o-Xylenes µg/m <sup>3</sup>	MTBE µg/m <sup>3</sup>	Methane ppm	Carbon Dioxide %	Oxygen %	Nitrogen %
SV-1	4/25/2010	<b>700</b>	<7,200	<b>21</b>	<3.8	<4.4	<b>16</b>	<4.4	<3.7	<5.0	<b>1.36</b>	<b>18.2</b>	<b>82.7</b>
SV-2	4/25/2010	<b>3,700</b>	<b>13,000</b>	<b>420</b>	<3.8	<b>81</b>	<b>360</b>	<b>60</b>	<3.7	<b>46</b>	<b>3.01</b>	<b>13.4</b>	<b>82.8</b>
SV-3	4/25/2010	<b>670</b>	<b>10,000</b>	<b>78</b>	<3.8	<b>6.9</b>	<b>28</b>	<b>4.8</b>	<3.7	<b>7.3</b>	<b>7.84</b>	<b>4.97</b>	<b>91.2</b>
SV-4	4/25/2010	<140	<b>13,000,000</b>	<b>330,000</b>	<b>6,800</b>	<b>40,000</b>	<b>130,000</b>	<b>25,000</b>	<180	<b>56,000</b>	<b>7.54</b>	<b>6.13</b>	<b>89.5</b>
SV-5	4/25/2010	<140	<b>23,000</b>	<b>780</b>	<190	<220	<220	<220	<180	<b>560</b>	<1.0	<b>14.1</b>	<b>67.3</b>
CHHSL (Commercial)		--	--	<b>120</b>	<b>140,000</b>	<b>420</b>	<b>320,000</b>		<b>13,000</b>	--	--	--	--
ESL (Commercial)		<b>0.1 % of Total</b>	<b>29,000</b>	<b>280</b>	<b>180,000</b>	<b>3,300</b>	<b>58,000</b>	<b>58,000</b>	<b>31,000</b>	--	--	--	--

Notes:

TPH-g = Total Petroleum Hydrocarbons as Gasoline

MTBE = Methyl tert-butyl ether

µg/m<sup>3</sup> = Micrograms per cubic meter

**Bold** = Greater than the reporting limit

**Grey background** = Positive analytical result above the ESL

ESL = SFRWQCB Environmental Screening Level, Table E2 for Commercial/Industrial Land Use (lowest)

CHSSL = California Human Health Screening Levels, Table 3 - Soil Gas Screening Levels for Chemicals Below Buildings Constructed without Engineered Fill Below Sub-Slab Gravel

<sup>1</sup> = 1,1-Difluoroethane used as leak detection compound

-- = Screening Level Not Designated



**APPENDIX A**

**BORING PERMIT**

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 03/02/2012 By jamesy**

**Permit Numbers: W2012-0156 to W2012-0157**  
**Permits Valid from 03/13/2012 to 03/14/2012**

**Application Id:** 1330649042004  
**Site Location:** 2585 Nicholson St, San Leandro, CA  
**Project Start Date:** 03/13/2012  
**Assigned Inspector:** Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

**City of Project Site:** San Leandro

**Completion Date:** 03/14/2012

**Applicant:** Versar Inc. - Tim Berger  
5330 Primrose Dr, Ste 147, Fair Oaks, CA 95628

**Phone:** 916-863-9323

**Property Owner:** Crane Works Inc  
2585 Nicholson St, San Leandro, CA 94577

**Phone:** 510-357-4000

**Client:** Sketchley Trust Bob Schifferle  
2000 Clayton Rd, D, Concord, CA 94520

**Phone:** 925-675-1978

<b>Receipt Number: WR2012-0070</b>	<b>Total Due:</b>	\$530.00
<b>Payer Name : Versar</b>	<b>Total Amount Paid:</b>	\$530.00
	<b>Paid By: CHECK</b>	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Well Construction-Vapor monitoring well-Vapor monitoring well - 5 Wells

Driller: Vironex - Lic #: 123456 - Method: other

**Work Total: \$265.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2012-0156	03/02/2012	06/11/2012	SSVW-1	0.50 in.	0.25 in.	0.33 ft	1.00 ft
W2012-0156	03/02/2012	06/11/2012	SSVW-2	0.50 in.	0.25 in.	0.33 ft	1.00 ft
W2012-0156	03/02/2012	06/11/2012	SSVW-3	0.50 in.	0.25 in.	0.33 ft	1.00 ft
W2012-0156	03/02/2012	06/11/2012	SSVW-4	0.50 in.	0.25 in.	0.33 ft	1.00 ft
W2012-0156	03/02/2012	06/11/2012	SSVW-5	0.50 in.	0.25 in.	0.33 ft	1.00 ft

**Specific Work Permit Conditions**

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Compliance with the above well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate state reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days, including permit number and site map.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

## Alameda County Public Works Agency - Water Resources Well Permit

4. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
5. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
6. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to [stevem@acpwa.org](mailto:stevem@acpwa.org) at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.
8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
9. Vapor monitoring wells above water level constructed with tubing maybe be backfilled with pancake-batter consistency bentonite. Minimum surface seal thickness is two inches of cement grout around well box.

Vapor monitoring wells above water level constructed with pvc pipe shall have a minimum seal depth (Neat Cement Seal) of 2 feet below ground surface (BGS). Minimum surface seal thickness is two inches of cement grout around well box. All other conditions for monitoring well construction shall apply.

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Borehole(s) for Investigation-Contamination Study - 8 Boreholes

Driller: Vironex - Lic #: 123456 - Method: other

**Work Total: \$265.00**

### Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2012-0157	03/02/2012	06/11/2012	8	3.50 in.	15.00 ft

### Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

## **Alameda County Public Works Agency - Water Resources Well Permit**

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
  4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
  5. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to [stevem@acpwa.org](mailto:stevem@acpwa.org) at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
  6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.
  7. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
  8. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.
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**APPENDIX B**

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**HEALTH AND SAFETY PLAN  
REVIEW DOCUMENTATION**



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
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Nicole Hastings	Versar	4/10/12	
Jared Trejos	Nichols	4/10/12	
CORD DENNIG	Versar	4/10/12	
Josh Zwemle	Enprobe	4/10/12	
Shaun Love	Enprobe	4/10/12	
CORD DENNIG	Versar	4/11/12	
Josh Zwemle	Enprobe	4/11/12	
Shaun Love	Enprobe	4/11/12	
Nicole Hastings	Versar	4/11/12	

**APPENDIX C**

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**BORING LOGS**



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-1

Date:

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Southeast property line - center

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
							Concrete 6"		
2					CL SC		SANDY CLAY/CLAYEY SAND: dark brown, moist, dense, 50% fines, alluvium Geo-Technical Soil Sample B-1(0.5-1.5)	0	
4							Soil Sample B-1-5	1170	
6							grades gray, wet, medium density, 50% fines, alluvium		
8							Soil Sample B-1-9	369	
10							Soil Sample B-1-10	191	
12					CH		CLAY: brown, wet, dense, 50% fines, alluvium		
14							Soil Sample B-1-15	35	
16									
18									
20									

Comments: B-1(0.5-1.5) - Geo-Soil Collected at 1213 B-1-15 - Env-Soil Collected at 1221  
 B-1-5 - Env-Soil Collected at 1221 B-1 - Grab-Groundwater Collected at 936 4/11/12  
 B-1-9 - Env-Soil Collected at 1231  
 B-1-10 - Env-Soil Collected at 1234





# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-2

Date: 4/10/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Southeast Property Line

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
						Concrete 6"			
2					CL	SANDY CLAY: medium brown, moist, dense, 40% fines, alluvium			11
4						Geo-Technical Soil Sample B-2 (4-5) Soil Sample B-2-5.5 (Hold)			75
6						grades, gray, wet, medium density, 30% fines, alluvium			
8						Soil Sample B-2-8			1490
10						Soil Sample B-2-10.5 Geo-Technical Sample B-2 (10.5-11.5)			
12					CH	CLAY: black, moist, dense, 50% fines, alluvium			25
14						Soil Sample B-2-15			
16									
18									
20									

Comments: B-2(4-5) - Geo-Soil Collected at 1314 B-2(10.5-11.5) - Geo-Soil Collected at 1322  
 B-2-5.5 - Env-Soil Collected at 1315 (Hold) B-2-15 - Env-Soil Collected at 1326  
 B-2-8 - Env-Soil Collected at 1317  
 B-2-10.5 - Env-Soil Collected at 1321



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-3

Date: 4/10/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Southeast corner of property

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
						Concrete 6"			
2					ML	SANDY SILT: fine, medium brown, moist, loose, well graded, 30% fines, alluvium			11
4									75
6					CL	SANDY CLAY: medium brown, moist, medium density, 40% fines, alluvium Soil Sample B-3-5			
8						grades gray, wet, medium density, 40% fines, alluvium			1490
10						Soil Sample B-3-10			
12									25
14						Soil Sample B-3-15			
16									
18									
20									

Comments: B-3-5 - Env-Soil Collected at 1106  
 B-3-10 - Env-Soil Collected at 1116  
 B-3-15 - Env-Soil Collected at 1122  
 B-3 - Water Sample Collected at 947 on 4/11/12



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-4

Date: 4/11/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Southwest property line - center

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
						Concrete 6"			
0					CL	SANDY CLAY: medium brown, moist, medium density, 30% fines, alluvium			0
2									
4									0.5
5						Soil Sample B-4-5			
6									677
6.5						grades gray, wet, medium dense, 30% fines, alluvium, gasoline odor			
7						Soil Sample B-4-7			
8									
9						Soil Sample B-4-9			
9.5						grades dark brown, moist, medium dense, 40% fines, alluvium			
10						Soil Sample B-4-10.5			24
12									19
13						Geo-Technical Soil Sample B-4(13-14)			
14						Soil Sample B-4-15			12
16									
18									
20									

Comments: B-4-5 - Env-Soil Collected at 636 (Hold) B-4(13-14) - Geo-Soil Collected at 648  
 B-4-7 - Env-Soil Collected at 640 B-4-15 - Env-Soil Collected at 654  
 B-4(9-10) - Geo-Soil Collected at 645 B-4 - Water Sample Collected at 1005 on 4/11/12  
 B-4-10.5 - Env-Soil Collected at 648



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-5

Date: 4/11/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Former fuel dispenser location

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
					FL	Concrete 6"	Fill: pea gravel and well graded sand, moist, gasoline odor		0
2					CH	CLAY: brown, moist, dense, 50% fines, alluvium, gasoline odor	Geo-Technical Soil Sample B-5(1-2)		
4							Soil Sample B-5-5		0.5
6							Geo-Technical Soil Sample B-5(6-8)		677
8					SM	SILTY SAND: gray, wet, medium density, 30% fines, alluvium, dark staining, gasoline odor			
10							Soil Sample B-5-10		
12					CH	CLAY: dark brown, moist, dense, 50% fines, alluvium, dark staining, gasoline odor	Soil Sample B-4-10.5		24
14							Soil Sample B-5-15		19
16									12
18									
20									

Comments: B-5(1-2) - Geo-Soil Collected at 818  
 B-5-5 - Env-Soil Collected at 821  
 B-5(6-8) - Geo-Soil Collected at 825  
 B-5-10 - Env-Soil Collected at 828  
 B-5-15 - Env-Soil Collected at 834  
 B-5 - Water Sample Collected at 1230 on 4/11/12



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-6

Date: 4/11/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 16'

Contractor Lic. No. 777007

Location: Center of former tank excavation

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
2					FL	Concrete 6" FILL: pea gravel and well-graded sand, moist, gasoline odor		9.3	
4						No Recovery			
8					FL	Soil Sample B-6-8 SAND and GRAVEL: gray, wet, gasoline odor and dark staining		751	
10						Soil Sample B-6-9			
12					CH	CLAY: dark brown, moist, dense, 50% fines, alluvium, gasoline odor, dark staining		659	
14						Grades white, moist, soft, no staining, no odor			
16						Soil Sample B-6-16			
18									
20									

Comments: B-6-8 - Env-Soil Collected at 1053  
 B-6-9 - Env-Soil Collected at 1120  
 B-6-16 - Env-Soil Collected at 1128  
 B-6 - Water Sample Collected at 1242 on 4/11/12



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-7

Date: 4/11/12

Boring Diameter: 3.5"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: South end of former UST excavation

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
2					FL	Concrete 6"	FILL: pea gravel and well graded sand, moist, gasoline odor	268	
4					ML		SANDY SILT: dark brown, moist, loose, 30% fines, alluvium, gasoline odor	1088	
6					CL		SANDY CLAY: gray, wet, medium density, 40% fines, alluvium, dark staining, gasoline odor	916	
8					CL		Geo-Technical Soil Sample B-7(7-8)		
10							Soil Sample B-7-10 grades dark brown, moist, dense, 50% fines, alluvium, dark staining, gasoline odor	347	
14							Soil Sample B-7-15	20	
16									
18									
20									

Comments: B-7-5 - Env-Soil Collected at 738  
 B-7(7-8) - Geo-Soil Collected at 740  
 B-7-10 - Env-Soil Collected at 749  
 B-7-15 - Env-Soil Collected at 755



# BORING LOG

PROJECT NO. 104422.4422.007

Driller: Josh Zwemke

Supervising Geologist: Tim Berger, R.G. 5225

Site Name: Former Rodding Cleaning Services

Log By: Cord Dennig

Boring No: B-8

Date: 4/10/12

Boring Diameter: 2"

Drilling Contractor: Enprobe

Boring Depth: 15'

Contractor Lic. No. 777007

Location: Fabrication area, northwest property line

Rig Type: DPT

Depth (ft)	Advanced/Recovered Retained	Sample Interval	First Water/ Water Table	Well Construction	USCS Group	Lithology	USCS SOIL DESCRIPTION SOIL CONDITION AND GEOLOGIC INTERPRETATION		PID Reading
							SOIL TYPE: Color, Moisture, Density, Staining, Sorting, Percent Fines, Rounding Secondary Porosity, Odor	GEOLOGY: Fill/alluvium/bedrock	
					FL	Concrete 6"			
2					CL	SILTY CLAY: dark brown, moist, medium density, 40% fines, alluvium			
4									
5						Soil Sample B-8-5		0	
6						Soil Sample B-8-7			
7					SM	SILTY SAND with Clay: gray, wet, loose, 20% fines, alluvium, gasoline odor		550	
10						Soil Sample B-8-10			
11					CL	SILTY CLAY: gray, wet, medium density, 50% fines, alluvium		491	
14						Soil Sample B-8-15		220	
16									
18									
20									

Comments: B-8-5 - Env-Soil Collected at 1005 (Hold)      B-8 - Grab-Groundwater Collected at 1354  
 B-8-7 - Env-Soil Collected at 1007  
 B-8-10 - Env-Soil Collected at 1016  
 B-8-15 - Env-Soil Collected at 1024

## **APPENDIX D**

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# **LABORATORY ANALYTICAL DATA AND CHAIN OF CUSTODY FORMS**





## Analytical Report

Versar  5330 Primrose Drive, Ste. 147  Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
		Date Received: 04/11/12
	Client Contact: Tim Berger	Date Reported: 04/18/12
	Client P.O.:	Date Completed: 04/18/12

**WorkOrder: 1204316**

April 18, 2012

Dear Tim:

Enclosed within are:

- 1) The results of the **32** analyzed samples from your project: **#104422.4422.007; Rodding Cleaning Services,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
 Laboratory Manager  
 McC Campbell Analytical, Inc.

*The analytical results relate only to the items tested.*



**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

1204316

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: Tim Berger Bill To: Lily Mullins  
Company: Vesar  
Quote # 2346  
E-Mail: tberger@vesar.com  
Tele: (805) 801-4996 Fax: ( )  
Project #: 104422.4422.007 Project Name: Rodding Cleaning Services  
Project Location: San Leandro  
Sampler Signature: [Signature]

**Analysis Request**

**Other** **Comments**

BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE TPH as Diesel (8015) and Motor Oil Total Petroleum Oil & Grease (1664 / 5520 E/B&F) Total Petroleum Hydrocarbons (418-1) EPA 502.2 / 601 / 8010 / 8021 (HVOCs) MTBE / BTEX ONLY (EPA 602 / 8021) EPA 505 / 608 / 8081 (CI Pesticides) EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners EPA 507 / 8141 (NP Pesticides) EPA 515 / 8151 (Acidic CI Herbicides) EPA 524.2 / 624 / 8260 (VOCs) EPA 525.2 / 625 / 8270 (SVOCs) EPA 8270 SIM / 8310 (PAHs / PNA's) CAM 17 Metals (200.7 / 200.8 / 6010 / 6020) LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020) Lead (200.7 / 200.8 / 6010 / 6020) Filter sample for DISSOLVED metals analysis	**Indicate here if these samples are potentially dangerous to handle:	
	Quote #2346	

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other				
B-2-8'	B-2	4/10	1317	1	Seal	X					X							
B-2-10.5'	B-2	4/10	1321	1	↓	X					X							
B-2-15'	B-2	4/10	1326	1	↓	X					X							
B-3	B-3	4/11	947	4	VOA Anhyd	X					X	X						
B-3-5'	B-3	4/10	1106	1	Seal	X					X							
B-3-10'	↓	↓	1116	1	↓	X					X							
B-3-15'	↓	↓	1122	1	↓	X					X							
B-7-5'	B-7	4/11	738	1	Seal	X					X							
B-7-10'	↓	↓	749	1	↓	X					X							
B-7-15'	↓	↓	755	1	↓	X					X							

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: <u>[Signature]</u>	Date: <u>4/11/12</u>	Time: <u>1550</u>	Received By: <u>[Signature]</u>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/° B-6  
 GOOD CONDITION ✓  
 HEAD SPACE ABSENT ✓  
 DECHLORINATED IN LAB ✓  
 APPROPRIATE CONTAINERS ✓  
 PRESERVED IN LAB ✓  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2  
 COMMENTS:  
 pg 1 of 4



# MCCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269



## CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)   
 Check if sample is effluent and "J" flag is required

Report To: Jim Berger Bill To: Lily Mullins  
Company: Versar  
Quote # 2346  
E-Mail: jberger@versar.com  
Tele: (805) 801-4998 Fax: ( )  
Project #: 104422, 4422.007 Project Name: Rodding Cleaning Services  
Project Location: San Leandro  
Sampler Signature: [Signature]

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
B-8	B-8	4/10	1354	4	Vial/ Sleeve	X											
B-8-5'	B-8	4/10	1005	1	Sleeve		X										
B-8-7'	B-8		1007	1			X										
B-8-10'			1016	1			X										
B-8-15'			1024	1			X										
B-1	B-1	4/11	936	4	Vial/ Sleeve	X						X					
B-1-5'	B-1	4/10	1221	1	Sleeve		X										
B-1-9'			1231	1			X										
B-1-10'			1234	1			X										
B-1-15'			1238	1			X										
B-2-5.5'	B-2	4/10	1315	1	Sleeve	X											HOLD

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: <u>[Signature]</u>	Date: <u>4/4/12</u>	Time: <u>1550</u>	Received By: <u>[Signature]</u>	COMMENTS: ICE/P* _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____ APPROPRIATE CONTAINERS _____ PRESERVED IN LAB _____ VOAS O&G METALS OTHER PRESERVATION pH<2
Relinquished By:	Date:	Time:	Received By:	
Relinquished By:	Date:	Time:	Received By:	

pg 2 of 4





**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: Jim Berger Bill To: Lily Mullins  
Company: Versar  
Quote # 2346  
E-Mail: berger@versar.com  
Tele: (805) 801-4998 Fax: ( )  
Project #: 104422, 4422, 007 Project Name: Rodding Cleaning Services  
Project Location: San Leandro  
Sampler Signature: [Signature]

**Analysis Request**

**Other**

**Comments**

- BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE
- TPH as Diesel (8015) and Motor Oil
- Total Petroleum Oil & Grease (1664 / 5520 E/B&F)
- Total Petroleum Hydrocarbons (418.1)
- EPA 502.2 / 601 / 8010 / 8021 (HVOCs)
- MTBE / BTEX ONLY (EPA 602 / 8021)
- EPA 505 / 608 / 8081 (CI Pesticides)
- EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners
- EPA 507 / 8141 (NP Pesticides)
- EPA 515 / 8151 (Acidic CI Herbicides)
- EPA 524.2 / 624 / 8260 (VOCs)
- EPA 525.2 / 625 / 8270 (SVOCs)
- EPA 8270 SIM / 8310 (PAHs / PNAs)
- CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)
- LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)
- Lead (200.7 / 200.8 / 6010 / 6020)
- Filter sample for DISSOLVED metals analysis

\*\*Indicate here if these samples are potentially dangerous to handle:

Quote #2346

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other					
H B-4	B-4	4/11	1005	4	Vof/ Ambig	X					X	X			X	X			
B-4-5'	↓	↓	636	1	Slave	X					X								
B-4-7'	↓	↓	640	↓	↓	↓													
B-4-10.5'	↓	↓	648	↓	↓	↓													
B-4-15'	↓	↓	654	↓	↓	↓													
+ B-5	B-5	4/11	1230	6	Vof	X					X	X			X	X			
B-5-5'	↓	↓	821	1	Slave	X					X								
B-5-10'	↓	↓	828	↓	↓	↓													
B-5-15'	↓	↓	834	↓	↓	↓													

HOLD

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Relinquished By: <u>[Signature]</u>	Date: <u>4/11/12</u>	Time: <u>1550</u>	Received By: <u>[Signature]</u>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t\* \_\_\_\_\_  
 GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_

VOAS O&G METALS OTHER  
 PRESERVATION pH<2

COMMENTS: \_\_\_\_\_

Pg 3 of 4





**McCAMPBELL ANALYTICAL, INC.**  
 1534 WILLOW PASS ROAD  
 PITTSBURG, CA 94565-1701  
 Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**  
 TURN AROUND TIME       
 RUSH 24 HR 48 HR 72 HR 5 DAY  
 GeoTracker EDF  PDF  Excel  Write On (DW)   
 Check if sample is effluent and "J" flag is required

Report To: Tim Berger Bill To: Lily Mullins  
 Company: Verbar  
Quote #2346  
 E-Mail: tberger@verbar.com  
 Tele: (805) 801-4998 Fax: ( )  
 Project #: 104422, 4422, 007 Project Name: Rodding Cleaning Services  
 Project Location: Syn Leandro  
 Sampler Signature: [Signature]

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
H B-6	B-6	4/11	1242	4	Vol/Amber	X					X	X					**Indicate here if these samples are potentially dangerous to handle:  <u>Quote #2346</u>
B-6-8'	↓	↓	1053	1	Seal	X					X						
B-6-9'	↓	↓	1120	↓	↓	↓					↓						
B-6-16'	↓	↓	1128	↓	↓	↓					↓						
✓ Trip Blank				2							X						

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: [Signature] Date: 4/14/12 Time: 1550 Received By: [Signature]  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/r° \_\_\_\_\_  
 GOOD CONDITION \_\_\_\_\_  
 HEAD SPACE ABSENT \_\_\_\_\_  
 DECHLORINATED IN LAB \_\_\_\_\_  
 APPROPRIATE CONTAINERS \_\_\_\_\_  
 PRESERVED IN LAB \_\_\_\_\_  
 VOAS O&G METALS OTHER  
 PRESERVATION pH<2  
 COMMENTS:  
  
pg 4 of 4



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

WorkOrder: 1204316

ClientCode: VEFE

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

**Report to:**  
Tim Berger  
Versar  
5330 Primrose Drive, Ste. 147  
Fair Oaks, CA 95628  
(916) 863-9323 FAX: (916) 962-2678

**Email:** tberger@versar.com  
**cc:**  
**PO:**  
**ProjectNo:** #104422.4422.007; Rodding Cleaning Services

**Bill to:**  
Lily Mullins  
Versar  
5330 Primrose Drive, Ste. 147  
Fair Oaks, CA 95628  
lmullins@versar.com

**Requested TAT:** 5 days  
**Date Received:** 04/11/2012  
**Date Printed:** 04/11/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204316-001	B-2-8'	Soil	4/10/2012 13:17	<input type="checkbox"/>	A		A										
1204316-002	B-2-10.5'	Soil	4/10/2012 13:21	<input type="checkbox"/>	A		A										
1204316-003	B-2-15'	Soil	4/10/2012 13:26	<input type="checkbox"/>	A		A										
1204316-004	B-3	Water	4/11/2012 9:47	<input type="checkbox"/>		A		B									
1204316-005	B-3-5'	Soil	4/10/2012 11:06	<input type="checkbox"/>	A		A										
1204316-006	B-3-10'	Soil	4/10/2012 11:16	<input type="checkbox"/>	A		A										
1204316-007	B-3-15'	Soil	4/10/2012 11:22	<input type="checkbox"/>	A		A										
1204316-008	B-7-5'	Soil	4/11/2012 7:38	<input type="checkbox"/>	A		A										
1204316-009	B-7-10'	Soil	4/11/2012 7:49	<input type="checkbox"/>	A		A										
1204316-010	B-7-15'	Soil	4/11/2012 7:55	<input type="checkbox"/>	A		A										
1204316-011	B-8	Water	4/10/2012 13:54	<input type="checkbox"/>		A		B									
1204316-013	B-8-7'	Soil	4/10/2012 10:07	<input type="checkbox"/>	A		A										
1204316-014	B-8-10'	Soil	4/10/2012 10:16	<input type="checkbox"/>	A		A										
1204316-015	B-8-15'	Soil	4/10/2012 10:24	<input type="checkbox"/>	A		A										

**Test Legend:**

1	G-MBTX_S	2	G-MBTX_W	3	TPH(DMO)_S	4	TPH(DMO)_W	5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

WorkOrder: 1204316

ClientCode: VEFE

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

**Report to:**  
Tim Berger  
Versar  
5330 Primrose Drive, Ste. 147  
Fair Oaks, CA 95628  
(916) 863-9323 FAX: (916) 962-2678

**Email:** tberger@versar.com  
**cc:**  
**PO:**  
**ProjectNo:** #104422.4422.007; Rodding Cleaning Services

**Bill to:**  
Lily Mullins  
Versar  
5330 Primrose Drive, Ste. 147  
Fair Oaks, CA 95628  
lmullins@versar.com

**Requested TAT:** 5 days  
**Date Received:** 04/11/2012  
**Date Printed:** 04/11/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204316-016	B-1	Water	4/11/2012 9:36	<input type="checkbox"/>		A		B									
1204316-017	B-1-5'	Soil	4/10/2012 12:21	<input type="checkbox"/>	A		A										
1204316-018	B-1-9'	Soil	4/10/2012 12:31	<input type="checkbox"/>	A		A										
1204316-019	B-1-10'	Soil	4/10/2012 12:34	<input type="checkbox"/>	A		A										
1204316-020	B-1-15'	Soil	4/10/2012 12:38	<input type="checkbox"/>	A		A										
1204316-022	B-4	Water	4/11/2012 10:05	<input type="checkbox"/>		A		B									
1204316-024	B-4-7'	Soil	4/11/2012 6:40	<input type="checkbox"/>	A		A										
1204316-025	B-4-10.5'	Soil	4/11/2012 6:48	<input type="checkbox"/>	A		A										
1204316-026	B-4-15'	Soil	4/11/2012 6:54	<input type="checkbox"/>	A		A										
1204316-027	B-5	Water	4/11/2012 12:30	<input type="checkbox"/>		A		B									
1204316-028	B-5-5'	Soil	4/11/2012 8:21	<input type="checkbox"/>	A		A										
1204316-029	B-5-10'	Soil	4/11/2012 8:28	<input type="checkbox"/>	A		A										
1204316-030	B-5-15'	Soil	4/11/2012 8:34	<input type="checkbox"/>	A		A										
1204316-031	B-6	Water	4/11/2012 12:42	<input type="checkbox"/>		A		B									

**Test Legend:**

1	G-MBTEX_S	2	G-MBTEX_W	3	TPH(DMO)_S	4	TPH(DMO)_W	5	
6		7		8		9		10	
11		12							

**Prepared by: Maria Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1204316

ClientCode: VEFE

WaterTrax    WriteOn    EDF    Excel    Fax    Email    HardCopy    ThirdParty    J-flag

Report to:

Tim Berger  
 Versar  
 5330 Primrose Drive, Ste. 147  
 Fair Oaks, CA 95628  
 (916) 863-9323   FAX: (916) 962-2678

Email: tberger@versar.com  
 cc:  
 PO:  
 ProjectNo: #104422.4422.007; Rodding Cleaning Services

Bill to:

Lily Mullins  
 Versar  
 5330 Primrose Drive, Ste. 147  
 Fair Oaks, CA 95628  
 lmullins@versar.com

Requested TAT: 5 days

Date Received: 04/11/2012

Date Printed: 04/11/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204316-032	B-6-8'	Soil	4/11/2012 10:53	<input type="checkbox"/>	A		A										
1204316-033	B-6-9'	Soil	4/11/2012 11:20	<input type="checkbox"/>	A		A										
1204316-034	B-6-16'	Soil	4/11/2012 11:28	<input type="checkbox"/>	A		A										

Test Legend:

1	G-MBTEX_S	2	G-MBTEX_W	3	TPH(DMO)_S	4	TPH(DMO)_W	5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.





### Sample Receipt Checklist

Client Name: **Versar** Date and Time Received: **4/11/2012 4:36:49 PM**  
 Project Name: **#104422.4422.007; Rodding Cleaning Services** Login Reviewed by: **Maria Venegas**  
 WorkOrder N°: **1204316** Matrix: Soil/Water Carrier: Client Drop-In

**Chain of Custody (COC) Information**

Chain of custody present? Yes  No   
 Chain of custody signed when relinquished and received? Yes  No   
 Chain of custody agrees with sample labels? Yes  No   
 Sample IDs noted by Client on COC? Yes  No   
 Date and Time of collection noted by Client on COC? Yes  No   
 Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

Custody seals intact on shipping container/cooler? Yes  No  NA   
 Shipping container/cooler in good condition? Yes  No   
 Samples in proper containers/bottles? Yes  No   
 Sample containers intact? Yes  No   
 Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time? Yes  No   
 Container/Temp Blank temperature Cooler Temp: 8.6°C NA   
 Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted   
 Sample labels checked for correct preservation? Yes  No   
 Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA   
 Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----  
 Comments:



Versar  5330 Primrose Drive, Ste. 147  Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
	Client Contact: Tim Berger	Date Received: 04/11/12
	Client P.O.:	Date Extracted: 04/11/12-04/14/12
		Date Analyzed: 04/12/12-04/18/12

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\***

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1204316

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	B-2-8'	S	1700	ND<5.0	6.5	29	35	160	100	---#	d1
002A	B-2-10.5'	S	220	ND<1.7	0.28	0.27	2.5	3.9	33	---#	d2,d9
003A	B-2-15'	S	ND	ND	ND	0.0058	ND	0.014	1	109	
004A	B-3	W	17,000	ND<250	62	67	1100	4000	50	99	d1,b6
005A	B-3-5'	S	ND	ND	ND	ND	ND	ND	1	106	
006A	B-3-10'	S	12	ND	ND	0.030	0.016	0.039	1	106	d2,d9
007A	B-3-15'	S	180	ND<1.0	ND<0.10	0.27	0.81	1.4	20	---#	d2,d9
008A	B-7-5'	S	3300	ND<10	12	5.1	56	5.9	200	---#	d1
009A	B-7-10'	S	ND	ND	0.0054	0.012	ND	ND	1	98	
010A	B-7-15'	S	ND	ND	ND	ND	ND	ND	1	111	
011A	B-8	W	55,000	ND<500	180	160	2600	3800	100	117	d1,b6,b1
013A	B-8-7'	S	5700	ND<25	9.8	3.7	110	290	500	---#	d2,d9
014A	B-8-10'	S	53	ND<0.25	ND<0.025	0.035	0.80	1.3	5	105	d2,d9
015A	B-8-15'	S	5000	ND<50	ND<5.0	ND<5.0	65	58	1000	---#	d2,d9
016A	B-1	W	120,000	ND<500	9300	15,000	2600	13,000	100	115	d1,b6
017A	B-1-5'	S	1100	ND<1.0	2.6	22	16	82	20	---#	d2,d9

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	μg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples are reported in μg/L, soil/sludge/solid samples in mg/kg, wipe samples in μg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant
- d2) heavier gasoline range compounds are significant (aged gasoline?)
- d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
- d9) no recognizable pattern



Versar  5330 Primrose Drive, Ste. 147  Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
	Client Contact: Tim Berger	Date Received: 04/11/12
	Client P.O.:	Date Extracted: 04/11/12-04/14/12
		Date Analyzed: 04/12/12-04/18/12

**Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\***

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1204316

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
018A	B-1-9'	S	1200	ND<5.0	6.3	44	25	120	100	---#	d1
019A	B-1-10'	S	230	ND<1.0	0.95	0.61	2.0	4.9	20	---#	d1
020A	B-1-15'	S	ND	ND	ND	ND	ND	ND	1	89	
022A	B-4	W	70,000	ND<500	450	5100	2800	15,000	100	118	d1,b6,b1
024A	B-4-7'	S	3000	ND<5.0	1.5	20	47	260	100	---#	d2,d9
025A	B-4-10.5'	S	25	ND<0.10	0.10	0.10	0.49	1.1	2	106	d1
026A	B-4-15'	S	1.1	ND	ND	ND	ND	0.016	1	93	d2
027A	B-5	W	35,000	ND<500	8800	76	1000	740	100	123	d1,b6
028A	B-5-5'	S	3000	ND<5.0	13	4.8	59	77	100	---#	d1
029A	B-5-10'	S	1.7	ND	0.0087	ND	ND	ND	1	103	d1
030A	B-5-15'	S	ND	ND	ND	ND	ND	ND	1	109	
031A	B-6	W	18,000	ND<300	2800	35	110	30	20	---#	d1,b6,b1
032A	B-6-8'	S	88	ND<0.50	0.57	0.13	0.17	0.36	10	---#	d1
033A	B-6-9'	S	2100	ND<3.3	9.1	4.0	3.5	3.2	67	---#	d1
034A	B-6-16'	S	24	ND	0.062	0.059	0.043	0.088	1	94	d7,d9
035A	Trip Blank	W	ND	ND	ND	ND	ND	ND	1	112	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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- b6) lighter than water immiscible sheen/product is present
- d1) weakly modified or unmodified gasoline is significant
- d2) heavier gasoline range compounds are significant (aged gasoline?)
- d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
- d9) no recognizable pattern



McC Campbell Analytical, Inc.

"When Quality Counts"

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Versar 5330 Primrose Drive, Ste. 147 Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
	Client Contact: Tim Berger	Date Received: 04/11/12
	Client P.O.:	Date Extracted: 04/11/12
		Date Analyzed: 04/12/12-04/17/12

**Total Extractable Petroleum Hydrocarbons\***

Extraction method: SW3510C/SW3550B

Analytical methods: SW8015B

Work Order: 1204316

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1204316-001A	B-2-8'	S	370	13	1	120	e4
1204316-002A	B-2-10.5'	S	89	13	1	112	e4
1204316-003A	B-2-15'	S	5.0	5.3	1	106	e7,e2
1204316-004B	B-3	W	2200	ND	1	95	e4,b6
1204316-005A	B-3-5'	S	ND	ND	1	101	
1204316-006A	B-3-10'	S	4.2	ND	1	117	e4,e2
1204316-007A	B-3-15'	S	20	7.3	1	112	e4,e2
1204316-008A	B-7-5'	S	1600	580	1	107	e4,e7,e2
1204316-009A	B-7-10'	S	2.2	ND	1	103	e2
1204316-010A	B-7-15'	S	2.0	ND	1	105	e2
1204316-011B	B-8	W	36,000	1300	1	99	e4,b6,b1
1204316-013A	B-8-7'	S	1300	32	2	104	e4
1204316-014A	B-8-10'	S	21	ND	1	120	e4
1204316-015A	B-8-15'	S	1400	64	5	124	e4
1204316-016B	B-1	W	17,000	490	1	110	e4,b6

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	1.0	5.0	mg/Kg

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

- b1) aqueous sample that contains greater than ~1 vol. % sediment
- b6) lighter than water immiscible sheen/product is present
- e1) unmodified or weakly modified diesel is significant
- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.
- e7) oil range compounds are significant



Versar  5330 Primrose Drive, Ste. 147  Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
	Client Contact: Tim Berger	Date Received: 04/11/12
	Client P.O.:	Date Extracted: 04/11/12
		Date Analyzed: 04/12/12-04/17/12

**Total Extractable Petroleum Hydrocarbons\***

Extraction method: SW3510C/SW3550B

Analytical methods: SW8015B

Work Order: 1204316

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS	Comments
1204316-017A	B-1-5'	S	800	34	2	118	e4
1204316-018A	B-1-9'	S	200	19	1	127	e4
1204316-019A	B-1-10'	S	36	8.4	1	121	e4,e2
1204316-020A	B-1-15'	S	ND	ND	1	110	
1204316-022B	B-4	W	9900	350	1	100	e4,b6,b1
1204316-024A	B-4-7'	S	1200	20	2	---#	e4
1204316-025A	B-4-10.5'	S	9.6	ND	1	110	e4,e2
1204316-026A	B-4-15'	S	2.0	ND	1	106	e2
1204316-027B	B-5	W	38,000	9600	1	125	e1,e4,b6
1204316-028A	B-5-5'	S	1600	260	1	120	e4,e1
1204316-029A	B-5-10'	S	5.4	ND	1	116	e1
1204316-030A	B-5-15'	S	2.2	ND	1	106	e2
1204316-031B	B-6	W	59,000	11,000	2	118	e1,e4,b6,b1
1204316-032A	B-6-8'	S	100	41	1	110	e1
1204316-033A	B-6-9'	S	3000	790	1	104	e1,e4
1204316-034A	B-6-16'	S	21	11	1	105	e1,e4

Reporting Limit for DF =1;  
 ND means not detected at or  
 above the reporting limit

W  
S

50  
1.0

250  
5.0

µg/L  
mg/Kg

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

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- b6) lighter than water immiscible sheen/product is present
- e1) unmodified or weakly modified diesel is significant
- e2) diesel range compounds are significant; no recognizable pattern
- e4) gasoline range compounds are significant.
- e7) oil range compounds are significant



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 66496

WorkOrder: 1204316

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1204211-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) <sup>£</sup>	ND	0.60	73.1	70.6	3.45	74.6	70 - 130	20	70 - 130	
MTBE	ND	0.10	106	100	5.14	108	70 - 130	20	70 - 130	
Benzene	ND	0.10	98.5	91.7	7.17	97.8	70 - 130	20	70 - 130	
Toluene	ND	0.10	96.8	89.5	7.54	100	70 - 130	20	70 - 130	
Ethylbenzene	ND	0.10	104	96.4	7.50	105	70 - 130	20	70 - 130	
Xylenes	ND	0.30	105	97.1	7.80	105	70 - 130	20	70 - 130	
%SS:	86	0.10	115	113	2.22	111	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66496 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-001A	04/10/12 1:17 PM	04/11/12	04/14/12 7:47 AM	1204316-002A	04/10/12 1:21 PM	04/11/12	04/13/12 11:53 PM
1204316-003A	04/10/12 1:26 PM	04/11/12	04/18/12 11:05 AM	1204316-005A	04/10/12 11:06 AM	04/11/12	04/13/12 1:00 AM
1204316-006A	04/10/12 11:16 AM	04/11/12	04/13/12 7:53 PM	1204316-007A	04/10/12 11:22 AM	04/11/12	04/12/12 8:31 PM
1204316-008A	04/11/12 7:38 AM	04/11/12	04/14/12 5:19 AM	1204316-009A	04/11/12 7:49 AM	04/11/12	04/14/12 5:26 AM
1204316-010A	04/11/12 7:55 AM	04/11/12	04/13/12 2:00 AM	1204316-013A	04/10/12 10:07 AM	04/11/12	04/16/12 8:07 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 66533

WorkOrder: 1204316

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1204265-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	0.60	76.8	72.5	5.73	74.1	70 - 130	20	70 - 130	
MTBE	ND	0.10	100	92.8	6.66	100	70 - 130	20	70 - 130	
Benzene	ND	0.10	102	94	8.16	97.4	70 - 130	20	70 - 130	
Toluene	ND	0.10	103	94.6	8.36	99.3	70 - 130	20	70 - 130	
Ethylbenzene	ND	0.10	108	98.8	8.89	103	70 - 130	20	70 - 130	
Xylenes	ND	0.30	107	98.1	8.61	102	70 - 130	20	70 - 130	
%SS:	89	0.10	101	103	1.48	106	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66533 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-014A	04/10/12 10:16 AM	04/11/12	04/14/12 12:52 AM	1204316-015A	04/10/12 10:24 AM	04/11/12	04/13/12 5:57 AM
1204316-017A	04/10/12 12:21 PM	04/11/12	04/13/12 6:56 AM	1204316-018A	04/10/12 12:31 PM	04/11/12	04/13/12 2:19 PM
1204316-019A	04/10/12 12:34 PM	04/11/12	04/13/12 3:20 PM	1204316-020A	04/10/12 12:38 PM	04/11/12	04/17/12 3:36 AM
1204316-024A	04/11/12 6:40 AM	04/11/12	04/14/12 4:20 AM	1204316-025A	04/11/12 6:48 AM	04/11/12	04/14/12 1:51 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 66566

WorkOrder: 1204316

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1204329-003A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	0.60	90.4	89.2	1.36	93.2	70 - 130	20	70 - 130	
MTBE	ND	0.10	90.1	90.9	0.901	92.6	70 - 130	20	70 - 130	
Benzene	ND	0.10	98.8	101	1.71	102	70 - 130	20	70 - 130	
Toluene	ND	0.10	86.7	88.8	2.47	89	70 - 130	20	70 - 130	
Ethylbenzene	ND	0.10	90.3	92	1.90	92.1	70 - 130	20	70 - 130	
Xylenes	ND	0.30	103	103	0	103	70 - 130	20	70 - 130	
%SS:	108	0.10	94	108	14.3	84	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66566 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-026A	04/11/12 6:54 AM	04/11/12	04/17/12 4:06 AM	1204316-028A	04/11/12 8:21 AM	04/11/12	04/14/12 4:49 AM
1204316-029A	04/11/12 8:28 AM	04/11/12	04/18/12 11:35 AM	1204316-030A	04/11/12 8:34 AM	04/11/12	04/14/12 3:50 AM
1204316-032A	04/11/12 10:53 AM	04/11/12	04/16/12 9:38 PM	1204316-033A	04/11/12 11:20 AM	04/11/12	04/16/12 11:08 PM
1204316-034A	04/11/12 11:28 AM	04/11/12	04/13/12 11:01 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 % Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).  
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.





**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 66647

WorkOrder: 1204316

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1204288-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	116	106	9.40	111	70 - 130	20	70 - 130	
MTBE	ND	10	98.5	93.9	4.85	99.9	70 - 130	20	70 - 130	
Benzene	ND	10	94.3	84.6	10.5	97.9	70 - 130	20	70 - 130	
Toluene	ND	10	98.9	89.4	10.1	99	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	94.3	85.9	9.22	94.9	70 - 130	20	70 - 130	
Xylenes	ND	30	98.2	88.1	10.7	98.1	70 - 130	20	70 - 130	
%SS:	109	10	102	100	2.62	103	70 - 130	20	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66647 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-004A	04/11/12 9:47 AM	04/12/12	04/12/12 4:54 PM	1204316-011A	04/10/12 1:54 PM	04/12/12	04/12/12 10:33 PM
1204316-016A	04/11/12 9:36 AM	04/12/12	04/12/12 11:31 PM	1204316-022A	04/11/12 10:05 AM	04/13/12	04/13/12
1204316-027A	04/11/12 12:30 PM	04/13/12	04/13/12 12:29 AM	1204316-031A	04/11/12 12:42 PM	04/14/12	04/14/12 12:10 AM
1204316-035A	04/11/12	04/13/12	04/13/12 1:28 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 % Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).  
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 £ TPH(btex) = sum of BTEX areas from the FID.  
 # cluttered chromatogram; sample peak coelutes with surrogate peak.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 66567

WorkOrder: 1204316

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1204316-015A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	1400	40	NR	NR	NR	107	N/A	N/A	70 - 130	
%SS:	124	25	NR	NR	NR	93	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66567 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-001A	04/10/12 1:17 PM	04/11/12	04/13/12 5:43 AM	1204316-002A	04/10/12 1:21 PM	04/11/12	04/13/12 12:57 AM
1204316-003A	04/10/12 1:26 PM	04/11/12	04/14/12 4:31 AM	1204316-005A	04/10/12 11:06 AM	04/11/12	04/13/12 2:07 AM
1204316-006A	04/10/12 11:16 AM	04/11/12	04/13/12 4:37 AM	1204316-007A	04/10/12 11:22 AM	04/11/12	04/12/12 9:58 PM
1204316-008A	04/11/12 7:38 AM	04/11/12	04/12/12 2:28 AM	1204316-009A	04/11/12 7:49 AM	04/11/12	04/12/12 5:47 PM
1204316-010A	04/11/12 7:55 AM	04/11/12	04/14/12 2:12 AM	1204316-013A	04/10/12 10:07 AM	04/11/12	04/13/12 4:29 AM
1204316-014A	04/10/12 10:16 AM	04/11/12	04/13/12 3:30 AM	1204316-015A	04/10/12 10:24 AM	04/11/12	04/14/12 5:41 AM
1204316-017A	04/10/12 12:21 PM	04/11/12	04/13/12 5:37 AM	1204316-018A	04/10/12 12:31 PM	04/11/12	04/12/12 7:44 PM
1204316-019A	04/10/12 12:34 PM	04/11/12	04/12/12 8:51 PM	1204316-020A	04/10/12 12:38 PM	04/11/12	04/13/12 2:07 AM
1204316-024A	04/11/12 6:40 AM	04/11/12	04/16/12 6:14 PM	1204316-025A	04/11/12 6:48 AM	04/11/12	04/12/12 11:46 PM
1204316-026A	04/11/12 6:54 AM	04/11/12	04/17/12 6:18 PM	1204316-028A	04/11/12 8:21 AM	04/11/12	04/14/12 4:39 AM
1204316-029A	04/11/12 8:28 AM	04/11/12	04/12/12 11:05 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 66568

WorkOrder: 1204316

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1204400-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	ND	40	93.4	91.5	2.00	96.8	70 - 130	30	70 - 130	
%SS:	91	25	90	88	2.45	90	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66568 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-030A	04/11/12 8:34 AM	04/11/12	04/14/12 3:22 AM	1204316-032A	04/11/12 10:53 AM	04/11/12	04/12/12 6:37 PM
1204316-033A	04/11/12 11:20 AM	04/11/12	04/12/12 8:51 PM	1204316-034A	04/11/12 11:28 AM	04/11/12	04/13/12 5:37 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 66452

WorkOrder: 1204316

EPA Method: SW8015B		Extraction: SW3510C					Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	111	N/A	N/A	70 - 130	
%SS:	N/A	625	N/A	N/A	N/A	105	N/A	N/A	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 66452 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-004B	04/11/12 9:47 AM	04/11/12	04/13/12 4:27 AM	1204316-011B	04/10/12 1:54 PM	04/11/12	04/17/12 4:09 PM
1204316-016B	04/11/12 9:36 AM	04/11/12	04/13/12 3:17 AM	1204316-022B	04/11/12 10:05 AM	04/11/12	04/13/12 3:21 AM
1204316-027B	04/11/12 12:30 PM	04/11/12	04/14/12 4:05 AM	1204316-031B	04/11/12 12:42 PM	04/11/12	04/15/12 3:27 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% Recovery = 100 * (MS - Sample) / (Amount Spiked)$ ;  $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$ .  
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



## Analytical Report

Versar  5330 Primrose Drive, Ste. 147  Fair Oaks, CA 95628	Client Project ID: #104422.4422.007; Rodding Cleaning Services	Date Sampled: 04/10/12-04/11/12
		Date Received: 04/11/12
	Client Contact: Tim Berger	Date Reported: 05/07/12
	Client P.O.:	Date Completed: 05/07/12

**WorkOrder: 1204316 A**

May 07, 2012

Dear Tim:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#104422.4422.007; Rodding Cleaning Services,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
 Laboratory Manager  
 McC Campbell Analytical, Inc.

*The analytical results relate only to the items tested.*









**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: Jim Berger Bill To: Lily Mullins  
Company: Versar  
Quote # 2346  
E-Mail: jberger@versar.com  
Tele: (805) 201-4998 Fax: ( )  
Project #: 104422.4422.007 Project Name: Rodding Cleaning Services  
Project Location: San Leandro  
Sampler Signature: [Signature]

Analysis Request

Other

Comments

*BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE  
TPH as Diesel (8015) and Motor Oil  
Total Petroleum Oil & Grease (1664 / 5520 E/B&F)  
Total Petroleum Hydrocarbons (418.1)  
EPA 502.2 / 601 / 8010 / 8021 (HVOCS)  
MTBE / BTEX ONLY (EPA 602 / 8021)  
EPA 505/ 608 / 8081 (CI Pesticides)  
EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners  
EPA 507 / 8141 (NP Pesticides)  
EPA 515 / 8151 (Acidic CI Herbicides)  
EPA 524.2 / 624 / 8260 (VOCs)  
EPA 525.2 / 625 / 8270 (SVOCS)  
EPA 8270 SIM / 8310 (PAHs / PNAAs)  
CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)  
LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)  
Lead (200.7 / 200.8 / 6010 / 6020)  
Filter sample for DISSOLVED metals analysis*

\*\*Indicate here if these samples are potentially dangerous to handle:  
Quote #2346

H

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
B-4	B-4	4/11	1005	4	VOA Amber	X						X	X				
B-4-5'			636	1	Slave	X						X	X				
B-4-7'			640	1													
B-4-10.5'			648	1													
B-4-15'			654	1													
B-5	B-5	4/11	1230	6	VOA	X						X	X				
B-5-5'			821	1	Slave	X						X	X				
B-5-10'			828	1													
B-5-15'			834	1													

Handwritten notes  
off hold 4/13/12

\*\*MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate \$250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

Relinquished By: <u>[Signature]</u>	Date: <u>4/11/12</u>	Time: <u>1550</u>	Received By: <u>[Signature]</u>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

COMMENTS:  
ICE/° \_\_\_\_\_  
GOOD CONDITION \_\_\_\_\_  
HEAD SPACE ABSENT \_\_\_\_\_  
DECHLORINATED IN LAB \_\_\_\_\_  
APPROPRIATE CONTAINERS \_\_\_\_\_  
PRESERVED IN LAB \_\_\_\_\_  
  
VOAS O&G METALS OTHER  
PRESERVATION pH<2

Pg 3 of 4

McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1204316 **A** ClientCode: VEFE

WaterTrax  WriteOn  EDF  Excel  Fax  Email  HardCopy  ThirdParty  J-flag

Report to:

Tim Berger  
 Versar  
 5330 Primrose Drive, Ste. 147  
 Fair Oaks, CA 95628  
 (916) 863-9342 FAX: (916) 962-2678

Email: tberger@versar.com  
 cc:  
 PO:  
 ProjectNo: #104422.4422.007; Rodding Cleaning Services

Bill to:

Lily Mullins  
 Versar  
 5330 Primrose Drive, Ste. 147  
 Fair Oaks, CA 95628  
 lmullins@versar.com

Requested TAT: 5 days

Date Received: 04/11/2012

Date Add-On: 04/30/2012

Date Printed: 04/30/2012

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1204316-012	B-8-5'	Soil	4/10/2012 10:05	<input type="checkbox"/>	A	A											
1204316-021	B-2-5.5'	Soil	4/10/2012 13:15	<input type="checkbox"/>	A	A											
1204316-023	B-4-5'	Soil	4/11/2012 6:36	<input type="checkbox"/>	A	A											

Test Legend:

1	G-MBTEX_S	2	TPH(DMO)_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments: Samples 012,021,023 off hold per Nicole and ok'ed to run pass holding. 4/30/12

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.









**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 67094

WorkOrder: 1204316

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1204840-031A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	2.2	40	99.9	97.6	2.19	99.6	70 - 130	30	70 - 130	
%SS:	88	25	90	87	2.64	86	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 67094 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-012A	04/10/12 10:05 AM	04/30/12	05/01/12 8:29 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS} - \text{Sample}) / (\text{Amount Spiked})$ ;  $\text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$ .  
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 67166

WorkOrder: 1204316

EPA Method: SW8015B		Extraction: SW3550B					Spiked Sample ID: 1204316-023A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH-Diesel (C10-C23)	4.5	40	107	108	0	102	70 - 130	30	70 - 130	
%SS:	94	25	95	95	0	90	70 - 130	30	70 - 130	

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
 NONE

BATCH 67166 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1204316-021A	04/10/12 1:15 PM	04/30/12	05/03/12 12:06 PM	1204316-023A	04/11/12 6:36 AM	04/30/12	05/01/12 7:20 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 $\% \text{ Recovery} = 100 * (\text{MS-Sample}) / (\text{Amount Spiked}); \text{RPD} = 100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2).$   
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

04 May 2012

Tim Berger  
Versar -- Fair Oaks  
7844 Madison Ave #167  
Fair Oaks, CA 95628  
RE: Former Redding Cleaning

Enclosed are the results of analyses for samples received by the laboratory on 04/26/12 09:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Wendy Hsiao For Daniel Chavez  
Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Versar -- Fair Oaks  
 7844 Madison Ave #167  
 Fair Oaks CA, 95628

Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

**Reported:**  
 05/04/12 10:44

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV-1	T120702-01	Air	04/25/12 12:19	04/26/12 09:50
SV-2	T120702-02	Air	04/25/12 11:55	04/26/12 09:50
SV-3	T120702-03	Air	04/25/12 11:30	04/26/12 09:50
SV-4	T120702-04	Air	04/25/12 11:15	04/26/12 09:50
SV-5	T120702-05	Air	04/25/12 10:50	04/26/12 09:50
YARD	T120702-06	Air	04/25/12 10:18	04/26/12 09:50

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Wendy Hsiao For Daniel Chavez, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Versar -- Fair Oaks  
 7844 Madison Ave #167  
 Fair Oaks CA, 95628

Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

**Reported:**  
 05/04/12 10:44

**SV-1**  
**T120702-01 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**TO-15**

<b>Benzene</b>	<b>21</b>	3.3	ug/m <sup>3</sup> Air	3.88	2042610	04/26/12	05/02/12	TO-15	
Toluene	ND	3.8	"	"	"	"	"	"	
Ethylbenzene	ND	4.4	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>16</b>	8.8	"	"	"	"	"	"	
o-Xylene	ND	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.7	"	"	"	"	"	"	
C6-C12 (GRO)	ND	7200	"	1.94	"	"	"	"	
<b>1,1-Difluoroethane (Freon 152)</b>	<b>700</b>	27	"	3.88	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>94.6 %</i>	<i>40-160</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

**Methane by GC**

Methane	ND	5.0	ppm(v)	1	2042608	04/26/12	04/30/12	8015M	
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**Fixed Gases ASTM D1946-90**

<b>Carbon Dioxide</b>	<b>1.36</b>	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>18.2</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>82.7</b>	1.00	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Wendy Hsiao For Daniel Chavez, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Versar -- Fair Oaks 7844 Madison Ave #167 Fair Oaks CA, 95628	Project: Former Redding Cleaning Project Number: 104422.4422.007 Project Manager: Tim Berger	<b>Reported:</b> 05/04/12 10:44
---------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	------------------------------------

**SV-2**  
**T120702-02 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**TO-15**

<b>Benzene</b>	<b>420</b>	3.3	ug/m <sup>3</sup> Air	18	2042610	04/26/12	05/02/12	TO-15	
Toluene	ND	3.8	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>81</b>	4.4	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>360</b>	8.8	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>60</b>	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.7	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>13000</b>	7200	"	1.8	"	"	"	"	
<b>1,1-Difluoroethane (Freon 152)</b>	<b>3700</b>	27	"	18	"	"	"	"	

Surrogate: 4-Bromofluorobenzene 99.7 % 40-160 " " " "

**Methane by GC**

<b>Methane</b>	<b>46</b>	5.0	ppm(v)	1	2042608	04/26/12	04/30/12	8015M	
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**Fixed Gases ASTM D1946-90**

<b>Carbon Dioxide</b>	<b>3.01</b>	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>13.4</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>82.8</b>	1.00	"	"	"	"	"	"	

SunStar Laboratories, Inc.

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Wendy Hsiao For Daniel Chavez, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Versar -- Fair Oaks 7844 Madison Ave #167 Fair Oaks CA, 95628	Project: Former Redding Cleaning Project Number: 104422.4422.007 Project Manager: Tim Berger	Reported: 05/04/12 10:44
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**SV-3**  
**T120702-03 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**TO-15**

<b>Benzene</b>	<b>78</b>	3.3	ug/m <sup>3</sup> Air	4.48	2042610	04/26/12	05/02/12	TO-15	
Toluene	ND	3.8	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>6.9</b>	4.4	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>28</b>	8.8	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>4.8</b>	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.7	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>10000</b>	7200	"	1.79	"	"	"	"	
<b>1,1-Difluoroethane (Freon 152)</b>	<b>670</b>	27	"	4.48	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>97.8 %</i>	<i>40-160</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

**Methane by GC**

<b>Methane</b>	<b>7.3</b>	5.0	ppm(v)	1	2042608	04/26/12	04/30/12	8015M	
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**Fixed Gases ASTM D1946-90**

<b>Carbon Dioxide</b>	<b>7.84</b>	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>4.97</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>91.2</b>	1.00	"	"	"	"	"	"	

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Versar -- Fair Oaks  
 7844 Madison Ave #167  
 Fair Oaks CA, 95628

Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

**Reported:**  
 05/04/12 10:44

**SV-4**  
**T120702-04 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

<b>TO-15</b>									<b>TO-14</b>
<b>Benzene</b>	<b>330000</b>	13000	ug/m <sup>3</sup> Air	81.78	2042610	04/26/12	05/02/12	TO-15	
<b>Toluene</b>	<b>6800</b>	190	"	1.67	"	"	05/01/12	"	
<b>Ethylbenzene</b>	<b>40000</b>	220	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>130000</b>	220	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>25000</b>	220	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	180	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>13000000</b>	7200	"	81.78	"	"	"	"	
1,1-Difluoroethane (Freon 152)	ND	140	"	1.67	"	"	"	"	
<b>Methane by GC</b>									
<b>Methane</b>	<b>56000</b>	250	ppm(v)	50	2042608	04/26/12	04/30/12	8015M	
<b>Fixed Gases ASTM D1946-90</b>									
<b>Carbon Dioxide</b>	<b>7.54</b>	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>6.13</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>89.5</b>	1.00	"	"	"	"	"	"	

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Versar -- Fair Oaks  
 7844 Madison Ave #167  
 Fair Oaks CA, 95628

Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

**Reported:**  
 05/04/12 10:44

**SV-5**  
**T120702-05 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

<b>TO-15</b>									<b>TO-14</b>
<b>Benzene</b>	<b>780</b>	160	ug/m <sup>3</sup> Air	2.73	2042610	04/26/12	05/02/12	TO-15	
Toluene	ND	190	"	"	"	"	"	"	
Ethylbenzene	ND	220	"	"	"	"	"	"	
m,p-Xylene	ND	220	"	"	"	"	"	"	
o-Xylene	ND	220	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	180	"	"	"	"	"	"	
<b>C6-C12 (GRO)</b>	<b>23000</b>	7200	"	"	"	"	"	"	
1,1-Difluoroethane (Freon 152)	ND	140	"	"	"	"	"	"	

**Methane by GC**

<b>Methane</b>	<b>560</b>	14	ppm(v)	2.73	2042608	04/26/12	04/30/12	8015M	
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**Fixed Gases ASTM D1946-90**

Carbon Dioxide	ND	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>14.1</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>67.3</b>	1.00	"	"	"	"	"	"	

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Versar -- Fair Oaks  
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 Fair Oaks CA, 95628

Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

**Reported:**  
 05/04/12 10:44

**YARD**  
**T120702-06 (Air)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**SunStar Laboratories, Inc.**

**TO-15**

<b>Benzene</b>	<b>65</b>	3.3	ug/m <sup>3</sup> Air	4.7	2042610	04/26/12	05/02/12	TO-15	
<b>Toluene</b>	<b>5.0</b>	3.8	"	"	"	"	"	"	
<b>Ethylbenzene</b>	<b>13</b>	4.4	"	"	"	"	"	"	
<b>m,p-Xylene</b>	<b>56</b>	8.8	"	"	"	"	"	"	
<b>o-Xylene</b>	<b>8.9</b>	4.4	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	3.7	"	"	"	"	"	"	
C6-C12 (GRO)	ND	7200	"	1.88	"	"	"	"	
1,1-Difluoroethane (Freon 152)	ND	27	"	4.7	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		<i>97.3 %</i>	<i>40-160</i>		<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

**Methane by GC**

Methane	ND	5.0	ppm(v)	1	2042608	04/26/12	04/30/12	8015M	
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**Fixed Gases ASTM D1946-90**

Carbon Dioxide	ND	1.00	%	1	2042609	04/26/12	04/27/12	GC	
<b>Oxygen</b>	<b>12.8</b>	1.00	"	"	"	"	"	"	
<b>Nitrogen</b>	<b>65.3</b>	1.00	"	"	"	"	"	"	

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Project: Former Redding Cleaning  
 Project Number: 104422.4422.007  
 Project Manager: Tim Berger

Reported:  
 05/04/12 10:44

**TO-15 - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2042610 - General Prep VOC-MS**

**Blank (2042610-BLK1)**

Prepared: 04/26/12 Analyzed: 05/02/12

Benzene	ND	3.3	ug/m <sup>3</sup> Air							
Toluene	ND	3.8	"							
Ethylbenzene	ND	4.4	"							
m,p-Xylene	ND	8.8	"							
o-Xylene	ND	4.4	"							
Methyl tert-butyl ether	ND	3.7	"							
C6-C12 (GRO)	ND	7200	"							
1,1-Difluoroethane (Freon 152)	ND	27	"							
Surrogate: 4-Bromofluorobenzene	42.3		"	45.3		93.4	40-160			

**Duplicate (2042610-DUP1)**

Source: T120702-01

Prepared: 04/26/12 Analyzed: 05/02/12

Benzene	21.6	3.3	ug/m <sup>3</sup> Air		20.7			4.18	30	
Toluene	ND	3.8	"		ND				30	
Ethylbenzene	4.46	4.4	"		4.11			8.00	30	
m,p-Xylene	17.5	8.8	"		16.3			7.11	30	
o-Xylene	ND	4.4	"		ND				30	
Methyl tert-butyl ether	ND	3.7	"		ND				30	
C6-C12 (GRO)	ND	7200	"		ND				30	
1,1-Difluoroethane (Freon 152)	667	27	"		697			4.53	200	
Surrogate: 4-Bromofluorobenzene	42.8		"	45.3		94.6	40-160			

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Versar -- Fair Oaks 7844 Madison Ave #167 Fair Oaks CA, 95628	Project: Former Redding Cleaning Project Number: 104422.4422.007 Project Manager: Tim Berger	<b>Reported:</b> 05/04/12 10:44
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**Methane by GC - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2042608 - General Prep VOC-GC**

<b>Blank (2042608-BLK1)</b>		Prepared: 04/26/12 Analyzed: 04/30/12								
Methane	ND	5.0	ppm(v)							
<b>Duplicate (2042608-DUP1)</b>		Source: T120702-01 Prepared: 04/26/12 Analyzed: 04/30/12								
Methane	ND	5.0	ppm(v)		ND				20	

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Versar -- Fair Oaks 7844 Madison Ave #167 Fair Oaks CA, 95628	Project: Former Redding Cleaning Project Number: 104422.4422.007 Project Manager: Tim Berger	<b>Reported:</b> 05/04/12 10:44
---------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	------------------------------------

**Fixed Gases ASTM D1946-90 - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2042609 - General Prep VOC-GC**

<b>Blank (2042609-BLK1)</b>				Prepared: 04/26/12 Analyzed: 04/27/12						
Carbon Dioxide	ND	1.00	%							
Oxygen	ND	1.00	"							
Nitrogen	7.40	1.00	"							QB-01
<b>Duplicate (2042609-DUP1)</b>				Source: T120702-01 Prepared: 04/26/12 Analyzed: 04/27/12						
Carbon Dioxide	1.44	1.00	%		1.36			5.72	20	
Oxygen	19.4	1.00	"		18.2			6.48	20	
Nitrogen	82.8	1.00	"		82.7			0.0145	20	

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Versar -- Fair Oaks  
7844 Madison Ave #167  
Fair Oaks CA, 95628

Project: Former Redding Cleaning  
Project Number: 104422.4422.007  
Project Manager: Tim Berger

**Reported:**  
05/04/12 10:44

### Notes and Definitions

- TO-14 TO-15 analysis of sample was not performed due to high concentration of analyte(s). Sample was analyzed utilizing method TO-14 and reporting limit has been adjusted accordingly.
- QB-01 The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

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Wendy Hsiao For Daniel Chavez, Project Manager

SunStar Laboratories, Inc.  
 25712 Commercentre Dr  
 Lake Forest, CA 92630  
 949-297-5020

### Chain of Custody Record

Client: Versar  
 Address: 5330 Primrose Dr #147 Fair Oaks CA  
 Phone: 916 863 9360 Fax: \_\_\_\_\_  
 Project Manager: Tim Berger

Date: 4/25/12 Page: 1 Of 1  
 Project Name: Former Rolling Cleaning  
 Collector: M. Hastings Client Project #: 104422.4422.007  
 Batch #: T120702 EDF #: \_\_\_\_\_

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	TPH-g, BTEX, MTBE	Oxygen, Nitrogen, Methane	CO <sub>2</sub>	Laboratory ID #	Comments/Preservative	Total # of containers
VAP-1	4/25/12													X	X	X	01		1
VAP-2														X	X	X	02		1
VAP-3														X	X	X	03		1
VAP-4														X	X	X	04		1
VAP-5														X	X	X	05		1
YARD														X	X	X	06		1

Relinquished by: (signature) <u>Chris [Signature]</u>	Date / Time <u>4/25/12 1350</u>	Received by: (signature) <u>Bill [Signature]</u>	Date / Time <u>4/25/12 1550</u>	Total # of containers	6
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time	Chain of Custody seals Y/N/NA	Y
Relinquished by: (signature) <u>CSO</u>	Date / Time <u>4-26-12 9:50</u>	Received by: (signature) <u>[Signature]</u>	Date / Time <u>4-26-12 750</u>	Seals intact? Y/N/NA	Y
Sample disposal Instructions: Disposal @ \$2.00 each _____	Return to client _____	Pickup _____	Turn around time: <u>STND</u>	Received good condition/cold	20.0

Notes  
**STD. TAT**  
 BC

## SAMPLE RECEIVING REVIEW SHEET

BATCH # T120702

Client Name: VEKSAR FAIR OAKS

Project: FORMER RODDING CLEANING

Received by: BRIAN

Date/Time Received: 4/26/12 09:30

Delivered by:  Client  SunStar Courier  GSO  FedEx  Other \_\_\_\_\_

Total number of coolers received 0 Temp criteria = 6°C > 0°C (no frozen containers)

Temperature: cooler #1 20.2 °C +/- the CF (-0.2°C) = 20.0 °C corrected temperature

cooler #2 \_\_\_\_\_ °C +/- the CF (-0.2°C) = \_\_\_\_\_ °C corrected temperature

cooler #3 \_\_\_\_\_ °C +/- the CF (-0.2°C) = \_\_\_\_\_ °C corrected temperature

Samples outside temp. but received on ice, w/in 6 hours of final sampling.  Yes  No\*  N/A

Custody Seals Intact on Cooler/Sample  Yes  No\*  N/A

Sample Containers Intact  Yes  No\*

Sample labels match COC ID's  Yes  No\*

Total number of containers received match COC  Yes  No\*

Proper containers received for analyses requested on COC  Yes  No\*

Proper preservative indicated on COC/containers for analyses requested  Yes  No\*  N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times.  Yes  No\*

\* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date BL 4/26/12

Comments:

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