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**PERJURY STATEMENT**

**Subject:** Fuel Lake Case No. RO0002981 and Geotracker Global ID T1000000416, Red Hanger Cleaners, 6335-6339 College Ave., Oakland, CA 94618

"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."



Ted Cleveland  
Vice President, Operations  
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20 January 2010

Barbara Jakub, P.G.  
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Subject: RO#0002981  
2009 Site Characterization Summary Report  
Red Hanger Kleaners  
6239 College Avenue  
Oakland, California

Dear Ms. Jakub:

On behalf of EFI Global, Inc. and Mr. Ronald Elvidge, site owner, ERM-West, Inc. (ERM) presents to Alameda County Environmental Health Services (ACEH) this 2009 Site Characterization Summary Report for the Red Hanger Kleaners site (Site), located at 6239 College Avenue in Oakland, California (Figure 1). ERM was retained to complete characterization of soil and ground water impacts identified during a previous Phase II investigation, in accordance with the 15 January 2009 letter from ACEH. The 2009 field activities were conducted in general conformance with ERM's 13 April 2009 Site Characterization Workplan (workplan) submitted to and approved by ACEH.

This report presents the following information:

- A brief Site background;
- A description of the field activities, including any exceptions to the workplan; and
- Investigation results.

Figures and tables are included at the end of this report.

## **BACKGROUND**

The site is located in a mixed commercial and residential area of Oakland, and consists of a three-story building, a parking area, and associated landscaping (Figure 2). The building is currently occupied by various tenants, including a dry cleaning facility.

A Phase I investigation performed for the Site in 2005 in support of a property transfer identified Recognized Environmental Conditions associated with the following:

- The apparent former presence of a gasoline Underground Storage Tank (UST) in the northwestern portion of the property; and
- Historical dry cleaning activities conducted since 1987, particularly with respect to potential releases of tetrachloroethylene (PCE).

The scope and findings of this Phase I investigation are presented in the report entitled *Phase I Environmental Site Assessment – 6235 College Avenue – Oakland, California* (AEI Consultants, March 2005), which has been provided to the ACEH under separate cover.

Based on the findings of the Phase I investigation, a Phase II subsurface investigation was performed at the Site to assess whether the suspected UST was present at the Site, and to determine whether volatile organic compounds (VOCs; particularly PCE) and/or total petroleum hydrocarbons (TPH) were present in the subsurface. Investigation activities included a geophysical survey in the suspected UST area, and soil and ground water sampling. The scope and findings of this Phase I investigation are presented in the report entitled *Phase II Subsurface Investigation Report – 6293[sic] College Avenue – Oakland, California* (AEI Consultants, May 2005), which has been provided to the ACEH under separate cover.

According to the Phase II report, a geophysical anomaly interpreted as representing a backfilled excavation was observed in the suspected UST vicinity. As part of this field event, analyses for TPH and/or VOCs were performed on several soil samples collected from five borings at the site. Four of the borings were in the vicinity of the dry cleaning machines in the southwest corner of the site (SB-1 through SB-4, maximum soil sample depth 4 feet below ground surface [bgs]; Figure 3), and one

boring was in the former UST area in the northwest corner (SB-5, soil sample depth 11.5 feet bgs; Figure 3). TPH was not detected in the soil sample from the former UST area, and the only VOC detected in the dry cleaning machine area was PCE. The PCE detections were relatively low, but the highest detection (0.26 mg/kg) was slightly higher than the 0.25 mg/kg Regional Water Quality Control Board (RWQCB) screening level for commercial/industrial land use that was cited in the report<sup>1</sup>. In addition, PCE and chloroform were detected in a ground water sample. The PCE detection in this ground water sample (48 µg/L) was higher than the 5 µg/L RWQCB screening level that was cited in the report<sup>2</sup>.

A second sampling event was conducted at the Site in June 2005 by EFI Global, Inc. (EFI) in response to a request by the City of Oakland Fire Department (OFD). The scope and findings of that sampling event are presented their findings in a 28 June 2005 letter report (submitted to ACEH under separate cover). During that sampling event, a ground water sample was collected from a location south of the dry cleaning machines (SB-6; Figure 3). There was no evidence of PCE impacts to soils, but the presence of PCE and chloroform in ground water was confirmed. The reported PCE detection (15 µg/L) was lower than that detected at SB-1. Based on the data from these two phases of investigation, OFD issued a No Further Action letter and the property transaction was completed.

An additional round of soil and ground water sampling was conducted at the Site in May 2008 by P&D Environmental, Inc. at two locations

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<sup>1</sup> The report is unclear regarding the source of the specific screening level that was used for this purpose. The PCE detections do not exceed the current RWQCB Environmental Screening Level (ESL; 0.7 mg/kg) for PCE (industrial/commercial land use) in shallow soil where ground water is a current or potential source of drinking water, as defined in RWQCB, 2007. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, revised May 2008.

<sup>2</sup> This 5 µg/L screening level is consistent with the ground water screening level (where ground water is a current or potential source of drinking water) presented in the current ESL document, referenced in prior footnote.

northeast (presumed upgradient) of the existing dry cleaning machines. The scope and results of that investigation have not been presented in a formal report, but boring logs, data summary tables, and an analytical report associated with those two locations (B7 and B8; Figure 3) were provided to ACEH under separate cover. PCE was detected in one of the soil samples, and in both ground water samples. In addition, chloroform was detected in both ground water samples. Both PCE detections in ground water (7 µg/L and 12 µg/L) were higher than the RWQCB screening level. The source of these upgradient detections is unknown. However, one possibility is a former dry cleaning facility previously located adjacent to and northeast of the current Red Hanger Kleeners location at 6251 College Avenue. Basics Environmental (Basics) conducted a local regulatory agency file review for the two dry cleaning facilities, and presented their findings in a 23 July 2008 letter report (submitted to ACEH under separate cover). According to the Basics report, the 6251 address originally housed a dry cleaning operation called Kay's Cleaners, and that facility was apparently later adopted for use by Red Hanger Kleeners, which apparently moved their operations in 1987 to the current location. Currently, the 6251 College Avenue address is occupied by a nail salon.

Based on these three prior phases of investigation, low concentrations of PCE and chloroform are present in ground water beneath the Site. These chemicals appear to be associated in part with upgradient, ambient conditions.

As part of due diligence associated with a subsequent pending property transaction, it was discovered that the ACEH had not reviewed the Site conditions or made a determination of No Further Action. When contacted to obtain a No Further Action letter, based on the observed presence of PCE in soils and ground water, the ACEH responded in a 15 January 2009 letter that additional characterization was required (i.e., soil and ground water sampling and a preferential pathway study). Specifically, the ACEH letter identified the following required tasks:

- **Dissolved Ground Water Plume Characterization.**  
Characterization of ground water (1) laterally to the southwest (in the presumed direction of ground water flow) of the two locations where PCE was detected in 2005 and (2) vertically at depths greater than those from which the 2005 samples were collected.

- **Soil Characterization.** Characterization of the vertical occurrence of chemicals in soils in the immediate vicinity of the dry cleaning machines (i.e., at depths greater than 4 feet bgs, the maximum depth at which samples were collected in 2005).
- **UST Characterization.** Characterization of the ground water conditions (previously unsampled) in the immediate vicinity of the suspected UST.
- **Preferential Pathway Study.** Assessment of potential lateral and vertical migration pathways (i.e., wells, utilities, and pipelines), including performance of a utility survey and well survey and performance of a background study of historical Site uses.

The preferential pathway study was completed in early 2009 and the results of the study were presented in ERM's 13 April 2009 workplan. The results of the utility survey indicated that the maximum depth of subsurface utilities beneath the Site was 5 feet bgs, which is appreciably shallower than the depth at which ground water was encountered during the Phase II investigation (approximately 21 to 24 feet bgs). Therefore, ERM concluded that chemicals present in ground water in the Site vicinity would not be preferentially directed in ground water to follow the pipeline alignments. However, if historical dry cleaner operations released PCE-impacted wastewater to the sanitary sewer or storm water lines in the Site vicinity, releases to the subsurface could have occurred if these pipelines contain or did contain cracks or breaks. The results of the well survey indicated no evidence of wells in the immediate Site vicinity that were located at hydrologic positions likely to serve as preferential pathways for chemical migration onto the site or away from the southwest corner of the Site (where PCE has been observed in ground water).

### ***OBJECTIVES AND SCOPE OF FIELD INVESTIGATION***

The scope of work presented in the workplan was developed to address ACEH requirements related to characterization of soil and ground water in the vicinity of the dry cleaning machines and the suspected former UST. Site characterization activities were proposed to be conducted in two phases (Phase A and B).

Phase A was completed in October and December 2009. As described in the workplan, the primary objectives of the Phase A investigation were (1) to assess the vertical extent of PCE impacts in soil and ground water near the dry cleaning machines, where PCE impacts were previously observed; and (2) to assess whether TPH impacts are present in soil and ground water in the vicinity of the suspected former UST location.

Phase B was to be conducted after receiving the results of Phase A. The objective of Phase B was to assess the lateral extent of PCE impacts associated with the historical dry cleaning operations.

### *Fieldwork Preparation*

Prior to initiating fieldwork, ERM prepared a site-specific health and safety plan (HSP), and obtained a drilling permit from the Alameda County Public Works Agency (ACPWA). The field investigation was performed in accordance with the HSP and the terms of the permit.

All boring locations were marked in the field and cleared for utilities prior to drilling. Utility clearance procedures included the following:

- Notification to Underground Services Alert at least 48 hours prior to beginning work; and
- Identification of water, gas, fuel, electrical, communication, storm sewer, and sanitary sewer lines in the vicinity of the proposed drilling locations by a private utility locator.

### *Soil and Ground Water Sampling*

Three soil borings (A-1, AD-3, and AUST-6) were advanced at the site on 11 October 2009 and one soil boring (A-2) was advanced on 5 December 2009 to facilitate collection of soil and ground water samples for physical characterization and chemical analysis. Boring locations are shown on Figure 4. The workplan proposed the advancement of borings at two additional locations (AU-4 and AU-5; Figure 4), however, these two borings were not completed due to access limitations.

The borings were advanced manually with a stainless-steel hand auger to 5 feet below ground surface (bgs) to reduce the potential for encountering underground utilities during drilling activities. The

borings were then advanced with a direct-push rig to the terminus of each boring. A-1, AD-3, and AUST-6 were advanced to 35 feet bgs using a standard direct-push drill rig. Boring A-2 was advanced inside the dry cleaning facility using a limited access direct-push rig. The limited access rig is typically less powerful than a standard direct-push rig and, thus, not able to drill to comparable depths. Boring A-2 was advanced until refusal at 30 feet bgs, followed by attempted depth-discrete ground water sampling from 30 to 35 feet bgs using a HydroPunch sampler. An additional stepout boring was advanced at location A-1 to 27 feet bgs using a HydroPunch sampler.

The soil borings were continuously cored during the direct-push drilling process in approximate 4-foot core lengths. The one exception was the location A-1 step-out boring, which was pushed directly to the terminus. As part of the soil sampling activities, the soil samples were (1) visually examined to characterize the subsurface geology according to the Unified Soil Classification System; (2) evaluated for visible evidence of contamination; and (3) field-screened with a photoionization detector (PID) for the presence of organic vapors. Soil descriptions and results of the PID screenings are documented on the soil boring logs included in Attachment A. Visual observations and PID readings were used to determine the appropriate sampling intervals within each boring. Soil samples were collected in acetate liners, covered with Teflon tape, and capped with plastic end caps. All soil samples were sealed in plastic bags and stored in an iced cooler.

Ground water was first encountered in A-1, AD-3, and AUST-6 at approximately 35 feet bgs and rose up almost immediately to approximately 22 feet bgs. Ground water was not encountered in A-2. Upon reaching ground water, temporary wells were installed using  $\frac{3}{4}$ -inch polyvinyl chloride (PVC) pipe with 5 feet of screen at the bottom. Ground water samples were then collected from the temporary wells using polyethylene tubing and a check valve. Ground water samples were collected into the appropriate, laboratory-provided sample containers and stored in an iced cooler.

The soil and ground water samples were submitted under proper chain of custody to Accutest Laboratories in San Jose, California. Copies of the chain-of-custody forms are provided in Attachment B. Samples collected from borings A-1, A-2, and AD-3 were analyzed for VOCs using United



States Environmental Protection Agency (USEPA) Method 8260B. Samples collected from AUST-6 were analyzed for the following constituents:

- TPH-gasoline/benzene, toluene, ethylbenzene, and xylenes (BTEX)/fuel oxygenates, and for water only, ethylene dibromide (EDB; syn: 1,2-dibromoethane) and ethylene dichloride (EDC; syn: 1,2-dichloroethane) by USEPA Method 8260B; and
- TPH-extractables by USEPA Method 8015-modified.

Upon completion of sampling activities at each location, the borings were properly backfilled with neat cement and restored to original condition. The soil cuttings generated from the drilling activities were contained in one 55-gallon drum and stored on the property; coordination of proper disposal of the wastes at a licensed waste disposal facility is underway.

The laboratory analytical reports (Attachment B) were subjected to a quality assurance/quality control (QA/QC) review and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***INVESTIGATION RESULTS***

The results of the 2009 field investigation are summarized in the following subsections.

### ***Geology/Hydrogeology***

Soils encountered during drilling activities included light brown to dark brown silts, sandy silts, and silty sands, and yellow-brown to orange-brown sandy/gravelly silts to clayey silts and gravelly clays to clays. Ground water was encountered in A-1, AD-3, and AUST-6 at approximately 35 feet bgs, where gravelly/sandy silts were present; water levels rose up to approximately 22 feet bgs. Ground water was not encountered in A-2. This boring was advanced to a total depth of 35 feet bgs and left open for approximately one hour. No evidence of impacts, such as odor or staining, was observed in any of the borings.

### *Soil Analytical Results*

The soil analytical results are summarized on Table 1 and Figure 4; the complete laboratory reports are presented in Attachment B. Table 1 also includes the following criteria for comparison purposes:

- San Francisco Bay Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs), for shallow and deep soils in commercial/industrial settings (where ground water is a potential drinking water source); and
- USEPA Region 9 Regional Screening Levels (RSLs) for soil in industrial settings.

These human health risk-based screening levels are not cleanup goals, do not establish policy or regulation, and are not intended to be used as a stand-alone tool for decision making. Detections lower than these criteria are presumed not likely to pose a threat to human health or the environment. As stated in the respective documentation, the presence of a chemical above these criteria does not necessarily indicate that adverse impacts to human health or the environment are occurring.

As seen in Table 1 and summarized below, there were few chemical detections in the soil samples. Furthermore, based on comparison to the relevant screening levels, none of the detections warrant further attention for protection of human health and the environment.

#### *VOCs*

PCE was detected at low concentrations in soil samples from two boring locations (A-2 and AD-3). At A-2, PCE was detected at concentrations of 10.6 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), 4.5 J  $\mu\text{g}/\text{kg}$ , and 4.8 J  $\mu\text{g}/\text{kg}$ , at depths of 6.5, 10, and 20 feet bgs, respectively. At AD-3, PCE was only detected in one sample (4.3 J  $\mu\text{g}/\text{kg}$  at 20 feet bgs). All detected PCE concentrations are well below the applicable screening levels.

Toluene was detected at low concentrations in soil samples from boring A-2. Toluene was detected at concentrations of 4.1 J  $\mu\text{g}/\text{kg}$  and 1.6 J  $\mu\text{g}/\text{kg}$ , at depths of 20 and 25 feet bgs, respectively. All detected toluene concentrations are well below the applicable screening levels.

Acetone was detected in soil samples from three boring locations (A-1, A-2, and AD-3). Acetone was detected at depths ranging from 6.5 to 35 feet bgs at these locations at concentrations ranging from 22.7 J  $\mu\text{g}/\text{kg}$  to 226  $\mu\text{g}/\text{kg}$ , below the applicable screening levels. Acetone was not detected in ground water samples. Acetone is a common laboratory contaminant, but was not detected in associated QA/QC samples; thus, its presence due to laboratory contamination could not be confirmed. The presence of acetone is not typically associated with dry cleaning operations, and is not likely to be associated with Site operations. Other potential explanations for its presence include sampling effects (i.e., off-gassing from the acetate liner used for sample collection) or atmospheric acetone introduced by rainfall.

#### *TPH and Fuel Compounds*

TPH-extractables, TPH-gasoline, BTEX compounds, and fuel oxygenates were not detected in soil samples collected from AUST-6.

#### *Ground Water Analytical Results*

Ground water analytical results are summarized on Table 1 and Figure 4; the complete laboratory reports are presented in Attachment B. As discussed above for soils, Table 2 includes the following human health risk-based screening criteria for comparison purposes:

- RWQCB ESLs for ground water as a potential drinking water source; and
- California Maximum Contaminant Levels (MCLs) for drinking water.

#### *VOCs*

PCE was detected at low concentrations of 0.91 J micrograms per liter ( $\mu\text{g}/\text{L}$ ) and 1.9  $\mu\text{g}/\text{L}$  in the ground water samples from A-1 and AD-3, respectively. These detected PCE concentrations are below the applicable screening levels.

Chloroform was detected at low concentrations of 1.7  $\mu\text{g}/\text{L}$  and 1.9  $\mu\text{g}/\text{L}$  in the ground water samples from A-1 and AD-3, respectively. These

detected chloroform concentrations are below the applicable screening levels.

#### *TPH and Fuel Compounds*

TPH-extractables, TPH-gasoline, BTEX compounds, fuel oxygenates, EDB, and EDC were not detected in the ground water sample collected from AUST-6.

### **SUMMARY AND CONCLUSIONS**

ERM conducted a characterization of soil and ground water impacts at the Red Hanger Kleeners property located at located at 6239 College Avenue in Oakland, California. Based on the results of this field investigation, ERM concludes the following:

- The lack of TPH and fuel-related compounds in soil and ground water samples collected in the vicinity of the suspected former UST indicates that the former UST is not a source of TPH impacts to the subsurface.
- The lack of visual or other evidence of VOC impacts and the low reported concentrations of VOCs in unsaturated soils, below applicable screening levels, indicates that there is not a significant VOC source in shallow soils at the Site.
- The low reported concentrations of VOCs in Site ground water, below applicable screening levels, indicate that current VOC concentrations in Site ground water are lower than reported in 2008 and are not representative of significant VOC impacts.

The extent of PCE impacts associated with the historical dry cleaning operations does not appear to be significant based on (1) the low reported concentrations of VOCs in Site soil and ground water, below applicable screening levels; (2) the nature of the underlying soils (primarily silts and clays, which are not conducive to vertical migration of contaminants); and (3) the depth to groundwater (currently not encountered until approximately 35 feet bgs).

For these reasons, conducting the second phase of site characterization activities no longer appears warranted. ERM requests that the ACEH

provide their concurrence with the general conclusion based on the historical sampling events that impacts due to historical Site operations are minimal, and that no further action is required for the Site.

If you have any questions regarding this report, please feel free to contact either of the undersigned at (925) 946-0455.

Sincerely,



John O. Cavanaugh, P.G.  
*Principal-in-Charge*



Jill A. Quillin, P.G.  
*Project Manager*



JAQ/ASC/JOC/kl/0099877

cc: Mr. Gary Bates, EFI Global, Inc. (electronic copy)  
file  
enclosures

## *Figures*

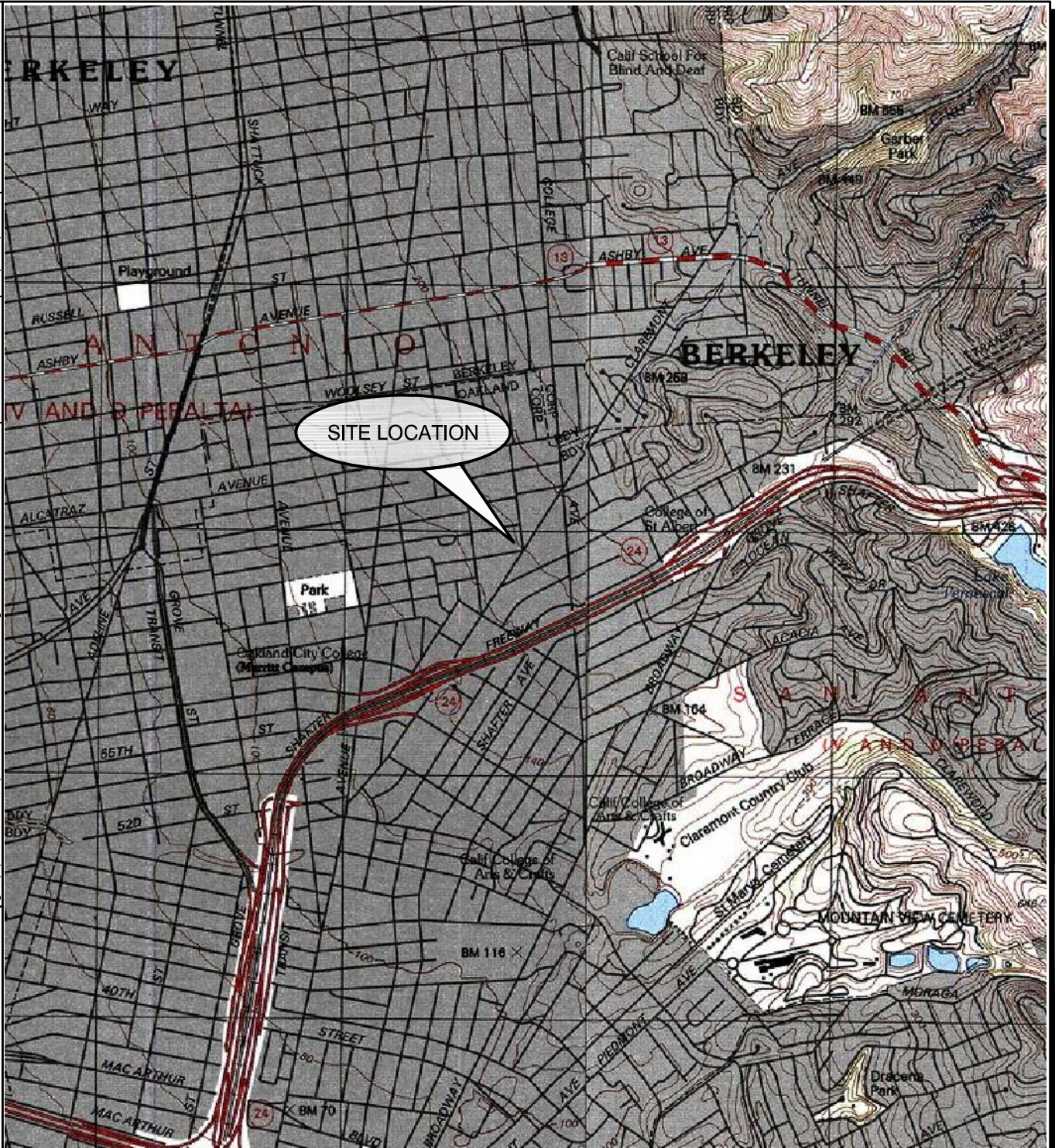


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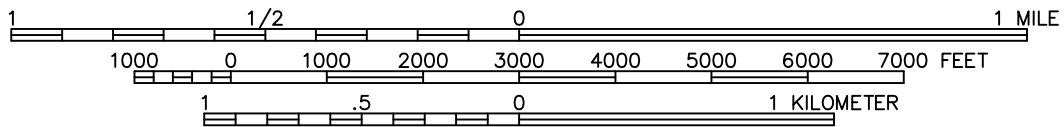
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04/10/09

Drawn By:  
J. Estrada

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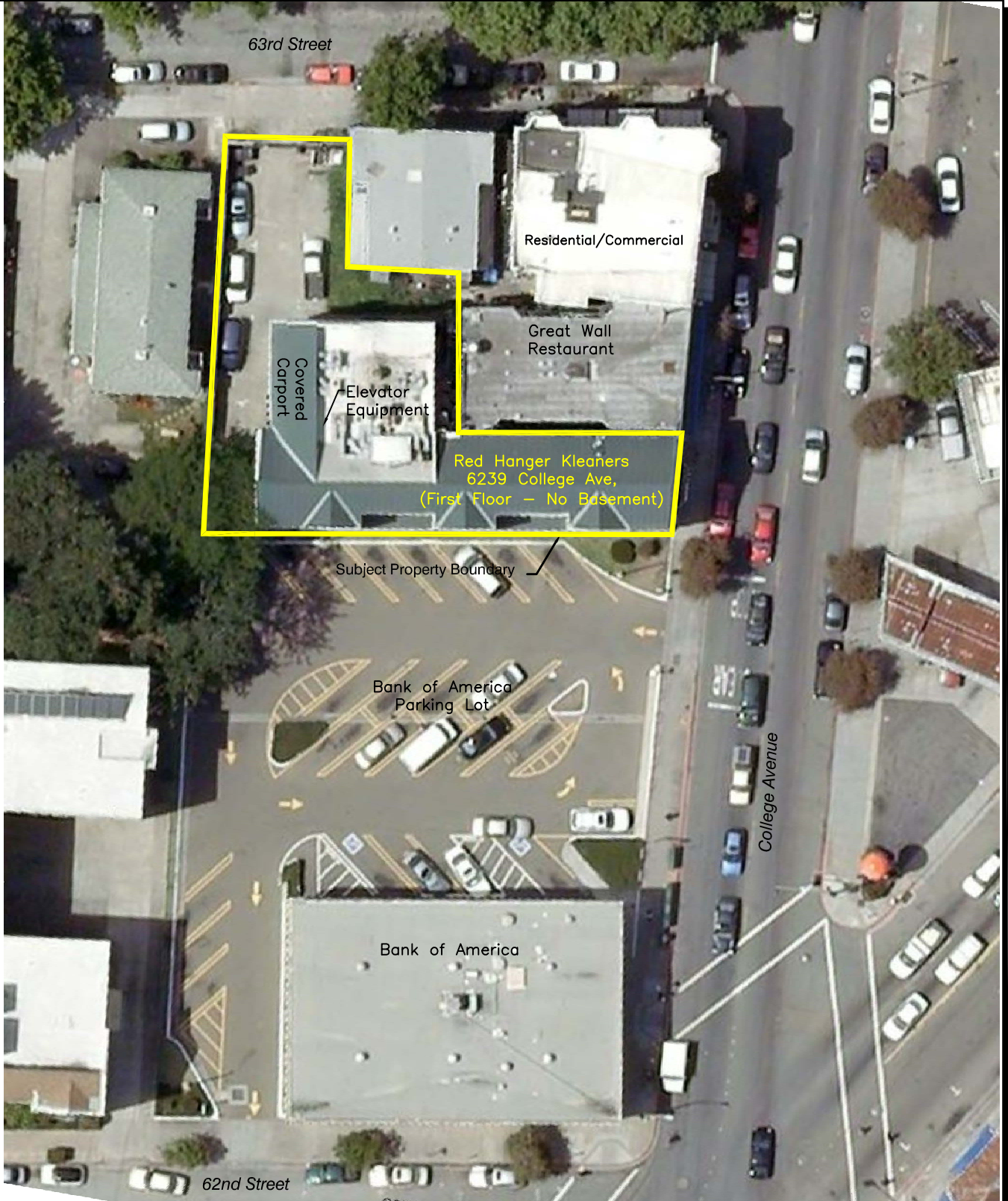
References:  
TOPO!® Software  
U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,  
Oakland West, California  
Dated: 1993

Figure 1  
*Site Location Map  
Red Hanger Kleaners  
6239 College Avenue  
Oakland, California*

ERM 04/09



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Aerial Photo Source: © 2007 Google Earth Pro Ver 5.0.11337.1968

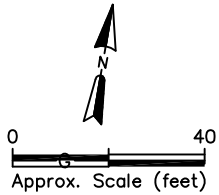
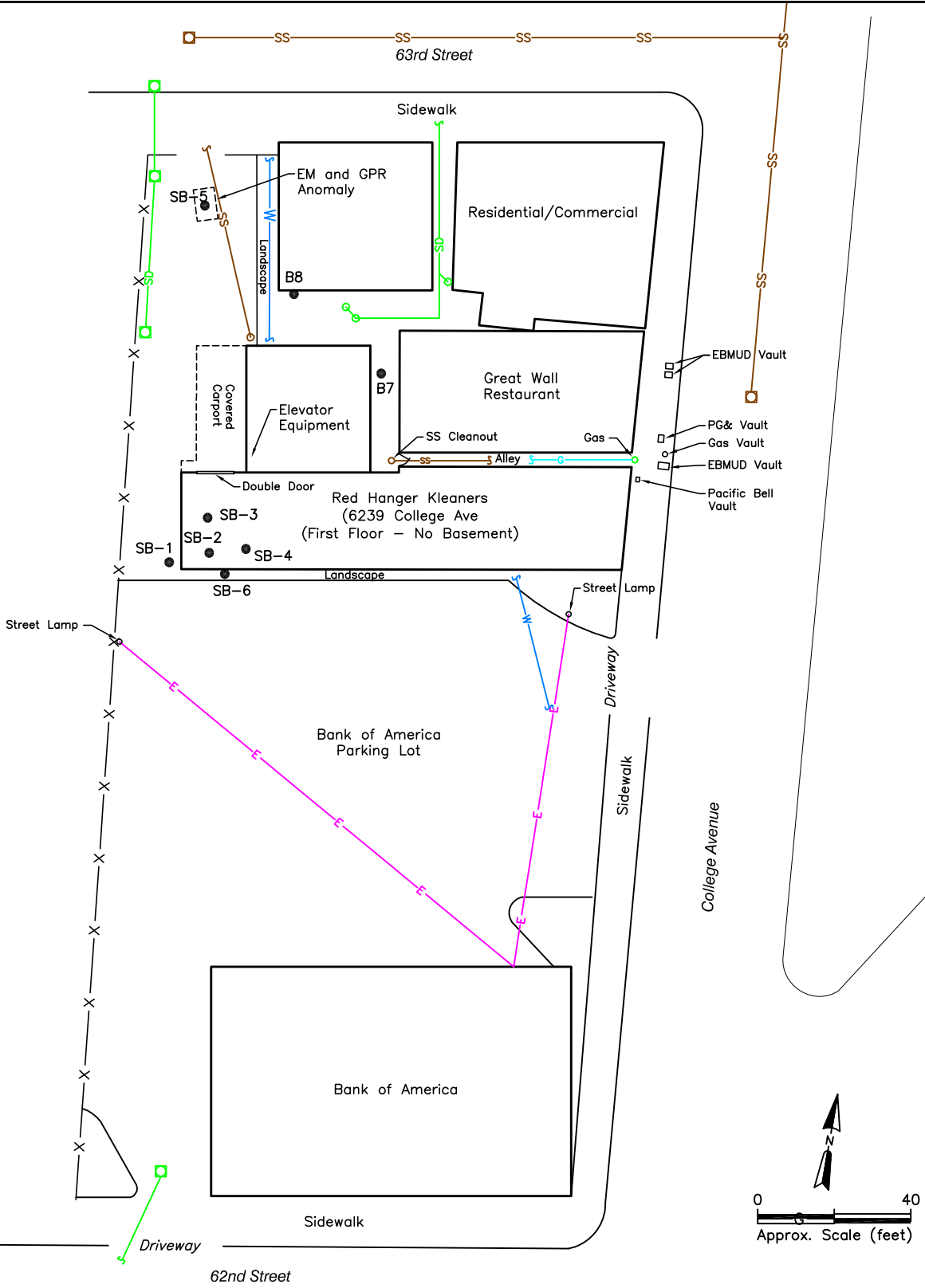


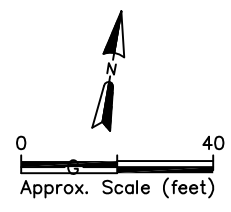
Figure 2  
*Aerial Photograph of Site  
Red Hanger Kleaners  
6239 College Avenue  
Oakland, California*



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 Date: 04/13/09  
 Project No. 0099877.00



- EBMUD Vault
- PG&E Vault
- Gas Vault
- EBMUD Vault
- Pacific Bell Vault

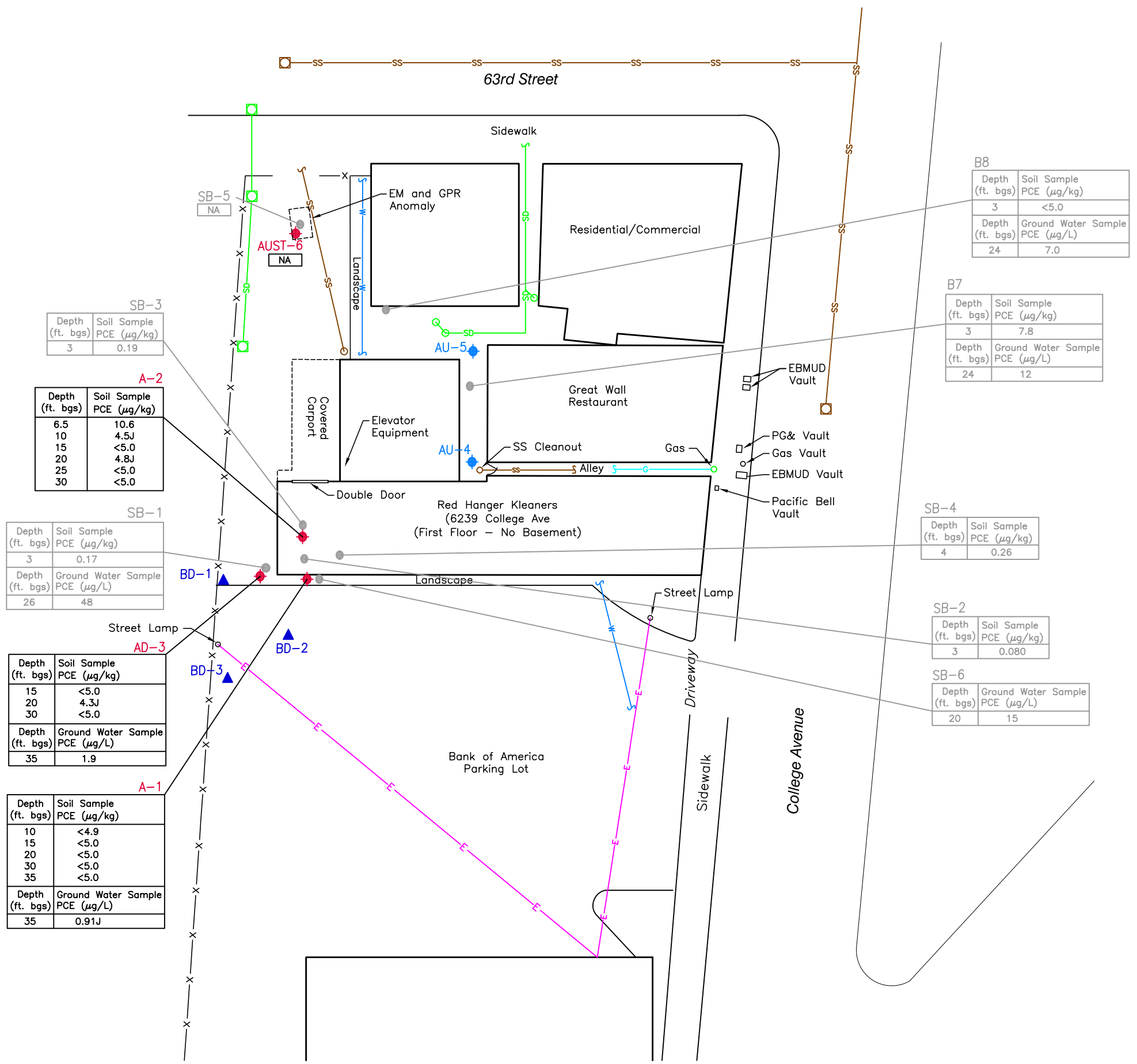
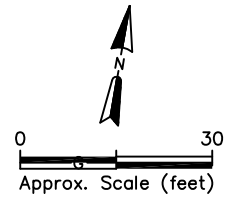


LEGEND	
— x — x —	Fence
— (pink) —	Electrical Line
— (brown) —	Sanitary Sewer Line
— (green) —	Storm Drain Line
— (blue) —	Water Line
— (cyan) —	Gas Line
□	Catch Basin or Manhole
●	Historical Boring Location (approximate)

**Figure 3**  
*Site Utility Survey Results and  
 Historical Boring Locations  
 Red Hanger Kleaners  
 6239 College Avenue  
 Oakland, California*

**LEGEND**

- x-x- Fence
- E- Electrical Line
- SS- Sanitary Sewer Line
- SD- Storm Drain Line
- W- Water Line
- G- Gas Line
- Catch Basin or Manhole
- Historical Boring Location (approximate)
- ◆ Phase A Boring Location (approximate)
- ◆ Proposed Phase A Boring Location Not Completed (approximate)
- ▲ Proposed Phase B Boring Location (approximate)
- J = Laboratory Qualifier Indicating Estimated Value
- NA = Not Analyzed
- PCE = Tetrachloroethene



**Figure 4**  
*PCE in Soil and Ground Water*  
*Red Hanger Kleaners*  
*6239 College Avenue*  
*Oakland, California*

## *Tables*

**Table 1**  
**2009 Site Investigation - Phase A Data Summary**  
**Red Hanger Kleeners Site**  
**6239 College Avenue, Oakland, California**

Location	Depth (ft bgs)	Date Sampled	Screening Levels	Acetone (µg/kg)	Chloroform (µg/kg)	PCE (µg/kg)	Toluene (µg/kg)
<i>Soil Data</i>							
			SF RWQCB ESL - Shallow Soil (Industrial/Commercial)	500	1,500	700	2,900
			SF RWQCB ESL - Deep Soil (Industrial/Commercial)	500	2,100	700	2,900
			US EPA Region IX RSL (Industrial)	610,000,000	1,500	2,700	46,000,000
A-1	10	10/11/2009		214	< 4.9	< 4.9	< 4.9
A-1	15	10/11/2009		169	< 5.0	< 5.0	< 5.0
A-1	20	10/11/2009		155	< 5.0	< 5.0	< 5.0
A-1	30	10/11/2009		186	< 5.0	< 5.0	< 5.0
A-1	35	10/11/2009		154	< 5.0	< 5.0	< 5.0
A-2	6.5	12/5/2009		30.5 J	< 5.0	10.6	< 5.0
A-2	10	12/5/2009		22.7 J	< 4.9	4.5 J	< 4.9
A-2	15	12/5/2009		< 100	< 5.0	< 5.0	< 5.0
A-2	20	12/5/2009		75.9 J	< 5.0	4.8 J	4.1 J
A-2	25	12/5/2009		34.1 J	< 5.0	< 5.0	1.6 J
A-2	30	12/5/2009		26.2 J	< 5.0	< 5.0	< 5.0
AD-3	15	10/11/2009		95.2 J	< 5.0	< 5.0	< 5.0
AD-3	20	10/11/2009		140	< 4.9	4.3 J	< 4.9
AD-3	30	10/11/2009		226	< 5.0	< 5.0	< 5.0
AUST-6	30.5	10/11/2010		NA	NA	NA	< 5.0
<i>Groundwater Data</i>				(µg/L)	(µg/L)	(µg/L)	(µg/L)
			SF RWQCB ESL - Groundwater (where groundwater is a potential source of drinking water)	1,500	70	5.0	5.0
			State of California MCL	--	--	5.0	5.0
A-1	35	10/11/2009		< 20	1.7	0.91 J	< 1.0
AD-3	35	10/11/2009		< 20	1.9	1.9	< 1.0
AUST-6	35	10/11/2009		NA	NA	NA	< 1.0

**Key:**

Only compounds detected in at least one sample are presented in this table.

ft bgs = feet below ground surface

µg/kg = Micrograms per kilogram

µg/L = Micrograms per liter

PCE = Tetrachloroethylene

NA = not analyzed

J = laboratory qualifier, indicating an estimated value between the Method Detection Limit (MDL) and Reporting Limit (RL)

SF RWQCB ESL = Regional Water Quality Control Board (San Francisco Bay Region) Environmental Screening Levels, from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, Interim Final - November 2007 (Revised May 2008) - obtained at SF Regional Water Quality Control Board website - [http://www.swrcb.ca.gov/rwqcb2/water\\_issues/available\\_documents/ESL\\_May\\_2008.pdf](http://www.swrcb.ca.gov/rwqcb2/water_issues/available_documents/ESL_May_2008.pdf)

US EPA Region IX RSL (Industrial) = United States Environmental Protection Agency, Region IX, Regional Screening Levels, from USEPA.

*Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites*. RSL Table Update. April 2009 - obtained at US EPA Region IX website - [http://www.epa.gov/region09/superfund/prg/pdf/master\\_sl\\_table\\_run\\_APRIL2009.pdf](http://www.epa.gov/region09/superfund/prg/pdf/master_sl_table_run_APRIL2009.pdf)

State of California MCL = State of California Maximum Contaminant Level, obtained online at California Department of Public Health website - <http://www.cdph.ca.gov/certlic/drinkingwater/Documents/DWdocuments/EPAandCDPH-11-28-2008.pdf>

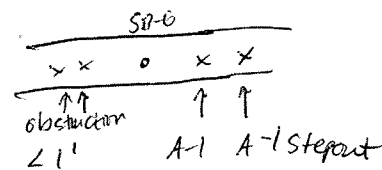
*Attachment A*  
*Soil Boring Logs*

ERM

Drilling Log

Project Red Hanger cleaners Owner \_\_\_\_\_  
 Location Oakland, CA Project Number 0099877  
 Boring Number A-1 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial 22' 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler 35' Total Depth of Ground Water Sampler 35'  
 Ground Water Sample Interval(s) 30-35'  
 Drilling Company Vironex Drilling Method direct push  
 Driller Mike Log By C.Yi Date Drilled 10-1-09

Sketch Map



Notes 0-5' hand augered

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
0					
1	ML		11.3	hand augered	SILT, dark br, dry, loose, trace fine sands, few pebbles.
2			0/3.7		as above, few fine roots.
3	ML		0/3.7		SANDY SILT, brown, dry, loose, few fine sands, trace thin roots.
4			0/3.7		as above, trace coarse sands.
5	ML		0/3.7	✗	A-1-5.5 0908 / SANDY SILT, brown, dry, med stiff, fine sands.
6			0/3.7		
7			0/3.7		
8	ML		0/3.7		SILT, brown, soft, dry, trace fine sands.
9			0/3.7		
10	CL		0/3.7	✗	A-1-10' 0910 / as above, or. br, med stiff. SILTY CLAY, or. br, med stiff, dry, trace fine sands.
11			0/3.7		
12	ML		0/3.7		SILT, or brown, dry, med stiff-soft, trace clays.
13					

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number A-1 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
13			0/3.7		as above, soft.
14			0/3.7	X	A-1-15' 0918
15			0/3.7		CLAYEY SILT, or. brown, soft, trace clays.
16	ML		"		
17			"		as above, with clays, trace fine sands.
18			"		
19	ML		"		
20	ML		"	X	CLAYEY SILT, or. br, slightly moist, soft, with clays. A-1-20' 0925
21			"		CLAYEY SILT, or. br, <sup>slightly</sup> moist, soft, w/ clays.
22			"		as above, sticky.
23	ML		"		as above, trace gravels up to 1".
24			"		CLAYEY SILT, or. br, stiff, dry, or staining, dark br. staining.
25	ML		"	X	A-1-25' 0917
26			"		CLAYEY SILT, or. br, dry, med stiff, few fine sands.

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number A-1 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
27	ML		"		CLAYEY SILT, or. br., med-stiff-soft, dry-slightly moist, few fine sands, gravels.
28			"		
29			"		
30			"	X	as above. A-1-30' 1000
31	ML		"		CLAYEY SILT, or. br., soft, slightly moist, <sup>few</sup> <del>fine</del> sands, gravels.
32			"		as above, moist.
33	SM		"		GRAVELLY/SANDY SILT, or. br., moist, <sup>soft,</sup> gravels up to ~0.5". fine sands, w/clays.
34			"		as above, med stiff, slightly moist. A-1-35' 1015
35			"	X	
36					GW A-1-35' 1023
37					
38					
39					
40					



ERM

Drilling Log

Project Red Hanger Cleaners Owner \_\_\_\_\_  
 Location Oakland, CA Project Number 0099877  
 Boring Number A-1 stout Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler N/A Total Depth of Ground Water Sampler 27'  
 Ground Water Sample Interval(s) dry  
 Drilling Company Vironex Drilling Method direct push  
 Driller Mike Log By C. Yi Date Drilled 10-1-09

Sketch Map  
  
  
  
  
 Notes 0-5' hand augered  
5-27' hydro punch

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
0					
1				11.3/3.7	SILT, dark br, dry, loose, few pebbles, trace fine sands.
2				0/3.7	SANDY SILT, dark br, dry, loose, few fine sands, pebbles, trace thin roots.
3				0/3.7	as above.
4				0/3.7	SANDY SILT, brown, dry, loose, few fine sands, few pebbles, trace <del>fine</del> thin roots.
5					
					Drill to 22'. Dry. Drill to 27'. Dry. <del>to A-1-22 cy.</del>

ERM

Drilling Log

Project Red Hunger Owner \_\_\_\_\_  
 Location Oakland, CA Project Number 009877  
 Boring Number AUST-6 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial 21.8' 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler 35' Total Depth of Ground Water Sampler 35'  
 Ground Water Sample Interval(s) 30-35'  
 Drilling Company Vironex Drilling Method direct push  
 Driller Mike Log By C. Yi Date Drilled 10/1/09

Sketch Map  
 Notes 0-5' hand augered

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
0					
1	ML			0-30"	Concrete ~4" CLAYEY SILT, dark br, soft, trace coarse sand, dry. trace gravel.
2				"	trace brick pieces, as above, soft-med stiff.
3	SM			"	GRAVELLY/SANDY SILT, br, dry, soft/loose, mid-coarse sands, few gravels up to 1".
4	ML			"	SANDY SILT, br, dry, soft/loose, fine sands.
5	CL			"	SILTY CLAY, dark br, soft, dry, w/silts, trace gravels.
6				"	as above, or-br, med stiff, trace gravels
7				"	
8				"	
9	SM			"	SANDY / GRAVELLY SILT, yellow br, dry, stiff-med stiff, fine sands, gravels up to 1".
10				"	as above, slightly moist; fine-coarse sands
11				"	as above, soft-med stiff.
12				"	chunks of gray gravel ~1"-1.5".
13				"	

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number AUST-6 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map
Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
10	MC		"		SANDY SILT, or-br, slightly moist, soft, w/ fine coarse sands, trace gravels.
14			"		
15			"		
16	MC		"		CLAYEY SILT, or-br, soft, slightly moist,
17			"		
18			"		as above, sticky, trace fine sands.
19	MC		"		CLAYEY SILT, or-br, slightly moist, soft, <del>at</del> few fine sands, trace coarse sands, sticky.
20			"	X	as above. AUST-6-20.5' 1335
21	ML		"		CLAYEY SILT, or-br, stiff, dry, few coarse sands
22			"		
23			"		as above, few <del>at</del> gravels, very stiff.
24			"		
25	MC		"		CLAYEY SILT, or-br, soft-med stiff, slightly moist, trace fine-coarse sands.
26			"		

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number AUST-6 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
27			0/3.7		as above, trace gravels, med stiff. soft, moist in center of core.
28			"		
29			"		as above, slightly moist.
30			"	X	as above med stiff - stiff. @ AUST-6-30.5' 1342
31	ML		"		CLAYEY SILT, or. br, slightly moist, soft, trace fine sands.
32	SM		"		(0") SANDY / GRAVELLY SILT, or. br, moist, soft/loose, gravels up to 1", fine-coarse sands.
33	ML		"		CLAYEY SILT, or. br, slightly moist, soft-med stiff.
34	ML		"		SANDY SILT, or. br. moist, sticky, soft, fine sands; trace gravels.
35			"		GW AUST-6-35' 1355

ERM

Drilling Log

Project Red Tanexx Cleaners Owner \_\_\_\_\_  
 Location Oakland, CA Project Number 0099877  
 Boring Number AD-3 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial 22.2' 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler 35' Total Depth of Ground Water Sampler 35'  
 Ground Water Sample Interval(s) 30-35'  
 Drilling Company Vireonex Drilling Method Direct Push  
 Driller Mike Log By C-Yi Date Drilled 10-1-09

Sketch Map  
 Notes 0-5' hand augered.

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)	
0					concrete ~4". Gravels / base rock.	
1	GM / ML		0/3.7	hand augered	GRAVELS (base rock) + SILT, dark br., soft/loose, dry.	
2	ML		"		SANDY SILT, dark br., soft, dry, fine sands.	
3			"			
4			"			as above.
5	ML		"		X	AD-3-5.5 1546 / SILT, br., dry, med stiff, trace fine sands.
6			"			
7			"			
8			"			
9			"		as above.	
10	ML		"	X	AD-3-10 1548 CLAYEY SILT, or. br., dry, stiff, few fine sands.	
11			"			
12	SM		"		SANDY / GRAVELLY SILT, or. br., dry, med stiff, fine-course sands, gravels ~1/4".	
13						

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number AD-3 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial 22.2' 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
13			0/307		as above, trace roots (med thick), stiff.
14			"		
15	ml		"	X	AD-3-15 1554 SILT, or. br, dry, soft-med stiff, (6") as above, few gravels
16			"		
17			"		
18	ml		"		CLAYEY SILT, or. br, dry, soft, <del>few</del> trace gravels, fine sand.
19			"		
20			"	X	AD-3-20 1600 as above, dry-slightly moist.
21			"		as above, stiff, dry.
22			"		
23			"		as above
24			"		
25	ml		"	X	AD-3-25 <del>1618</del> 1618 CLAYEY SILT, or. br, <del>dry-slightly moist</del> <sup>stiff</sup> , <del>soft</del> , c.y. stiff-med stiff, trace gravels + fine sand
26			"		

ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number AD-3 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
27			0/2.7		as above, med stiff, with fine-coarse sands and gravels ~ 1/4"
28	ML		"		CLAYEY SILT, or-br, soft-med stiff, dry-slightly moist.
29			"		as above, few gravels.
30			"	X	AD-3-30 1635
31	ML		"		CLAYEY SILT, or-brown, slightly moist, soft, sticky, trace gravels.
32			"		
33			"		
34	SM		"		GRAVELLY/CLAYEY SILT, or-br, moist, soft, sticky, gravels ~ 1/4"
35			"		GW AD-3-35 1720

ERM

# Drilling Log

Project Red Hanger Cleaners Owner \_\_\_\_\_  
 Location Oakland, CA Project Number 0099877  
 Boring Number A-2 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial N/A 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler 30' Total Depth of Ground Water Sampler 35'  
 Ground Water Sample Interval(s) N/A  
 Drilling Company Vikonex Drilling Method direct push w/limited access  
 Driller Sayphone Log By CY Date Drilled 12-5-09

Sketch Map

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Notes  
 rig 0-6' hand augered

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
0					Concrete 6"
1	ML		2.0	hand augered	gravel ~1/4"
2			1.9		SANDY SILT, dark brown, dry, soft, fine sands, few gravels.
3	SM		1.6		as above, brown.
4	ML		1.4		SILTY SAND <del>dry</del> layer @ 2.5', light br, loose, fine sands w/ silt, thin roots. / CLAYEY SILT, br, soft, trace thin roots, dry.
5			1.1		as above, trace fine sands.
6	ML		0.5	X	A-2-6.5' 1105 / CLAYEY SILT, brown, soft, dry, trace fine sands. trace gravels
7			0.3		
8			0	mm	as above.
9	CL		0.2		SILTY CLAY, or. br, dry, med stiff-soft, <del>mm</del>
10			0	X	A-2-10' 1111 / trace coarse sand.
11			0	mm	
12	CL		0.4		as above, few coarse sands, fine sands as above, few gravels up to 1/2". stiff.
13					SILTY CLAY, orange br, clay, med stiff-stiff, trace fine sand.



ERM

Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_  
 Location \_\_\_\_\_ Project Number \_\_\_\_\_  
 Boring Number A-2 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_  
 Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_  
 Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_  
 Ground Water Sample Interval(s) \_\_\_\_\_  
 Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_  
 Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Notes  
 \_\_\_\_\_  
 \_\_\_\_\_

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
13			0		as above, soft-med stiff.
14	ML		0	<del>ML</del>	CLAYEY SILT, <sup>Yellow</sup> br, dry, soft, trace fine sands
15	ml/Gm		0.9	X	A-2-15' 1122 GRAVELLY SILT, br, dry, med stiff, gravels 1/4" subangular.
16	ML		0		CLAYEY SILT, br, dry, soft, few coarse-fine sands, trace gravels up to ~2" - friable,
17			0	<del>ML</del>	
18			0.2		as above, slightly sticky.
19	GW GIC		0		as above. (6" layer) GRAVELS, loose, dry, up to 1/4" rounded to subangular. 1/3" GRAVELLY CLAY, br, soft w/ gravels, dry.
20	CL		0	<del>ML</del>	A-2-20' 1142. CLAY, yellow br, dry, soft, slightly sticky.
21			0.4		as above, few gravels.
22	CL		0		SILTY CLAY, yellow br, slightly moist, sticky, soft trace fine sand + gravel.
23			0	<del>ML</del>	as above, dry, soft-med stiff, slightly sticky
24			0.1		as above
25	CL		0	X	A-2-25' 1264 SILTY CLAY, or. br. dry, stiff, trace coarse sand.
26			0.1	<del>ML</del>	

ERM

# Drilling Log

Project \_\_\_\_\_ Owner \_\_\_\_\_

Location \_\_\_\_\_ Project Number \_\_\_\_\_

Boring Number A-2 Total Depth of Auger \_\_\_\_\_ Auger Diameter \_\_\_\_\_

Surface Elevation \_\_\_\_\_ Water Level: Initial \_\_\_\_\_ 24-hrs \_\_\_\_\_

Total Depth of Soil Sampler \_\_\_\_\_ Total Depth of Ground Water Sampler \_\_\_\_\_

Ground Water Sample Interval(s) \_\_\_\_\_

Drilling Company \_\_\_\_\_ Drilling Method \_\_\_\_\_

Driller \_\_\_\_\_ Log By \_\_\_\_\_ Date Drilled \_\_\_\_\_

Sketch Map

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Notes

Depth (Feet)	Graphic Log and USCS Designation	FID (ppm)	PID (ppm)	Sample Interval	Soil Description and Observations (Color, Texture, Structures, Odor, Foreign Matter)
27	CL		0.2		CLAY, brown, dry, med stiff, trace gravels. 1" gravel layer, up to 1/2", fine sands at bottom.
28	CL		0		
29			0	<del>    </del>	<del>SILTY CLAY, brown, dry, med. stiff, with gravels, fine sands.</del>
30				X	A-2-30' 1227. hydro punch to 35'. pull screen up to 31'.
31					
32				<del>    </del>	
33					
34					
35				<del>    </del>	GW A-2-35' - no gw encountered

*Attachment B*  
*Laboratory Analytical Reports*  
*and QA/QC Data Reviews*

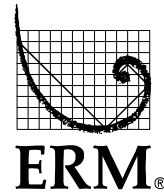
# Memorandum

**Environmental  
Resources  
Management**

**To:** Jill Quillin  
**From:** Irene Lavigne  
**Date:** 29 October 2009  
**Subject:** Data Review of Red Hanger Cleaners Soil and Groundwater Samples Collected 11 October 2009  
**Project Number:** 0099877  
**Data Package:** Accutest Laboratories Data Package C7905

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2875 Michelle Drive  
Suite 200  
Irvine, CA 92606  
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(949) 623-4711 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The samples were prepared and analyzed within the method-prescribed time period from the date of collection. The sample shipment was received at the laboratory within the method-prescribed preservation requirements. None of the data were qualified based on holding time or preservation exceedances.

## ***BLANK EVALUATION***

The method blank and trip blank sample results were nondetected for each of the target analytes. None of the data were qualified based on blank results.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance with one exception. One recovery for methyl chloride was outside of acceptable control limits; however, no sample data were qualified as a result of this LCS outlier because the recovery was biased high and the associated samples were nondetected for this compound. The outlying LCS recovery is presented in Table 1.

### ***MATRIX SPIKE EVALUATION***

The matrix spike (MS)/matrix spike duplicate (MSD) recoveries were within the laboratory's limits of acceptance with limited exceptions. No sample data were qualified on the basis of MS outliers. Sample data were not qualified if the spike sample was prepared using a non-client sample, if only one recovery in a MS/MSD pair exceeded control limits, if the spike recovery was biased high and the samples were nondetected for the associated compound, or if the data could be verified using an associated, in-control LCS recovery. The outlying MS recoveries are presented in Table 1.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications to the data were made. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***CONTINUING CALIBRATION EVALUATION***

The laboratory noted that the continuing calibration verification (CCV) recoveries associated with a number of sample results exceeded acceptable control limits. Data were not qualified as a result of these CCV exceedances because the CCVs were biased high and the samples were nondetected for the corresponding compounds. The CCV outliers are presented in Table 2.

### ***OVERALL ASSESSMENT***

No data required qualification or were determined to be unusable. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically-defensible documents.

**Table 1**  
**Spike Recoveries Outside of Acceptable Limits**  
**Soil & Groundwater Samples - October 2009**  
**Red Hanger Cleaners**  
**Oakland, California**

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Sample Result	ERM Qualifier
<b>LCS</b>									
C7905	LCS VM319-BS	NA	Methyl chloride	170	60-130	--	--	NA	--
<b>MS/MSD</b>									
C7905	Batch MS/MSD	NA	Ethyl tert-butyl ether	133/139	60-130	4	30	NA	--
C7905	Batch MS/MSD	NA	Methyl tert-butyl ether	132/133	60-130	0	30	NA	--
C7905	Batch MS/MSD	NA	tert Butyl alcohol	160/152	60-130	5	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Acetone	38/70	60-130	16	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Bromodichloromethane	132/123	60-130	8	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Carbon tetrachloride	135/126	60-130	8	30	NA	--
C7905	AD-3-30 MS/MSD	NA	1,2-Dichloroethane	160/148	60-130	8	30	NA	--
C7905	AD-3-30 MS/MSD	NA	2,2-Dichloropropane	135/129	60-130	5	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Ethyl tert-butyl ether	138/134	60-130	4	30	NA	--
C7905	AD-3-30 MS/MSD	NA	2-Hexanone	143/140	60-130	3	30	NA	--
C7905	AD-3-30 MS/MSD	NA	4-Methyl-2-pentanone	159/151	60-130	6	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Methyl chloride	237/216	60-130	10	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Methyl tert-butyl ether	133/132	60-130	2	30	NA	--
C7905	AD-3-30 MS/MSD	NA	tert Butyl alcohol	145/143	60-130	2	30	NA	--
C7905	AD-3-30 MS/MSD	NA	1,1,1-Trichloroethane	136/131	60-130	4	30	NA	--
C7905	AD-3-30 MS/MSD	NA	Trichlorofluoromethane	133/128	60-130	5	30	NA	--
C7905	Batch MS/MSD	NA	tert Butyl alcohol	115/140	60-130	3	25	NA	--

**Key:**

LCS = Laboratory control sample

MS/MSD = Matrix spike/matrix spike duplicate

RPD = Relative percent difference

NA = Not applicable; associated sample data not affected

**Table 2**  
**Calibration Verification Recoveries Outside of Acceptable Limits**  
**Soil & Groundwater Samples - October 2009**  
**Red Hanger Cleaners**  
**Oakland, California**

Lab Package	Sample ID	Compound	CCV Recovery	Reported Concentration	Units	ERM Qualifier
C7905	A-1-10	1,2-Dichloroethane	High	< 4.9	µg/kg	--
C7905	A-1-10	4-Methyl-2-pentanone	High	< 39	µg/kg	--
C7905	A-1-10	Methyl chloride	High	< 4.9	µg/kg	--
C7905	A-1-10	tert Butyl alcohol	High	< 39	µg/kg	--
C7905	A-1-15	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	A-1-15	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	A-1-15	Methyl chloride	High	< 5.0	µg/kg	--
C7905	A-1-15	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	A-1-20	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	A-1-20	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	A-1-20	Methyl chloride	High	< 5.0	µg/kg	--
C7905	A-1-20	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	A-1-30	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	A-1-30	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	A-1-30	Methyl chloride	High	< 5.0	µg/kg	--
C7905	A-1-30	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	A-1-35	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	A-1-35	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	A-1-35	Methyl chloride	High	< 5.0	µg/kg	--
C7905	A-1-35	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	AD-3-15	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	AD-3-15	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	AD-3-15	Methyl chloride	High	< 5.0	µg/kg	--
C7905	AD-3-15	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	AD-3-20	1,2-Dichloroethane	High	< 4.9	µg/kg	--
C7905	AD-3-20	4-Methyl-2-pentanone	High	< 39	µg/kg	--
C7905	AD-3-20	Methyl chloride	High	< 4.9	µg/kg	--
C7905	AD-3-20	tert Butyl alcohol	High	< 39	µg/kg	--
C7905	AD-3-30	1,2-Dichloroethane	High	< 5.0	µg/kg	--
C7905	AD-3-30	4-Methyl-2-pentanone	High	< 40	µg/kg	--
C7905	AD-3-30	Methyl chloride	High	< 5.0	µg/kg	--
C7905	AD-3-30	tert Butyl alcohol	High	< 40	µg/kg	--
C7905	AD-3-35	1,1-Dichloropropene	High	< 1.0	µg/L	--
C7905	AD-3-35	Hexachlorobutadiene	High	< 5.0	µg/L	--
C7905	AD-3-35	Isopropylbenzene	High	< 1.0	µg/L	--
C7905	AD-3-35	Trichloroethylene	High	< 1.0	µg/L	--

**Key:**

CCV = Continuing calibration verification  
High = CCV exceeded maximum acceptable limit

µg/kg = Micrograms per kilogram  
µg/L = Micrograms per liter



Technical Report for

ERM-West, Inc.

Red Hanger Cleaners - Oakland, CA

0099877

Accutest Job Number: C7905

Sampling Date: 10/11/09

Report to:

ERM-West, Inc.

jill.quillin@erm.com

ATTN: Jill Quillin

Total number of pages in report: **96**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy  
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.





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## Sample Summary

ERM-West, Inc.

**Job No:** C7905

Red Hanger Cleaners - Oakland, CA

Project No: 0099877

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C7905-2	10/11/09	09:10 CY	10/12/09	SO	Soil	A-1-10
C7905-3	10/11/09	09:18 CY	10/12/09	SO	Soil	A-1-15
C7905-4	10/11/09	09:25 CY	10/12/09	SO	Soil	A-1-20
C7905-6	10/11/09	10:00 CY	10/12/09	SO	Soil	A-1-30
C7905-7	10/11/09	10:15 CY	10/12/09	SO	Soil	A-1-35
C7905-8	10/11/09	10:23 CY	10/12/09	AQ	Ground Water	A-1-35
C7905-10	10/11/09	13:42 CY	10/12/09	SO	Soil	AUST-6-30.5
C7905-11	10/11/09	13:55 CY	10/12/09	AQ	Ground Water	AUST-6-35
C7905-14	10/11/09	15:54 CY	10/12/09	SO	Soil	AD-3-15
C7905-15	10/11/09	16:00 CY	10/12/09	SO	Soil	AD-3-20
C7905-17	10/11/09	16:35 CY	10/12/09	SO	Soil	AD-3-30
C7905-18	10/11/09	17:20 CY	10/12/09	AQ	Ground Water	AD-3-35
C7905-19	10/11/09	00:00 CY	10/12/09	AQ	Trip Blank Water	TRIP BLANK 1

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



### Sample Summary (continued)

ERM-West, Inc.

Job No: C7905

Red Hanger Cleaners - Oakland, CA  
Project No: 0099877

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
C7905-20	10/11/09	00:00	CY 10/12/09	AQ Trip Blank Water	TRIP BLANK 2

---

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



## Sample Results

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## Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b>	A-1-10	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-2	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9756.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.08 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	214	98	20	ug/kg	
71-43-2	Benzene	ND	4.9	1.5	ug/kg	
108-86-1	Bromobenzene	ND	4.9	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	4.9	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	0.98	ug/kg	
75-25-2	Bromoform	ND	4.9	0.98	ug/kg	
104-51-8	n-Butylbenzene	ND	4.9	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.9	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.9	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	1.5	ug/kg	
75-00-3	Chloroethane	ND	4.9	1.5	ug/kg	
67-66-3	Chloroform	ND	4.9	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.9	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.9	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.9	0.98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	0.98	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.9	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.9	0.98	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.98	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	4.9	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.9	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.9	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	0.98	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.9	0.98	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.9	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.9	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.9	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-10	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-2	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	1.5	ug/kg	
591-78-6	2-Hexanone	ND	39	4.9	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.9	0.98	ug/kg	
98-82-8	Isopropylbenzene	ND	4.9	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.9	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	39	15	ug/kg	
74-83-9	Methyl bromide	ND	4.9	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	4.9	1.5	ug/kg	
74-95-3	Methylene bromide	ND	4.9	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	39	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
91-20-3	Naphthalene	ND	4.9	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	4.9	1.5	ug/kg	
100-42-5	Styrene	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	39	9.8	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.9	0.98	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	0.98	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.9	0.98	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.9	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.9	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.9	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.9	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	4.9	3.4	ug/kg	
108-88-3	Toluene	ND	4.9	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	0.98	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.9	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	4.9	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		60-130%
2037-26-5	Toluene-D8	97%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-10	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-2	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-15	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-3	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9761.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	169	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	A-1-15	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-3	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		60-130%
2037-26-5	Toluene-D8	99%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-1-15		<b>Date Sampled:</b> 10/11/09
<b>Lab Sample ID:</b> C7905-3		<b>Date Received:</b> 10/12/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		60-130%

(a) All results reported on wet weight basis.

(b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-4	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9762.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	155	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-4	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		60-130%
2037-26-5	Toluene-D8	99%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-4	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	111%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-1-30		<b>Date Sampled:</b> 10/11/09
<b>Lab Sample ID:</b> C7905-6		<b>Date Received:</b> 10/12/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9764.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	186	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-30	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-6	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		60-130%
2037-26-5	Toluene-D8	98%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-30	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-6	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	A-1-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-7	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9765.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.02 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	154	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-7	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		60-130%
2037-26-5	Toluene-D8	98%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-7	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	111%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-8	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W9217.D	1	10/23/09	BD	n/a	n/a	VW323
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	1.7	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-1-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-8	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	0.91	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		60-130%
2037-26-5	Toluene-D8	100%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-1-35		
<b>Lab Sample ID:</b> C7905-8		<b>Date Sampled:</b> 10/11/09
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 10/12/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AUST-6-30.5	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-10	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9744.D	1	10/15/09	XB	n/a	n/a	VM318
Run #2							

	Initial Weight
Run #1	5.00 g
Run #2	

## BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%		60-130%
2037-26-5	Toluene-D8	99%		60-130%
460-00-4	4-Bromofluorobenzene	109%		60-130%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> AUST-6-30.5	
<b>Lab Sample ID:</b> C7905-10	<b>Date Sampled:</b> 10/11/09
<b>Matrix:</b> SO - Soil	<b>Date Received:</b> 10/12/09
<b>Method:</b> SW846 8015B M SW846 3545A	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> Red Hanger Cleaners - Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8640.D	1	10/16/09	JH	10/14/09	OP1393	GGG304
Run #2							

Run #	Initial Weight	Final Volume
Run #1	10.0 g	1.0 ml
Run #2		

**TPH Extractable**

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	10	5.0	mg/kg	
	TPH (Motor Oil)	ND	20	10	mg/kg	
	TPH (Mineral Spirits)	ND	10	5.0	mg/kg	
	TPH (Kerosene)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	68%		45-140%

(a) All results reported on wet weight basis.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	AUST-6-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-11	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 <sup>a</sup>	N10347.D	1	10/22/09	TF	n/a	n/a	VN348
Run #2							

Run #	Purge Volume
Run #1	10.0 ml
Run #2	

### BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	100%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) Sample vial contained more than 0.5cm of sediment.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AUST-6-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-11	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8015B M SW846 3510C		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8590.D	1	10/14/09	JH	10/13/09	OP1389	GGG303
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

### TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	0.10	0.050	mg/l	
	TPH (Motor Oil)	ND	0.20	0.10	mg/l	
	TPH (Mineral Spirits)	ND	0.10	0.050	mg/l	
	TPH (Kerosene)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	97%		45-140%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-15	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-14	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9766.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.02 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	95.2	100	20	ug/kg	J
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-15	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-14	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%		60-130%
2037-26-5	Toluene-D8	98%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-15	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-14	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%		60-130%

(a) All results reported on wet weight basis.

(b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-15	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9767.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #1	Initial Weight
Run #1	5.07 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	140	99	20	ug/kg	
71-43-2	Benzene	ND	4.9	1.5	ug/kg	
108-86-1	Bromobenzene	ND	4.9	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	4.9	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	0.99	ug/kg	
75-25-2	Bromoform	ND	4.9	0.99	ug/kg	
104-51-8	n-Butylbenzene	ND	4.9	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.9	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.9	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	1.5	ug/kg	
75-00-3	Chloroethane	ND	4.9	1.5	ug/kg	
67-66-3	Chloroform	ND	4.9	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.9	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.9	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.9	0.99	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	0.99	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.9	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.9	0.99	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.99	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	4.9	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.9	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.9	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	0.99	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	4.9	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.9	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.9	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.9	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-15	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	1.5	ug/kg	
591-78-6	2-Hexanone	ND	39	4.9	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.9	0.99	ug/kg	
98-82-8	Isopropylbenzene	ND	4.9	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.9	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	39	15	ug/kg	
74-83-9	Methyl bromide	ND	4.9	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	4.9	1.5	ug/kg	
74-95-3	Methylene bromide	ND	4.9	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	39	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.99	ug/kg	
91-20-3	Naphthalene	ND	4.9	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	4.9	1.5	ug/kg	
100-42-5	Styrene	ND	4.9	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	39	9.9	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.9	0.99	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	0.99	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.9	0.99	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.9	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.9	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.9	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.9	1.5	ug/kg	
127-18-4	Tetrachloroethylene	4.3	4.9	3.5	ug/kg	J
108-88-3	Toluene	ND	4.9	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	0.99	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.9	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	4.9	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	117%		60-130%
2037-26-5	Toluene-D8	99%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-20	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-15	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	111%		60-130%

(a) All results reported on wet weight basis.

(b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> AD-3-30	<b>Date Sampled:</b> 10/11/09
<b>Lab Sample ID:</b> C7905-17	<b>Date Received:</b> 10/12/09
<b>Matrix:</b> SO - Soil	<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B	
<b>Project:</b> Red Hanger Cleaners - Oakland, CA	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M9757.D	1	10/16/09	XB	n/a	n/a	VM319
Run #2							

Run #	Initial Weight
Run #1	5.00 g
Run #2	

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	226	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane <sup>b</sup>	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-30	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-17	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone <sup>b</sup>	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride <sup>b</sup>	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol <sup>b</sup>	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		60-130%
2037-26-5	Toluene-D8	96%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-30	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-17	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	109%		60-130%

(a) All results reported on wet weight basis.

(b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> AD-3-35		<b>Date Sampled:</b> 10/11/09
<b>Lab Sample ID:</b> C7905-18		<b>Date Received:</b> 10/12/09
<b>Matrix:</b> AQ - Ground Water		<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	W9191.D	1	10/22/09	BD	n/a	n/a	VW322

Run #1	Purge Volume
Run #2	10.0 ml

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	1.9	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene <sup>a</sup>	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	AD-3-35	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-18	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Ground Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene <sup>a</sup>	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene <sup>a</sup>	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	1.9	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene <sup>a</sup>	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		60-130%
2037-26-5	Toluene-D8	97%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> AD-3-35		
<b>Lab Sample ID:</b> C7905-18		<b>Date Sampled:</b> 10/11/09
<b>Matrix:</b> AQ - Ground Water		<b>Date Received:</b> 10/12/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		60-130%

(a) CCV outside of control limits; results may be biased high.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 1	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-19	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W9178.D	1	10/22/09	BD	n/a	n/a	VW322
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene <sup>a</sup>	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 1	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-19	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene <sup>a</sup>	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene <sup>a</sup>	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene <sup>a</sup>	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	87%		60-130%
2037-26-5	Toluene-D8	97%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 1	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-19	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) CCV outside of control limits; results may be biased high.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 2	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-20	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W9179.D	1	10/22/09	BD	n/a	n/a	VW322
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene <sup>a</sup>	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 2	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-20	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene <sup>a</sup>	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene <sup>a</sup>	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene <sup>a</sup>	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK 2	<b>Date Sampled:</b>	10/11/09
<b>Lab Sample ID:</b>	C7905-20	<b>Date Received:</b>	10/12/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		60-130%
460-00-4	4-Bromofluorobenzene	96%		60-130%

(a) CCV outside of control limits; results may be biased high.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

PROJECT #		PROJECT NAME		#	MATRIX			REQUESTED PARAMETERS																	
0099577		Red Hanger Cleaners		CONTAINERS	SOIL	WATER	GAS	VOCs - S200B TPH-extractables S015M TPH-gasoline, BTEX, Fuel Oxygenates - S200B																	
SAMPLER: (PRINT NAME)		(SIGNATURE)																							
Chimi Yi		<i>Chimi Yi</i>																							
RECEIVING LABORATORY																									
Accutest																									
SAMPLE I.D.	DATE	TIME	COMP	ORIG	SAMPLING METHOD	PRESERVATIVE	ICE (Y/N)	SAMPLING VOLUME																	
A-1-S.S	10-11-09	0908		X	direct push	NO	Y	2" x 6"	1	X															
A-1-10		0910							1	X															
A-1-15		0918							1	X															
A-1-20		0925							1	X															
A-1-25		0947							1	X															
A-1-30		1000							1	X															
A-1-35		1015							1	X															
A-1-35		1023			check valve direct push	HCl		40mL	3		X														
AUST-6-20.5		1335			direct push	NO		2" x 6"	1	X															
AUST-6-30.5		1342			"				1	X															
RELINQUISHED BY (SIGNATURE)			DATE	TIME	RECEIVED BY			DATE	TIME	FIELD REMARKS															
<i>Chimi Yi</i>			10-11-09		ERM WC Front Desk			10/11/09		Standard TAT															
<i>Ar Bonner</i>			10/12/09	3:39	<i>Anne K...</i>			10/12/09	3:39pm	15x Acetate Liners 3 vials each (w/1mL) (x4) 4 vials (w/1mL) + 2 Lit. Amber N/P (x1) cooler Temp / 4.3°C															
<i>Ar Bonner</i>			10/12/09	17:20	<i>Chimi Yi</i>			10/12/09	17:20	SEND REPORT TO: Jill Quillin @ erm.com															
REMARKS ON SAMPLE RECEIPT										ERM REMARKS															
<input type="checkbox"/> BOTTLE INTACT <input type="checkbox"/> CUSTODY SEALS <input type="checkbox"/> CHILLED <input type="checkbox"/> PRESERVED <input type="checkbox"/> SEALS INTACT <input type="checkbox"/> SEE REMARKS																									

WHITE - LABORATORY COPY    CANARY - FIELD COPY    PINK - DATABASE    GOLD - PROJECT FILE

C7905: Chain of Custody

Page 1 of 2





## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM318-MB	M9731.D	1	10/15/09	XB	n/a	n/a	VM318

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-10

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	
	TPH-GRO (C6-C10)	ND	100	50	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	102% 60-130%
2037-26-5	Toluene-D8	100% 60-130%
460-00-4	4-Bromofluorobenzene	104% 60-130%

4.1.1  
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## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-MB	M9755.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-MB	M9755.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	106% 60-130%

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-MB	M9755.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	99% 60-130%
460-00-4	4-Bromofluorobenzene	107% 60-130%

# Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN348-MB	N10343.D	1	10/22/09	TF	n/a	n/a	VN348

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	101% 60-130%
2037-26-5	Toluene-D8	100% 60-130%
460-00-4	4-Bromofluorobenzene	95% 60-130%

4.1.3  
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## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB2	W9177.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB2	W9177.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

4.1.4  
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## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB2	W9177.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	88% 60-130%
2037-26-5	Toluene-D8	96% 60-130%
460-00-4	4-Bromofluorobenzene	98% 60-130%



## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-MB	W9206.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	

# Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-MB	W9206.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 60-130%

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-MB	W9206.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	98% 60-130%
460-00-4	4-Bromofluorobenzene	96% 60-130%

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB	W9168.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

VW322-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB	W9168.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

VW322-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

## Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-MB	W9168.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

VW322-BS

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	88%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM318-BS	M9729.D	1	10/15/09	XB	n/a	n/a	VM318

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	40	39.6	99	60-130
108-20-3	Di-Isopropyl ether	40	40.4	101	60-130
100-41-4	Ethylbenzene	40	37.5	94	60-130
637-92-3	Ethyl tert-Butyl Ether	40	45.7	114	60-130
1634-04-4	Methyl Tert Butyl Ether	40	45.3	113	60-130
994-05-8	Tert-Amyl Methyl Ether	40	43.7	109	60-130
75-65-0	Tert Butyl Alcohol	200	258	129	60-130
108-88-3	Toluene	40	35.6	89	60-130
1330-20-7	Xylene (total)	120	106	88	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	107%	60-130%
2037-26-5	Toluene-D8	95%	60-130%
460-00-4	4-Bromofluorobenzene	103%	60-130%

4.2.1  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM318-BS	M9730.D	1	10/15/09	XB	n/a	n/a	VM318

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-10

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
	TPH-GRO (C6-C10)	250	243	97	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	60-130%
2037-26-5	Toluene-D8	99%	60-130%
460-00-4	4-Bromofluorobenzene	103%	60-130%

4.2.2  
4



# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-BS	M9753.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	160	173	108	60-130
71-43-2	Benzene	40	42.5	106	60-130
108-86-1	Bromobenzene	40	37.6	94	60-130
74-97-5	Bromochloromethane	40	40.8	102	60-130
75-27-4	Bromodichloromethane	40	45.1	113	60-130
75-25-2	Bromoform	40	37.0	93	60-130
104-51-8	n-Butylbenzene	40	42.3	106	60-130
135-98-8	sec-Butylbenzene	40	41.0	103	60-130
98-06-6	tert-Butylbenzene	40	40.0	100	60-130
108-90-7	Chlorobenzene	40	39.7	99	60-130
75-00-3	Chloroethane	40	44.1	110	60-130
67-66-3	Chloroform	40	44.2	111	60-130
95-49-8	o-Chlorotoluene	40	37.8	95	60-130
106-43-4	p-Chlorotoluene	40	44.6	112	60-130
56-23-5	Carbon tetrachloride	40	46.6	117	60-130
75-34-3	1,1-Dichloroethane	40	46.9	117	60-130
75-35-4	1,1-Dichloroethylene	40	45.2	113	60-130
563-58-6	1,1-Dichloropropene	40	47.5	119	60-130
96-12-8	1,2-Dibromo-3-chloropropane	40	41.7	104	60-130
106-93-4	1,2-Dibromoethane	40	38.3	96	60-130
107-06-2	1,2-Dichloroethane	40	47.2	118	60-130
78-87-5	1,2-Dichloropropane	40	42.6	107	60-130
142-28-9	1,3-Dichloropropane	40	39.5	99	60-130
108-20-3	Di-Isopropyl ether	40	41.1	103	60-130
594-20-7	2,2-Dichloropropane	40	48.8	122	60-130
124-48-1	Dibromochloromethane	40	39.2	98	60-130
75-71-8	Dichlorodifluoromethane	40	34.2	86	60-130
156-59-2	cis-1,2-Dichloroethylene	40	41.4	104	60-130
10061-01-5	cis-1,3-Dichloropropene	40	43.4	109	60-130
541-73-1	m-Dichlorobenzene	40	38.8	97	60-130
95-50-1	o-Dichlorobenzene	40	37.6	94	60-130
106-46-7	p-Dichlorobenzene	40	39.0	98	60-130
156-60-5	trans-1,2-Dichloroethylene	40	44.0	110	60-130
10061-02-6	trans-1,3-Dichloropropene	40	41.3	103	60-130
100-41-4	Ethylbenzene	40	41.8	105	60-130
637-92-3	Ethyl tert-Butyl Ether	40	46.6	117	60-130

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-BS	M9753.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
591-78-6	2-Hexanone	160	189	118	60-130
87-68-3	Hexachlorobutadiene	40	42.7	107	60-130
98-82-8	Isopropylbenzene	40	41.9	105	60-130
99-87-6	p-Isopropyltoluene	40	41.7	104	60-130
108-10-1	4-Methyl-2-pentanone	160	198	124	60-130
74-83-9	Methyl bromide	40	41.9	105	60-130
74-87-3	Methyl chloride	40	68.1	170* a	60-130
74-95-3	Methylene bromide	40	40.5	101	60-130
75-09-2	Methylene chloride	40	41.7	104	60-130
78-93-3	Methyl ethyl ketone	160	167	104	60-130
1634-04-4	Methyl Tert Butyl Ether	40	45.8	115	60-130
91-20-3	Naphthalene	40	39.1	98	60-130
103-65-1	n-Propylbenzene	40	41.7	104	60-130
100-42-5	Styrene	40	38.8	97	60-130
994-05-8	Tert-Amyl Methyl Ether	40	44.0	110	60-130
75-65-0	Tert Butyl Alcohol	200	240	120	60-130
630-20-6	1,1,1,2-Tetrachloroethane	40	38.9	97	60-130
71-55-6	1,1,1-Trichloroethane	40	46.1	115	60-130
79-34-5	1,1,2,2-Tetrachloroethane	40	35.6	89	60-130
79-00-5	1,1,2-Trichloroethane	40	36.8	92	60-130
87-61-6	1,2,3-Trichlorobenzene	40	40.2	101	60-130
96-18-4	1,2,3-Trichloropropane	40	39.1	98	60-130
120-82-1	1,2,4-Trichlorobenzene	40	40.6	102	60-130
95-63-6	1,2,4-Trimethylbenzene	40	40.6	102	60-130
108-67-8	1,3,5-Trimethylbenzene	40	41.0	103	60-130
127-18-4	Tetrachloroethylene	40	41.9	105	60-130
108-88-3	Toluene	40	40.0	100	60-130
79-01-6	Trichloroethylene	40	43.2	108	60-130
75-69-4	Trichlorofluoromethane	40	46.8	117	60-130
75-01-4	Vinyl chloride	40	34.9	87	60-130
1330-20-7	Xylene (total)	120	120	100	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	60-130%

4.2.3  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-BS	M9753.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	96%	60-130%
460-00-4	4-Bromofluorobenzene	105%	60-130%

(a) High percent recovery; not detected in associated samples.

4.2.3  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM319-BS	M9759.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	111%	60-130%

4.2.4  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-BS	W9165.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	80	61.5	77	60-130
71-43-2	Benzene	20	23.3	117	60-130
108-86-1	Bromobenzene	20	20.9	105	60-130
74-97-5	Bromochloromethane	20	20.7	104	60-130
75-27-4	Bromodichloromethane	20	21.7	109	60-130
75-25-2	Bromoform	20	19.7	99	60-130
104-51-8	n-Butylbenzene	20	24.1	121	60-130
135-98-8	sec-Butylbenzene	20	23.9	120	60-130
98-06-6	tert-Butylbenzene	20	23.0	115	60-130
108-90-7	Chlorobenzene	20	22.6	113	60-130
75-00-3	Chloroethane	20	20.6	103	60-130
67-66-3	Chloroform	20	21.4	107	60-130
95-49-8	o-Chlorotoluene	20	23.1	116	60-130
106-43-4	p-Chlorotoluene	20	21.1	106	60-130
56-23-5	Carbon tetrachloride	20	25.4	127	60-130
75-34-3	1,1-Dichloroethane	20	22.7	114	60-130
75-35-4	1,1-Dichloroethylene	20	25.3	127	60-130
563-58-6	1,1-Dichloropropene	20	25.7	129	60-130
96-12-8	1,2-Dibromo-3-chloropropane	20	15.9	80	60-130
106-93-4	1,2-Dibromoethane	20	19.9	100	60-130
107-06-2	1,2-Dichloroethane	20	20.1	101	60-130
78-87-5	1,2-Dichloropropane	20	21.4	107	60-130
142-28-9	1,3-Dichloropropane	20	19.5	98	60-130
108-20-3	Di-Isopropyl ether	20	19.1	96	60-130
594-20-7	2,2-Dichloropropane	20	24.1	121	60-130
124-48-1	Dibromochloromethane	20	20.7	104	60-130
75-71-8	Dichlorodifluoromethane	20	20.1	101	60-130
156-59-2	cis-1,2-Dichloroethylene	20	21.5	108	60-130
10061-01-5	cis-1,3-Dichloropropene	20	21.0	105	60-130
541-73-1	m-Dichlorobenzene	20	22.5	113	60-130
95-50-1	o-Dichlorobenzene	20	21.6	108	60-130
106-46-7	p-Dichlorobenzene	20	21.8	109	60-130
156-60-5	trans-1,2-Dichloroethylene	20	23.4	117	60-130
10061-02-6	trans-1,3-Dichloropropene	20	19.9	100	60-130
100-41-4	Ethylbenzene	20	23.8	119	60-130
637-92-3	Ethyl Tert Butyl Ether	20	19.2	96	60-130

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-BS	W9165.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
591-78-6	2-Hexanone	80	71.4	89	60-130
87-68-3	Hexachlorobutadiene	20	25.6	128	60-130
98-82-8	Isopropylbenzene	20	24.8	124	60-130
99-87-6	p-Isopropyltoluene	20	24.1	121	60-130
108-10-1	4-Methyl-2-pentanone	80	74.6	93	60-130
74-83-9	Methyl bromide	20	19.8	99	60-130
74-87-3	Methyl chloride	20	19.3	97	60-130
74-95-3	Methylene bromide	20	20.1	101	60-130
75-09-2	Methylene chloride	20	21.0	105	60-130
78-93-3	Methyl ethyl ketone	80	71.9	90	60-130
1634-04-4	Methyl Tert Butyl Ether	20	18.8	94	60-130
91-20-3	Naphthalene	20	20.0	100	60-130
103-65-1	n-Propylbenzene	20	23.4	117	60-130
100-42-5	Styrene	20	22.7	114	60-130
994-05-8	Tert-Amyl Methyl Ether	20	18.8	94	60-130
75-65-0	Tert-Butyl Alcohol	100	88.5	89	60-130
630-20-6	1,1,1,2-Tetrachloroethane	20	22.0	110	60-130
71-55-6	1,1,1-Trichloroethane	20	23.2	116	60-130
79-34-5	1,1,2,2-Tetrachloroethane	20	18.5	93	60-130
79-00-5	1,1,2-Trichloroethane	20	19.4	97	60-130
87-61-6	1,2,3-Trichlorobenzene	20	21.8	109	60-130
96-18-4	1,2,3-Trichloropropane	20	17.4	87	60-130
120-82-1	1,2,4-Trichlorobenzene	20	22.7	114	60-130
95-63-6	1,2,4-Trimethylbenzene	20	22.5	113	60-130
108-67-8	1,3,5-Trimethylbenzene	20	23.1	116	60-130
127-18-4	Tetrachloroethylene	20	21.4	107	60-130
108-88-3	Toluene	20	23.4	117	60-130
79-01-6	Trichloroethylene	20	24.4	122	60-130
75-69-4	Trichlorofluoromethane	20	21.4	107	60-130
75-01-4	Vinyl chloride	20	22.1	111	60-130
1330-20-7	Xylene (total)	60	71.6	119	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%

4.2.5  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-BS	W9165.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	96%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.2.5  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW322-BS	W9167.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	122	98	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	88%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

4.2.6  
4



# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN348-BS	N10344.D	1	10/22/09	TF	n/a	n/a	VN348

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	60-130
106-93-4	1,2-Dibromoethane	20	20.6	103	60-130
107-06-2	1,2-Dichloroethane	20	21.0	105	60-130
108-20-3	Di-Isopropyl ether	20	20.3	102	60-130
100-41-4	Ethylbenzene	20	20.8	104	60-130
637-92-3	Ethyl Tert Butyl Ether	20	20.8	104	60-130
1634-04-4	Methyl Tert Butyl Ether	20	20.5	103	60-130
994-05-8	Tert-Amyl Methyl Ether	20	20.5	103	60-130
75-65-0	Tert-Butyl Alcohol	100	112	112	60-130
108-88-3	Toluene	20	20.2	101	60-130
1330-20-7	Xylene (total)	60	63.7	106	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	60-130%
2037-26-5	Toluene-D8	98%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.2.7  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN348-BS	N10345.D	1	10/22/09	TF	n/a	n/a	VN348

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	127	102	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	60-130%
2037-26-5	Toluene-D8	100%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

4.2.8  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-BS	W9202.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	80	60.2	75	60-130
71-43-2	Benzene	20	23.8	119	60-130
108-86-1	Bromobenzene	20	22.2	111	60-130
74-97-5	Bromochloromethane	20	21.8	109	60-130
75-27-4	Bromodichloromethane	20	23.0	115	60-130
75-25-2	Bromoform	20	20.9	105	60-130
104-51-8	n-Butylbenzene	20	23.9	120	60-130
135-98-8	sec-Butylbenzene	20	23.6	118	60-130
98-06-6	tert-Butylbenzene	20	23.0	115	60-130
108-90-7	Chlorobenzene	20	23.4	117	60-130
75-00-3	Chloroethane	20	17.5	88	60-130
67-66-3	Chloroform	20	21.5	108	60-130
95-49-8	o-Chlorotoluene	20	23.8	119	60-130
106-43-4	p-Chlorotoluene	20	21.4	107	60-130
56-23-5	Carbon tetrachloride	20	24.6	123	60-130
75-34-3	1,1-Dichloroethane	20	22.8	114	60-130
75-35-4	1,1-Dichloroethylene	20	23.3	117	60-130
563-58-6	1,1-Dichloropropene	20	25.1	126	60-130
96-12-8	1,2-Dibromo-3-chloropropane	20	15.8	79	60-130
106-93-4	1,2-Dibromoethane	20	21.2	106	60-130
107-06-2	1,2-Dichloroethane	20	21.2	106	60-130
78-87-5	1,2-Dichloropropane	20	22.9	115	60-130
142-28-9	1,3-Dichloropropane	20	21.0	105	60-130
108-20-3	Di-Isopropyl ether	20	19.9	100	60-130
594-20-7	2,2-Dichloropropane	20	22.5	113	60-130
124-48-1	Dibromochloromethane	20	21.9	110	60-130
75-71-8	Dichlorodifluoromethane	20	13.8	69	60-130
156-59-2	cis-1,2-Dichloroethylene	20	21.7	109	60-130
10061-01-5	cis-1,3-Dichloropropene	20	22.6	113	60-130
541-73-1	m-Dichlorobenzene	20	23.3	117	60-130
95-50-1	o-Dichlorobenzene	20	22.5	113	60-130
106-46-7	p-Dichlorobenzene	20	22.7	114	60-130
156-60-5	trans-1,2-Dichloroethylene	20	22.6	113	60-130
10061-02-6	trans-1,3-Dichloropropene	20	21.3	107	60-130
100-41-4	Ethylbenzene	20	24.1	121	60-130
637-92-3	Ethyl Tert Butyl Ether	20	19.4	97	60-130

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-BS	W9202.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
591-78-6	2-Hexanone	80	71.3	89	60-130
87-68-3	Hexachlorobutadiene	20	25.6	128	60-130
98-82-8	Isopropylbenzene	20	24.8	124	60-130
99-87-6	p-Isopropyltoluene	20	24.0	120	60-130
108-10-1	4-Methyl-2-pentanone	80	78.4	98	60-130
74-83-9	Methyl bromide	20	17.3	87	60-130
74-87-3	Methyl chloride	20	15.9	80	60-130
74-95-3	Methylene bromide	20	21.4	107	60-130
75-09-2	Methylene chloride	20	21.6	108	60-130
78-93-3	Methyl ethyl ketone	80	73.9	92	60-130
1634-04-4	Methyl Tert Butyl Ether	20	18.9	95	60-130
91-20-3	Naphthalene	20	20.2	101	60-130
103-65-1	n-Propylbenzene	20	23.3	117	60-130
100-42-5	Styrene	20	23.6	118	60-130
994-05-8	Tert-Amyl Methyl Ether	20	18.9	95	60-130
75-65-0	Tert-Butyl Alcohol	100	88.9	89	60-130
630-20-6	1,1,1,2-Tetrachloroethane	20	23.0	115	60-130
71-55-6	1,1,1-Trichloroethane	20	22.1	111	60-130
79-34-5	1,1,2,2-Tetrachloroethane	20	19.4	97	60-130
79-00-5	1,1,2-Trichloroethane	20	20.7	104	60-130
87-61-6	1,2,3-Trichlorobenzene	20	22.3	112	60-130
96-18-4	1,2,3-Trichloropropane	20	18.4	92	60-130
120-82-1	1,2,4-Trichlorobenzene	20	23.3	117	60-130
95-63-6	1,2,4-Trimethylbenzene	20	22.7	114	60-130
108-67-8	1,3,5-Trimethylbenzene	20	23.3	117	60-130
127-18-4	Tetrachloroethylene	20	20.7	104	60-130
108-88-3	Toluene	20	23.5	118	60-130
79-01-6	Trichloroethylene	20	24.1	121	60-130
75-69-4	Trichlorofluoromethane	20	17.0	85	60-130
75-01-4	Vinyl chloride	20	17.7	89	60-130
1330-20-7	Xylene (total)	60	73.0	122	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	91%	60-130%

4.2.9  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-BS	W9202.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	95%	60-130%
460-00-4	4-Bromofluorobenzene	98%	60-130%

4.2.9  
4

# Blank Spike Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW323-BS	W9205.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	89%	60-130%
2037-26-5	Toluene-D8	97%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7874-13MS	M9748.D	1	10/15/09	XB	n/a	n/a	VM318
C7874-13MSD	M9749.D	1	10/15/09	XB	n/a	n/a	VM318
C7874-13	M9742.D	1	10/15/09	XB	n/a	n/a	VM318

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-10

CAS No.	Compound	C7874-13 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		38.9	35.3	91	37.5	97	6	60-130/30
108-20-3	Di-Isopropyl ether	ND		38.9	38.6	99	40.7	105	5	60-130/30
100-41-4	Ethylbenzene	ND		38.9	31.0	80	34.3	88	10	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		38.9	51.8	133* a	54.1	139* a	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		38.9	51.3	132* a	51.5	133* a	0	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND		38.9	47.5	122	48.9	126	3	60-130/30
75-65-0	Tert Butyl Alcohol	ND		195	311	160* a	296	152* a	5	60-130/30
108-88-3	Toluene	ND		38.9	30.0	77	32.1	83	7	60-130/30
1330-20-7	Xylene (total)	ND		117	83.6	72	91.3	78	9	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C7874-13	Limits
1868-53-7	Dibromofluoromethane	122%	120%	124%	60-130%
2037-26-5	Toluene-D8	98%	97%	99%	60-130%
460-00-4	4-Bromofluorobenzene	115%	110%	108%	60-130%

(a) Outside of in-house control limits.

4.3.1  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7905-17MS	M9773.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17MSD	M9774.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17	M9757.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	C7905-17 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	226		159	287	38* a	337	70	16	60-130/30
71-43-2	Benzene	ND		39.7	42.5	107	39.7	101	7	60-130/30
108-86-1	Bromobenzene	ND		39.7	34.5	87	33.3	85	4	60-130/30
74-97-5	Bromochloromethane	ND		39.7	41.6	105	39.7	101	5	60-130/30
75-27-4	Bromodichloromethane	ND		39.7	52.5	132* a	48.3	123	8	60-130/30
75-25-2	Bromoform	ND		39.7	38.7	98	38.0	97	2	60-130/30
104-51-8	n-Butylbenzene	ND		39.7	39.2	99	38.1	97	3	60-130/30
135-98-8	sec-Butylbenzene	ND		39.7	38.2	96	37.1	94	3	60-130/30
98-06-6	tert-Butylbenzene	ND		39.7	36.7	92	36.3	92	1	60-130/30
108-90-7	Chlorobenzene	ND		39.7	35.4	89	34.8	88	2	60-130/30
75-00-3	Chloroethane	ND		39.7	42.1	106	41.4	105	2	60-130/30
67-66-3	Chloroform	ND		39.7	50.4	127	48.1	122	5	60-130/30
95-49-8	o-Chlorotoluene	ND		39.7	36.1	91	39.5	100	9	60-130/30
106-43-4	p-Chlorotoluene	ND		39.7	36.6	92	36.0	91	2	60-130/30
56-23-5	Carbon tetrachloride	ND		39.7	53.5	135* a	49.6	126	8	60-130/30
75-34-3	1,1-Dichloroethane	ND		39.7	51.2	129	49.3	125	4	60-130/30
75-35-4	1,1-Dichloroethylene	ND		39.7	41.7	105	40.4	103	3	60-130/30
563-58-6	1,1-Dichloropropene	ND		39.7	49.5	125	46.7	119	6	60-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		39.7	47.8	120	46.5	118	3	60-130/30
106-93-4	1,2-Dibromoethane	ND		39.7	38.6	97	37.3	95	3	60-130/30
107-06-2	1,2-Dichloroethane	ND		39.7	63.5	160* a	58.4	148* a	8	60-130/30
78-87-5	1,2-Dichloropropane	ND		39.7	44.2	111	41.8	106	6	60-130/30
142-28-9	1,3-Dichloropropane	ND		39.7	40.6	102	40.0	102	1	60-130/30
108-20-3	Di-Isopropyl ether	ND		39.7	42.1	106	40.6	103	4	60-130/30
594-20-7	2,2-Dichloropropane	ND		39.7	53.6	135* a	50.8	129	5	60-130/30
124-48-1	Dibromochloromethane	ND		39.7	40.3	102	39.2	100	3	60-130/30
75-71-8	Dichlorodifluoromethane	ND		39.7	38.3	97	38.3	97	0	60-130/30
156-59-2	cis-1,2-Dichloroethylene	ND		39.7	40.8	103	39.6	101	3	60-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		39.7	46.9	118	43.7	111	7	60-130/30
541-73-1	m-Dichlorobenzene	ND		39.7	34.4	87	33.6	85	2	60-130/30
95-50-1	o-Dichlorobenzene	ND		39.7	35.4	89	34.5	88	3	60-130/30
106-46-7	p-Dichlorobenzene	ND		39.7	34.3	86	33.7	86	2	60-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		39.7	41.2	104	40.7	103	1	60-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		39.7	44.4	112	42.6	108	4	60-130/30
100-41-4	Ethylbenzene	ND		39.7	39.8	100	38.9	99	2	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		39.7	54.7	138* a	52.7	134* a	4	60-130/30

4.3.2  
4



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7905-17MS	M9773.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17MSD	M9774.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17	M9757.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Compound	C7905-17 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND	159	227	143* a	221	140* a	3	60-130/30	
87-68-3	Hexachlorobutadiene	ND	39.7	38.0	96	37.6	96	1	60-130/30	
98-82-8	Isopropylbenzene	ND	39.7	39.4	99	38.2	97	3	60-130/30	
99-87-6	p-Isopropyltoluene	ND	39.7	38.3	97	36.9	94	4	60-130/30	
108-10-1	4-Methyl-2-pentanone	ND	159	253	159* a	238	151* a	6	60-130/30	
74-83-9	Methyl bromide	ND	39.7	39.4	99	37.6	96	5	60-130/30	
74-87-3	Methyl chloride	ND	39.7	94.1	237* a	84.9	216* a	10	60-130/30	
74-95-3	Methylene bromide	ND	39.7	45.7	115	42.9	109	6	60-130/30	
75-09-2	Methylene chloride	ND	39.7	41.8	105	40.2	102	4	60-130/30	
78-93-3	Methyl ethyl ketone	ND	159	185	117	178	113	4	60-130/30	
1634-04-4	Methyl Tert Butyl Ether	ND	39.7	52.9	133* a	52.0	132* a	2	60-130/30	
91-20-3	Naphthalene	ND	39.7	36.3	91	36.9	94	2	60-130/30	
103-65-1	n-Propylbenzene	ND	39.7	38.9	98	37.3	95	4	60-130/30	
100-42-5	Styrene	ND	39.7	36.1	91	34.8	88	4	60-130/30	
994-05-8	Tert-Amyl Methyl Ether	ND	39.7	50.5	127	49.1	125	3	60-130/30	
75-65-0	Tert Butyl Alcohol	ND	198	287	145* a	281	143* a	2	60-130/30	
630-20-6	1,1,1,2-Tetrachloroethane	ND	39.7	37.8	95	37.2	94	2	60-130/30	
71-55-6	1,1,1-Trichloroethane	ND	39.7	54.0	136* a	51.7	131* a	4	60-130/30	
79-34-5	1,1,2,2-Tetrachloroethane	ND	39.7	36.9	93	36.1	92	2	60-130/30	
79-00-5	1,1,2-Trichloroethane	ND	39.7	38.1	96	37.2	94	2	60-130/30	
87-61-6	1,2,3-Trichlorobenzene	ND	39.7	35.4	89	35.1	89	1	60-130/30	
96-18-4	1,2,3-Trichloropropane	ND	39.7	41.2	104	39.6	101	4	60-130/30	
120-82-1	1,2,4-Trichlorobenzene	ND	39.7	33.7	85	33.9	86	1	60-130/30	
95-63-6	1,2,4-Trimethylbenzene	ND	39.7	38.6	97	37.2	94	4	60-130/30	
108-67-8	1,3,5-Trimethylbenzene	ND	39.7	38.9	98	37.7	96	3	60-130/30	
127-18-4	Tetrachloroethylene	ND	39.7	37.4	94	37.1	94	1	60-130/30	
108-88-3	Toluene	ND	39.7	36.3	91	35.5	90	2	60-130/30	
79-01-6	Trichloroethylene	ND	39.7	40.5	102	38.8	99	4	60-130/30	
75-69-4	Trichlorofluoromethane	ND	39.7	52.8	133* a	50.4	128	5	60-130/30	
75-01-4	Vinyl chloride	ND	39.7	36.3	91	34.4	87	5	60-130/30	
1330-20-7	Xylene (total)	ND	119	109	92	106	90	3	60-130/30	

CAS No.	Surrogate Recoveries	MS	MSD	C7905-17	Limits
1868-53-7	Dibromofluoromethane	116%	117%	111%	60-130%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7905-17MS	M9773.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17MSD	M9774.D	1	10/16/09	XB	n/a	n/a	VM319
C7905-17	M9757.D	1	10/16/09	XB	n/a	n/a	VM319

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-2, C7905-3, C7905-4, C7905-6, C7905-7, C7905-14, C7905-15, C7905-17

CAS No.	Surrogate Recoveries	MS	MSD	C7905-17	Limits
2037-26-5	Toluene-D8	93%	94%	96%	60-130%
460-00-4	4-Bromofluorobenzene	113%	114%	109%	60-130%

(a) Outside control limits.

4.3.2  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8068-4MS	N10363.D	1	10/22/09	TF	n/a	n/a	VN348
C8068-4MSD	N10364.D	1	10/22/09	TF	n/a	n/a	VN348
C8068-4	N10362.D	1	10/22/09	TF	n/a	n/a	VN348

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-11

CAS No.	Compound	C8068-4 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	19.2	96	19.3	97	1	60-130/25
106-93-4	1,2-Dibromoethane	ND	20	19.5	98	20.3	102	4	60-130/25
107-06-2	1,2-Dichloroethane	ND	20	21.1	106	21.5	108	2	60-130/25
108-20-3	Di-Isopropyl ether	ND	20	19.5	98	19.6	98	1	60-130/25
100-41-4	Ethylbenzene	ND	20	20.5	103	20.5	103	0	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND	20	20.1	101	20.3	102	1	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	19.4	97	19.9	100	3	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	20	19.5	98	19.8	99	2	60-130/25
75-65-0	Tert-Butyl Alcohol	698	E 100	813	115	838	140* a	3	60-130/25
108-88-3	Toluene	ND	20	19.5	98	19.8	99	2	60-130/25
1330-20-7	Xylene (total)	ND	60	62.1	104	62.6	104	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C8068-4	Limits
1868-53-7	Dibromofluoromethane	102%	100%	100%	60-130%
2037-26-5	Toluene-D8	100%	99%	100%	60-130%
460-00-4	4-Bromofluorobenzene	100%	100%	95%	60-130%

(a) Outside control limits due to high level in sample relative to spike amount.

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8044-4MS	W9196.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4MSD	W9197.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4	W9186.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	C8044-4 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	80	63.0	79	71.1	89	12	60-130/25	
71-43-2	Benzene	ND	20	22.0	110	25.0	125	13	60-130/25	
108-86-1	Bromobenzene	ND	20	20.6	103	23.5	118	13	60-130/25	
74-97-5	Bromochloromethane	ND	20	21.2	106	23.4	117	10	60-130/25	
75-27-4	Bromodichloromethane	ND	20	21.7	109	24.9	125	14	60-130/25	
75-25-2	Bromoform	ND	20	20.5	103	23.6	118	14	60-130/25	
104-51-8	n-Butylbenzene	ND	20	19.4	97	22.4	112	14	60-130/25	
135-98-8	sec-Butylbenzene	ND	20	20.1	101	22.8	114	13	60-130/25	
98-06-6	tert-Butylbenzene	ND	20	20.0	100	22.5	113	12	60-130/25	
108-90-7	Chlorobenzene	ND	20	21.7	109	24.3	122	11	60-130/25	
75-00-3	Chloroethane	ND	20	20.1	101	20.4	102	1	60-130/25	
67-66-3	Chloroform	ND	20	20.3	102	22.9	115	12	60-130/25	
95-49-8	o-Chlorotoluene	ND	20	21.2	106	24.4	122	14	60-130/25	
106-43-4	p-Chlorotoluene	ND	20	19.2	96	21.8	109	13	60-130/25	
56-23-5	Carbon tetrachloride	ND	20	21.0	105	23.7	119	12	60-130/25	
75-34-3	1,1-Dichloroethane	ND	20	21.4	107	23.9	120	11	60-130/25	
75-35-4	1,1-Dichloroethylene	ND	20	21.2	106	24.2	121	13	60-130/25	
563-58-6	1,1-Dichloropropene	ND	20	21.7	109	24.8	124	13	60-130/25	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	16.7	84	18.4	92	10	60-130/25	
106-93-4	1,2-Dibromoethane	ND	20	20.5	103	23.6	118	14	60-130/25	
107-06-2	1,2-Dichloroethane	ND	20	20.3	102	23.4	117	14	60-130/25	
78-87-5	1,2-Dichloropropane	ND	20	21.6	108	24.7	124	13	60-130/25	
142-28-9	1,3-Dichloropropane	ND	20	20.3	102	23.4	117	14	60-130/25	
108-20-3	Di-Isopropyl ether	ND	20	19.1	96	21.1	106	10	60-130/25	
594-20-7	2,2-Dichloropropane	ND	20	18.3	92	18.7	94	2	60-130/25	
124-48-1	Dibromochloromethane	ND	20	21.2	106	24.1	121	13	60-130/25	
75-71-8	Dichlorodifluoromethane	ND	20	18.4	92	18.2	91	1	60-130/25	
156-59-2	cis-1,2-Dichloroethylene	ND	20	20.7	104	23.4	117	12	60-130/25	
10061-01-5	cis-1,3-Dichloropropene	ND	20	20.6	103	23.7	119	14	60-130/25	
541-73-1	m-Dichlorobenzene	ND	20	20.9	105	23.9	120	13	60-130/25	
95-50-1	o-Dichlorobenzene	ND	20	21.0	105	23.8	119	13	60-130/25	
106-46-7	p-Dichlorobenzene	ND	20	20.5	103	23.3	117	13	60-130/25	
156-60-5	trans-1,2-Dichloroethylene	ND	20	21.0	105	23.4	117	11	60-130/25	
10061-02-6	trans-1,3-Dichloropropene	ND	20	19.4	97	22.3	112	14	60-130/25	
100-41-4	Ethylbenzene	ND	20	21.8	109	24.2	121	10	60-130/25	
637-92-3	Ethyl Tert Butyl Ether	ND	20	19.7	99	21.8	109	10	60-130/25	

4.3.4  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8044-4MS	W9196.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4MSD	W9197.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4	W9186.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Compound	C8044-4 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND	80	72.2	90	85.8	107	17	60-130/25
87-68-3	Hexachlorobutadiene	ND	20	21.2	106	24.2	121	13	60-130/25
98-82-8	Isopropylbenzene	ND	20	21.9	110	23.9	120	9	60-130/25
99-87-6	p-Isopropyltoluene	ND	20	20.2	101	22.6	113	11	60-130/25
108-10-1	4-Methyl-2-pentanone	ND	80	77.8	97	92.0	115	17	60-130/25
74-83-9	Methyl bromide	ND	20	19.4	97	19.8	99	2	60-130/25
74-87-3	Methyl chloride	ND	20	19.2	96	19.3	97	1	60-130/25
74-95-3	Methylene bromide	ND	20	20.6	103	23.8	119	14	60-130/25
75-09-2	Methylene chloride	ND	20	20.9	105	23.6	118	12	60-130/25
78-93-3	Methyl ethyl ketone	ND	80	75.2	94	87.1	109	15	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	19.3	97	21.0	105	8	60-130/25
91-20-3	Naphthalene	ND	20	19.7	99	20.7	104	5	60-130/25
103-65-1	n-Propylbenzene	ND	20	20.0	100	22.9	115	14	60-130/25
100-42-5	Styrene	ND	20	19.0	95	17.7	89	7	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	20	19.7	99	21.6	108	9	60-130/25
75-65-0	Tert-Butyl Alcohol	ND	100	87.2	87	95.7	96	9	60-130/25
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	21.8	109	23.9	120	9	60-130/25
71-55-6	1,1,1-Trichloroethane	ND	20	19.8	99	21.8	109	10	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	19.1	96	22.3	112	15	60-130/25
79-00-5	1,1,2-Trichloroethane	ND	20	20.1	101	23.2	116	14	60-130/25
87-61-6	1,2,3-Trichlorobenzene	ND	20	20.9	105	23.2	116	10	60-130/25
96-18-4	1,2,3-Trichloropropane	ND	20	17.8	89	20.4	102	14	60-130/25
120-82-1	1,2,4-Trichlorobenzene	ND	20	20.8	104	23.5	118	12	60-130/25
95-63-6	1,2,4-Trimethylbenzene	ND	20	19.7	99	20.2	101	3	60-130/25
108-67-8	1,3,5-Trimethylbenzene	ND	20	20.0	100	20.7	104	3	60-130/25
127-18-4	Tetrachloroethylene	ND	20	17.8	89	20.3	102	13	60-130/25
108-88-3	Toluene	ND	20	21.4	107	24.0	120	11	60-130/25
79-01-6	Trichloroethylene	7.7	20	29.0	107	31.8	121	9	60-130/25
75-69-4	Trichlorofluoromethane	ND	20	19.8	99	19.6	98	1	60-130/25
75-01-4	Vinyl chloride	ND	20	21.3	107	21.2	106	0	60-130/25
1330-20-7	Xylene (total)	ND	60	65.5	109	71.1	119	8	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C8044-4	Limits
1868-53-7	Dibromofluoromethane	92%	92%	87%	60-130%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8044-4MS	W9196.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4MSD	W9197.D	1	10/23/09	BD	n/a	n/a	VW322
C8044-4	W9186.D	1	10/22/09	BD	n/a	n/a	VW322

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-18, C7905-19, C7905-20

CAS No.	Surrogate Recoveries	MS	MSD	C8044-4	Limits
2037-26-5	Toluene-D8	96%	95%	98%	60-130%
460-00-4	4-Bromofluorobenzene	98%	97%	95%	60-130%

4.3.4  
4

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7938-1MS	W9221.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1MSD	W9222.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1	W9215.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	C7938-1		Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
67-64-1	Acetone	ND		80	67.0	84	69.0	86	3	60-130/25
71-43-2	Benzene	ND		20	21.5	108	21.2	106	1	60-130/25
108-86-1	Bromobenzene	ND		20	21.8	109	21.7	109	0	60-130/25
74-97-5	Bromochloromethane	ND		20	20.5	103	20.5	103	0	60-130/25
75-27-4	Bromodichloromethane	ND		20	21.7	109	21.8	109	0	60-130/25
75-25-2	Bromoform	ND		20	21.2	106	21.7	109	2	60-130/25
104-51-8	n-Butylbenzene	ND		20	21.8	109	21.0	105	4	60-130/25
135-98-8	sec-Butylbenzene	ND		20	22.2	111	21.2	106	5	60-130/25
98-06-6	tert-Butylbenzene	ND		20	21.7	109	20.7	104	5	60-130/25
108-90-7	Chlorobenzene	ND		20	21.8	109	21.8	109	0	60-130/25
75-00-3	Chloroethane	ND		20	20.8	104	21.3	107	2	60-130/25
67-66-3	Chloroform	ND		20	19.7	99	19.3	97	2	60-130/25
95-49-8	o-Chlorotoluene	ND		20	22.6	113	22.1	111	2	60-130/25
106-43-4	p-Chlorotoluene	ND		20	20.2	101	20.0	100	1	60-130/25
56-23-5	Carbon tetrachloride	ND		20	21.9	110	20.6	103	6	60-130/25
75-34-3	1,1-Dichloroethane	ND		20	20.5	103	19.8	99	3	60-130/25
75-35-4	1,1-Dichloroethylene	ND		20	20.3	102	19.3	97	5	60-130/25
563-58-6	1,1-Dichloropropene	ND		20	21.7	109	21.1	106	3	60-130/25
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	17.2	86	17.6	88	2	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	21.4	107	21.8	109	2	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	20.5	103	20.8	104	1	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	21.2	106	21.3	107	0	60-130/25
142-28-9	1,3-Dichloropropane	ND		20	20.8	104	21.4	107	3	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	18.1	91	18.0	90	1	60-130/25
594-20-7	2,2-Dichloropropane	ND		20	19.5	98	18.0	90	8	60-130/25
124-48-1	Dibromochloromethane	ND		20	21.6	108	21.9	110	1	60-130/25
75-71-8	Dichlorodifluoromethane	ND		20	16.1	81	15.8	79	2	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		20	19.8	99	19.4	97	2	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	21.0	105	21.1	106	0	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	22.1	111	22.0	110	0	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	22.1	111	22.1	111	0	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	21.8	109	21.6	108	1	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		20	20.2	101	19.3	97	5	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	20.4	102	21.0	105	3	60-130/25
100-41-4	Ethylbenzene	ND		20	22.0	110	21.4	107	3	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	19.2	96	18.9	95	2	60-130/25

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7938-1MS	W9221.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1MSD	W9222.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1	W9215.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Compound	C7938-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND	80	74.1	93	77.8	97	5	60-130/25
87-68-3	Hexachlorobutadiene	ND	20	23.8	119	22.4	112	6	60-130/25
98-82-8	Isopropylbenzene	ND	20	22.4	112	21.6	108	4	60-130/25
99-87-6	p-Isopropyltoluene	ND	20	22.3	112	21.4	107	4	60-130/25
108-10-1	4-Methyl-2-pentanone	ND	80	80.6	101	82.7	103	3	60-130/25
74-83-9	Methyl bromide	ND	20	20.0	100	20.5	103	2	60-130/25
74-87-3	Methyl chloride	ND	20	18.4	92	18.6	93	1	60-130/25
74-95-3	Methylene bromide	ND	20	20.7	104	21.3	107	3	60-130/25
75-09-2	Methylene chloride	ND	20	20.0	100	19.8	99	1	60-130/25
78-93-3	Methyl ethyl ketone	ND	80	75.8	95	78.4	98	3	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	18.9	95	18.9	95	0	60-130/25
91-20-3	Naphthalene	ND	20	20.0	100	20.6	103	3	60-130/25
103-65-1	n-Propylbenzene	ND	20	21.7	109	21.0	105	3	60-130/25
100-42-5	Styrene	ND	20	21.6	108	20.7	104	4	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	20	19.3	97	19.0	95	2	60-130/25
75-65-0	Tert-Butyl Alcohol	ND	100	86.5	87	88.7	89	3	60-130/25
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	22.0	110	21.6	108	2	60-130/25
71-55-6	1,1,1-Trichloroethane	ND	20	19.8	99	18.7	94	6	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	20.6	103	21.0	105	2	60-130/25
79-00-5	1,1,2-Trichloroethane	ND	20	20.6	103	21.3	107	3	60-130/25
87-61-6	1,2,3-Trichlorobenzene	ND	20	21.4	107	21.4	107	0	60-130/25
96-18-4	1,2,3-Trichloropropane	ND	20	18.7	94	19.0	95	2	60-130/25
120-82-1	1,2,4-Trichlorobenzene	ND	20	21.9	110	21.8	109	0	60-130/25
95-63-6	1,2,4-Trimethylbenzene	ND	20	21.3	107	20.3	102	5	60-130/25
108-67-8	1,3,5-Trimethylbenzene	ND	20	21.6	108	20.5	103	5	60-130/25
127-18-4	Tetrachloroethylene	ND	20	18.6	93	18.1	91	3	60-130/25
108-88-3	Toluene	ND	20	21.7	109	21.3	107	2	60-130/25
79-01-6	Trichloroethylene	ND	20	21.8	109	21.1	106	3	60-130/25
75-69-4	Trichlorofluoromethane	ND	20	21.5	108	22.1	111	3	60-130/25
75-01-4	Vinyl chloride	ND	20	21.7	109	22.1	111	2	60-130/25
1330-20-7	Xylene (total)	ND	60	66.4	111	64.6	108	3	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C7938-1	Limits
1868-53-7	Dibromofluoromethane	92%	92%	89%	60-130%



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7938-1MS	W9221.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1MSD	W9222.D	1	10/23/09	BD	n/a	n/a	VW323
C7938-1	W9215.D	1	10/23/09	BD	n/a	n/a	VW323

The QC reported here applies to the following samples:

Method: SW846 8260B

C7905-8

CAS No.	Surrogate Recoveries	MS	MSD	C7938-1	Limits
2037-26-5	Toluene-D8	98%	99%	101%	60-130%
460-00-4	4-Bromofluorobenzene	97%	99%	95%	60-130%

4.3.5  
4



## GC Semi-volatiles

5

### QC Data Summaries

---

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

# Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1389-MB	GG8522.D	1	10/13/09	JH	10/13/09	OP1389	GGG302

The QC reported here applies to the following samples:

Method: SW846 8015B M

C7905-11

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	0.10	0.050	mg/l	
	TPH (Motor Oil)	ND	0.20	0.10	mg/l	
	TPH (Mineral Spirits)	ND	0.10	0.050	mg/l	
	TPH (Kerosene)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	87% 45-140%

# Method Blank Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1393-MB	GG8562.D	1	10/14/09	JH	10/14/09	OP1393	GGG303

The QC reported here applies to the following samples:

Method: SW846 8015B M

C7905-10

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	10	5.0	mg/kg	
	TPH (Motor Oil)	ND	20	10	mg/kg	
	TPH (Mineral Spirits)	ND	10	5.0	mg/kg	
	TPH (Kerosene)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
630-01-3	Hexacosane	94% 45-140%

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1389-BS	GG8523.D	1	10/13/09	JH	10/13/09	OP1389	GGG302
OP1389-BSD	GG8524.D	1	10/13/09	JH	10/13/09	OP1389	GGG302

The QC reported here applies to the following samples:

Method: SW846 8015B M

C7905-11

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	1	0.686	69	0.698	70	2	45-140/30
	TPH (Motor Oil)	1	0.672	67	0.666	67	1	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	77%	78%	45-140%

5.2.1  
5

# Blank Spike/Blank Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1393-BS	GG8563.D	1	10/14/09	JH	10/14/09	OP1393	GGG303
OP1393-BSD	GG8564.D	1	10/14/09	JH	10/14/09	OP1393	GGG303

The QC reported here applies to the following samples:

Method: SW846 8015B M

C7905-10

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	100	78.4	78	77.8	78	1	45-140/30
	TPH (Motor Oil)	100	78.2	78	81.4	81	4	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	90%	91%	45-140%

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C7905  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1393-MS	GG8649.D	1	10/16/09	JH	10/14/09	OP1393	GGG304
OP1393-MSD	GG8650.D	1	10/16/09	JH	10/14/09	OP1393	GGG304
C7888-1	GG8623.D	1	10/15/09	JH	10/14/09	OP1393	GGG304

The QC reported here applies to the following samples:

Method: SW846 8015B M

C7905-10

CAS No.	Compound	C7888-1 mg/kg	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	ND	100	69.6	70	71.3	71	2	45-140/30
	TPH (Motor Oil)	ND	100	67.1	67	70.3	70	5	45-140/30

CAS No.	Surrogate Recoveries	MS	MSD	C7888-1	Limits
630-01-3	Hexacosane	72%	78%	79%	45-140%

5.3.1  
5

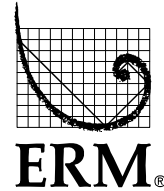
# Memorandum

Environmental  
Resources  
Management

**To:** Jill Quillin  
**From:** Irene Lavigne  
**Date:** 07 January 2010  
**Subject:** Data Review of Red Hanger Cleaners Soil Samples  
Collected December 2009  
**Project Number:** 0099877  
**Data Package:** Accutest Laboratories Data Package C8716

---

2875 Michelle Drive  
Suite 200  
Irvine, CA 92606  
(949) 623-4700  
(949) 623-2940 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

## ***HOLDING TIME AND PRESERVATION EVALUATION***

The sample shipments were received at the laboratory within the method-prescribed temperature preservation requirements. The samples were prepared and analyzed within the method-prescribed time period from the date of collection. None of the data required qualification based on holding time or temperature exceedances.

## ***BLANK EVALUATION***

The method blank and trip blank sample results were nondetected for each of the target analytes with limited exceptions. The trip blank had a detection of chloroform; however, no sample data required qualification as a result of this detection because the samples were nondetected for this compound. The blank detection is presented in Table 1.

## ***BLANK SPIKE EVALUATION***

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance. None of the data were qualified on the basis of LCS recoveries. The LCS recoveries indicate acceptable laboratory accuracy and precision.



### ***MATRIX SPIKE EVALUATION***

The matrix spike (MS)/matrix spike duplicate (MSD) recoveries were within the laboratory's limits of acceptance with one exception. A spike recovery for dichlorodifluoromethane exceeded the maximum acceptable limit. Since the recovery was biased high and the sample results for this compound were nondetected, none of the data were qualified as a result of the MS outlier. The MS that exceeded acceptable limits is shown in Table 2.

### ***SURROGATE SPIKE EVALUATION***

The surrogate recoveries were within acceptable limits. No qualifications were required. The surrogate recoveries indicate minimal matrix interference in the samples.

### ***CALIBRATION EVALUATION***

The laboratory noted that the continuing calibration verification (CCV) recoveries associated with six sample results exceeded the maximum acceptable control limits. All sample results were nondetected; thus, none of the data were qualified based on CCV exceedances. The CCV outliers are presented in Table 3.

### ***OVERALL ASSESSMENT***

No data were determined to be unusable or required qualification. All of the data can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically-defensible documents.

**Table 1**  
**Blank and Associated Suspect Sample Detections**  
**Soil Samples Collected December 2009**  
**Red Hanger Cleaners**  
**Oakland, California**

Lab Package	Blank ID	Associated Samples	Detected Compound	Reported Concentration	Report Limit	Units	ERM Qualifier
C8716	TB (12/05/09)	NA	Chloroform	0.31	1.0	µg/L	--

**Key:**

FB = Field blank

EB = Equipment blank

NA = Not applicable; associated samples not affected

µg/L = Micrograms per liter

U = Sample result qualified as nondetected

*Table 2  
Spike Recoveries Outside of Acceptable Limits  
Soil Samples Collected December 2009  
Red Hanger Cleaners  
Oakland, California*

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Sample Result	ERM Qualifier
MS/MSD									
C8716	A-2-30' MS/MSD	NA	Dichlorodifluoromethane	145/131	60-130	11	30	NA	--

**Key:**

MS/MSD = Matrix spike/matrix spike duplicate

RPD = Relative percent difference

NA = Not applicable; associated samples not qualified

**Table 3**  
**Calibration Verification Recoveries Outside of Acceptable Limits**  
**Soil Samples Collected December 2009**  
**Red Hanger Cleaners**  
**Oakland, California**

Lab Package	Sample ID	Compound	CCV Recovery	Reported Concentration	Units	ERM Qualifier
C8716	A-2-6.5'	Dichlorodifluoromethane	High	< 5.0	µg/kg	--
C8716	A-2-10'	Dichlorodifluoromethane	High	< 4.9	µg/kg	--
C8716	A-2-15'	Dichlorodifluoromethane	High	< 5.0	µg/kg	--
C8716	A-2-20'	Dichlorodifluoromethane	High	< 5.0	µg/kg	--
C8716	A-2-25'	Dichlorodifluoromethane	High	< 5.0	µg/kg	--
C8716	A-2-30'	Dichlorodifluoromethane	High	< 5.0	µg/kg	--

**Key:**

CCV = Continuing calibration verification

µg/kg = Micrograms per kilogram

High = CCV exceeded maximum acceptable limit



Technical Report for

ERM-West, Inc.

Red Hanger Cleaners - Oakland, CA

0099877

Accutest Job Number: C8716

Sampling Date: 12/05/09

Report to:

ERM-West, Inc.  
1277 Treat Blvd. Suite 500  
Walnut Creek, CA 94597  
jill.quillin@erm.com; chimi.yi@erm.com  
ATTN: Jill Quillin

Total number of pages in report: **50**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy  
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.



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## Sample Summary

ERM-West, Inc.

**Job No:** C8716

Red Hanger Cleaners - Oakland, CA

Project No: 0099877

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
C8716-1	12/05/09	11:05 CY	12/07/09	SO	Soil	A-2-6.5'
C8716-2	12/05/09	11:11 CY	12/07/09	SO	Soil	A-2-10'
C8716-3	12/05/09	11:22 CY	12/07/09	SO	Soil	A-2-15'
C8716-4	12/05/09	11:42 CY	12/07/09	SO	Soil	A-2-20'
C8716-5	12/05/09	12:04 CY	12/07/09	SO	Soil	A-2-25'
C8716-6	12/05/09	12:27 CY	12/07/09	SO	Soil	A-2-30'
C8716-7	12/05/09	00:00 CY	12/07/09	AQ	Trip Blank Water	TRIP BLANK

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Soil samples reported on a dry weight basis unless otherwise indicated on result page.

## SAMPLE DELIVERY GROUP CASE NARRATIVE

**Client:** ERM-West, Inc.

**Job No** C8716

**Site:** Red Hanger Cleaners - Oakland, CA

**Report Date** 12/21/2009 10:31:13 P

6 Sample(s), 1 Trip Blank(s) and 0 Field Blank(s) were collected on 12/05/2009 and were received at Accutest on 12/07/2009 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of C8716. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

**Matrix** AQ

**Batch ID:** VN391

- Sample(s) C8753-5MS, C8753-5MSD were used as the QC samples indicated.
- CCV for Acetone, Bromochloromethane, Methyl bromide, Methylene bromide, 4-Methyl-2-pentanone, Tert-Butyl Alcohol outside of control limits (biased high); not detected in associated sample (C8716-7).

**Matrix** SO

**Batch ID:** VM356

- Sample(s) C8716-6MS, C8716-6MSD were used as the QC samples indicated.
- Matrix Spike/Matrix Spike Duplicate Recovery(s) for Dichlorodifluoromethane are biased high outside control limits; not detected in associated samples.
- CCV for Dichlorodifluoromethane outside of control limits (biased high); not detected in associated samples (C8716-1 through -6).

Accutest Laboratories Northern California (ALNCA) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALNCA and as stated on the COC. ALNCA certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALNCA Quality Manual except as noted above. This report is to be used in its entirety. ALNCA is not responsible for any assumptions of data quality if partial data packages are used





## Sample Results

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## Report of Analysis

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## Report of Analysis

<b>Client Sample ID:</b>	A-2-6.5'	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-1	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M10840.D	1	12/07/09	XB	n/a	n/a	VM356
Run #2							

Run #1	Initial Weight
Run #1	5.05 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	30.5	99	20	ug/kg	J
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.99	ug/kg	
75-25-2	Bromoform	ND	5.0	0.99	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.99	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.99	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	0.99	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.99	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.99	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	5.0	0.99	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-2-6.5'	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-1	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	0.99	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.99	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	0.99	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	0.99	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	10.6	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	0.99	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.9	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		60-130%
2037-26-5	Toluene-D8	101%		60-130%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-6.5'		
<b>Lab Sample ID:</b> C8716-1		<b>Date Sampled:</b> 12/05/09
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/07/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-10'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-2		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	M10841.D	1	12/07/09	XB	n/a	n/a	VM356

Run #1	Initial Weight
Run #2	5.09 g

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	22.7	98	20	ug/kg	J
71-43-2	Benzene	ND	4.9	1.5	ug/kg	
108-86-1	Bromobenzene	ND	4.9	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	4.9	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	4.9	0.98	ug/kg	
75-25-2	Bromoform	ND	4.9	0.98	ug/kg	
104-51-8	n-Butylbenzene	ND	4.9	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	4.9	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	4.9	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	4.9	1.5	ug/kg	
75-00-3	Chloroethane	ND	4.9	1.5	ug/kg	
67-66-3	Chloroform	ND	4.9	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	4.9	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	4.9	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	4.9	0.98	ug/kg	
75-34-3	1,1-Dichloroethane	ND	4.9	0.98	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	4.9	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	4.9	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	4.9	0.98	ug/kg	
106-93-4	1,2-Dibromoethane	ND	4.9	0.98	ug/kg	
107-06-2	1,2-Dichloroethane	ND	4.9	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	4.9	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	4.9	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	4.9	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	4.9	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	4.9	0.98	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	4.9	0.98	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	4.9	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	4.9	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	4.9	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> A-2-10'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-2		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	4.9	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	4.9	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	4.9	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	4.9	1.5	ug/kg	
591-78-6	2-Hexanone	ND	39	4.9	ug/kg	
87-68-3	Hexachlorobutadiene	ND	4.9	0.98	ug/kg	
98-82-8	Isopropylbenzene	ND	4.9	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	4.9	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	39	15	ug/kg	
74-83-9	Methyl bromide	ND	4.9	2.5	ug/kg	
74-87-3	Methyl chloride	ND	4.9	1.5	ug/kg	
74-95-3	Methylene bromide	ND	4.9	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	39	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	4.9	0.98	ug/kg	
91-20-3	Naphthalene	ND	4.9	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	4.9	1.5	ug/kg	
100-42-5	Styrene	ND	4.9	0.98	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	4.9	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	39	9.8	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	4.9	0.98	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	4.9	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.9	0.98	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	4.9	0.98	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	4.9	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	4.9	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	4.9	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	4.9	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	4.9	1.5	ug/kg	
127-18-4	Tetrachloroethylene	4.5	4.9	3.4	ug/kg	J
108-88-3	Toluene	ND	4.9	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	4.9	0.98	ug/kg	
75-69-4	Trichlorofluoromethane	ND	4.9	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	4.9	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	9.8	3.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		60-130%
2037-26-5	Toluene-D8	100%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-10'		
<b>Lab Sample ID:</b> C8716-2		<b>Date Sampled:</b> 12/05/09
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/07/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-2-15'	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-3	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	M10842.D	1	12/07/09	XB	n/a	n/a	VM356

Run #1	Initial Weight
Run #2	5.00 g

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



# Report of Analysis

<b>Client Sample ID:</b> A-2-15'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-3		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		60-130%
2037-26-5	Toluene-D8	103%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-15'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-3		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-20'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-4		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	M10843.D	1	12/07/09	XB	n/a	n/a	VM356

Run #1	Initial Weight
Run #2	5.00 g

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	75.9	100	20	ug/kg	J
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> A-2-20'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-4		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	4.8	5.0	3.5	ug/kg	J
108-88-3	Toluene	4.1	5.0	1.5	ug/kg	J
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		60-130%
2037-26-5	Toluene-D8	103%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-20'		
<b>Lab Sample ID:</b> C8716-4		<b>Date Sampled:</b> 12/05/09
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/07/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	A-2-25'	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-5	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M10844.D	1	12/07/09	XB	n/a	n/a	VM356
Run #2							

Run #1	Initial Weight
Run #1	5.00 g
Run #2	

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	34.1	100	20	ug/kg	J
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> A-2-25'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-5		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	1.6	5.0	1.5	ug/kg	J
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		60-130%
2037-26-5	Toluene-D8	101%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-25'		
<b>Lab Sample ID:</b> C8716-5		<b>Date Sampled:</b> 12/05/09
<b>Matrix:</b> SO - Soil		<b>Date Received:</b> 12/07/09
<b>Method:</b> SW846 8260B		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Report of Analysis

<b>Client Sample ID:</b> A-2-30'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-6		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	M10845.D	1	12/07/09	XB	n/a	n/a	VM356

Run #1	Initial Weight
Run #2	5.00 g

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	26.2	100	20	ug/kg	J
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane <sup>b</sup>	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b>	A-2-30'	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-6	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	SO - Soil	<b>Percent Solids:</b>	n/a <sup>a</sup>
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

## VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		60-130%
2037-26-5	Toluene-D8	102%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b> A-2-30'		<b>Date Sampled:</b> 12/05/09
<b>Lab Sample ID:</b> C8716-6		<b>Date Received:</b> 12/07/09
<b>Matrix:</b> SO - Soil		<b>Percent Solids:</b> n/a <sup>a</sup>
<b>Method:</b> SW846 8260B		
<b>Project:</b> Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	107%		60-130%

- (a) All results reported on wet weight basis.
- (b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b> TRIP BLANK	
<b>Lab Sample ID:</b> C8716-7	<b>Date Sampled:</b> 12/05/09
<b>Matrix:</b> AQ - Trip Blank Water	<b>Date Received:</b> 12/07/09
<b>Method:</b> SW846 8260B	<b>Percent Solids:</b> n/a
<b>Project:</b> Red Hanger Cleaners - Oakland, CA	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N11705.D	1	12/17/09	TF	n/a	n/a	VN391
Run #2							

Run #1	Purge Volume
Run #1	10.0 ml
Run #2	

### VOA 8260 List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone <sup>a</sup>	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane <sup>a</sup>	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	0.31	1.0	0.30	ug/l	J
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

# Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-7	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

**VOA 8260 List**

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone <sup>a</sup>	ND	20	5.0	ug/l	
74-83-9	Methyl bromide <sup>a</sup>	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide <sup>a</sup>	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol <sup>a</sup>	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		60-130%
2037-26-5	Toluene-D8	97%		60-130%

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound

## Report of Analysis

<b>Client Sample ID:</b>	TRIP BLANK	<b>Date Sampled:</b>	12/05/09
<b>Lab Sample ID:</b>	C8716-7	<b>Date Received:</b>	12/07/09
<b>Matrix:</b>	AQ - Trip Blank Water	<b>Percent Solids:</b>	n/a
<b>Method:</b>	SW846 8260B		
<b>Project:</b>	Red Hanger Cleaners - Oakland, CA		

### VOA 8260 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		60-130%

(a) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected      MDL - Method Detection Limit  
 RL = Reporting Limit  
 E = Indicates value exceeds calibration range

J = Indicates an estimated value  
 B = Indicates analyte found in associated method blank  
 N = Indicates presumptive evidence of a compound



## Misc. Forms

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### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

# Environmental Resources Management

## CHAIN OF CUSTODY RECORD

NO: 5331

"EKINCAWC 2368"

C8716

1777 Botelho Drive, Suite 260 • Walnut Creek, CA • 94596 • (925) 946-0455 • FAX (925) 946-9968

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PROJECT #		PROJECT NAME							# OF CONTAINERS	MATRIX			REQUESTED PARAMETERS																	
SAMPLER: (PRINT NAME)		(SIGNATURE)								SOIL	WATER	GAS																		
RECEIVING LABORATORY																														
0099877		Red Hanger							1	X	X	VOCs 8260																		
Chimi Yi		Chimi Yi																												
Accutest																														
SAMPLE I.D.	DATE	TIME	COMP	GRAB	SAMPLING METHOD	PRESERVATIVE	ICE (M)	SAMPLING VOLUME																						
A-2-6.5'	12-5-09	1105		X	direct push	-		Y 2"x6"																						
A-2-10'		1111																												
A-2-15'		1122																												
A-2-20'		1142																												
A-2-25'		1204																												
A-2-30'		1227																												
Trip Blank	-	-				Hcl		Y 40mL	3		X																			
RELINQUISHED BY (SIGNATURE)		DATE	TIME	RECEIVED BY		DATE	TIME	FIELD REMARKS																						
Chimi Yi		12-7-09	0815	ERM WC Office		12-7-09	0815	standard TAT																						
Kam Lee		12-7	10:10	Chimi Yi		12/7/09	10/11	6 (2"x6") Acetate tubes 3 vials (w/hcl) only																						
Chimi Yi		12/7/09	11:00	Chimi Yi		12/7/09	11:30	cooler temp 2.8-0.9 = 2.4°C																						
REMARKS ON SAMPLE RECEIPT								ERM REMARKS								SEND REPORT TO:														
<input type="checkbox"/> BOTTLE INTACT <input type="checkbox"/> CUSTODY SEALS <input type="checkbox"/> CHILLED <input type="checkbox"/> PRESERVED <input type="checkbox"/> SEALS INTACT <input type="checkbox"/> SEE REMARKS																Jill.Quillin@erm.com Chimi.Yi@erm.com														

WHITE - LABORATORY COPY

CANARY - FIELD COPY

PINK - DATABASE

GOLD - PROJECT FILE

C8716: Chain of Custody

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4.1  
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## GC/MS Volatiles

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### QC Data Summaries

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Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-MB	M10832.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	20	ug/kg	
71-43-2	Benzene	ND	5.0	1.5	ug/kg	
108-86-1	Bromobenzene	ND	5.0	1.5	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	1.5	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	1.0	ug/kg	
75-25-2	Bromoform	ND	5.0	1.0	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	1.5	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	1.5	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.5	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	1.5	ug/kg	
75-00-3	Chloroethane	ND	5.0	1.5	ug/kg	
67-66-3	Chloroform	ND	5.0	1.5	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	1.5	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.5	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	1.0	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	1.5	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	1.5	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	1.0	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	1.0	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	1.5	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	1.5	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	1.5	ug/kg	
108-20-3	Di-Isopropyl ether	ND	5.0	1.5	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	1.5	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	1.0	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	1.5	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	1.5	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	1.5	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	1.5	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	1.5	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	1.5	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	1.5	ug/kg	

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-MB	M10832.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	40	5.0	ug/kg	
87-68-3	Hexachlorobutadiene	ND	5.0	1.0	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	1.5	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	1.5	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	40	15	ug/kg	
74-83-9	Methyl bromide	ND	5.0	2.5	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.5	ug/kg	
74-95-3	Methylene bromide	ND	5.0	2.5	ug/kg	
75-09-2	Methylene chloride	ND	25	16	ug/kg	
78-93-3	Methyl ethyl ketone	ND	40	12	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.5	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	1.5	ug/kg	
100-42-5	Styrene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	1.2	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.5	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.0	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	1.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.5	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.5	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.5	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	1.5	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.5	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	3.5	ug/kg	
108-88-3	Toluene	ND	5.0	1.5	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.0	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	1.2	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	2.5	ug/kg	
1330-20-7	Xylene (total)	ND	10	4.0	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	99% 60-130%

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-MB	M10832.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	105% 60-130%
460-00-4	4-Bromofluorobenzene	99% 60-130%

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-MB	N11701.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	20	10	ug/l	
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.30	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.30	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.30	ug/l	
75-00-3	Chloroethane	ND	1.0	0.30	ug/l	
67-66-3	Chloroform	ND	1.0	0.30	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	0.50	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.20	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.30	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.20	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.30	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	10	5.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.30	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.30	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.20	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.30	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.50	ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.30	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.30	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.30	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-MB	N11701.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	Result	RL	MDL	Units	Q
591-78-6	2-Hexanone	ND	20	10	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	0.50	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.20	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	20	5.0	ug/l	
74-83-9	Methyl bromide	ND	5.0	1.5	ug/l	
74-87-3	Methyl chloride	ND	1.0	0.30	ug/l	
74-95-3	Methylene bromide	ND	1.0	0.20	ug/l	
75-09-2	Methylene chloride	ND	20	5.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	20	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	5.0	0.50	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.20	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.20	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.20	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	0.50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	0.50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.30	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	0.30	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	106% 60-130%

## Method Blank Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-MB	N11701.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	102% 60-130%
460-00-4	4-Bromofluorobenzene	93% 60-130%

5.1.2  
5



# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-BS	M10830.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	160	164	103	60-130
71-43-2	Benzene	40	35.7	89	60-130
108-86-1	Bromobenzene	40	37.4	94	60-130
74-97-5	Bromochloromethane	40	38.2	96	60-130
75-27-4	Bromodichloromethane	40	32.8	82	60-130
75-25-2	Bromoform	40	33.6	84	60-130
104-51-8	n-Butylbenzene	40	39.0	98	60-130
135-98-8	sec-Butylbenzene	40	38.3	96	60-130
98-06-6	tert-Butylbenzene	40	37.9	95	60-130
108-90-7	Chlorobenzene	40	35.8	90	60-130
75-00-3	Chloroethane	40	43.4	109	60-130
67-66-3	Chloroform	40	36.7	92	60-130
95-49-8	o-Chlorotoluene	40	38.7	97	60-130
106-43-4	p-Chlorotoluene	40	37.4	94	60-130
56-23-5	Carbon tetrachloride	40	33.4	84	60-130
75-34-3	1,1-Dichloroethane	40	38.4	96	60-130
75-35-4	1,1-Dichloroethylene	40	40.5	101	60-130
563-58-6	1,1-Dichloropropene	40	35.3	88	60-130
96-12-8	1,2-Dibromo-3-chloropropane	40	35.9	90	60-130
106-93-4	1,2-Dibromoethane	40	34.9	87	60-130
107-06-2	1,2-Dichloroethane	40	30.8	77	60-130
78-87-5	1,2-Dichloropropane	40	35.7	89	60-130
142-28-9	1,3-Dichloropropane	40	35.2	88	60-130
108-20-3	Di-Isopropyl ether	40	36.7	92	60-130
594-20-7	2,2-Dichloropropane	40	38.4	96	60-130
124-48-1	Dibromochloromethane	40	33.1	83	60-130
75-71-8	Dichlorodifluoromethane	40	47.9	120	60-130
156-59-2	cis-1,2-Dichloroethylene	40	38.3	96	60-130
10061-01-5	cis-1,3-Dichloropropene	40	34.9	87	60-130
541-73-1	m-Dichlorobenzene	40	37.5	94	60-130
95-50-1	o-Dichlorobenzene	40	37.9	95	60-130
106-46-7	p-Dichlorobenzene	40	37.3	93	60-130
156-60-5	trans-1,2-Dichloroethylene	40	39.6	99	60-130
10061-02-6	trans-1,3-Dichloropropene	40	34.3	86	60-130
100-41-4	Ethylbenzene	40	35.7	89	60-130
637-92-3	Ethyl tert-Butyl Ether	40	36.5	91	60-130

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-BS	M10830.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
591-78-6	2-Hexanone	160	151	94	60-130
87-68-3	Hexachlorobutadiene	40	37.2	93	60-130
98-82-8	Isopropylbenzene	40	35.6	89	60-130
99-87-6	p-Isopropyltoluene	40	38.7	97	60-130
108-10-1	4-Methyl-2-pentanone	160	145	91	60-130
74-83-9	Methyl bromide	40	42.1	105	60-130
74-87-3	Methyl chloride	40	39.2	98	60-130
74-95-3	Methylene bromide	40	34.2	86	60-130
75-09-2	Methylene chloride	40	39.4	99	60-130
78-93-3	Methyl ethyl ketone	160	165	103	60-130
1634-04-4	Methyl Tert Butyl Ether	40	36.0	90	60-130
91-20-3	Naphthalene	40	37.3	93	60-130
103-65-1	n-Propylbenzene	40	39.3	98	60-130
100-42-5	Styrene	40	35.2	88	60-130
994-05-8	Tert-Amyl Methyl Ether	40	35.3	88	60-130
75-65-0	Tert Butyl Alcohol	200	195	98	60-130
630-20-6	1,1,1,2-Tetrachloroethane	40	33.9	85	60-130
71-55-6	1,1,1-Trichloroethane	40	36.4	91	60-130
79-34-5	1,1,2,2-Tetrachloroethane	40	38.9	97	60-130
79-00-5	1,1,2-Trichloroethane	40	35.5	89	60-130
87-61-6	1,2,3-Trichlorobenzene	40	36.5	91	60-130
96-18-4	1,2,3-Trichloropropane	40	36.0	90	60-130
120-82-1	1,2,4-Trichlorobenzene	40	37.7	94	60-130
95-63-6	1,2,4-Trimethylbenzene	40	37.3	93	60-130
108-67-8	1,3,5-Trimethylbenzene	40	37.9	95	60-130
127-18-4	Tetrachloroethylene	40	35.4	89	60-130
108-88-3	Toluene	40	36.2	91	60-130
79-01-6	Trichloroethylene	40	36.5	91	60-130
75-69-4	Trichlorofluoromethane	40	38.4	96	60-130
75-01-4	Vinyl chloride	40	40.6	102	60-130
1330-20-7	Xylene (total)	120	108	90	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	105%	60-130%

5.2.1  
5

## Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-BS	M10830.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	93%	60-130%

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM356-BS	M10831.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	60-130%
2037-26-5	Toluene-D8	104%	60-130%
460-00-4	4-Bromofluorobenzene	96%	60-130%

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-BS	N11702.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	80	92.1	115	60-130
71-43-2	Benzene	20	19.2	96	60-130
108-86-1	Bromobenzene	20	17.4	87	60-130
74-97-5	Bromochloromethane	20	24.8	124	60-130
75-27-4	Bromodichloromethane	20	19.7	99	60-130
75-25-2	Bromoform	20	19.2	96	60-130
104-51-8	n-Butylbenzene	20	17.3	87	60-130
135-98-8	sec-Butylbenzene	20	17.9	90	60-130
98-06-6	tert-Butylbenzene	20	17.7	89	60-130
108-90-7	Chlorobenzene	20	18.8	94	60-130
75-00-3	Chloroethane	20	21.7	109	60-130
67-66-3	Chloroform	20	22.2	111	60-130
95-49-8	o-Chlorotoluene	20	17.3	87	60-130
106-43-4	p-Chlorotoluene	20	17.9	90	60-130
56-23-5	Carbon tetrachloride	20	18.3	92	60-130
75-34-3	1,1-Dichloroethane	20	21.7	109	60-130
75-35-4	1,1-Dichloroethylene	20	21.1	106	60-130
563-58-6	1,1-Dichloropropene	20	17.6	88	60-130
96-12-8	1,2-Dibromo-3-chloropropane	20	17.7	89	60-130
106-93-4	1,2-Dibromoethane	20	18.7	94	60-130
107-06-2	1,2-Dichloroethane	20	17.4	87	60-130
78-87-5	1,2-Dichloropropane	20	19.7	99	60-130
142-28-9	1,3-Dichloropropane	20	18.9	95	60-130
108-20-3	Di-Isopropyl ether	20	19.3	97	60-130
594-20-7	2,2-Dichloropropane	20	21.9	110	60-130
124-48-1	Dibromochloromethane	20	19.0	95	60-130
75-71-8	Dichlorodifluoromethane	20	14.8	74	60-130
156-59-2	cis-1,2-Dichloroethylene	20	21.8	109	60-130
10061-01-5	cis-1,3-Dichloropropene	20	19.4	97	60-130
541-73-1	m-Dichlorobenzene	20	18.4	92	60-130
95-50-1	o-Dichlorobenzene	20	17.9	90	60-130
106-46-7	p-Dichlorobenzene	20	18.2	91	60-130
156-60-5	trans-1,2-Dichloroethylene	20	21.1	106	60-130
10061-02-6	trans-1,3-Dichloropropene	20	19.1	96	60-130
100-41-4	Ethylbenzene	20	19.1	96	60-130
637-92-3	Ethyl Tert Butyl Ether	20	20.4	102	60-130

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-BS	N11702.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
591-78-6	2-Hexanone	80	68.3	85	60-130
87-68-3	Hexachlorobutadiene	20	17.5	88	60-130
98-82-8	Isopropylbenzene	20	19.5	98	60-130
99-87-6	p-Isopropyltoluene	20	17.4	87	60-130
108-10-1	4-Methyl-2-pentanone	80	79.6	100	60-130
74-83-9	Methyl bromide	20	25.7	129	60-130
74-87-3	Methyl chloride	20	21.8	109	60-130
74-95-3	Methylene bromide	20	20.0	100	60-130
75-09-2	Methylene chloride	20	21.8	109	60-130
78-93-3	Methyl ethyl ketone	80	81.4	102	60-130
1634-04-4	Methyl Tert Butyl Ether	20	19.9	100	60-130
91-20-3	Naphthalene	20	20.6	103	60-130
103-65-1	n-Propylbenzene	20	17.6	88	60-130
100-42-5	Styrene	20	18.4	92	60-130
994-05-8	Tert-Amyl Methyl Ether	20	20.8	104	60-130
75-65-0	Tert-Butyl Alcohol	100	114	114	60-130
630-20-6	1,1,1,2-Tetrachloroethane	20	18.6	93	60-130
71-55-6	1,1,1-Trichloroethane	20	21.1	106	60-130
79-34-5	1,1,2,2-Tetrachloroethane	20	19.3	97	60-130
79-00-5	1,1,2-Trichloroethane	20	19.8	99	60-130
87-61-6	1,2,3-Trichlorobenzene	20	19.0	95	60-130
96-18-4	1,2,3-Trichloropropane	20	19.3	97	60-130
120-82-1	1,2,4-Trichlorobenzene	20	18.5	93	60-130
95-63-6	1,2,4-Trimethylbenzene	20	18.5	93	60-130
108-67-8	1,3,5-Trimethylbenzene	20	17.3	87	60-130
127-18-4	Tetrachloroethylene	20	16.2	81	60-130
108-88-3	Toluene	20	17.6	88	60-130
79-01-6	Trichloroethylene	20	19.4	97	60-130
75-69-4	Trichlorofluoromethane	20	22.0	110	60-130
75-01-4	Vinyl chloride	20	21.7	109	60-130
1330-20-7	Xylene (total)	60	54.1	90	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	112%	60-130%

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-BS	N11702.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	90%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

5.2.3  
5

# Blank Spike Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN391-BS	N11703.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	60-130%
2037-26-5	Toluene-D8	89%	60-130%
460-00-4	4-Bromofluorobenzene	90%	60-130%



# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8716-6MS	M10849.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6MSD	M10850.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6	M10845.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	C8716-6 ug/kg	Spike Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	26.2	J	158	193	106	204	113	6	60-130/30
71-43-2	Benzene	ND		39.5	40.9	103	40.2	102	2	60-130/30
108-86-1	Bromobenzene	ND		39.5	38.0	96	38.3	97	1	60-130/30
74-97-5	Bromochloromethane	ND		39.5	41.0	104	41.9	107	2	60-130/30
75-27-4	Bromodichloromethane	ND		39.5	46.1	117	40.9	104	12	60-130/30
75-25-2	Bromoform	ND		39.5	43.1	109	42.3	108	2	60-130/30
104-51-8	n-Butylbenzene	ND		39.5	39.1	99	37.0	94	6	60-130/30
135-98-8	sec-Butylbenzene	ND		39.5	39.4	100	37.1	94	6	60-130/30
98-06-6	tert-Butylbenzene	ND		39.5	39.4	100	37.4	95	5	60-130/30
108-90-7	Chlorobenzene	ND		39.5	39.1	99	38.8	99	1	60-130/30
75-00-3	Chloroethane	ND		39.5	39.7	100	42.6	108	7	60-130/30
67-66-3	Chloroform	ND		39.5	43.7	111	40.1	102	9	60-130/30
95-49-8	o-Chlorotoluene	ND		39.5	39.7	100	37.5	95	6	60-130/30
106-43-4	p-Chlorotoluene	ND		39.5	40.4	102	39.6	101	2	60-130/30
56-23-5	Carbon tetrachloride	ND		39.5	45.7	116	38.7	98	17	60-130/30
75-34-3	1,1-Dichloroethane	ND		39.5	43.0	109	40.7	104	5	60-130/30
75-35-4	1,1-Dichloroethylene	ND		39.5	38.5	97	40.2	102	4	60-130/30
563-58-6	1,1-Dichloropropene	ND		39.5	42.5	108	39.0	99	9	60-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		39.5	44.9	114	43.7	111	3	60-130/30
106-93-4	1,2-Dibromoethane	ND		39.5	42.2	107	42.3	108	0	60-130/30
107-06-2	1,2-Dichloroethane	ND		39.5	47.6	120	40.6	103	16	60-130/30
78-87-5	1,2-Dichloropropane	ND		39.5	40.8	103	41.5	106	2	60-130/30
142-28-9	1,3-Dichloropropane	ND		39.5	42.7	108	41.0	104	4	60-130/30
108-20-3	Di-Isopropyl ether	ND		39.5	39.3	99	39.4	100	0	60-130/30
594-20-7	2,2-Dichloropropane	ND		39.5	44.8	113	38.5	98	15	60-130/30
124-48-1	Dibromochloromethane	ND		39.5	43.2	109	39.9	102	8	60-130/30
75-71-8	Dichlorodifluoromethane	ND		39.5	57.4	145* a	51.6	131* a	11	60-130/30
156-59-2	cis-1,2-Dichloroethylene	ND		39.5	40.0	101	40.2	102	0	60-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		39.5	43.4	110	40.5	103	7	60-130/30
541-73-1	m-Dichlorobenzene	ND		39.5	37.7	95	37.3	95	1	60-130/30
95-50-1	o-Dichlorobenzene	ND		39.5	39.9	101	38.4	98	4	60-130/30
106-46-7	p-Dichlorobenzene	ND		39.5	37.6	95	37.4	95	1	60-130/30
156-60-5	trans-1,2-Dichloroethylene	ND		39.5	39.4	100	40.1	102	2	60-130/30
10061-02-6	trans-1,3-Dichloropropene	ND		39.5	43.4	110	40.7	104	6	60-130/30
100-41-4	Ethylbenzene	ND		39.5	41.4	105	38.7	98	7	60-130/30
637-92-3	Ethyl tert-Butyl Ether	ND		39.5	43.9	111	41.6	106	5	60-130/30

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8716-6MS	M10849.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6MSD	M10850.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6	M10845.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Compound	C8716-6 ug/kg	Spike Q	ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND		158	184	116	189	120	3	60-130/30
87-68-3	Hexachlorobutadiene	ND		39.5	41.3	104	36.5	93	12	60-130/30
98-82-8	Isopropylbenzene	ND		39.5	41.8	106	38.4	98	8	60-130/30
99-87-6	p-Isopropyltoluene	ND		39.5	38.8	98	37.2	95	4	60-130/30
108-10-1	4-Methyl-2-pentanone	ND		158	189	120	192	122	2	60-130/30
74-83-9	Methyl bromide	ND		39.5	40.6	103	43.0	109	6	60-130/30
74-87-3	Methyl chloride	ND		39.5	45.4	115	42.1	107	8	60-130/30
74-95-3	Methylene bromide	ND		39.5	45.5	115	43.1	110	5	60-130/30
75-09-2	Methylene chloride	ND		39.5	41.3	104	42.2	107	2	60-130/30
78-93-3	Methyl ethyl ketone	ND		158	176	111	189	120	7	60-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		39.5	44.4	112	42.9	109	3	60-130/30
91-20-3	Naphthalene	ND		39.5	43.8	111	42.6	108	3	60-130/30
103-65-1	n-Propylbenzene	ND		39.5	38.7	98	37.2	95	4	60-130/30
100-42-5	Styrene	ND		39.5	39.8	101	38.5	98	3	60-130/30
994-05-8	Tert-Amyl Methyl Ether	ND		39.5	42.3	107	40.8	104	4	60-130/30
75-65-0	Tert Butyl Alcohol	ND		198	224	113	231	118	3	60-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		39.5	41.5	105	39.4	100	5	60-130/30
71-55-6	1,1,1-Trichloroethane	ND		39.5	44.5	113	39.8	101	11	60-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		39.5	40.0	101	43.2	110	8	60-130/30
79-00-5	1,1,2-Trichloroethane	ND		39.5	42.2	107	41.7	106	1	60-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		39.5	41.2	104	39.5	101	4	60-130/30
96-18-4	1,2,3-Trichloropropane	ND		39.5	45.9	116	45.2	115	2	60-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		39.5	39.7	100	37.6	96	5	60-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		39.5	39.2	99	37.6	96	4	60-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		39.5	39.2	99	37.7	96	4	60-130/30
127-18-4	Tetrachloroethylene	ND		39.5	39.8	101	38.6	98	3	60-130/30
108-88-3	Toluene	ND		39.5	38.7	98	38.3	97	1	60-130/30
79-01-6	Trichloroethylene	ND		39.5	40.1	101	38.8	99	3	60-130/30
75-69-4	Trichlorofluoromethane	ND		39.5	46.3	117	41.8	106	10	60-130/30
75-01-4	Vinyl chloride	ND		39.5	41.3	104	40.7	104	1	60-130/30
1330-20-7	Xylene (total)	ND		119	119	100	116	98	3	60-130/30

CAS No.	Surrogate Recoveries	MS	MSD	C8716-6	Limits
1868-53-7	Dibromofluoromethane	115%	109%	113%	60-130%

5.3.1  
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# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8716-6MS	M10849.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6MSD	M10850.D	1	12/07/09	XB	n/a	n/a	VM356
C8716-6	M10845.D	1	12/07/09	XB	n/a	n/a	VM356

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-1, C8716-2, C8716-3, C8716-4, C8716-5, C8716-6

CAS No.	Surrogate Recoveries	MS	MSD	C8716-6	Limits
2037-26-5	Toluene-D8	98%	95%	102%	60-130%
460-00-4	4-Bromofluorobenzene	108%	101%	107%	60-130%

(a) High percent recovery; not detected in associated samples.

5.3.1  
5

# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8753-5MS	N11721.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5MSD	N11722.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5	N11718.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	C8753-5		Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
		ug/l	Q							
67-64-1	Acetone	ND		80	75.5	94	69.6	87	8	60-130/25
71-43-2	Benzene	ND		20	19.4	97	19.2	96	1	60-130/25
108-86-1	Bromobenzene	ND		20	18.0	90	17.4	87	3	60-130/25
74-97-5	Bromochloromethane	ND		20	24.4	122	23.4	117	4	60-130/25
75-27-4	Bromodichloromethane	ND		20	20.8	104	20.0	100	4	60-130/25
75-25-2	Bromoform	ND		20	19.0	95	18.0	90	5	60-130/25
104-51-8	n-Butylbenzene	ND		20	16.7	84	16.7	84	0	60-130/25
135-98-8	sec-Butylbenzene	ND		20	17.4	87	16.9	85	3	60-130/25
98-06-6	tert-Butylbenzene	ND		20	17.0	85	17.1	86	1	60-130/25
108-90-7	Chlorobenzene	ND		20	18.0	90	17.5	88	3	60-130/25
75-00-3	Chloroethane	ND		20	20.1	101	19.6	98	3	60-130/25
67-66-3	Chloroform	ND		20	20.6	103	20.0	100	3	60-130/25
95-49-8	o-Chlorotoluene	ND		20	18.3	92	16.4	82	11	60-130/25
106-43-4	p-Chlorotoluene	ND		20	17.6	88	18.7	94	6	60-130/25
56-23-5	Carbon tetrachloride	ND		20	18.9	95	18.8	94	1	60-130/25
75-34-3	1,1-Dichloroethane	ND		20	19.8	99	19.3	97	3	60-130/25
75-35-4	1,1-Dichloroethylene	ND		20	19.9	100	19.2	96	4	60-130/25
563-58-6	1,1-Dichloropropene	ND		20	18.7	94	18.4	92	2	60-130/25
96-12-8	1,2-Dibromo-3-chloropropane	ND		20	18.6	93	16.8	84	10	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	19.3	97	18.7	94	3	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	18.5	93	17.5	88	6	60-130/25
78-87-5	1,2-Dichloropropane	ND		20	19.8	99	19.1	96	4	60-130/25
142-28-9	1,3-Dichloropropane	ND		20	18.5	93	17.8	89	4	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	18.3	92	17.5	88	4	60-130/25
594-20-7	2,2-Dichloropropane	ND		20	19.2	96	19.0	95	1	60-130/25
124-48-1	Dibromochloromethane	ND		20	19.4	97	18.8	94	3	60-130/25
75-71-8	Dichlorodifluoromethane	ND		20	12.8	64	13.3	67	4	60-130/25
156-59-2	cis-1,2-Dichloroethylene	ND		20	20.5	103	20.0	100	2	60-130/25
10061-01-5	cis-1,3-Dichloropropene	ND		20	20.2	101	19.5	98	4	60-130/25
541-73-1	m-Dichlorobenzene	ND		20	18.2	91	16.8	84	8	60-130/25
95-50-1	o-Dichlorobenzene	ND		20	17.6	88	16.9	85	4	60-130/25
106-46-7	p-Dichlorobenzene	ND		20	17.3	87	16.5	83	5	60-130/25
156-60-5	trans-1,2-Dichloroethylene	ND		20	20.3	102	19.5	98	4	60-130/25
10061-02-6	trans-1,3-Dichloropropene	ND		20	18.6	93	18.0	90	3	60-130/25
100-41-4	Ethylbenzene	ND		20	17.9	90	17.7	89	1	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	19.5	98	18.7	94	4	60-130/25

5.3.2  
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# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8753-5MS	N11721.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5MSD	N11722.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5	N11718.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Compound	C8753-5 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
591-78-6	2-Hexanone	ND	80	71.4	89	64.8	81	10	60-130/25
87-68-3	Hexachlorobutadiene	ND	20	16.8	84	16.3	82	3	60-130/25
98-82-8	Isopropylbenzene	ND	20	18.0	90	17.9	90	1	60-130/25
99-87-6	p-Isopropyltoluene	ND	20	17.4	87	16.4	82	6	60-130/25
108-10-1	4-Methyl-2-pentanone	ND	80	92.5	116	85.5	107	8	60-130/25
74-83-9	Methyl bromide	ND	20	23.0	115	23.8	119	3	60-130/25
74-87-3	Methyl chloride	ND	20	20.1	101	19.3	97	4	60-130/25
74-95-3	Methylene bromide	ND	20	22.1	111	21.2	106	4	60-130/25
75-09-2	Methylene chloride	ND	20	21.0	105	20.0	100	5	60-130/25
78-93-3	Methyl ethyl ketone	ND	80	84.5	106	76.2	95	10	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND	20	20.2	101	18.9	95	7	60-130/25
91-20-3	Naphthalene	ND	20	21.1	106	19.7	99	7	60-130/25
103-65-1	n-Propylbenzene	ND	20	18.1	91	17.4	87	4	60-130/25
100-42-5	Styrene	ND	20	17.2	86	16.3	82	5	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND	20	19.9	100	18.7	94	6	60-130/25
75-65-0	Tert-Butyl Alcohol	ND	100	121	121	115	115	5	60-130/25
630-20-6	1,1,1,2-Tetrachloroethane	ND	20	18.1	91	17.5	88	3	60-130/25
71-55-6	1,1,1-Trichloroethane	ND	20	20.1	101	19.4	97	4	60-130/25
79-34-5	1,1,2,2-Tetrachloroethane	ND	20	21.1	106	19.3	97	9	60-130/25
79-00-5	1,1,2-Trichloroethane	ND	20	19.1	96	18.2	91	5	60-130/25
87-61-6	1,2,3-Trichlorobenzene	ND	20	18.0	90	17.2	86	5	60-130/25
96-18-4	1,2,3-Trichloropropane	ND	20	19.1	96	17.9	90	6	60-130/25
120-82-1	1,2,4-Trichlorobenzene	ND	20	17.5	88	17.1	86	2	60-130/25
95-63-6	1,2,4-Trimethylbenzene	ND	20	17.5	88	17.4	87	1	60-130/25
108-67-8	1,3,5-Trimethylbenzene	ND	20	17.9	90	17.3	87	3	60-130/25
127-18-4	Tetrachloroethylene	ND	20	15.3	77	15.1	76	1	60-130/25
108-88-3	Toluene	ND	20	17.1	86	17.1	86	0	60-130/25
79-01-6	Trichloroethylene	ND	20	19.0	95	18.8	94	1	60-130/25
75-69-4	Trichlorofluoromethane	ND	20	19.3	97	19.2	96	1	60-130/25
75-01-4	Vinyl chloride	ND	20	19.3	97	19.2	96	1	60-130/25
1330-20-7	Xylene (total)	ND	60	50.5	84	49.9	83	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C8753-5	Limits
1868-53-7	Dibromofluoromethane	109%	105%	109%	60-130%

5.3.2  
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# Matrix Spike/Matrix Spike Duplicate Summary

**Job Number:** C8716  
**Account:** ERMCAWC ERM-West, Inc.  
**Project:** Red Hanger Cleaners - Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C8753-5MS	N11721.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5MSD	N11722.D	1	12/17/09	TF	n/a	n/a	VN391
C8753-5	N11718.D	1	12/17/09	TF	n/a	n/a	VN391

The QC reported here applies to the following samples:

Method: SW846 8260B

C8716-7

CAS No.	Surrogate Recoveries	MS	MSD	C8753-5	Limits
2037-26-5	Toluene-D8	92%	92%	94%	60-130%
460-00-4	4-Bromofluorobenzene	97%	96%	88%	60-130%

5.3.2  
5