

BEX Portfolio, LLC

Site Assessment Summary Report

Flair/Fazio Cleaners
23383 Mulholland Drive
Woodland Hills, California
(SLIC No. 0645, Site ID No. 1848600)

April 21, 2015



James A. Gonzales, PG, CHG
Senior Geologist/Project Manager

Andrew S. Leavitt, PG
Staff Geologist

Michele E. Amaral
Principal Toxicologist

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Prepared for:
BEX Portfolio, LLC

Prepared by:
ARCADIS U.S., Inc.
320 Commerce
Suite 200
Irvine
California 92602
Tel 714.730.9052
Fax 714.730.9345

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Acronyms and Abbreviations

1,2-DCA	1,2-dichloroethane
1,2-DCE	1,2-dichloroethene
4,4'-DDE	dichlorodiphenyldichloroethylene
4, 4'-DDT	dichlorodiphenyltrichloroethane
AET	Applied Environmental Technologies, Inc.
ARCADIS	ARCADIS U.S., Inc.
bgs	below ground surface
BEX	BEX Portfolio, LLC
cis-1,2-DCA	cis-1,2-dichloroethane
cis-1,2-DCE	cis-1,2-dichloroethene
COC	constituent of concern
DTSC	California Department of Toxic Substances Control
ELCR	excess lifetime cancer risk
ESL	Environmental Screening Level
HASP	health and safety plan
inHg	inches of mercury
J&H	J&H Drilling Company, Inc.
MCL	Maximum Contaminant Level
mg/L	milligram(s) per liter
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
MRCC	M.R. Chassé Company
msl	mean sea level
PCE	tetrachloroethene
PES	PES Environmental, Inc.
ppmv	parts per million by volume
RBCA	Risk Based Corrective Action
RSL	USEPA Regional Screening Level
RWQCB	California Regional Water Quality Control Board, Los Angeles Region

SCAQMD	South Coast Air Quality Management District
SFRWQCB	California Regional Water Quality Control Board, San Francisco Bay Region
Site	Flair/Fazio Cleaners, 23383 Mulholland Drive, Woodland Hills, California
SSTL	site-specific target level
SVE	soil vapor extraction
TCE	trichloroethene
trans-1,2-DCE	trans-1,2-dichloroethene
USEPA	United States Environmental Protection Agency
VES	vapor extraction system
VOC	volatile organic compound

1. Introduction

On behalf of BEX Portfolio, LLC (BEX), ARCADIS U.S., Inc. (ARCADIS) has prepared this summary report describing environmental assessment activities at the Fazio Cleaners (formerly Flair Cleaners) facility located at 23383 Mulholland Drive in Woodland Hills, California (“the Site”; Figures 1 and 2).

Site assessment activities were executed in accordance with the *Work Plan in Response to December 14, 2011 Letter* (ARCADIS 2012), which was approved by the California Regional Water Quality Control Board, Los Angeles Region (RWQCB) by letter dated December 2, 2014 (RWQCB 2014; Appendix A) and an *Addendum to Vapor Intrusion Work Plan* dated January 26, 2015 (ARCADIS 2015b), which was approved by the RWQCB by letter dated February 15, 2015 (RWQCB 2015; Appendix B). Additionally, in the February 2015 approval letter, the RWQCB granted an extension of the report submittal, as requested by ARCADIS in a letter titled *Report Due Date Extension Request for Vapor Intrusion, Soil, and Soil Evaluation Report*, dated January 29, 2015 (ARCADIS 2015c).

1.1 Regulatory Correspondence

According to previous assessments, soil and groundwater were impacted with volatile organic compounds (VOCs), specifically tetrachloroethene (PCE), related to previous operation of dry cleaning equipment at the Site. Activities completed to remediate the VOC-impacted soil, soil vapor, and groundwater included vapor extraction and air sparging venting. In a letter dated August 14, 2001, the RWQCB confirmed completion of soil remediation work at the Site. However, in the RWQCB letter dated December 2, 2014 (RWQCB 2014; Appendix A), the RWQCB identified the need for current data to evaluate site conditions and the need for active groundwater remediation. The additional recommended data to be collected and actions to be taken are summarized below:

- 1. Additional soil matrix sampling is needed to delineate the residual concentrations left in place and their corresponding locations beneath the Site. This information is necessary to assess if additional remediation is warranted.*
- 2. Additional soil vapor sampling is needed to delineate the residual concentrations left in place and their corresponding locations beneath the Site. This information is necessary to assess whether additional remediation or other alternative is warranted and/or feasible.*

- 3. Residual concentrations of PCE in groundwater have been decreasing in time. The core of the plume is directly beneath the dry cleaners building and the outdoor storage area. These concentrations do not warrant a no-further-action determination at the moment. Active remediation may be needed to expedite the degradation of VOCs in groundwater.*

1.2 Site Objectives

Based on the additional data collection recommended by the RWQCB and the environmental data review by ARCADIS, the following objectives were determined to facilitate the Site's path to closure:

1. Delineate current VOC concentrations in soil beneath the Site.
2. Assess current VOC concentrations in soil vapor beneath the Site and evaluate if they are amenable to remedial action, if determined to be necessary.
3. Evaluate the potential for vapor intrusion risk to on-site building occupants based on residual concentrations of VOCs in soil vapor beneath the Site.

Results of shallow soil and soil vapor data will guide planning of future sampling activities; therefore, a step-wise approach to sample collection has been determined to meet the objectives stated above. The steps in this approach include initial evaluation as discussed in this report followed by additional sampling, if deemed necessary, and development of a groundwater remedial approach. This report presents the site activities conducted and data collected to meet Objectives 1, 2, and 3 as detailed in Sections 2 and 3. A groundwater remedial approach will be addressed in future RWQCB correspondence.

2. Site Background

2.1 Site Description and Location

The dry cleaning facility is located within the El Camino Shopping Center at 23383 Mulholland Drive, Woodland Hills, California. A supermarket, restaurants, drug store, and other small businesses are present in the vicinity of the Site. The shopping center was constructed in the 1960s, and the dry cleaning establishment was built in approximately 1970. The Site is located in a mixed commercial, light industrial, and residential use area of Woodland Hills, and is bounded to the east by Arroyo Calabasas, to the south and west by the adjacent parking lot and Mulholland Drive, and to the north by Highway 101 and the



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southbound freeway on-ramp. The nearest residences are located approximately 200 feet east of the Site, and Arroyo Calabasas is entirely encased in a concrete flood control channel. There are no current plans to redevelop the Site, and it is expected to remain a dry cleaners in the future.

2.2 Previous Site Assessments

Previous site assessments with supporting figures and tables are discussed in the Applied Environmental Technologies, Inc. (AET) *Phase I Environmental Site Assessment* (AET 2008a) and are summarized herein. Previous site assessments included drilling soil borings B-1 through B-3, HP-1 through HP-5, GP-1, SB-6 through SB-18, and SG-1 through SG-20, and installation of groundwater monitoring wells MW-1 through MW-3. The boring and well locations are shown on Figure 2. Analytical data for these borings were provided to the RWQCB by previous consultants (AET 2008a).

2.2.1 Initial Investigation (1995–1997)

Soil vapor survey activities performed by PES Environmental, Inc. (PES) in December 1995 and February 1996 included the advancement of 20 soil vapor borings (SG-1 through SG-20). Detections of PCE were limited in extent and were primarily located directly outside the eastern side of the building in borings SG-10 and SG-11, and next to the former dry cleaning equipment in boring SG-19. The concentrations of PCE and trichloroethene (TCE) detected in soil were variable, with the greatest concentrations documented near the dry cleaning equipment. The maximum PCE concentration (3,700 micrograms per kilogram [$\mu\text{g}/\text{kg}$] in soil sample SB-6) was measured within 10 feet of the dry cleaning equipment at a depth of 6 feet below ground surface (bgs; PES 1997). The PCE and TCE concentrations extended vertically to a depth of approximately 25 feet bgs beneath the dry cleaning equipment area. The extent of PCE-impacted groundwater laterally was documented at distances of approximately 50 to 60 feet east and west of the dry cleaning equipment (HP-1 and HP-3, respectively) and as far downgradient (north) as wells MW-2 and MW-3 (PES 1997).

2.2.2 ARCADIS Investigation (2011)

From July 13 through 21, 2011, ARCADIS conducted site assessment activities to further characterize VOC impacts at the request of the RWQCB. Sampling locations were selected to characterize soil (ARC-SB-01 and ARC-SB-04), soil vapor (ARC-SV-01 through ARC-SV-12), and groundwater (ARC-HP-01 through ARC-HP-08) as shown on Figure 2.

the adjacent parking lot and Mulholland Drive, and to the north by Highway 101 and the southbound freeway on-ramp. The nearest residences are located approximately 200 feet east of the Site, and Arroyo Calabasas is entirely encased in a concrete flood control channel. There are no current plans to redevelop the Site, and it is expected to remain a dry cleaners in the future.

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This event is detailed in the *Environmental Site Assessment Summary Report* dated October 4, 2011 (ARCADIS 2011).

Soil samples were collected from soil borings ARC-SB-01 and ARC-SB-04 (co-located with soil vapor probes ARC-SV-01 and ARC-SV-04) and analyzed for VOCs, arsenic, and pesticides, as requested by the RWQCB. Each boring was drilled to a total depth of 10 feet bgs. Soil samples for laboratory analysis were collected at depths of 1, 5, and 10 feet bgs at each boring location. Pesticides including 4,4'-dichlorodiphenyldichloroethylene (DDE), 4,4'-dichlorodiphenyltrichloroethane (DDT), and technical chlordane were detected in soil at concentrations below screening levels in the 1-foot samples (ARCADIS 2011). Arsenic was detected at concentrations within typical background ranges (ARCADIS 2011). PCE was detected in all six soil samples at concentrations ranging from 7.57 µg/kg (ARC-SB-1 at 1 foot bgs) to 669 µg/kg (ARC-SB-4 at 10 feet bgs). TCE was also detected in the 10-foot sample from ARC-SB-04 (7.89 µg/kg). PCE concentrations were below the September 2008 direct contact industrial United States Environmental Protection Agency (USEPA) Regional Screening Level (RSL) of 2,600 µg/kg. Historical VOC soil data are presented in Table 1.

A total of 12 soil vapor probes were installed across the Site (Figure 2). Within each of the 12 borings (ARC-SV-01 through ARC-SV-12), a temporary soil vapor probe was installed to collect soil vapor samples at target depths between 5 and 7 feet bgs. Soil vapor samples were analyzed for VOCs using USEPA Method 8260B. PCE was detected at 11 of the 12 locations, at concentrations ranging from 0.73 micrograms per liter (µg/L) in ARC-SV-10 to 430 µg/L in ARC-SV-06. PCE was not detected in ARC-SV-07. TCE was detected at 5 of the 12 locations, at concentrations ranging from 0.16 µg/L at ARC-SV-08 to 48 µg/L at ARC-SV-09. Historical soil vapor data are presented in Table 2.

Groundwater sampling locations (ARCHP-01 through ARCHP-08) are shown on Figure 2. These locations were selected to evaluate the lateral and vertical extent of the groundwater plume possibly affected by VOCs. A direct-push drilling rig was used to advance eight borings to the first groundwater zone, which ranged from 11 to 20 feet bgs. In addition, groundwater samples were collected at depths of 28 to 32 feet bgs and 38 to 42 feet bgs at boring locations ARC-HP-01 through ARC-HP-06. Twenty Hydropunch groundwater samples were collected from eight locations and analyzed for VOCs using USEPA Method 8260B. PCE was detected at four of the eight locations (ARC-HP-01, ARC-HP-04, ARC-HP-05, and ARC-HP-08) at concentrations ranging from 3.13 µg/L (ARC-HP-05 at 30 feet bgs) to 186 µg/L (ARC-HP-04 at 18 feet bgs). TCE was detected at three of the eight locations (ARC-HP-04, ARC-HP-05, and ARC-HP-08) at concentrations ranging from 2.3 µg/L (ARC-HP-05 at 18 feet bgs) to 65 µg/L (ARC-HP-04 at 18 feet bgs).

Groundwater impacts are less than when the Site was first investigated, and are limited to the area inside the dry cleaner facility and directly to the east of the building.

2.3 Previous Soil and Groundwater Remedial Action

Site remediation was performed in accordance with the procedures detailed in the *Feasibility Study/Remedial Action Plan/Remedial Design Report and Closure Plan* dated February 28, 1997 (AET 1997a). Site remediation work included in-situ soil vapor extraction (SVE), ex-situ SVE, and groundwater air sparging/venting.

2.3.1 In-situ Soil Vapor Extraction

In-situ soil remediation using a vapor extraction system (VES) was performed at the Site from August 27, 1997 through May 6, 1998 and included a combination of SVE and air injection. Performance of the soil VES through May 6, 1998 is documented in AET's reports dated October 20, 1997, February 23, 1998, and September 30, 1998.

Shallow vapor extraction/injection wells VW-1 through VW-14 were used to extract and recover halogenated VOCs. Soil vapor VOC concentrations decreased from an initial 240 parts per million by volume (ppmv) at 22 inches of water (August 27, 1997) to 0.4 ppmv (December 29, 1997). AET reported a total VOC concentration reduction of approximately 99 percent in the soil at the Site (AET 2008a).

Due to consistently low VOC concentrations recorded at the mainline of the system using vapor extraction wells VW-1 through VW-14 (0.4 ppmv at 10 inches of water on December 29, 1997), deep vapor extraction wells DVW-1 through DVW-3 were added to the vapor recovery system on January 6, 1998. The vacuum placed on wells DVW-1 through DVW-3 increased extraction of and removal rates for VOCs. On May 6, 1998, the system was shut down due to decreasing concentrations resulting from removal of the VOCs from the soil and soil vapor (less than 5 ppmv). AET calculated that the total mass of VOCs removed from August 27, 1997 to May 6, 1998 was 191.46 pounds (AET 2008a).

2.3.2 Groundwater Air Sparging

Air sparging equipment was installed in deep vapor extraction wells DVW-1 through DVW-3 on October 2 and 3, 1997. The groundwater-sparging piping was placed at a depth of approximately 5 feet beneath the groundwater interface (encountered at depths of approximately 11 to 12 bgs) to a depth of approximately 17 feet bgs in wells DVW-1 through DVW-3. The groundwater-sparging and venting system was configured for a daily timed

operational cycle (7 days per week, 12 hours per day) from October 3, 1997 through January 6, 1998 (AET 2008a).

2.4 Soil and Groundwater Remediation Verification Sampling

2.4.1 Groundwater Testing – March and April 1998

The March and April 1998 groundwater analytical results indicated that significant reductions in VOC concentrations were achieved (AET 2008a). The reduction of VOC concentrations in groundwater was attributed to the combined use of groundwater air sparging/venting and SVE.

Concentrations of PCE in downgradient monitoring well MW-3, the most heavily impacted well prior to remedial action, were reduced from the initial concentration of 430 µg/L (in September 1996) to 5.9 µg/L (on March 3, 1998). PCE concentrations in that well remained low, at 8.48 µg/L in 2010. Significant reductions in PCE concentrations were also achieved in wells MW-1, MW-2, and DVW-2. Similar reductions in TCE concentrations were also observed in groundwater samples from monitoring wells MW-1 through MW-3. Residual concentrations of PCE and TCE were present in wells DVW-2 and DVW-1.

2.4.2 Soil Vapor Rebound Testing – July 1998

Following a review of AET's report dated February 23, 1998, the RWQCB indicated that prior to considering the Site for closure, it required temporarily shutting down the VES and then restarting it to determine if VOC rebound had occurred (RWQCB letter dated March 20, 1998).

AET prepared a verification sampling work plan that was submitted to the RWQCB on May 13, 1998. After approval of the work plan, the VES was started on July 22, 1998 for rebound testing. Details of the rebound testing are included in AET's report dated September 30, 1998. Low VOC concentrations were detected with an organic vapor analyzer during initial system rebound testing at low vacuum (0.2 ppmv at 2 inches of water), medium vacuum (0.4 ppmv at 7 inches of water), and high vacuum (1.4 ppmv at 14 inches of water). These VOC readings are similar to readings taken from January through May 1998, prior to system shutdown.

Low residual concentrations of 1,2-dichloroethane (1,2-DCA; 0.18 µg/L), TCE (0.15 µg/L), and PCE (8.3 µg/L) were detected in inlet vapor samples VS-1 and VS-2 at a mainline vacuum of 7 inches of water. Similar concentrations of cis-1,2-dichloroethane (cis-1,2-DCA;

0.18 µg/L), TCE (0.16 µg/L), and PCE (17 µg/L) were detected in vapor samples VS-1 and VS-2 at a maximum mainline vacuum of 10 inches of water.

The results of the rebound testing did not indicate significant rebounding of VOCs at the Site. Further remediation of the remaining residual low concentrations of VOCs was not considered to be technically and economically feasible. The RWQCB agreed that further vapor extraction may not be economically feasible, and required completion of a soil treatment verification boring work plan prior to consideration of site closure (RWQCB letter dated October 28, 1998).

2.4.3 Initial Treatment Verification Soil Sampling – February 1999

AET submitted a verification sampling work plan (dated December 16, 1998), which was approved by the RWQCB in a letter dated January 15, 1999. The RWQCB approval letter required that the verification borings be completed in the most heavily impacted areas, which were designated as near former borings SB-6 (inside the site building) and SB-15 (outside the site building).

On February 3, 1999, AET completed verification borings VB-1 and VB-2, as described in AET's report dated June 3, 1999. During previous assessments, concentrations of PCE (1,900 µg/kg and 3,700 µg/kg) were detected in SB-6 at depths of 6 and 12 feet bgs, respectively. Concentrations of PCE (1,000 and 1,200 µg/kg) were detected in SB-15 at depths of 5.5 and 11.5 feet bgs, respectively (AET 1999).

Verification borings VB-1 and VB-2 were drilled to depths of approximately 20 feet bgs. Boring VB-1 was located outside the site building, between the electrical substation and the storage area, adjacent to SB-15 and DVW-1. Boring VB-2 was located inside the site building, near the dry cleaning equipment, immediately west of SB-6 and SB-9. Discrete soil samples were collected at intervals of approximately 5 feet deep, beginning at 5 feet bgs and terminating at 20 feet bgs (AET 1999).

No VOCs, with the exception of PCE, were detected in the verification samples collected from inside boring VB-2 at concentrations above the laboratory reporting limit. Concentrations of PCE ranging from 21 µg/kg (at 10 feet bgs) to 59 µg/kg (at 5 feet bgs) were detected in VB-2. The average concentration of PCE (37.3 µg/kg) was 98.7 percent lower than the average PCE concentration (2,800 µg/kg) in the closest adjacent boring (SB-6), which was sampled prior to remediation (AET 1999).

No VOCs, with the exception of PCE and TCE, were detected in the verification samples collected from outside boring VB-1 at concentrations above the laboratory reporting limit. Concentrations of PCE ranging from 99 µg/kg (at 5 feet bgs) to 600 µg/kg (at 15 feet bgs) were detected in VB-1. TCE concentrations in VB-1 ranged from 13 µg/kg (at 20 feet bgs) to 28 µg/kg (at 20 feet bgs). The average concentrations of PCE (352.3 µg/kg) and TCE (18 µg/kg) were 68 percent and 82 percent lower than the average concentrations of PCE and TCE (1,100 µg/kg and 100 µg/kg, respectively) in the closest adjacent boring (SB-15), which was sampled prior to remediation (AET 1999).

Based on these results, AET requested that the RWQCB designate the Site as suitable for closure status with no further action required, pending proper removal/abandonment of the existing remediation features. The RWQCB required additional verification sampling prior to granting site closure (RWQCB letter dated July 21, 1999). The scope of work included sampling static soil vapors from wells MW-1 through MW-3 and DVW-1 through DVW-3, and collection and analysis of groundwater samples.

2.4.4 Verification Sampling for Residual VOCs in Soil Vapor and Groundwater – September 1999

As requested by the RWQCB, AET personnel collected samples of static soil vapors from wells MW-1 through MW-3 and DVW-1 through DVW-3. No concentrations of halogenated VOCs were detected in vapor samples collected from wells MW-1 through MW-3 and DVW-1 through DVW-3. Details are documented in AET's report dated February 24, 2000.

Depth to water ranged from 11.06 feet (DVW-2) to 13.56 feet (DVW-3) below the top of the well heads, as measured on September 28, 1999. Groundwater flow beneath the Site was predominantly to the northwest at a gradient of 0.013 feet per foot, similar to previous events. Following collection of depth-to-water measurements, groundwater samples were collected from wells DVW-1 and DVW-2 and analyzed to determine if residual VOC concentrations were present in groundwater (AET 2000).

Halogenated VOCs were not detected in wells MW-1 through MW-3 and DVW-1. Low concentrations of PCE were detected in wells DVW-2 (1.9 µg/L) and DVW-3 (0.5 µg/L). These concentrations were well below the state Maximum Contaminant Level (MCL) of 5 µg/L for PCE in drinking water. No other halogenated VOCs were detected at concentrations above the laboratory reporting limit in wells DVW-2 and DVW-3.

Based on the results of the verification sampling, AET requested that the RWQCB designate the Site as suitable for closure with no further action required, pending proper removal/abandonment of the existing remediation features. The RWQCB letter dated

August 14, 2001 indicated that no further soil work was required, but additional groundwater treatment verification sampling was required near former groundwater sample location HP-4.

2.4.5 Groundwater Treatment Verification Sampling – December 2002 and February 2003

In response to RWQCB requirements for groundwater verification sampling, on December 26, 2002, AET advanced soil boring GP-1(W) next to the former location of HP-4. The purpose of the work was to confirm that remediation of groundwater impacted by VOCs had been completed at the Site. Based on the RWQCB letter dated August 14, 2001, groundwater was sampled but no soil samples were collected from the boring. In addition, all on-site groundwater monitoring wells were monitored and sampled on February 13, 2003. Details are documented in AET's report dated June 25, 2003.

Soil boring GP-1(W) was drilled within a 5-foot radius of the former location of HP-4 to a depth of approximately 20 feet bgs. One groundwater grab sample was collected from the boring using a stainless steel wire screen point sampler. Concentrations of PCE (71.2 µg/L) and TCE (3.7 µg/L) were detected in the groundwater grab sample collected from boring GP-1(W). VOCs were not detected in well MW-1. PCE was detected in wells MW-2, MW-3, and DVW-1 through DVW-3 at concentrations ranging from 0.8 µg/L in DVW-3 to 59.2 µg/L in DVW-2. TCE was detected in wells MW-2, MW-3, DVW-1, and DVW-2 at concentrations ranging from 1.9 µg/L in MW-2 to 6.5 µg/L in DVW-2. Cis-1,2-dichloroethene (cis-1,2-DCE) was detected in wells MW-2, MW-3, DVW-1, and DVW-2 at concentrations ranging from 2.4 µg/L in MW-2 to 15.4 µg/L in DVW-2 (AET 2003).

Based on the December 2002 and February 2003 groundwater analytical results, Risk Based Corrective Action (RBCA) modeling was performed for TCE, PCE, and 1,2-dichloroethene (1,2-DCE) in groundwater. Details are documented in AET's report dated June 25, 2003. Groundwater analytical data, along with other site-specific characteristics, were used to generate a Tier 2 evaluation, which included calculation of 95 upper confidence limits of the mean constituent concentrations. Based on the RBCA modeling, the representative concentrations of TCE, PCE, and cis-1,2-DCE in groundwater were calculated to be 0.0053 milligrams per liter (mg/L), 0.057 mg/L, and 0.0076 mg/L, respectively. The calculated site-specific target levels (SSTLs) were 0.36 mg/L for TCE, 0.71 mg/L for PCE, and 0.85 mg/L for cis-1,2-DCE. Analytical results indicated that residual concentrations of TCE, PCE, and cis-1,2-DCE in groundwater were below the corresponding SSTLs. Based on the modeling criteria described above, TCE, PCE, and cis-1,2-DCE in groundwater were not expected to reach a receptor at a distance of 1,320 feet downgradient from the Site in at least 100 years. AET subsequently requested site

closure. However, in a letter dated July 10, 2008, the RWQCB indicated that additional activities would be required prior to granting closure for the Site.

2.5 Groundwater Monitoring

AET conducted groundwater monitoring activities at the Site from September 1996 through October 2009. ARCADIS began monitoring the existing groundwater monitoring wells at the Site in March 2010 and has continued groundwater monitoring on a quarterly basis. The most recent quarterly monitoring event was conducted in November 2014 (fourth quarter 2014) and was reported to the RWQCB on January 15, 2015 (ARCADIS 2015a). Routine groundwater monitoring will occur on a semiannual basis starting the first semester of 2015 as approved by the RWQCB (RWQCB 2015; Appendix B).

3. Geology and Hydrogeology

3.1 Regional Geologic Conditions

The site vicinity is characterized by recent-age alluvium that is composed of sands, silts, and clays. The alluvial deposits are approximately 40 to 50 feet thick in the vicinity of the Site and overlie marine shales of the upper Miocene-age Modelo Formation (AET 1997a).

3.2 Site Soil Conditions

Previous investigations have indicated that the Site is underlain by recent-age alluvium consisting of sands, silts, and clays. Based on data from historical boring logs and the soil observed during the previous site assessment activities discussed above, the Site is underlain by predominantly sandy material interbedded with clayey sands and clay at shallow depth.

3.3 Regional Hydrogeologic Conditions

The Site is located in the southwest corner of the San Fernando Valley Groundwater Basin. According to the Upper Los Angeles River Area Watermaster, regionally extensive groundwater in the vicinity of the Site was present at an elevation of approximately 860 feet above mean sea level (msl) in spring 1995 to 900 feet above msl in fall 1998 (AET 2008b).

3.4 Site Hydrogeologic Conditions

Groundwater flow has been consistently to the north-northwest since the beginning of groundwater monitoring in 1996. In addition, ARCADIS' groundwater monitoring, which began in 2010, has supported the generalized direction of groundwater flow. Potentiometric surface levels measured in on-site wells occur consistently at depths of approximately 11 to 14 feet bgs. Based on data from historical boring logs, review of previous site investigations, and the environmental assessment discussed in this report, the first water-bearing zone underlying the Site appears to be partially confined. Initially, first encountered water was determined to be at the potentiometric surface observed in on-site monitoring wells. During the Hydropunch investigation conducted in 2011, groundwater was not observed until approximately 18 to 22 feet bgs; therefore, first encountered groundwater samples were taken at 18 feet bgs. This observation of groundwater depth is supported by a Hydropunch investigation conducted by PES in December 1995 in which groundwater in GP-1 was not encountered until 23 feet bgs (PES 1995). Furthermore, a Phase II environmental investigation conducted by M.R. Chassé Company (MRCC) in October 1995 observed water at approximately 17 feet bgs in borings upgradient of GP-1 (MRCC 1995).

3.5 Impacted Groundwater

The primary constituent of concern (COC) at the Site is PCE, which has the highest historical (pre-remediation) concentration in groundwater. PCE was detected at a concentration of 1,700 µg/L in HP-4, located approximately 80 feet downgradient of the previously determined source zone (PES 1996a). The highest current (post-remediation) PCE concentrations are from the August 2011 sampling event: 186 µg/L in ARC-HP-04 at 18 feet bgs and 232 µg/L in DVW-1.

Chlorinated chemicals are observed to generally follow the direction of site groundwater flow, which is to the north-northwest. Previous site investigations and the data presented in this report have supported that COCs have generally been identified in the vicinity of the dry cleaning operations.

4. Scope of Work

ARCADIS submitted the *Work Plan in Response to December 14, 2011 Letter (ARCADIS 2012)*, which was approved by the RWQCB on December 2, 2014 (RWQCB 2014). Additionally, ARCADIS submitted an *Addendum to Vapor Intrusion Work Plan (ARCADIS 2015b)*, which was approved by the RWQCB on February 15, 2015 (RWQCB 2015). Along with authorization to implement the work plan, the RWQCB requested the collection of the following supplementary information in addition to the scope of work discussed in the work plan:

1. Expand soil vapor sampling laterally and vertically to delineate the soil vapor plume.
2. Advance six soil borings co-located with SV-13 and SV-18 and collect soil samples at depths of 2 and 5 feet bgs. Analyze all soil samples collected for chlorinated VOCs.
3. Notify RWQCB staff at least 72 hours before start of fieldwork.

In accordance with the list above, the scope of work includes the following activities:

- Pre-field activities that included notifying the RWQCB, contacting Underground Services Alert, and subsurface utility locating using an independent geophysical subcontractor to identify underground utilities in the vicinity of the proposed work. In addition, the site-specific Health and Safety Plan (HASP) was updated to address potential hazards and emergency planning in regard to the current scope of work.
- Drilling and sampling of six soil borings, five of which were co-located with soil vapor probes (ARC-SV-13 through ARC-SV-15, ARC-SV-17, and ARC-SV-18) beneath the Site. Soil samples were collected at depth intervals of 2 and 5 feet bgs, and were analyzed for VOCs using USEPA Method 8260B. Soil vapor probes were installed at five of the six boring locations, and samples were collected and analyzed by an on-site mobile laboratory using USEPA Method 8260B.
- Drilling and installation of three sub-slab vapor sample probes to collect vapor samples from directly beneath the building's concrete foundation slab. Vapor samples were collected and analyzed by Eurofins Air Toxics Ltd., a California-certified laboratory using USEPA Method TO-15.

5. Field Sampling Procedures

Field activities conducted from February 11 through February 14, 2015 at the Site are discussed in the following sections. Locations of soil samples (ARC-SV-13 through ARC-SV-18), soil vapor sample probes (ARC-SV-13 through ARC-SV-15, ARC-SV-17, and ARC-SV-18), and sub-slab vapor sample probes (SS-02 through SS-04) are shown on Figure 2. Notably, ARC-SV-16 and SS-01 were not installed due to subsurface conditions or Site constraints.

5.1 Pre-Field Activities

Drilling for installation of soil vapor and sub-slab vapor sample probes did not reach the depth of groundwater; therefore, no permits were required. ARCADIS pre-marked boring locations and notified Underground Services Alert, the California-state one call notification center for subsurface utility identification, approximately 48 hours in advance to check for the presence of underground utilities in the vicinity of the proposed work. The RWQCB was notified prior to beginning any of the field activities described below. The site-specific HASP was updated to describe work hazards and emergency planning, and was maintained on Site and followed during all phases of the current scope of work.

5.2 Soil Sampling

Soil samples were collected from soil borings ARC-SV-13 through ARC-SV-18 (co-located with soil vapor probes ARC-SV-13 through ARC-SV-15, ARC-SV-17, and ARC-SV-18) and analyzed for VOCs, as requested by the RWQCB.

Prior to drilling and soil sampling, each location was cored to penetrate the concrete (asphalt at boring location ARC-SV-18) surface to access the soil at the target locations. Each location was cored by a California-state-licensed C-8 concrete subcontractor. The concrete coring process occurred with a coring machine secured to the surface that advanced a 3-inch-diameter borehole through the concrete. All work relating to concrete coring was implemented in accordance with the site-specific HASP.

Soil borings ARC-SV-13 through ARC-SV-18 were advanced using manual hand augering methods. J&H Drilling Company, Inc. (J&H) of Buena Park, California, a California-state-licensed C-57 drilling subcontractor, advanced each boring vertically to a total depth of 5 feet bgs. The driller manually advanced the hand auger until the auger bucket was full (approximately 6 inches at a time). When the auger bucket was full, the tool was removed from the borehole, bringing the soil sample to the surface. At the surface, the soil sample

was exposed so that ARCADIS staff could collect analytical samples. Soil boring logs, along with soil vapor probe construction details, are provided in Appendix C.

With the exception of AUS-SV-16, soil samples for laboratory analysis were collected at depths of 2 and 5 feet bgs at each boring location. For soil boring AUS-SV-16, bentonite was encountered at approximately 3 feet bgs, which was a result of the proximity of a previous boring or conveyance piping. While a laboratory sample was collected at the 2-foot bgs interval, a 5-foot sample was not collected. Individual samples were packaged securely in an ice-filled cooler and transported to Eurofins Calscience Laboratory Services of Santa Fe Springs, California, a certified analytical laboratory. Strict chain-of-custody procedures were followed during sample transfer. Soil cuttings generated during field activities were placed in 55-gallon drums and stored on Site pending profiling and disposal at an off-site facility.

Soil samples were analyzed for VOCs using USEPA Method 8260B and were collected according to USEPA Method 5035 using laboratory-provided Terra Core samplers.

5.3 Soil Vapor Probe Installation and Sampling

J&H employed the manual hand auger drilling method to advance five soil vapor probes across the Site (Figure 2). When each of the five soil borings (ARC-SV-13 through ARC-SV-15, ARC-SV-17, and ARC-SV-18) was advanced to the final depth of 5 feet bgs, a 6-inch-long, 0.375-inch outer-diameter stainless steel soil vapor screen was set in a 1-foot interval of standard sand filter pack, allowing approximately 3 inches of sand above and below the screen. Nyla-flow tubing was connected to the soil vapor screen and capped with a vapor-tight two-way valve or cap at the surface to eliminate the potential for barometric pressure fluctuations to induce vapor transport between the subsurface and the atmosphere. A stainless steel Swagelok cap was installed in the closed position to allow equilibration of soil vapor concentrations to commence immediately following installation. Notably, a soil vapor probe was not installed at the ARC-SV-16 location due to the bentonite encountered at 3 feet bgs.

A 1-foot interval of dry, granular bentonite was placed above the sand pack followed by hydrated granular bentonite to the surface. A sand pack was used around the screened interval of each sample probe to allow soil vapor from the adjacent soil to reach the probe. Dry granular bentonite was used to prevent the hydrated bentonite from sealing the vapor probe screen and inhibiting the collection of soil vapor. The surface of each probe location was fitted with a flush-mounted and traffic-rated well box with sufficient room to store the tubing lines and valves or caps. Following installation, a minimum of 48 hours was allowed

for equilibration as described in the next section. Soil vapor probe construction logs are included in Appendix C.

Prior to sampling of all vapor probe locations, a real-time purge-volume test was conducted using one, three, and ten purge volumes to determine the optimal purge volume to be used throughout the sampling. Additionally, leak checks were performed for each sample collected. Samples were collected using a syringe and analyzed on Site by Jones Laboratories, a California-certified mobile laboratory. Soil gas samples were analyzed for VOCs using USEPA Method 8260B.

Soil vapor sampling and analysis were performed in accordance with the requirements set forth in the California Department of Toxic Substances Control's (DTSC's) and RWQCB's *Advisory Active Soil Gas Investigations* (DTSC 2012) and under the direction of an ARCADIS California Professional Geologist.

5.4 Sub-Slab Vapor Probe Installation and Sampling

J&H installed three temporary sub-slab soil vapor probes (SS-02, SS-03, and SS-04) by advancing a 5/8-inch-diameter borehole approximately 6 to 8 inches through the slab using an electric-powered rotary hammer drill. A 1-inch-long by 0.5-inch-wide (outer-diameter) stainless steel soil vapor probe was inserted into the borehole to a depth of approximately 0.5 inch above the bottom of the slab to prevent the probe from becoming obstructed. A 1-foot section of 0.25-inch (outer-diameter) Teflon tubing was attached to the top of the vapor probe, allowing approximately 6 inches of tubing above the surface to be used during the sampling process. A sub-slab probe was not installed at the proposed location of SS-01, which was outdoors and in a concrete sidewalk. The data provided by this location would not be indicative of sub-slab vapor conditions.

The annular space between the borehole and the tubing was filled with hydrated granular bentonite, which was permitted to set for a minimum of 24 hours before soil vapor sampling was initiated. A safety cone was placed over each probe to prevent a tripping hazard. Prior to sampling, the bentonite seal was inspected for cracking or settling. After the sampling of each sub-slab vapor probe was complete, each probe was removed by ARCADIS staff, backfilled with concrete, and made flush with the surface.

ARCADIS sampled the temporary sub-slab soil vapor probes approximately 48 hours after installation. Sampling occurred concurrently with sample collection from the soil vapor probes. Soil vapor conditions under the soil vapor probes are assumed to be representative

of typical sub-slab conditions; therefore, purging of the sub-slab soil vapor probes prior to sample collection was not necessary.

ARCADIS performed the leak test to ensure the integrity of the sampling system. The sub-slab soil vapor probe and entire sampling train (valves, tubing, gauges, manifold, and sample canister) were placed in an enclosure (shroud) with pliable weather stripping along the base. A tracer check compound (high purity helium) was permitted into the enclosure. Approximately 10 to 20 percent helium was maintained in the enclosure using a portable helium detector. Analysis for the tracer compound (helium) was performed in the field using a portable helium detector to assess whether leakage occurred. Upon successful completion of the leak test, the sub-slab soil vapor samples were collected using 1-liter 100%-certified SUMMA™ canisters at a maximum flow rate of 50 milliliters per minute. A vacuum of less than 10 inches of mercury (inHg) was maintained throughout sampling. Soil vapor sampling was stopped once the canister vacuum dropped to approximately 5 inHg. The leak test details and field measurements are provided on the sampling log included in Appendix D.

One duplicate sample collected in-line with its respective parent sample was also submitted to the laboratory for quality assurance purposes.

The sub-slab soil vapor samples were shipped under appropriate chain-of-custody protocols to Eurofins Air Toxics Ltd. in Folsom, California, for analysis of VOCs by Modified USEPA Method TO-15.

6. Analytical Results

6.1 Soil Results

A total of 11 soil samples were collected from the borings ARC-SV-13 through ARC-SV-18 at depths of 2 and 5 feet bgs (no sample was collected at 5 feet bgs from boring ARC-SV-16) and analyzed for VOCs using USEPA Method 5035/8260B. Laboratory analytical results for soil samples are summarized in Table 1 and shown on Figure 3. Complete laboratory analytical results and chain-of-custody forms are included in Appendix E.

VOCs were detected at concentrations above their respective laboratory reporting limits, as outlined below:

- PCE was detected in all 11 soil samples at concentrations ranging from 6.3 µg/kg at sample ARC-SV-18-5 to 620 µg/kg at sample ARC-SV-13-2.
- TCE was detected in 1 of the 11 soil samples analyzed. TCE was detected at a concentration of 8.0 µg/kg in the 2-foot soil sample collected from ARC-SV-18. TCE was not detected in any of the remaining samples.
- Cis-1,2-DCE was detected in 1 of the 11 soil samples analyzed. CIS-1,2-DCE was detected at a concentration of 1.8 µg/kg in the 2-foot soil sample collected from ARC-SV-18. Cis-1,2-DCE was not detected in any of the remaining samples.
- Benzene was detected in 1 of the 11 soil samples analyzed. Benzene was detected at a concentration of 1.3 µg/kg in the 5-foot soil sample collected from ARC-SV-17. Benzene was not detected in any of the remaining samples.
- Toluene was detected in 3 of the 11 soil samples. Toluene was detected in soil samples ARC-SV-14-2, ARC-SV-14-5, and ARC-SV-17-5 at concentrations of 1.5, 1.3, and 1.8 µg/kg, respectively. Toluene was not detected in any of the remaining samples.

6.2 Soil Vapor Results

Soil vapor samples were collected at a depth of approximately 5 feet bgs from five soil vapor probes (ARC-SV-13 through ARC-SV-15, ARC-SV-17, and ARC-SV-18) and analyzed for VOCs using USEPA Method 8260B. A soil vapor probe was not set in the ARC-SV-16 location due to bentonite encountered at 3 feet bgs. Field laboratory analytical

results for soil vapor samples are summarized in Table 2 and shown on Figure 4. Complete laboratory analytical results and chain-of-custody forms are included in Appendix F.

Seven soil vapor samples and one duplicate sample were analyzed for VOCs using USEPA Method 8260B. The total sample count includes the three vapor samples collected from ARC-SV-15 for the purge volume test. Based on the results of the purge volume test, it was determined that the optimal purge volume was three casing volumes. Additionally, a sample blank and method blank were analyzed for laboratory quality purposes.

VOCs were detected in soil vapor at concentrations above their respective laboratory reporting limits, as outlined below:

- PCE was detected at all five locations. PCE was detected at a concentration of 15.3 µg/L in ARC-SV-15-10P (the sample collected after purging 10 casing volumes during the purge volume test). The detected concentration of PCE in the sample collected from AUS-SV-15 at the optimal three purge volumes was 16.6 µg/L, which was the lowest concentration detected using the optimal purge volume. The highest concentration detected was to 173 µg/L in ARC-SV-13 DUP.
- TCE was detected at four of the five locations, at concentrations ranging from 0.444 µg/L in sample ARC-SV-17 to 11 µg/L in sample ARC-SV-13 DUP.
- Cis-1,2-DCE was detected at two of the five soil vapor probe locations at concentrations of 0.335 µg/L in sample ARC-SV-13, 0.290 µg/L in duplicate sample ARC-SV-13 DUP, and 1.08 µg/L in sample AUS-SV-18.

6.3 Sub-Slab Soil Vapor Results

Sub-slab soil vapor samples were collected at depths of approximately 0.5 foot bgs, just below the building's concrete foundation slab, from three sub-slab soil vapor probes (SS-02 through SS-04) and analyzed for VOCs using USEPA Method TO-15. A sub-slab vapor probe was not installed at SS-01, as proposed in the Work Plan, given that the proposed location is outdoors. Laboratory analytical results for sub-slab soil vapor samples are summarized in Table 3 and shown on Figure 5. Complete laboratory analytical results and chain-of-custody forms are included in Appendix G.

Three sub-slab soil vapor samples and one duplicate sample were analyzed for VOCs using USEPA Method TO-15. VOCs were detected at concentrations above their respective laboratory reporting limits, as outlined below:

- Ethanol was detected at all three sub-slab soil vapor probe locations, at concentrations ranging from 0.023 µg/L in sample SS-04 to 0.26 µg/L in samples SS-02 and duplicate sample SS-02-DUP.
- Acetone was detected at all three sub-slab soil vapor probe locations, at concentrations ranging from 0.11 µg/L in sample SS-03 to 0.41 µg/L in sample SS-02.
- 2-Propanol was detected at sub-slab soil vapor probe location SS-02, at concentrations of 0.24 µg/L in sample SS-02 and 0.22 µg/L in duplicate sample SS-02-DUP.
- 2-Butanone was detected at two of the three sub-slab soil vapor probe locations, at concentrations of 0.018 µg/L in sample SS-02 and 0.017 µg/L in samples SS-04 and SS-02-DUP.
- PCE was detected at all three sub-slab soil vapor probe locations, at concentrations ranging from 0.093 µg/L in sample SS-02-DUP (the TCE concentration in parent sample SS-02 was 0.11 µg/L) to 5.9 µg/L in sample SS-03.
- 4-Methyl-2-pentanone was detected at sub-slab soil vapor probe location SS-02, at concentrations of 0.0056 µg/L in sample SS-02 and 0.0058 µg/L in duplicate sample SS-02-DUP.
- Cis-1,2-DCE was detected at sub-slab soil vapor probe location SS-03, at a concentration of 0.011 µg/L.
- TCE was detected at sub-slab soil vapor probe location SS-03, at a concentration of 0.15 µg/L.

7. Risk-Based Screening Evaluation

This section presents an evaluation of the potential health risks to current and future on-site building occupants based on possible exposures to residual concentrations of VOCs in soil and soil vapor beneath the Site. A risk-based screening evaluation was also conducted to evaluate potential future construction/trench worker exposure to residual concentrations of VOCs in soil at the Site.

7.1 Soil

Although direct contact exposures with soil beneath the on-site building and with soil adjacent to the Site are unlikely for current and future on-site commercial/industrial workers and future on-site construction/trench workers, soil VOC concentrations were compared to risk-based screening levels protective of human health. Specifically, the maximum concentrations of VOCs in soil were compared to the January 2015 USEPA direct contact RSLs for industrial land use and California Regional Water Quality Control Board, San Francisco Bay Region ([SFRWQCB] 2013, Table K-3) direct contact Environmental Screening Levels (ESLs) for construction/trench workers. As shown in Table 1, none of the detected soil VOC concentrations are above the industrial soil RSL or construction/trench worker soil ESL.

7.2 Soil Vapor

The detected soil vapor VOC concentrations collected at 5 feet bgs beneath the building and adjacent to the building were compared to risk-based screening levels protective of possible vapor migration concerns for indoor commercial workers. Table 2 presents risk-based soil vapor screening levels calculated using the DTSC-recommended industrial worker indoor air screening levels presented in the July 14, 2014 DTSC Note Number 3 (DTSC 2014) and the DTSC-recommended existing contaminant source attenuation factor for commercial structures of 0.001 (DTSC 2011). The regulatory established indoor air screening levels are based on a target acceptable excess lifetime cancer risk (ELCR) of one-in-one million (1×10^{-6}) or an acceptable target hazard quotient of 1.0 for noncarcinogens.

As shown in Table 2, most of the PCE soil vapor concentrations collected during prior sampling events and during the February 2015 event exceeded the soil vapor screening level of 2.08 µg/L. TCE soil vapor concentrations collected at ARC-SV-06, ARC-SV-09, and ARC-SV-13 exceeded the soil vapor screening level of 8 µg/L. Cis-1,2-DCE and toluene

soil vapor concentrations were below the soil vapor screening levels of 31 and 1,300 µg/L, respectively.

Although TCE soil vapor concentrations were detected above the soil vapor screening level based on a 1×10^{-6} target acceptable ELCR, the estimated ELCR based on the maximum detected soil vapor TCE concentration collected during the most recent sampling event, 11 µg/L, would be approximately 1×10^{-6} . This estimated ELCR is equal to the low end of the regulatory acceptable target ELCR range of 1×10^{-6} to 1×10^{-4} . The maximum PCE soil vapor concentration collected during the most recent sampling event, 173 µg/L, would result in an estimated ELCR of approximately 8×10^{-5} , which is within the regulatory acceptable target ELCR range of 1×10^{-6} to 1×10^{-4} . The arithmetic average PCE soil vapor concentration of the detected data collected during the most recent sampling event, or all of the detected soil vapor data (5 feet bgs) collected at the Site, would result in an estimated ELCR of approximately 3×10^{-5} . Thus, residual VOC concentrations in soil vapor are unlikely to pose adverse health effects to indoor occupants of the on-site commercial building based on possible vapor migration from the subsurface.

7.3 Sub-Slab Soil Vapor

The detected sub-slab vapor VOC concentrations collected immediately beneath the building foundation were compared to risk-based screening levels protective of possible vapor migration concerns for indoor commercial workers. Table 3 presents risk-based sub-slab soil vapor screening levels calculated using the DTSC-recommended industrial worker indoor air screening levels presented in the July 14, 2014 DTSC Note Number 3 (DTSC 2014) and the DTSC-recommended sub-slab attenuation factor for commercial structures of 0.05 (DTSC 2011). If an indoor air screening level is not available in Note Number 3, (such as for acetone, 2-propanol, 2-butanone, and 4-methyl-2-pentanone), DTSC recommends use of the USEPA commercial/industrial worker indoor air RSL for commercial land use sites.

As shown in Table 3, no VOC sub-slab soil vapor concentration collected during the February 2015 event exceeded its sub-slab vapor screening level, with the exception of PCE. PCE was detected at concentrations in sub-slab soil vapor ranging from 0.093 (in SS-02) to 5.9 µg/L (SS-03), respectively, compared to a sub-slab vapor screening level of 0.041 µg/L. A sub-slab vapor screening level is unavailable for ethanol, which is relatively low in toxicity.

The estimated ELCRs based on the maximum and arithmetic average detected sub-slab soil vapor PCE concentrations would be approximately 1×10^{-4} and 4×10^{-5} , respectively.



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Flair/Fazio Cleaners, 23383 Mulholland
Drive, Woodland Hills, California
(SLIC No. 0645, Site ID No. 1848600)

These estimated ELCRs are equal to the high end of and within the regulatory acceptable target risk range of 1×10^{-6} to 1×10^{-4} . Based on the more representative average sub-slab vapor PCE concentration, residual concentrations of VOCs in sub-slab soil vapor are unlikely to pose adverse health effects to indoor occupants of the on-site commercial building based on possible vapor migration from the subsurface.

8. Summary and Discussion

8.1 Soil

As discussed, 11 soil samples were collected from depths of 2 and 5 feet bgs from five soil borings inside the dry cleaners and one soil boring in the back parking lot and loading area (Figure 2). All 11 soil samples were analyzed for VOCs. Soil VOC concentrations were compared to USEPA direct contact RSLs for industrial/commercial land use and SFRWQCB ESLs for possible construction/trench worker direct contact exposures:

- PCE was detected in all 11 soil samples at concentrations ranging from 6.3 µg/kg (ARC-SV-18 at 5 foot bgs) to 620 µg/kg (ARC-SV-13 at 2 feet bgs). TCE and cis-1,2-DCE were also detected in the 2-foot sample from ARC-SV-18 (8.0 and 1.8 µg/kg, respectively). Additionally, benzene and toluene were detected in the 5-foot sample from ARC-SV-17 (1.3 and 1.8 µg/kg, respectively), and toluene was detected in both the 2- and 5-foot samples from ARC-SV-14 (1.5 and 1.3 µg/kg, respectively). PCE concentrations were below the RSL of 2,600 µg/kg.
- None of the detected soil VOC concentrations were above the industrial soil direct contact RSL or construction/trench worker soil ESL. Thus, the residual VOC concentrations in soil are not expected to pose adverse health effects to current and future on-site commercial workers and future on-site construction/trench workers based on direct contact exposures.
- Site records (SCAQMD 2011) indicate that use of chlorinated solvents at the Site ceased in 2004; consequently, there are no ongoing chlorinated solvent sources at the Site.
- The previous extensive remedial activities have remediated COC concentrations in site soils. PCE concentrations in soil have decreased from a maximum of 3,700 µg/kg in SB-6 prior to remediation to 620 µg/kg in ARC-SV-13, which was collected in February 2015. Chlorinated solvents in soil are expected to further naturally degrade over time in the absence of any continued source.

8.2 Soil Vapor

As discussed, soil vapor samples were collected from five soil vapor probes at depths of approximately 5 feet bgs. The soil vapor samples were analyzed for VOCs using USEPA Method 8260B. Soil vapor concentrations were compared to soil vapor screening levels

calculated using the DTSC-recommended industrial worker indoor air screening levels and attenuation factor for commercial structures. PCE and TCE were detected at concentrations exceeding soil vapor screening levels:

- PCE was detected at concentrations above screening levels in samples collected at all five soil vapor locations. The highest PCE concentrations (153/173 µg/L and 51.4 µg/L) were detected in ARC-SV-13 (parent and duplicate samples) and ARC-SV-18, respectively. Soil vapor probe AUS-SV-13 is located inside the dry cleaning facility, and probe AUS-SV-18 is located outside of the building in the loading dock area. The remaining three soil vapor probes are located inside the dry cleaning facility.
- The maximum and arithmetic average PCE soil vapor concentrations collected during sampling result in estimated ELCRs that are within the regulatory acceptable target ELCR range of 1×10^{-6} to 1×10^{-4} , and thus these concentrations are unlikely to pose adverse health effects to indoor occupants of the on-site commercial building based on possible vapor migration from the subsurface.
- The estimated ELCR based on the maximum detected soil vapor TCE concentration collected during the most recent sampling event would be approximately equal to the low end of the regulatory acceptable target ELCR range of 1×10^{-6} to 1×10^{-4} .
- Soil vapor concentrations exceeding screening levels that were collected during the most recent site investigation are primarily located beneath the dry cleaning facility and directly to the east of the facility (Figure 4).
- As noted above, site records (SCAQMD 2011) indicate that chlorinated solvent use at the Site ceased in 2004 and there are no ongoing chlorinated solvent sources at the Site. The previous extensive remedial activities have remediated vapors in soil. Chlorinated solvents in soil vapor are expected to further naturally degrade over time in the absence of any continued source.

8.3 Sub-Slab Soil Vapor

Sub-slab soil vapor samples were collected from three sub-slab soil vapor probes at depths just beneath the building's concrete foundation slab of approximately 0.5 foot bgs. The three sub-slab soil vapor samples and one duplicate sample were analyzed for VOCs using USEPA Method TO-15. Sub-slab soil vapor VOC concentrations were compared to sub-slab soil vapor screening levels calculated using the DTSC-recommended industrial worker indoor air screening levels and a sub-slab attenuation factor for commercial

structures. PCE was detected at concentrations exceeding the sub-slab soil vapor screening levels:

- The estimated ELCRs based on the maximum and arithmetic average detected sub-slab soil vapor PCE concentrations are equal to the high end of and within the regulatory acceptable target risk range of 1×10^{-6} to 1×10^{-4} . Based on the more representative average sub-slab vapor PCE concentration, residual concentrations of VOCs in sub-slab soil vapor are unlikely to pose adverse health effects to indoor occupants of the on-site commercial building based on possible vapor migration from the subsurface.

9. Conclusions and Recommendations

Based on soil, soil vapor, and sub-slab soil vapor samples collected at the Site, and previous multi-depth groundwater sampling conducted at the Site, elevated PCE concentrations are present, but have continued to decrease significantly from pre-remedial concentrations. Previous consultants concluded that remedial SVE and air sparging and venting efforts have reduced concentrations to asymptotic levels at which additional remedial efforts are neither technically feasible nor cost-effective. The results of the most recent sampling event confirm this conclusion:

- Soil data collected in this investigation confirmed that soil concentrations beneath the dry cleaning facility have decreased from pre-remediation concentrations of up to 3,700 µg/kg to a current maximum concentration of 620 µg/kg. The residual VOC concentrations in soil are not expected to pose adverse health effects to current and future on-site commercial workers and future on-site construction/trench workers based on direct contact exposures.
- PCE soil vapor concentrations above risk-based screening levels were detected beneath and just to the east of the dry cleaning facility, but are not expected to pose adverse health effects to commercial workers within the on-site building based on potential vapor migration from the subsurface.
- Post-remediation monitoring conducted by ARCADIS over the past five years along with the Hydropunch data collected during the 2011 investigation have shown expected decreasing concentrations in groundwater over time. Additionally, the results of soil and soil vapor sampling during the most recent investigation completed at the Site show that post-remedial concentrations of COCs continue to remain significantly lower than pre-remediation levels.
- Elevated VOC concentrations in groundwater have been limited to the area directly beneath and to the east of the dry cleaners.
- The extent of affected soil and groundwater has been defined at the Site. Further investigation into these two media would not provide significant added benefit to assist in decision-making at the Site.



**Site Assessment Summary
Report**

Flair/Fazio Cleaners, 23383 Mulholland
Drive, Woodland Hills, California
(SLIC No. 0645, Site ID No. 1848600)

Based on the above conclusions, ARCADIS recommends the following:

- Continue to monitor the existing well network on a semiannual basis to confirm post-remedial concentrations of chlorinated solvents in soil and groundwater that continue to further decrease over time. The well network will be evaluated periodically (e.g., 2 years) to determine the monitoring value of each well. A request for a revised monitoring program will be made if a well is deemed to be ineffective for the monitoring program.



**Site Assessment Summary
Report**

Flair/Fazio Cleaners, 23383 Mulholland Drive, Woodland Hills, California (SLIC No. 0645, Site ID No. 1848600)

10. Certification

All geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by the undersigned ARCADIS California Professional Geologist.



April 21, 2015

Date

James A. Gonzales, PG, CHG

Senior Geologist

California Professional Geologist #8918

California Certified Hydrogeologist #984

* A professional geologist's certification of conditions comprises a declaration of his or her professional judgment. It does not constitute a warranty or guarantee, expressed or implied, nor does it relieve any other party of its responsibility to abide by contract documents, applicable codes, standards, regulations or ordinances.

11. Limitations Statement

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ARCADIS and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty or guarantee, express or implied, is intended or given. To the extent that ARCADIS relied upon any information prepared by other parties not under contract to ARCADIS, ARCADIS makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user's sole risk.

Results of any investigations or testing and any findings presented in this report apply solely to conditions existing at the time when ARCADIS' investigative work was performed. It must be recognized that any such investigative or testing activities are inherently limited and do not represent a conclusive or complete characterization. Conditions in other parts of the project site may vary from those at the locations where data were collected. ARCADIS' ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100 percent confidence in environmental investigation conclusions cannot reasonably be achieved.

ARCADIS, therefore, does not provide any guarantees, certifications, or warranties regarding any conclusions regarding environmental contamination of any such property. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

12. References

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Site Assessment Summary Report

Flair/Fazio Cleaners, 23383 Mulholland
Drive, Woodland Hills, California
(SLIC No. 0645, Site ID No. 1848600)

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Tables

Table 1
Summary of Soil Analytical Results
Environmental Site Assessment Summary Report
Fazio Cleaners
23383 Mulholland Drive, Woodland Hills, California

Sample ID	Date Sampled	Tetrachloroethene (PCE)	Trichloroethene (TCE)	cis-1,2-Dichloroethene	Benzene	Toluene
ARC-SB-1-1	07/20/2011	7.57	<4.0	<80	<4.0	NA
ARC-SB-1-10	07/20/2011	39.1	<4.0	<80	<4.0	NA
ARC-SB-1-5	07/20/2011	109	<4.0	<80	<4.0	NA
ARC-SB-4-1	07/20/2011	6.65	<4.0	<80	<4.0	NA
ARC-SB-4-10	07/20/2011	669	7.98	<80	<4.0	NA
ARC-SB-4-5	07/20/2011	369	<4.0	<80	<4.0	NA
ARC-SV-13-2	2/12/2015	620	<84	<42	<42	<42
ARC-SV-13-5	2/12/2015	520	<80	<40	<40	<40
ARC-SV-14-2	2/12/2015	59	<1.9	<0.93	<0.93	1.5
ARC-SV-14-5	2/12/2015	39	<1.7	<0.83	<0.83	1.3
ARC-SV-15-2	2/12/2015	9.1	<1.9	<0.93	<0.93	<0.93
ARC-SV-15-5	2/12/2015	33	<1.9	<0.95	<0.95	<0.95
ARC-SV-16-2	2/12/2015	15	<1.8	<0.90	<0.90	<0.90
ARC-SV-17-2	2/12/2015	24	<1.6	<0.82	<0.82	<0.82
ARC-SV-17-5	2/12/2015	160	<1.7	<0.87	1.3	1.8
ARC-SV-18-2	2/12/2015	71	8.0	1.8	<0.95	<0.95
ARC-SV-18-5	2/12/2015	6.3	<5.1	<5.1	<5.1	<5.1
Industrial Soil Direct Contact Regional Screening Level¹		100,000	6,000	2,300,000	5,100	47,000,000

Notes:

< = Not detected above laboratory reporting limit indicated.

Concentrations are in units of micrograms per kilogram (µg/kg).

¹ January 2015 U.S. Environmental Protection Agency direct contact Regional Screening Level (RSL) for industrial soil (µg/kg).

² California Environmental Protection Agency San Francisco Regional Water Quality Control Board 2013 direct contact Environmental Screening Level (ESL) for soil (µg/kg).

NA = Not Available

Table 2
Summary of Soil Vapor Analytical Results
Environmental Site Assessment Summary Report
Fazio Cleaners
23383 Mulholland Drive, Woodland Hills, California

		cis-1,2-Dichloroethene	Tetrachloroethene	Toluene	Trichloroethene
Sample ID	Date Sampled	<i>Analyte:</i>			
ARC-SV1	21-Jul-11	<1.0	39	<1.0	<1.0
ARC-SV2	7/21/2011	<0.10	0.93	<0.10	<0.10
ARC-SV3	7/21/2011	<1.0	34	<1.0	<1.0
ARC-SV4	7/21/2011	2.4	150	<1.0	3.7
ARC-SV5	7/21/2011	<1.0	6.1	<1.0	<1.0
ARC-SV5 DUP	7/21/2011	<1.0	5.9	<1.0	<1.0
ARC-SV6	7/21/2011	1.3	430	<1.0	19
ARC-SV7	7/21/2011	<0.10	<0.10	<0.10	<0.10
ARC-SV8	7/21/2011	<0.10	2.8	<0.10	0.16
ARC-SV9	7/21/2011	2.5	330	<1.0	48
ARC-SV10	7/21/2011	<0.10	0.73	<0.10	<0.10
ARC-SV11	7/21/2011	<1.0	4.3	<1.0	<1.0
ARC-SV12 1PV	7/21/2011	<1.0	69	1.6	<1.0
ARC-SV12 3PV	7/21/2011	<1.0	120	1.7	1.0
ARC-SV12 7PV	7/21/2011	<1.0	120	1.4	<1.0
ARC-SV-13	02/14/15	0.335	153*	<0.020	10.7*
ARC-SV-13 DUP	02/14/15	0.290	173*	<0.020	11.0*
ARC-SV-14	02/14/15	<0.020	17	<0.020	0.466
ARC-SV-15 1PV	02/14/15	<0.020	15.9	<0.020	<0.020
ARC-SV-15 3PV	02/14/15	<0.020	16.6	<0.020	<0.020
ARC-SV-15 10PV	02/14/15	<0.020	15.3	<0.020	<0.020
ARC-SV-17	02/14/15	<0.020	23.6	<0.020	0.444
ARC-SV-18	02/14/15	1.08	51.4	<0.020	7.16
Commercial/Industrial Indoor Air Screening Level^{1,2}		0.031	0.002	1.300	0.008
Commercial/Industrial Soil Vapor Screening Level^{3,4}		31	2.08	1,300	8

Notes:

Samples were analyzed by U.S. Environmental Protection Agency Method 8260B.

Concentrations are in units of micrograms per liter (µg/L)

< = Not detected above laboratory reporting limit indicated.

* = Dilutions for these compound(s); first number for all others

¹The Indoor Air Screening Levels are those recommended in the Department of Toxic Substances Control (DTSC) July 14, 2014 Note Number 3, *DTSC recommended methodology for use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities*.

²The Indoor Air Screening Levels for trichloroethene are recommended accelerated response action levels in DTSC August 23, 2014 Note Number 5, *Health-based Indoor Air Screening Criteria for Trichloroethylene (TCE)*.

³Soil Vapor Screening Level = Indoor Air Screening Level / Existing Contaminant Source Attenuation Factor

⁴For existing commercial structures, the DTSC-recommended soil gas attenuation factor is 0.001, from Table 2 of the DTSC 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*.

Shaded value = Indicates soil vapor concentration above commercial/industrial soil vapor screening level.

Table 3
Summary of Sub-Slab Soil Vapor Analytical Results

Environmental Site Assessment Summary Report
Fazio Cleaners
23383 Mulholland Drive, Woodland Hills, California

	<i>Analyte:</i>	Ethanol	Acetone	2-Propanol	2-Butanone (MEK)	4-Methyl-2-pentanone	cis-1,2-Dichloroethene	Trichloroethene	Tetrachloroethene
Sample ID	Date Sampled								
SS-02	02/14/15	0.26	0.41	0.24	0.018	0.0056	<0.0048	<0.0065	0.11
SS-02-DUP	02/14/15	0.26	0.38	0.22	0.017	0.0058	<0.0051	<0.0069	0.093
SS-03	02/14/15	0.031	0.11	<0.024	<0.029	<0.010	0.011	0.15	5.9
SS-04	02/14/15	0.023	0.17	<0.012	0.017	<0.0049	<0.0048	<0.0064	0.22
Commercial/Industrial Indoor Air Screening Level^{1,2}		NA	140	0.88	22	13	0.031	0.008	0.002
Commercial Sub-Slab Vapor Screening Level^{3,4}		NA	2,800	17.6	440	260	0.62	0.16	0.0416

Notes:

Samples were analyzed by U.S. Environmental Protection Agency Method 8260B.

Concentrations are in units of micrograms per liter (µg/L).

MEK = Methyl Ethyl Ketone

NA = Not Available

< = Not detected above laboratory reporting limit indicated.

¹ The Indoor Air Screening Levels are those recommended in the Department of Toxic Substances Control (DTSC) July 14, 2014 Note Number 3, *DTSC recommended methodology for use of U.S. EPA Regional Screening Levels (RSLs) in the Human Health Risk Assessment process at hazardous waste sites and permitted facilities*.

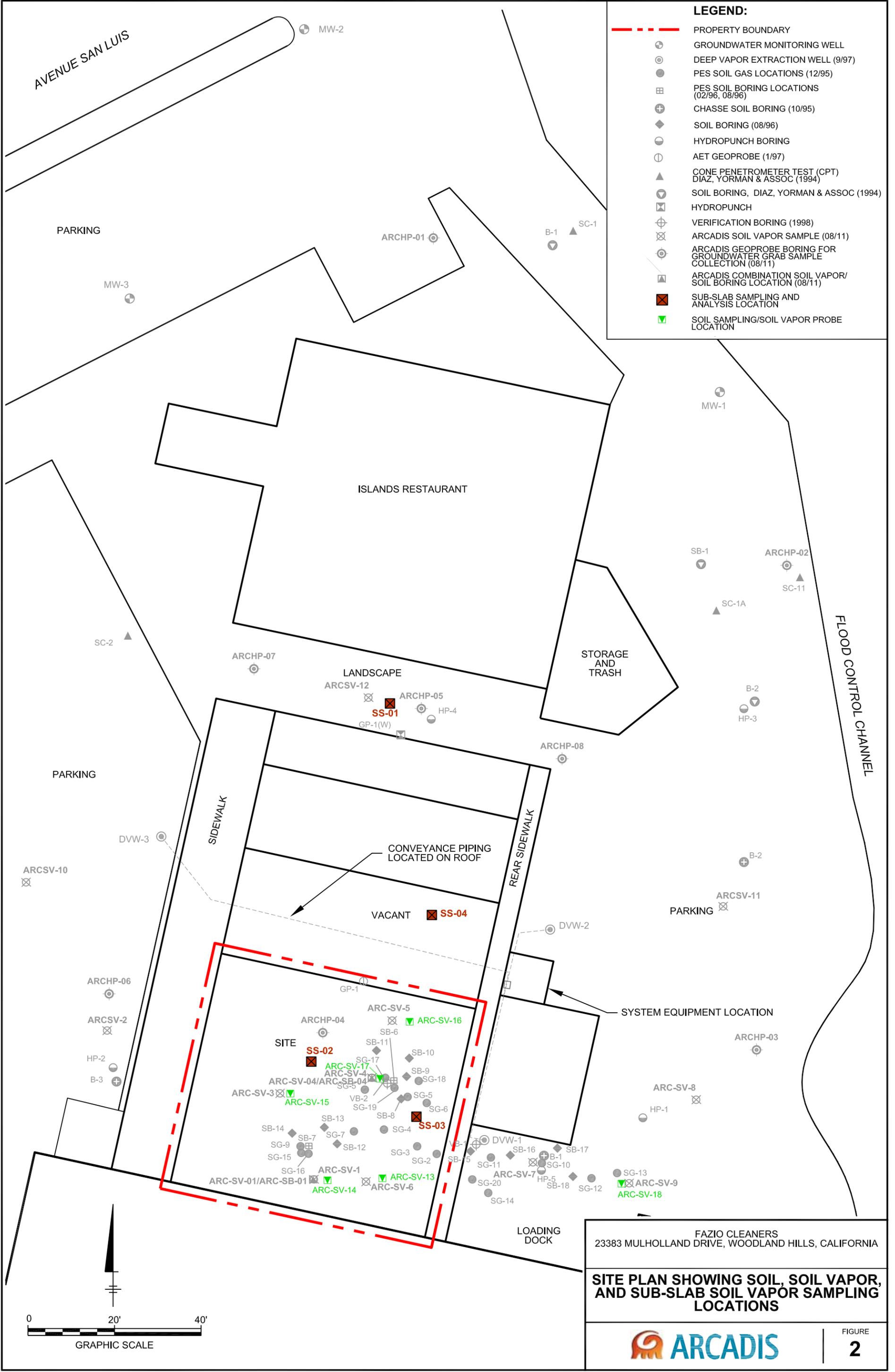
² The Indoor Air Screening Level for trichloroethene is the recommended accelerated response action level in DTSC August 23, 2014 Note Number 5, *Health-based Indoor Air Screening Criteria for Trichloroethylene (TCE)*.

³ Commercial Sub-Slab Soil Vapor Screening Level = Commercial Indoor Air Screening Level / Existing Commercial Sub-Slab Attenuation Factor.

⁴ For existing commercial and residential structures, the DTSC-recommended sub-slab attenuation factor is 0.05 from Table 2 of the DTSC 2011 *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air*.

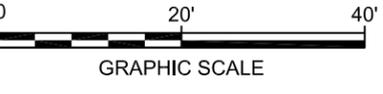
Shaded value = Indicates sub-slab vapor concentrations are above the sub-slab vapor screening level.

Figures



LEGEND:

- - - PROPERTY BOUNDARY
- GROUNDWATER MONITORING WELL
- DEEP VAPOR EXTRACTION WELL (9/97)
- PES SOIL GAS LOCATIONS (12/95)
- PES SOIL BORING LOCATIONS (02/96, 08/96)
- CHASSE SOIL BORING (10/95)
- SOIL BORING (08/96)
- HYDROPUNCH BORING
- AET GEOPROBE (1/97)
- CONE PENETROMETER TEST (CPT) DIAZ, YORMAN & ASSOC (1994)
- SOIL BORING, DIAZ, YORMAN & ASSOC (1994)
- HYDROPUNCH
- VERIFICATION BORING (1998)
- ARCADIS SOIL VAPOR SAMPLE (08/11)
- ARCADIS GEOPROBE BORING FOR GROUNDWATER GRAB SAMPLE COLLECTION (08/11)
- ARCADIS COMBINATION SOIL VAPOR/ SOIL BORING LOCATION (08/11)
- SUB-SLAB SAMPLING AND ANALYSIS LOCATION
- SOIL SAMPLING/SOIL VAPOR PROBE LOCATION



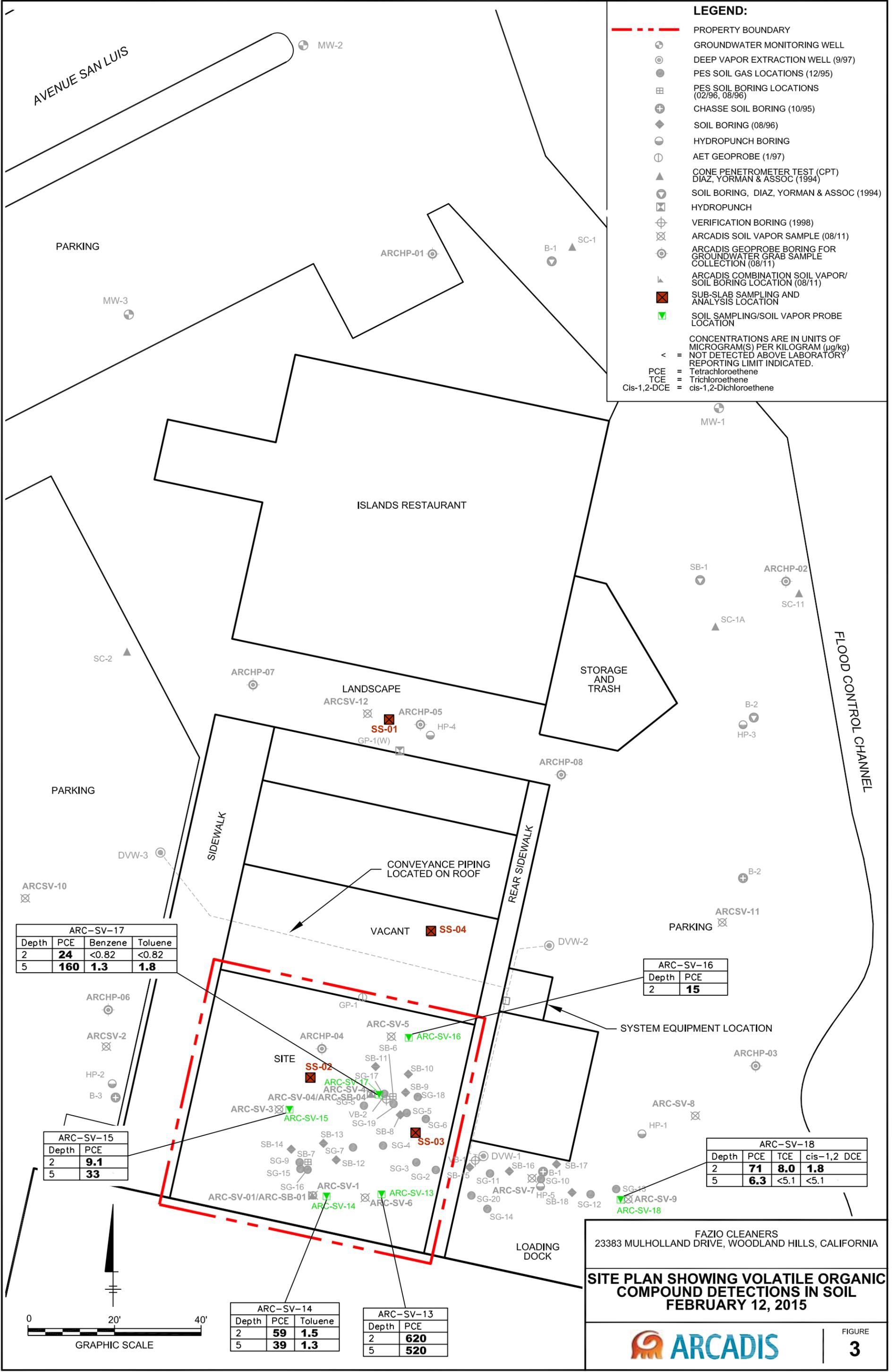
FAZIO CLEANERS
 23383 MULHOLLAND DRIVE, WOODLAND HILLS, CALIFORNIA

SITE PLAN SHOWING SOIL, SOIL VAPOR, AND SUB-SLAB SOIL VAPOR SAMPLING LOCATIONS



LEGEND:

- - - PROPERTY BOUNDARY
 - GROUNDWATER MONITORING WELL
 - DEEP VAPOR EXTRACTION WELL (9/97)
 - PES SOIL GAS LOCATIONS (12/95)
 - PES SOIL BORING LOCATIONS (02/96, 08/96)
 - CHASSE SOIL BORING (10/95)
 - SOIL BORING (08/96)
 - HYDROPUNCH BORING
 - AET GEOPROBE (1/97)
 - CONE PENETROMETER TEST (CPT) DIAZ, YORMAN & ASSOC (1994)
 - SOIL BORING, DIAZ, YORMAN & ASSOC (1994)
 - HYDROPUNCH
 - VERIFICATION BORING (1998)
 - ARCADIS SOIL VAPOR SAMPLE (08/11)
 - ARCADIS GEOPROBE BORING FOR GROUNDWATER GRAB SAMPLE COLLECTION (08/11)
 - ARCADIS COMBINATION SOIL VAPOR/ SOIL BORING LOCATION (08/11)
 - SUB-SLAB SAMPLING AND ANALYSIS LOCATION
 - SOIL SAMPLING/SOIL VAPOR PROBE LOCATION
- CONCENTRATIONS ARE IN UNITS OF MICROGRAM(S) PER KILOGRAM ($\mu\text{g}/\text{kg}$)
 < = NOT DETECTED ABOVE LABORATORY REPORTING LIMIT INDICATED.
- PCE = Tetrachloroethene
 TCE = Trichloroethene
 Cis-1,2-DCE = cis-1,2-Dichloroethene



ARC-SV-17			
Depth	PCE	Benzene	Toluene
2	24	<0.82	<0.82
5	160	1.3	1.8

ARC-SV-16	
Depth	PCE
2	15

ARC-SV-15	
Depth	PCE
2	9.1
5	33

ARC-SV-18				
Depth	PCE	TCE	cis-1,2 DCE	
2	71	8.0	1.8	
5	6.3	<5.1	<5.1	

ARC-SV-14		
Depth	PCE	Toluene
2	59	1.5
5	39	1.3

ARC-SV-13	
Depth	PCE
2	620
5	520

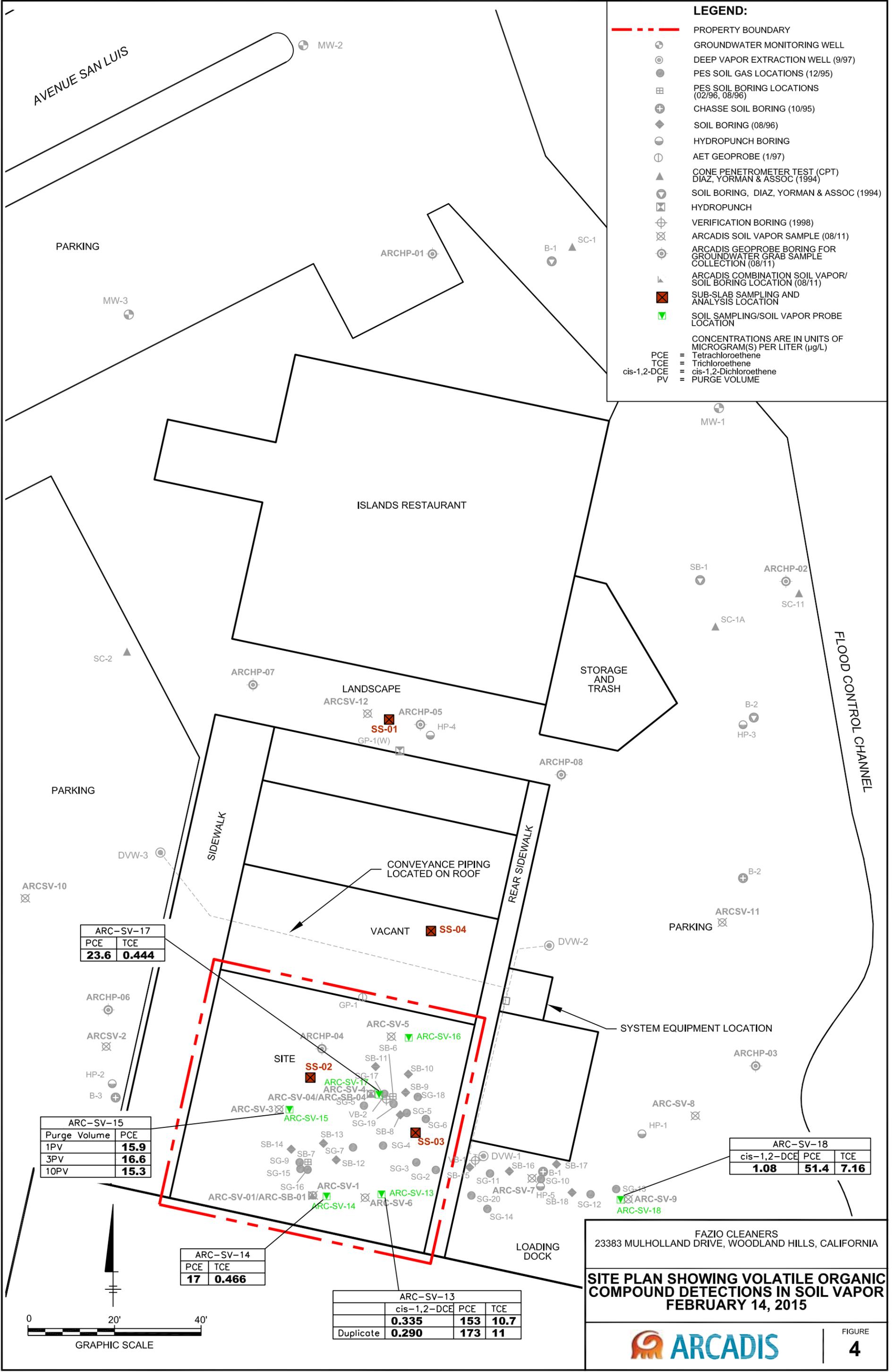
FAZIO CLEANERS
 23383 MULHOLLAND DRIVE, WOODLAND HILLS, CALIFORNIA

SITE PLAN SHOWING VOLATILE ORGANIC COMPOUND DETECTIONS IN SOIL FEBRUARY 12, 2015

FIGURE
3

LEGEND:

- - - PROPERTY BOUNDARY
 - GROUNDWATER MONITORING WELL
 - DEEP VAPOR EXTRACTION WELL (9/97)
 - PES SOIL GAS LOCATIONS (12/95)
 - PES SOIL BORING LOCATIONS (02/96, 08/96)
 - CHASSE SOIL BORING (10/95)
 - SOIL BORING (08/96)
 - HYDROPUNCH BORING
 - AET GEOPROBE (1/97)
 - CONE PENETROMETER TEST (CPT) DIAZ, YORMAN & ASSOC (1994)
 - SOIL BORING, DIAZ, YORMAN & ASSOC (1994)
 - HYDROPUNCH
 - VERIFICATION BORING (1998)
 - ARCADIS SOIL VAPOR SAMPLE (08/11)
 - ARCADIS GEOPROBE BORING FOR GROUNDWATER GRAB SAMPLE COLLECTION (08/11)
 - ARCADIS COMBINATION SOIL VAPOR/ SOIL BORING LOCATION (08/11)
 - SUB-SLAB SAMPLING AND ANALYSIS LOCATION
 - SOIL SAMPLING/SOIL VAPOR PROBE LOCATION
- CONCENTRATIONS ARE IN UNITS OF MICROGRAM(S) PER LITER (µg/L)
- PCE = Tetrachloroethene
 TCE = Trichloroethene
 cis-1,2-DCE = cis-1,2-Dichloroethene
 PV = PURGE VOLUME



ARC-SV-17	
PCE	TCE
23.6	0.444

ARC-SV-15	
Purge Volume	PCE
1PV	15.9
3PV	16.6
10PV	15.3

ARC-SV-14	
PCE	TCE
17	0.466

ARC-SV-13			
	cis-1,2-DCE	PCE	TCE
	0.335	153	10.7
Duplicate	0.290	173	11

ARC-SV-18		
cis-1,2-DCE	PCE	TCE
1.08	51.4	7.16



Fazio Cleaners
 23383 MULHOLLAND DRIVE, WOODLAND HILLS, CALIFORNIA

SITE PLAN SHOWING VOLATILE ORGANIC COMPOUND DETECTIONS IN SOIL VAPOR FEBRUARY 14, 2015

FIGURE 4

LEGEND:

- - - PROPERTY BOUNDARY
 - GROUNDWATER MONITORING WELL
 - DEEP VAPOR EXTRACTION WELL (9/97)
 - PES SOIL GAS LOCATIONS (12/95)
 - PES SOIL BORING LOCATIONS (02/96, 08/96)
 - CHASSE SOIL BORING (10/95)
 - SOIL BORING (08/96)
 - HYDROPUNCH BORING
 - AET GEOPROBE (1/97)
 - CONE PENETROMETER TEST (CPT) DIAZ, YORMAN & ASSOC (1994)
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 - SUB-SLAB SAMPLING AND ANALYSIS LOCATION
 - SOIL SAMPLING/SOIL VAPOR PROBE LOCATION
- CONCENTRATIONS ARE IN UNITS OF MICROGRAM(S) PER LITER (µg/L)
- PCE = Tetrachloroethene
 TCE = Trichloroethene
 cis-1,2-DCE = cis-1,2-Dichloroethene
 MEK = Methyl Ethyl Ketone
 SS-01 NOT SAMPLED DUE TO LOCATION OUTDOORS

AVENUE SAN LUIS

PARKING

MW-3

ARCHP-01

B-1 SC-1

ISLANDS RESTAURANT

SS-02						
	Ethanol	Acetone	2-Propanol	2-Butanone (MEK)	4-Methyl-2-pentanone	PCE
	0.26	0.41	0.24	0.018	0.0056	0.11
Duplicate	0.26	0.38	0.22	0.017	0.0058	0.093

SS-01
NO SAMPLE COLLECTED

STORAGE AND TRASH

LANDSCAPE

ARCSV-12

SS-01

ARCHP-05

GP-1(W)

HP-4

ARCHP-08

PARKING

SC-2

SIDEWALK

CONVEYANCE PIPING LOCATED ON ROOF

VACANT

SS-04

REAR SIDEWALK

SS-04				
	Ethanol	Acetone	2-Butanone (MEK)	PCE
	0.023	0.17	0.017	0.22

ARCSV-10

DVW-3

ARCHP-06

ARCSV-2

HP-2

B-3

SITE

SS-02

ARCHP-04

ARC-SV-5

SB-6

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Appendix A

RWQCB Work Plan Approval Letter,
December 2, 2014

Los Angeles Regional Water Quality Control Board

December 2, 2014

Mr. John Allen
Allen Matkins Leck Gamble Mallory & Natsis LLP
515 South Figueroa Street, 9th Floor
Los Angeles, California 90071-3398

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7012 3460 0002 9486 3490

**SUBJECT: REVIEW OF WORK PLAN IN RESPONSE TO DECEMBER 14, 2011 LETTER
PURSUANT TO CALIFORNIA WATER CODE 13267 ORDER**

**SITE\CASE: FAZIO CLEANERS, 23383 MULHOLLAND DRIVE, WOODLAND HILLS,
CALIFORNIA (SCP NO. 0645, SITE ID NO. 1848600)**

Dear Mr. Allen:

The Los Angeles Regional Water Quality Control Board (Regional Board) has reviewed the report titled "Work Plan in Response to December 14, 2011 RWQCB" (Work Plan) dated February 14, 2012 prepared by ARCADIS U.S., Inc. (ARCADIS). In addition, on November 12, 2014, Regional Board staff met with you and Mr. James Gonzales from ARCADIS to discuss the status of the site and the requirements to be met to achieve site closure.

After the review of the Work Plan and the meeting with you, ARCADIS and Regional Board staff, the following pending issues or data gaps need to be addressed:

1. Residual concentrations of tetrachloroethylene (PCE) in soil matrix exceed the soil cleanup level for protection of groundwater (62 µg/kg) in some confirmation sampling locations. ARCADIS indicates that these residual concentrations are not able to be feasibly removed. ARCADIS further indicates that based on groundwater quality, there is no continuing source to groundwater contamination.

However, additional soil matrix sampling is needed to delineate the residual concentrations left in place and their corresponding locations beneath the site. This information is necessary to assess if additional remediation is warranted.

2. Residual concentrations of volatile organic compounds (VOCs) in soil vapor warrant further evaluation of their potential for vapor intrusion. The Work Plan submitted by ARCADIS proposes to address this concern and is described in the Summary of the Proposed Work Plan below.

During the meeting, Regional Board staff expressed concerns that the soil vapor extraction (SVE) system may not have been efficient in removing the vapor beneath the site and/or that the vapor may have been rebounding. ARCADIS indicated that the SVE system reached asymptotic levels, that these residual soil vapor concentrations were very localized, and that additional remediation was unfeasible.

In the same way as described in point 1, additional confirmation soil vapor sampling is needed to delineate the residual concentrations left in place and their corresponding location beneath the site. This information is necessary to assess whether additional remediation or other alternative is warranted and/or feasible.

3. Residual concentrations of PCE in groundwater have been decreasing in time. The core of the plume is directly beneath the dry cleaners building and the outdoor storage area. These concentrations do not warrant a no-further-action determination at the moment. Active remediation may be needed to expedite the degradation of VOCs in groundwater.

Summary of Proposed Work Plan

The Work Plan proposes to collect sub-slab soil vapor samples from four locations using summa canisters and using the results to evaluate the potential for soil vapor intrusion. The findings from the vapor intrusion testing and the risk evaluation will be summarized in a report.

The scope of the Work Plan does not address all of the data gaps mentioned in points 1 to 3 above, it only covers the evaluation of indoor vapor intrusion. However, the results from this phase of environmental work will be used to make a decision regarding future requirements.

Regional Board Approval

Based on the information provided, the Regional Board has the following comments/requirements:

1. Proceed with the implementation of the Work Plan to evaluate vapor intrusion considering the following:
 - a. Consider the installation of permanent or semi-permanent soil vapor probes. Periodic monitoring may be needed to evaluate concentrations trends in time or seasonal changes.
 - b. Consider the collection of indoor air samples concurrently with the sub-slab soil vapor sampling.
 - c. Follow the *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (October 2011) by the Department of Toxic Substances Control.
 - d. For the prediction of indoor air concentrations based on soil gas results, justify the selection of site-specific parameters based on actual measurements or a thorough description of your selection (e.g. soil physical parameters, building dimensions, air exchange rate, etc.).
 - e. Refer to the guidance document *Interim Framework for the Assessment of Vapor Intrusion at TCE Contaminated Sites in the San Francisco Bay Region* (October 2014) by the San Francisco Bay Regional Water Quality Control Board. While this document pertains in particular to TCE, it provides guidance on the different aspects of the vapor intrusion evaluation.
 - f. A technical report documenting the results of the vapor intrusion evaluation is due on **February 15, 2015**.

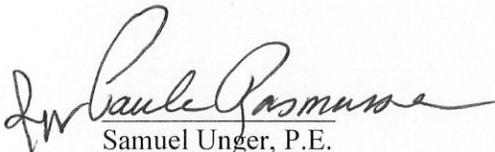
2. Semi-annual groundwater monitoring is authorized starting in 2015, as requested. Semiannual groundwater monitoring reports shall be submitted to the Regional Board according to the schedule below:

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	July 15 th
July – December	January 15 th

The above requirement for submittal of technical reports is an amendment to the requirements of the California Water Code California Water Code (CWC) section 13267 Order (Order) originally dated July 10, 2008. All other aspects of the Order, and amendments thereto, remain in full force and effect. The required technical report is necessary to investigate the characteristics of soil contamination at the Site and to evaluate mitigation alternatives. Therefore, the burden, including costs, of the reports bear a reasonable relationship to the need for the reports and benefits to be obtained. Pursuant to section 13268 of the CWC, failure to submit the required technical reports by the specified due date may result in civil liability administratively imposed by the Regional Board in an amount up to one thousand dollars (\$1000) for each day each technical report is not received.

If you have any questions regarding this matter, please contact Dr. Angelica Castaneda, project manager, at (213) 576-6737 (angelica.castaneda@waterboards.ca.gov) or Ms. Thizar Tintut-Williams, Unit Chief, at (213) 576-6723 (thizar.williams@waterboards.ca.gov).

Sincerely,


Samuel Unger, P.E.
Executive Officer

cc: James Gonzalez, ARCADIS U.S. Inc.



Appendix B

RWQCB Addendum and Extension
Approval Letter, February 15, 2015



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

February 15, 2015

Mr. John Allen
Allen Matkins Leck Gamble Mallory & Natsis LLP
515 South Figueroa Street, 9th Floor
Los Angeles, California 90071-3398

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7012 3460 0002 9486 1380

**SUBJECT: 1) APPROVAL OF ADDENDUM TO VAPOR INTRUSION WORK PLAN; AND
2) APPROVAL OF EXTENSION REQUEST FOR SUBMITTAL OF VAPOR
INTRUSION EVALUATION REPORT PURSUANT TO CALIFORNIA WATER
CODE SECTION 13267 ORDER**

**SITE\CASE: FAZIO CLEANERS, 23383 MULHOLLAND DRIVE, WOODLAND HILLS,
CALIFORNIA (SCP NO. 0645, SITE ID NO. 1848600)**

Dear Mr. Allen:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is the state regulatory agency responsible for protecting water quality within Los Angeles and Ventura counties, including the referenced property (Site). On December 2, 2014, the Regional Board approved the *Work Plan in Response to December 14, 2011 RWQCB Letter* (Work Plan) dated February 14, 2012, prepared by ARCADIS U.S. Inc. (ARCADIS). The due date for the submission of the technical report (Report) is February 15, 2015 as required pursuant to the California Water Code section 13267 Order.

Regional Board staff received and reviewed the following documents prepared by ARCADIS on your behalf:

- *Request for Extension, Vapor Intrusion Evaluation Report* (Extension Letter) dated January 7, 2015
- *Addendum to Vapor Intrusion Work Plan* (Addendum) dated January 26, 2015
- *Report Due Date Extension Request for Vapor Intrusion, Soil, and Soil Evaluation Report* (Updated Extension Letter) dated January 29, 2015

The Extension Letter requested a time extension for the submittal of the Report from February 15, 2015 to March 31, 2015. The reasons for the extension request were planning activities and approvals were delayed due to the holidays and access negotiations with the current tenants are to be conducted.

The Addendum proposed an installation of five semi-permanent soil vapor probes to periodically monitor soil vapor conditions beneath the Site in addition to the subslab sampling and human health risk evaluation that was proposed in the Work Plan and approved by the Regional Board on December 2, 2014. On January 29, 2015, after discussion with the Regional Board staff, one additional soil vapor probe location was added by ARC-SV-9 and therefore, the number of proposed semi-permanent vapor

February 15, 2015

probes was increased to six locations. An updated site map with the proposed soil vapor probe and sub-slab probe locations was provided to the Regional Board staff on January 29, 2015 (see attached figure).

The Updated Extension Letter requested a revised time extension for the submittal of the Report from February 15, 2015 to April 17, 2015. The reason was access negotiations with the current tenants and property manager took longer than anticipated. The access has recently been secured and the field work is scheduled to commence in mid-February.

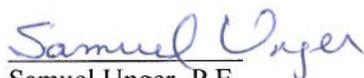
Based on the information provided, the proposed Addendum to the Work Plan is acceptable and the requests for extensions are granted. Therefore, Regional Board staff has determined the following:

1. You can proceed with implementing the additional scope of work proposed in the Addendum with the proposed locations as shown on the attached figure.
2. The Report is due on **April 17, 2015**.

The above requirement and due date for submittal of the technical report are amendments to the requirements of the California Water Code California Water Code (CWC) section 13267 Order (Order) originally dated July 10, 2008. All other aspects of the Order, and amendments thereto, remain in full force and effect. The required technical report is necessary to investigate the characteristics of soil contamination at the Site and to evaluate mitigation alternatives. Therefore, the burden, including costs, of the reports bears a reasonable relationship to the need for the reports and benefits to be obtained. Pursuant to section 13268 of the CWC, failure to submit the required technical reports by the specified due date may result in civil liability administratively imposed by the Regional Board in an amount up to one thousand dollars (\$1000) for each day each technical report is not received.

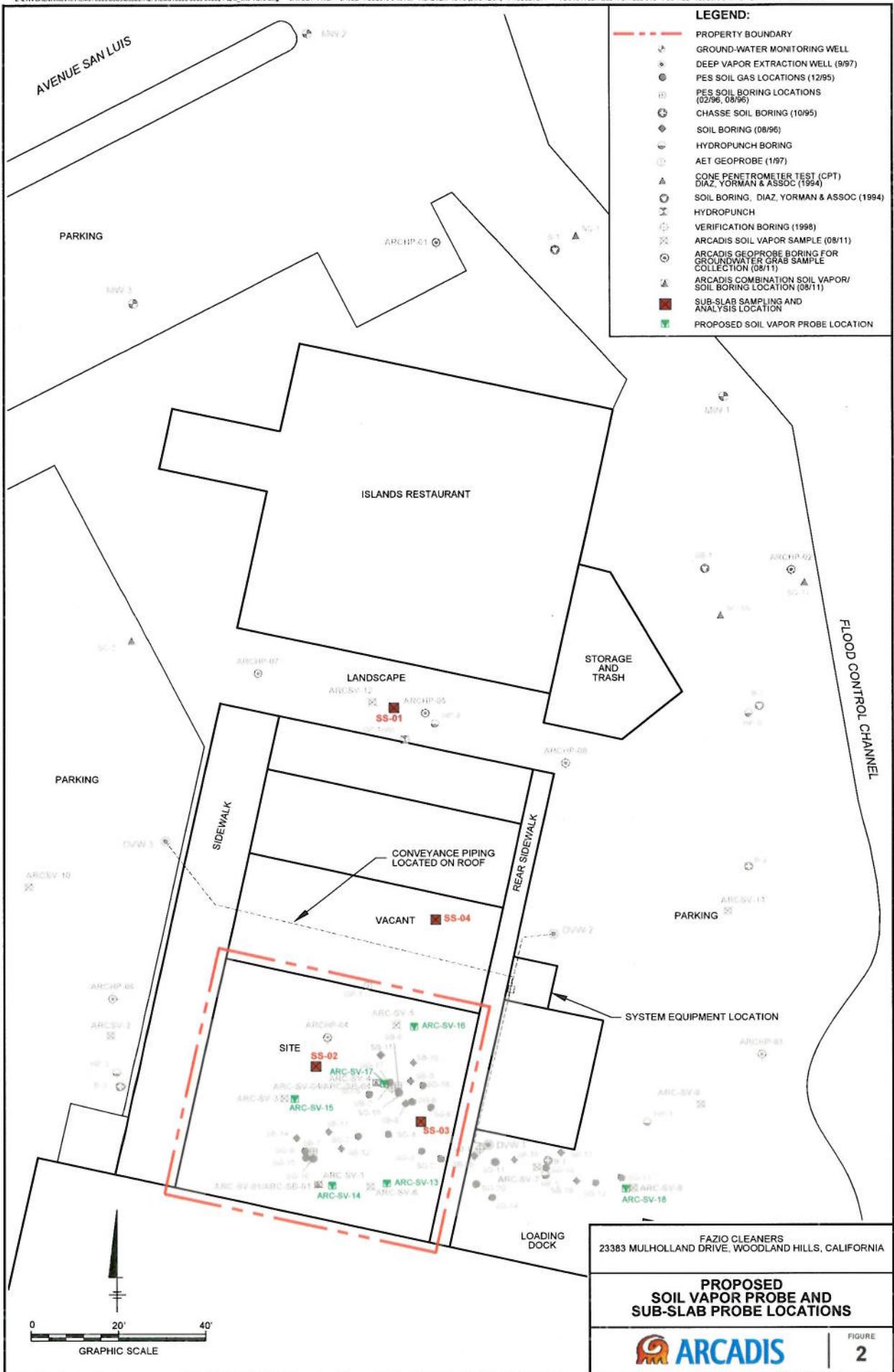
If you have any questions regarding this matter, please contact Ms. Jillian Ly, project manager, at (213) 576-6664 (jillian.ly@waterboards.ca.gov) or Ms. Thizar Tintut-Williams, Unit Chief, at (213) 576-6723 (thizar.williams@waterboards.ca.gov).

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosure: Figure 2

cc: James Gonzalez, ARCADIS U.S. Inc.



- LEGEND:**
- PROPERTY BOUNDARY
 - ⊕ GROUND-WATER MONITORING WELL
 - ⊙ DEEP VAPOR EXTRACTION WELL (9/97)
 - ⊙ PES SOIL GAS LOCATIONS (12/95)
 - ⊙ PES SOIL BORING LOCATIONS (02/96, 08/96)
 - ⊙ CHASSE SOIL BORING (10/95)
 - ⊙ SOIL BORING (08/96)
 - ⊙ HYDROPUNCH BORING
 - ⊙ AET GEOPROBE (1/97)
 - ⊙ CONE PENETROMETER TEST (CPT) DIAZ, YORMAN & ASSOC (1994)
 - ⊙ SOIL BORING, DIAZ, YORMAN & ASSOC (1994)
 - ⊙ HYDROPUNCH
 - ⊙ VERIFICATION BORING (1998)
 - ⊙ ARCADIS SOIL VAPOR SAMPLE (08/11)
 - ⊙ ARCADIS GEOPROBE BORING FOR GROUNDWATER GRAB SAMPLE COLLECTION (08/11)
 - ⊙ ARCADIS COMBINATION SOIL VAPOR/ SOIL BORING LOCATION (08/11)
 - SUB-SLAB SAMPLING AND ANALYSIS LOCATION
 - ⊙ PROPOSED SOIL VAPOR PROBE LOCATION

FAZIO CLEANERS
 23383 MULHOLLAND DRIVE, WOODLAND HILLS, CALIFORNIA

PROPOSED SOIL VAPOR PROBE AND SUB-SLAB PROBE LOCATIONS

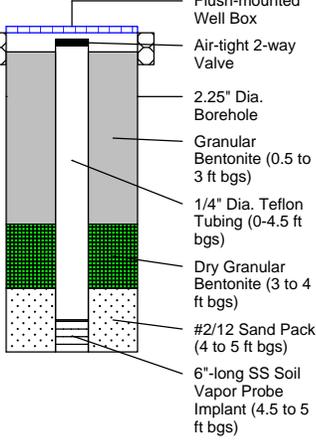




Appendix C

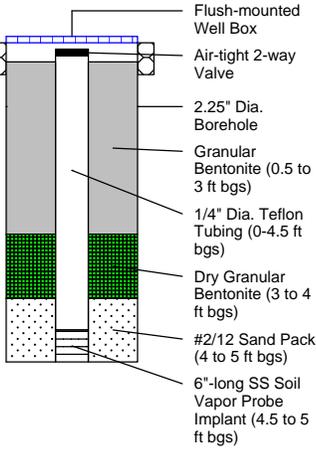
Boring and Soil Vapor Probe
Construction Logs

Date Start/Finish: 2/11/15 Drilling Company: J&H Drilling Co., Inc. Driller's Name: Fernando Vasquez Drilling Method: Hand auger Rig Type: NA Sampling Method: Hand auger	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5 ft bgs Borehole Diameter: 2.25" Surface Elevation: NA Descriptions By: Andrew Leavitt	Well/Boring ID: ARC-SV-13 Client: BEX Portfolio, LLC Location: Fazio Cleaners 23383 Mulholland Drive Woodland Hills, California Reviewed By: <i>James Douglas</i> CA P.G. 8918
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DEPTH	ELEVATION	Sample ID	Sample Interval	Recovery (feet)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Concrete slab.	 <p> Flush-mounted Well Box Air-tight 2-way Valve 2.25" Dia. Borehole Granular Bentonite (0.5 to 3 ft bgs) 1/4" Dia. Teflon Tubing (0-4.5 ft bgs) Dry Granular Bentonite (3 to 4 ft bgs) #2/12 Sand Pack (4 to 5 ft bgs) 6"-long SS Soil Vapor Probe Implant (4.5 to 5 ft bgs) </p>
		ARC-SV-13-2.0		5.0	10.6		FILL	x	Base rock (gravel and sand).	
							SW		SAND, very fine- to medium-grained sand, rounded; some silt, non-plastic; well graded; moist, loose to medium dense, dark yellowish brown (10YR 3/6).	
		ARC-SV-13-5.0			19.5		SW-SM		SAND AND SILT, low plasticity; very fine- to medium-grained; well graded; damp, medium dense to medium stiff, dark yellowish brown (10YR 3/6).	
5	-5								Bottom of boring at 5 ft bgs. Bottom of soil vapor probe at 5 ft bgs.	
10	-10									
15	-15									

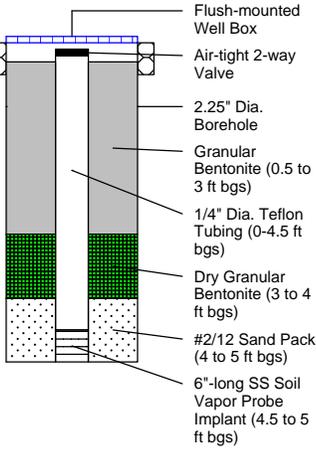
	Remarks: amsl = above mean sea level; bgs = below ground surface; btoc = below top of casing; Dia. = diameter; ft = feet; NA = not applicable/available; PID = photoionization detector; ppm = parts per million; SS = Stainless Steel; USCS = unified soil classification system; " = inches ☒ = First Encountered Water ☒ = Static Water	Water Level Data		
		Date	Depth	Elev.
		NA	☒ NA ft bgs	NA ft amsl
		NA	☒ NA ft btoc	NA ft amsl
	☒ ft btoc	ft amsl		

Date Start/Finish: 2/11/15 Drilling Company: J&H Drilling Co., Inc. Driller's Name: Fernando Vasquez Drilling Method: Hand auger Rig Type: NA Sampling Method: Hand auger	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5 ft bgs Borehole Diameter: 2.25" Surface Elevation: NA Descriptions By: Andrew Leavitt	Well/Boring ID: ARC-SV-14 Client: BEX Portfolio, LLC Location: Fazio Cleaners 23383 Mulholland Drive Woodland Hills, California Reviewed By: <i>James Douglas</i> CA P.G. 8918
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DEPTH	ELEVATION	Sample ID	Sample Interval	Recovery (feet)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Concrete slab.	 <p>Flush-mounted Well Box Air-tight 2-way Valve 2.25" Dia. Borehole Granular Bentonite (0.5 to 3 ft bgs) 1/4" Dia. Teflon Tubing (0-4.5 ft bgs) Dry Granular Bentonite (3 to 4 ft bgs) #2/12 Sand Pack (4 to 5 ft bgs) 6"-long SS Soil Vapor Probe Implant (4.5 to 5 ft bgs)</p>
		ARC-SV-14-2.0		5.0	11.2		FILL	x	Base rock (gravel and sand).	
							SW		SAND, very fine- to medium-grained sand, rounded; some silt, non-plastic; well graded; moist, loose to medium dense, dark yellowish brown (10YR 3/6).	
		ARC-SV-14-5.0			16.4		SW-SM		SAND AND SILT, low plasticity; very fine- to medium-grained; well graded; damp, medium dense to medium stiff, dark yellowish brown (10YR 3/6).	
-5	-5								Bottom of boring at 5 ft bgs. Bottom of soil vapor probe at 5 ft bgs.	
-10	-10									
-15	-15									

	Remarks: amsl = above mean sea level; bgs = below ground surface; btoc = below top of casing; Dia. = diameter; ft = feet; NA = not applicable/available; PID = photoionization detector; ppm = parts per million; SS = Stainless Steel; USCS = unified soil classification system; " = inches ☒ = First Encountered Water ☒ = Static Water	Water Level Data		
		Date	Depth	Elev.
		NA	☒ NA ft bgs	NA ft amsl
		NA	☒ NA ft btoc	NA ft amsl
	☒ ft btoc	ft amsl		

Date Start/Finish: 2/11/15 Drilling Company: J&H Drilling Co., Inc. Driller's Name: Fernando Vasquez Drilling Method: Hand auger Rig Type: NA Sampling Method: Hand auger	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5 ft bgs Borehole Diameter: 2.25" Surface Elevation: NA Descriptions By: Andrew Leavitt	Well/Boring ID: ARC-SV-15 Client: BEX Portfolio, LLC Location: Fazio Cleaners 23383 Mulholland Drive Woodland Hills, California Reviewed By: <i>James Berg</i> CA P.G. 8918
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DEPTH	ELEVATION	Sample ID	Sample Interval	Recovery (feet)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Concrete slab.	 <p> Flush-mounted Well Box Air-tight 2-way Valve 2.25" Dia. Borehole Granular Bentonite (0.5 to 3 ft bgs) 1/4" Dia. Teflon Tubing (0-4.5 ft bgs) Dry Granular Bentonite (3 to 4 ft bgs) #2/12 Sand Pack (4 to 5 ft bgs) 6"-long SS Soil Vapor Probe Implant (4.5 to 5 ft bgs) </p>
		ARC-SV-15-2.0		5.0	11.3		FILL	x	Base rock (gravel and sand).	
							SW		SAND, very fine- to medium-grained sand, rounded; some silt, non-plastic; well graded; moist, loose to medium dense, dark yellowish brown (10YR 3/6).	
		ARC-SV-15-5.0			18.1		SW-SM		SAND AND SILT, low plasticity; very fine- to medium-grained; round; well graded; damp, medium dense to medium stiff, dark yellowish brown (10YR 3/6).	
-5	-5								Bottom of boring at 5 ft bgs. Bottom of soil vapor probe at 5 ft bgs.	
-10	-10									
-15	-15									

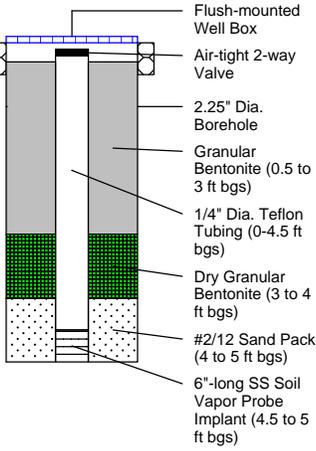
	Remarks: amsl = above mean sea level; bgs = below ground surface; btoc = below top of casing; Dia. = diameter; ft = feet; NA = not applicable/available; PID = photoionization detector; ppm = parts per million; SS = Stainless Steel; USCS = unified soil classification system; " = inches ≡ = First Encountered Water ≡ = Static Water	Water Level Data		
		Date	Depth	Elev.
		NA	≡ NA ft bgs	NA ft amsl
		NA	≡ NA ft btoc	NA ft amsl
		≡ ft btoc	ft amsl	

Date Start/Finish: 2/11/15 Drilling Company: J&H Drilling Co., Inc. Driller's Name: Fernando Vasquez Drilling Method: Hand auger Rig Type: NA Sampling Method: Hand auger	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5 ft bgs Borehole Diameter: 2.25" Surface Elevation: NA Descriptions By: Andrew Leavitt	Well/Boring ID: ARC-SV-16 Client: BEX Portfolio, LLC Location: Fazio Cleaners 23383 Mulholland Drive Woodland Hills, California Reviewed By:  CA P.G. 8918
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DEPTH	ELEVATION	Sample ID	Sample Interval	Recovery (feet)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Concrete.	
							FILL	x	Base rock (gravel and sand).	
		ARC-SV-16-2.0		5.0	7.1		SW-SM		SAND AND SILT, no plasticity to low plasticity; very fine- to medium-grained; round; well graded; damp, medium dense to medium stiff, dark yellowish brown (10YR 3/6). @2.6 ft bgs, bentonite. @4 ft bgs, soil, 50% bentonite.	 2.25" Dia. Borehole backfilled with bentonite to surface.
5	-5								Bottom of boring at 5 ft bgs.	
10	-10									
15	-15									

	Remarks: amsl = above mean sea level; bgs = below ground surface; btoc = below top of casing; Dia. = diameter; ft = feet; NA = not applicable/available; PID = photoionization detector; ppm = parts per million; SS = Stainless Steel; USCS = unified soil classification system; " = inches ☞ = First Encountered Water ☛ = Static Water	Water Level Data		
		Date	Depth	Elev.
		NA	☞ NA ft bgs	NA ft amsl
		NA	☞ NA ft btoc	NA ft amsl
	☞	ft btoc	ft amsl	

Date Start/Finish: 2/11/15 Drilling Company: J&H Drilling Co., Inc. Driller's Name: Fernando Vasquez Drilling Method: Hand auger Rig Type: NA Sampling Method: Hand auger	Northing: NA Easting: NA Casing Elevation: NA Borehole Depth: 5 ft bgs Borehole Diameter: 2.25" Surface Elevation: NA Descriptions By: Andrew Leavitt	Well/Boring ID: ARC-SV-17 Client: BEX Portfolio, LLC Location: Fazio Cleaners 23383 Mulholland Drive Woodland Hills, California Reviewed By: <i>James Bergin</i> CA P.G. 8918
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DEPTH	ELEVATION	Sample ID	Sample Interval	Recovery (feet)	PID (ppm)	Analytical Sample	USCS Code	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0								Concrete slab.	 <p> Flush-mounted Well Box Air-tight 2-way Valve 2.25" Dia. Borehole Granular Bentonite (0.5 to 3 ft bgs) 1/4" Dia. Teflon Tubing (0-4.5 ft bgs) Dry Granular Bentonite (3 to 4 ft bgs) #2/12 Sand Pack (4 to 5 ft bgs) 6"-long SS Soil Vapor Probe Implant (4.5 to 5 ft bgs) </p>
		ARC-SV-17-2.0		8.3			FILL	x	Base rock (gravel and sand).	
				5.0			SW		SAND, very fine- to medium-grained sand, rounded; some silt, non-plastic; well graded; moist, loose to medium dense, dark yellowish brown (10YR 3/6).	
		ARC-SV-17-5.0		15.7			SW-SM		SAND AND SILT, low plasticity; very fine- to medium-grained; round; well graded; damp, medium dense to medium stiff, dark yellowish brown (10YR 3/6).	
5	-5								Bottom of boring at 5 ft bgs. Bottom of soil vapor probe at 5 ft bgs.	
10	-10									
15	-15									

	Remarks: amsl = above mean sea level; bgs = below ground surface; btoc = below top of casing; Dia. = diameter; ft = feet; NA = not applicable/available; PID = photoionization detector; ppm = parts per million; SS = Stainless Steel; USCS = unified soil classification system; " = inches ☒ = First Encountered Water ☒ = Static Water	Water Level Data		
		Date	Depth	Elev.
		NA	☒ NA ft bgs	NA ft amsl
		NA	☒ NA ft btoc	NA ft amsl
		☒ ft btoc	ft amsl	



Appendix D

Sub-Slab Soil Vapor Sampling Logs

Project Number CMO10555-0004 Date 2/13/15
 Project Location Fazio's Cleaners
 Client Fazio's Project Name Fazio's Cleaners

ppm

Probe	Date	VOCs (ppb)	Shut-in Test	CO2 (%)	O2 (%)	Helium in Shroud (%)	Helium Detected	Purge V (mL)	Canister #	Pressure Start/Finish	Time Start/Finish
AUS-02											
AUS-SS-02	2/13/15	12.5	Pass	—	—	13.1	25	400			
↓	↓	10.6	↓	—	—	14.8	0	800			
↓	↓	10.9	↓	—	—	14.7	0	1200			
↓	↓	—	↓	—	—	12.3	—	—	24398	-30/-5	0935/0955
AUS-SS-02-20P	2/13/15	—	↓	—	—	12.3	—	—	36383	-27/-5	0935/0955
AUS-SS-03	2/13/15	21.8	Pass	—	—	13.5	0	400			
↓	↓	24.3	↓	—	—	13.0	0	800			
↓	↓	20.1	↓	—	—	12.7	0	1200			
↓	↓	—	↓	—	—	15.1	—	—	11834	-29/-5	1021/1020
AUS-SS-04	2/13/15	18.5	Pass	—	—	15.8	0	400			
↓	↓	19.9	↓	—	—	15.2	0	800			
↓	↓	19.0	↓	—	—	14.1	0	1200			
↓	↓	—	↓	—	—	17.3	—	—	34582	-30/-5	1120/1135

Note: _____

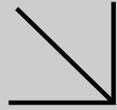


Appendix E

Laboratory Reports and
Chain-of-Custody Forms –
Soil



Calscience



WORK ORDER NUMBER: 15-02-0902

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: ARCADIS U.S., Inc.

Client Project Name: Fazio's Cleaners / Woodland Hills, CA

Attention: James Gonzales
320 Commerce, Suite 200
Irvine, CA 92602-1363

Approved for release on 02/23/2015 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Contents

Client Project Name: Fazio's Cleaners / Woodland Hills, CA
Work Order Number: 15-02-0902

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 02/12/15. They were assigned to Work Order 15-02-0902.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: ARCADIS U.S., Inc. 320 Commerce, Suite 200 Irvine, CA 92602-1363	Work Order: 15-02-0902 Project Name: Fazio's Cleaners / Woodland Hills, CA PO Number: Date/Time Received: 02/12/15 12:45 Number of Containers: 31
--	---

Attn: James Gonzales

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
ARC-SV-13-2.0	15-02-0902-1	02/11/15 12:45	3	Solid
ARC-SV-13-5.0	15-02-0902-2	02/11/15 12:52	3	Solid
ARC-SV-14-2.0	15-02-0902-3	02/11/15 13:20	3	Solid
ARC-SV-14-5.0	15-02-0902-4	02/11/15 13:32	3	Solid
ARC-SV-15-2.0	15-02-0902-5	02/11/15 13:58	3	Solid
ARC-SV-15-5.0	15-02-0902-6	02/11/15 14:12	3	Solid
ARC-SV-17-2.0	15-02-0902-7	02/11/15 14:45	3	Solid
ARC-SV-17-5.0	15-02-0902-8	02/11/15 15:00	3	Solid
ARC-SV-18-2.0	15-02-0902-9	02/11/15 17:52	3	Solid
ARC-SV-18-5.0	15-02-0902-10	02/11/15 18:10	1	Solid
ARC-SV-16-2.0	15-02-0902-11	02/11/15 15:37	3	Solid

Detections Summary

Client: ARCADIS U.S., Inc.
 320 Commerce, Suite 200
 Irvine, CA 92602-1363

Work Order: 15-02-0902
 Project Name: Fazio's Cleaners / Woodland Hills, CA
 Received: 02/12/15

Attn: James Gonzales

Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
ARC-SV-13-2.0 (15-02-0902-1) Tetrachloroethene	620		42	ug/kg	EPA 8260B	EPA 5035
ARC-SV-13-5.0 (15-02-0902-2) Tetrachloroethene	520		40	ug/kg	EPA 8260B	EPA 5035
ARC-SV-14-2.0 (15-02-0902-3) Tetrachloroethene	59		0.93	ug/kg	EPA 8260B	EPA 5035
Toluene	1.5		0.93	ug/kg	EPA 8260B	EPA 5035
ARC-SV-14-5.0 (15-02-0902-4) Tetrachloroethene	39		0.83	ug/kg	EPA 8260B	EPA 5035
Toluene	1.3		0.83	ug/kg	EPA 8260B	EPA 5035
ARC-SV-15-2.0 (15-02-0902-5) Tetrachloroethene	9.1		0.93	ug/kg	EPA 8260B	EPA 5035
ARC-SV-15-5.0 (15-02-0902-6) Tetrachloroethene	33		0.95	ug/kg	EPA 8260B	EPA 5035
ARC-SV-17-2.0 (15-02-0902-7) Tetrachloroethene	24		0.82	ug/kg	EPA 8260B	EPA 5035
ARC-SV-17-5.0 (15-02-0902-8) Benzene	1.3		0.87	ug/kg	EPA 8260B	EPA 5035
Tetrachloroethene	160		0.87	ug/kg	EPA 8260B	EPA 5035
Toluene	1.8		0.87	ug/kg	EPA 8260B	EPA 5035
ARC-SV-18-2.0 (15-02-0902-9) c-1,2-Dichloroethene	1.8		0.95	ug/kg	EPA 8260B	EPA 5035
Tetrachloroethene	71		0.95	ug/kg	EPA 8260B	EPA 5035
Trichloroethene	8.0		1.9	ug/kg	EPA 8260B	EPA 5035
ARC-SV-18-5.0 (15-02-0902-10) Tetrachloroethene	6.3		5.1	ug/kg	EPA 8260B	EPA 5030C
ARC-SV-16-2.0 (15-02-0902-11) Tetrachloroethene	15		0.90	ug/kg	EPA 8260B	EPA 5035

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown



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Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 1 of 24

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-13-2.0	15-02-0902-1-D	02/11/15 12:45	Solid	GC/MS UU	02/11/15	02/12/15 21:18	150212L035

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2100	50.0	
Benzene	ND	42	50.0	
Bromobenzene	ND	42	50.0	
Bromochloromethane	ND	84	50.0	
Bromodichloromethane	ND	42	50.0	
Bromoform	ND	210	50.0	
Bromomethane	ND	840	50.0	
2-Butanone	ND	840	50.0	
n-Butylbenzene	ND	42	50.0	
sec-Butylbenzene	ND	42	50.0	
tert-Butylbenzene	ND	42	50.0	
Carbon Disulfide	ND	420	50.0	
Carbon Tetrachloride	ND	42	50.0	
Chlorobenzene	ND	42	50.0	
Chloroethane	ND	84	50.0	
Chloroform	ND	42	50.0	
Chloromethane	ND	840	50.0	
2-Chlorotoluene	ND	42	50.0	
4-Chlorotoluene	ND	42	50.0	
Dibromochloromethane	ND	84	50.0	
1,2-Dibromo-3-Chloropropane	ND	210	50.0	
1,2-Dibromoethane	ND	42	50.0	
Dibromomethane	ND	42	50.0	
1,2-Dichlorobenzene	ND	42	50.0	
1,3-Dichlorobenzene	ND	42	50.0	
1,4-Dichlorobenzene	ND	42	50.0	
Dichlorodifluoromethane	ND	84	50.0	
1,1-Dichloroethane	ND	42	50.0	
1,2-Dichloroethane	ND	42	50.0	
1,1-Dichloroethene	ND	42	50.0	
c-1,2-Dichloroethene	ND	42	50.0	
t-1,2-Dichloroethene	ND	42	50.0	
1,2-Dichloropropane	ND	42	50.0	
1,3-Dichloropropane	ND	42	50.0	
2,2-Dichloropropane	ND	210	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 2 of 24

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	84	50.0	
c-1,3-Dichloropropene	ND	42	50.0	
t-1,3-Dichloropropene	ND	84	50.0	
Ethylbenzene	ND	42	50.0	
2-Hexanone	ND	840	50.0	
Isopropylbenzene	ND	42	50.0	
p-Isopropyltoluene	ND	42	50.0	
Methylene Chloride	ND	420	50.0	
4-Methyl-2-Pentanone	ND	840	50.0	
Naphthalene	ND	420	50.0	
n-Propylbenzene	ND	84	50.0	
Styrene	ND	42	50.0	
1,1,1,2-Tetrachloroethane	ND	42	50.0	
1,1,2,2-Tetrachloroethane	ND	84	50.0	
Tetrachloroethene	620	42	50.0	
Toluene	ND	42	50.0	
1,2,3-Trichlorobenzene	ND	84	50.0	
1,2,4-Trichlorobenzene	ND	84	50.0	
1,1,1-Trichloroethane	ND	42	50.0	
1,1,2-Trichloroethane	ND	42	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	420	50.0	
Trichloroethene	ND	84	50.0	
Trichlorofluoromethane	ND	420	50.0	
1,2,3-Trichloropropane	ND	84	50.0	
1,2,4-Trimethylbenzene	ND	84	50.0	
1,3,5-Trimethylbenzene	ND	84	50.0	
Vinyl Acetate	ND	420	50.0	
Vinyl Chloride	ND	42	50.0	
p/m-Xylene	ND	84	50.0	
o-Xylene	ND	42	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	84	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	89	80-120		
Dibromofluoromethane	108	79-133		
1,2-Dichloroethane-d4	111	71-155		
Toluene-d8	98	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-13-5.0	15-02-0902-2-D	02/11/15 12:52	Solid	GC/MS UU	02/11/15	02/12/15 21:43	150212L035

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2000	50.0	
Benzene	ND	40	50.0	
Bromobenzene	ND	40	50.0	
Bromochloromethane	ND	80	50.0	
Bromodichloromethane	ND	40	50.0	
Bromoform	ND	200	50.0	
Bromomethane	ND	800	50.0	
2-Butanone	ND	800	50.0	
n-Butylbenzene	ND	40	50.0	
sec-Butylbenzene	ND	40	50.0	
tert-Butylbenzene	ND	40	50.0	
Carbon Disulfide	ND	400	50.0	
Carbon Tetrachloride	ND	40	50.0	
Chlorobenzene	ND	40	50.0	
Chloroethane	ND	80	50.0	
Chloroform	ND	40	50.0	
Chloromethane	ND	800	50.0	
2-Chlorotoluene	ND	40	50.0	
4-Chlorotoluene	ND	40	50.0	
Dibromochloromethane	ND	80	50.0	
1,2-Dibromo-3-Chloropropane	ND	200	50.0	
1,2-Dibromoethane	ND	40	50.0	
Dibromomethane	ND	40	50.0	
1,2-Dichlorobenzene	ND	40	50.0	
1,3-Dichlorobenzene	ND	40	50.0	
1,4-Dichlorobenzene	ND	40	50.0	
Dichlorodifluoromethane	ND	80	50.0	
1,1-Dichloroethane	ND	40	50.0	
1,2-Dichloroethane	ND	40	50.0	
1,1-Dichloroethene	ND	40	50.0	
c-1,2-Dichloroethene	ND	40	50.0	
t-1,2-Dichloroethene	ND	40	50.0	
1,2-Dichloropropane	ND	40	50.0	
1,3-Dichloropropane	ND	40	50.0	
2,2-Dichloropropane	ND	200	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	80	50.0	
c-1,3-Dichloropropene	ND	40	50.0	
t-1,3-Dichloropropene	ND	80	50.0	
Ethylbenzene	ND	40	50.0	
2-Hexanone	ND	800	50.0	
Isopropylbenzene	ND	40	50.0	
p-Isopropyltoluene	ND	40	50.0	
Methylene Chloride	ND	400	50.0	
4-Methyl-2-Pentanone	ND	800	50.0	
Naphthalene	ND	400	50.0	
n-Propylbenzene	ND	80	50.0	
Styrene	ND	40	50.0	
1,1,1,2-Tetrachloroethane	ND	40	50.0	
1,1,2,2-Tetrachloroethane	ND	80	50.0	
Tetrachloroethene	520	40	50.0	
Toluene	ND	40	50.0	
1,2,3-Trichlorobenzene	ND	80	50.0	
1,2,4-Trichlorobenzene	ND	80	50.0	
1,1,1-Trichloroethane	ND	40	50.0	
1,1,2-Trichloroethane	ND	40	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	400	50.0	
Trichloroethene	ND	80	50.0	
Trichlorofluoromethane	ND	400	50.0	
1,2,3-Trichloropropane	ND	80	50.0	
1,2,4-Trimethylbenzene	ND	80	50.0	
1,3,5-Trimethylbenzene	ND	80	50.0	
Vinyl Acetate	ND	400	50.0	
Vinyl Chloride	ND	40	50.0	
p/m-Xylene	ND	80	50.0	
o-Xylene	ND	40	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	80	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	87	80-120		
Dibromofluoromethane	110	79-133		
1,2-Dichloroethane-d4	116	71-155		
Toluene-d8	102	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-14-2.0	15-02-0902-3-B	02/11/15 13:20	Solid	GC/MS UU	02/11/15	02/12/15 18:00	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	46	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.6	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.6	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	59	0.93	1.00	
Toluene	1.5	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	80-120	
Dibromofluoromethane	99	79-133	
1,2-Dichloroethane-d4	103	71-155	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-14-5.0	15-02-0902-4-B	02/11/15 13:32	Solid	GC/MS UU	02/11/15	02/12/15 18:25	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.83	1.00	
Bromobenzene	ND	0.83	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.83	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.83	1.00	
sec-Butylbenzene	ND	0.83	1.00	
tert-Butylbenzene	ND	0.83	1.00	
Carbon Disulfide	ND	8.3	1.00	
Carbon Tetrachloride	ND	0.83	1.00	
Chlorobenzene	ND	0.83	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.83	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.83	1.00	
4-Chlorotoluene	ND	0.83	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.83	1.00	
Dibromomethane	ND	0.83	1.00	
1,2-Dichlorobenzene	ND	0.83	1.00	
1,3-Dichlorobenzene	ND	0.83	1.00	
1,4-Dichlorobenzene	ND	0.83	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.83	1.00	
1,2-Dichloroethane	ND	0.83	1.00	
1,1-Dichloroethene	ND	0.83	1.00	
c-1,2-Dichloroethene	ND	0.83	1.00	
t-1,2-Dichloroethene	ND	0.83	1.00	
1,2-Dichloropropane	ND	0.83	1.00	
1,3-Dichloropropane	ND	0.83	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.83	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.83	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.83	1.00	
p-Isopropyltoluene	ND	0.83	1.00	
Methylene Chloride	ND	8.3	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.3	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.83	1.00	
1,1,1,2-Tetrachloroethane	ND	0.83	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	39	0.83	1.00	
Toluene	1.3	0.83	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.3	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.3	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.3	1.00	
Vinyl Chloride	ND	0.83	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.83	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	102	80-120	
Dibromofluoromethane	108	79-133	
1,2-Dichloroethane-d4	110	71-155	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-15-2.0	15-02-0902-5-B	02/11/15 13:58	Solid	GC/MS UU	02/11/15	02/12/15 18:50	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	9.1	0.93	1.00	
Toluene	ND	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	92	80-120	
Dibromofluoromethane	110	79-133	
1,2-Dichloroethane-d4	112	71-155	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-15-5.0	15-02-0902-6-B	02/11/15 14:12	Solid	GC/MS UU	02/11/15	02/12/15 19:14	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	48	1.00	
Benzene	ND	0.95	1.00	
Bromobenzene	ND	0.95	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.95	1.00	
Bromoform	ND	4.8	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.95	1.00	
sec-Butylbenzene	ND	0.95	1.00	
tert-Butylbenzene	ND	0.95	1.00	
Carbon Disulfide	ND	9.5	1.00	
Carbon Tetrachloride	ND	0.95	1.00	
Chlorobenzene	ND	0.95	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.95	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.95	1.00	
4-Chlorotoluene	ND	0.95	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.8	1.00	
1,2-Dibromoethane	ND	0.95	1.00	
Dibromomethane	ND	0.95	1.00	
1,2-Dichlorobenzene	ND	0.95	1.00	
1,3-Dichlorobenzene	ND	0.95	1.00	
1,4-Dichlorobenzene	ND	0.95	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.95	1.00	
1,2-Dichloroethane	ND	0.95	1.00	
1,1-Dichloroethene	ND	0.95	1.00	
c-1,2-Dichloroethene	ND	0.95	1.00	
t-1,2-Dichloroethene	ND	0.95	1.00	
1,2-Dichloropropane	ND	0.95	1.00	
1,3-Dichloropropane	ND	0.95	1.00	
2,2-Dichloropropane	ND	4.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.95	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.95	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.95	1.00	
p-Isopropyltoluene	ND	0.95	1.00	
Methylene Chloride	ND	9.5	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.5	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.95	1.00	
1,1,1,2-Tetrachloroethane	ND	0.95	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	33	0.95	1.00	
Toluene	ND	0.95	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.5	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.5	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.5	1.00	
Vinyl Chloride	ND	0.95	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.95	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	80-120	
Dibromofluoromethane	107	79-133	
1,2-Dichloroethane-d4	111	71-155	
Toluene-d8	97	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-17-2.0	15-02-0902-7-B	02/11/15 14:45	Solid	GC/MS UU	02/11/15	02/12/15 19:39	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	41	1.00	
Benzene	ND	0.82	1.00	
Bromobenzene	ND	0.82	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.82	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.82	1.00	
sec-Butylbenzene	ND	0.82	1.00	
tert-Butylbenzene	ND	0.82	1.00	
Carbon Disulfide	ND	8.2	1.00	
Carbon Tetrachloride	ND	0.82	1.00	
Chlorobenzene	ND	0.82	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.82	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.82	1.00	
4-Chlorotoluene	ND	0.82	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.82	1.00	
Dibromomethane	ND	0.82	1.00	
1,2-Dichlorobenzene	ND	0.82	1.00	
1,3-Dichlorobenzene	ND	0.82	1.00	
1,4-Dichlorobenzene	ND	0.82	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.82	1.00	
1,2-Dichloroethane	ND	0.82	1.00	
1,1-Dichloroethene	ND	0.82	1.00	
c-1,2-Dichloroethene	ND	0.82	1.00	
t-1,2-Dichloroethene	ND	0.82	1.00	
1,2-Dichloropropane	ND	0.82	1.00	
1,3-Dichloropropane	ND	0.82	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.82	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.82	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.82	1.00	
p-Isopropyltoluene	ND	0.82	1.00	
Methylene Chloride	ND	8.2	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.2	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.82	1.00	
1,1,1,2-Tetrachloroethane	ND	0.82	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	24	0.82	1.00	
Toluene	ND	0.82	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.2	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.2	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.2	1.00	
Vinyl Chloride	ND	0.82	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.82	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	102	80-120	
Dibromofluoromethane	110	79-133	
1,2-Dichloroethane-d4	113	71-155	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-17-5.0	15-02-0902-8-B	02/11/15 15:00	Solid	GC/MS UU	02/11/15	02/12/15 20:53	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	1.3	0.87	1.00	
Bromobenzene	ND	0.87	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.87	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.87	1.00	
sec-Butylbenzene	ND	0.87	1.00	
tert-Butylbenzene	ND	0.87	1.00	
Carbon Disulfide	ND	8.7	1.00	
Carbon Tetrachloride	ND	0.87	1.00	
Chlorobenzene	ND	0.87	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.87	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.87	1.00	
4-Chlorotoluene	ND	0.87	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.87	1.00	
Dibromomethane	ND	0.87	1.00	
1,2-Dichlorobenzene	ND	0.87	1.00	
1,3-Dichlorobenzene	ND	0.87	1.00	
1,4-Dichlorobenzene	ND	0.87	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.87	1.00	
1,2-Dichloroethane	ND	0.87	1.00	
1,1-Dichloroethene	ND	0.87	1.00	
c-1,2-Dichloroethene	ND	0.87	1.00	
t-1,2-Dichloroethene	ND	0.87	1.00	
1,2-Dichloropropane	ND	0.87	1.00	
1,3-Dichloropropane	ND	0.87	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.87	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.87	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.87	1.00	
p-Isopropyltoluene	ND	0.87	1.00	
Methylene Chloride	ND	8.7	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.7	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.87	1.00	
1,1,1,2-Tetrachloroethane	ND	0.87	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	160	0.87	1.00	
Toluene	1.8	0.87	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.7	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.7	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.7	1.00	
Vinyl Chloride	ND	0.87	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.87	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	89	80-120	
Dibromofluoromethane	108	79-133	
1,2-Dichloroethane-d4	117	71-155	
Toluene-d8	103	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-18-2.0	15-02-0902-9-B	02/11/15 17:52	Solid	GC/MS UU	02/11/15	02/12/15 20:04	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.95	1.00	
Bromobenzene	ND	0.95	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.95	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.95	1.00	
sec-Butylbenzene	ND	0.95	1.00	
tert-Butylbenzene	ND	0.95	1.00	
Carbon Disulfide	ND	9.5	1.00	
Carbon Tetrachloride	ND	0.95	1.00	
Chlorobenzene	ND	0.95	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.95	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.95	1.00	
4-Chlorotoluene	ND	0.95	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.95	1.00	
Dibromomethane	ND	0.95	1.00	
1,2-Dichlorobenzene	ND	0.95	1.00	
1,3-Dichlorobenzene	ND	0.95	1.00	
1,4-Dichlorobenzene	ND	0.95	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.95	1.00	
1,2-Dichloroethane	ND	0.95	1.00	
1,1-Dichloroethene	ND	0.95	1.00	
c-1,2-Dichloroethene	1.8	0.95	1.00	
t-1,2-Dichloroethene	ND	0.95	1.00	
1,2-Dichloropropane	ND	0.95	1.00	
1,3-Dichloropropane	ND	0.95	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.95	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.95	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.95	1.00	
p-Isopropyltoluene	ND	0.95	1.00	
Methylene Chloride	ND	9.5	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.5	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.95	1.00	
1,1,1,2-Tetrachloroethane	ND	0.95	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	71	0.95	1.00	
Toluene	ND	0.95	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.5	1.00	
Trichloroethene	8.0	1.9	1.00	
Trichlorofluoromethane	ND	9.5	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.5	1.00	
Vinyl Chloride	ND	0.95	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.95	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	87	80-120		
Dibromofluoromethane	108	79-133		
1,2-Dichloroethane-d4	109	71-155		
Toluene-d8	99	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-16-2.0	15-02-0902-11-B	02/11/15 15:37	Solid	GC/MS UU	02/11/15	02/12/15 20:29	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	45	1.00	
Benzene	ND	0.90	1.00	
Bromobenzene	ND	0.90	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.90	1.00	
Bromoform	ND	4.5	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	ND	0.90	1.00	
sec-Butylbenzene	ND	0.90	1.00	
tert-Butylbenzene	ND	0.90	1.00	
Carbon Disulfide	ND	9.0	1.00	
Carbon Tetrachloride	ND	0.90	1.00	
Chlorobenzene	ND	0.90	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.90	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.90	1.00	
4-Chlorotoluene	ND	0.90	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.5	1.00	
1,2-Dibromoethane	ND	0.90	1.00	
Dibromomethane	ND	0.90	1.00	
1,2-Dichlorobenzene	ND	0.90	1.00	
1,3-Dichlorobenzene	ND	0.90	1.00	
1,4-Dichlorobenzene	ND	0.90	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.90	1.00	
1,2-Dichloroethane	ND	0.90	1.00	
1,1-Dichloroethene	ND	0.90	1.00	
c-1,2-Dichloroethene	ND	0.90	1.00	
t-1,2-Dichloroethene	ND	0.90	1.00	
1,2-Dichloropropane	ND	0.90	1.00	
1,3-Dichloropropane	ND	0.90	1.00	
2,2-Dichloropropane	ND	4.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.90	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	ND	0.90	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	ND	0.90	1.00	
p-Isopropyltoluene	ND	0.90	1.00	
Methylene Chloride	ND	9.0	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	9.0	1.00	
n-Propylbenzene	ND	1.8	1.00	
Styrene	ND	0.90	1.00	
1,1,1,2-Tetrachloroethane	ND	0.90	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	15	0.90	1.00	
Toluene	ND	0.90	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.90	1.00	
1,1,2-Trichloroethane	ND	0.90	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.0	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	9.0	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	ND	1.8	1.00	
1,3,5-Trimethylbenzene	ND	1.8	1.00	
Vinyl Acetate	ND	9.0	1.00	
Vinyl Chloride	ND	0.90	1.00	
p/m-Xylene	ND	1.8	1.00	
o-Xylene	ND	0.90	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	110	79-133	
1,2-Dichloroethane-d4	114	71-155	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-025-26018	N/A	Solid	GC/MS UU	02/12/15	02/12/15 16:34	150212L025

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	105	79-133	
1,2-Dichloroethane-d4	110	71-155	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	095-01-025-26021	N/A	Solid	GC/MS UU	02/12/15	02/12/15 17:17	150212L035

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	80-120	
Dibromofluoromethane	93	79-133	
1,2-Dichloroethane-d4	97	71-155	
Toluene-d8	104	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
ARC-SV-18-5.0	15-02-0902-10-A	02/11/15 18:10	Solid	GC/MS BB	02/12/15	02/13/15 16:00	150213L022

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.00	
Benzene	ND	5.1	1.00	
Bromobenzene	ND	5.1	1.00	
Bromochloromethane	ND	5.1	1.00	
Bromodichloromethane	ND	5.1	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	26	1.00	
2-Butanone	ND	51	1.00	
n-Butylbenzene	ND	5.1	1.00	
sec-Butylbenzene	ND	5.1	1.00	
tert-Butylbenzene	ND	5.1	1.00	
Carbon Disulfide	ND	51	1.00	
Carbon Tetrachloride	ND	5.1	1.00	
Chlorobenzene	ND	5.1	1.00	
Chloroethane	ND	5.1	1.00	
Chloroform	ND	5.1	1.00	
Chloromethane	ND	26	1.00	
2-Chlorotoluene	ND	5.1	1.00	
4-Chlorotoluene	ND	5.1	1.00	
Dibromochloromethane	ND	5.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	5.1	1.00	
Dibromomethane	ND	5.1	1.00	
1,2-Dichlorobenzene	ND	5.1	1.00	
1,3-Dichlorobenzene	ND	5.1	1.00	
1,4-Dichlorobenzene	ND	5.1	1.00	
Dichlorodifluoromethane	ND	5.1	1.00	
1,1-Dichloroethane	ND	5.1	1.00	
1,2-Dichloroethane	ND	5.1	1.00	
1,1-Dichloroethene	ND	5.1	1.00	
c-1,2-Dichloroethene	ND	5.1	1.00	
t-1,2-Dichloroethene	ND	5.1	1.00	
1,2-Dichloropropane	ND	5.1	1.00	
1,3-Dichloropropane	ND	5.1	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.1	1.00	
c-1,3-Dichloropropene	ND	5.1	1.00	
t-1,3-Dichloropropene	ND	5.1	1.00	
Ethylbenzene	ND	5.1	1.00	
2-Hexanone	ND	51	1.00	
Isopropylbenzene	ND	5.1	1.00	
p-Isopropyltoluene	ND	5.1	1.00	
Methylene Chloride	ND	51	1.00	
4-Methyl-2-Pentanone	ND	51	1.00	
Naphthalene	ND	51	1.00	
n-Propylbenzene	ND	5.1	1.00	
Styrene	ND	5.1	1.00	
1,1,1,2-Tetrachloroethane	ND	5.1	1.00	
1,1,2,2-Tetrachloroethane	ND	5.1	1.00	
Tetrachloroethene	6.3	5.1	1.00	
Toluene	ND	5.1	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	5.1	1.00	
1,1,1-Trichloroethane	ND	5.1	1.00	
1,1,2-Trichloroethane	ND	5.1	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1.00	
Trichloroethene	ND	5.1	1.00	
1,2,3-Trichloropropane	ND	5.1	1.00	
1,2,4-Trimethylbenzene	ND	5.1	1.00	
Trichlorofluoromethane	ND	51	1.00	
1,3,5-Trimethylbenzene	ND	5.1	1.00	
Vinyl Acetate	ND	51	1.00	
Vinyl Chloride	ND	5.1	1.00	
p/m-Xylene	ND	5.1	1.00	
o-Xylene	ND	5.1	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	97	60-132		
Dibromofluoromethane	100	63-141		
1,2-Dichloroethane-d4	105	62-146		
Toluene-d8	100	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-796-9386	N/A	Solid	GC/MS BB	02/13/15	02/13/15 15:02	150213L022

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1.00	
Benzene	ND	5.0	1.00	
Bromobenzene	ND	5.0	1.00	
Bromochloromethane	ND	5.0	1.00	
Bromodichloromethane	ND	5.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	25	1.00	
2-Butanone	ND	50	1.00	
n-Butylbenzene	ND	5.0	1.00	
sec-Butylbenzene	ND	5.0	1.00	
tert-Butylbenzene	ND	5.0	1.00	
Carbon Disulfide	ND	50	1.00	
Carbon Tetrachloride	ND	5.0	1.00	
Chlorobenzene	ND	5.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	5.0	1.00	
Chloromethane	ND	25	1.00	
2-Chlorotoluene	ND	5.0	1.00	
4-Chlorotoluene	ND	5.0	1.00	
Dibromochloromethane	ND	5.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	5.0	1.00	
Dibromomethane	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
Dichlorodifluoromethane	ND	5.0	1.00	
1,1-Dichloroethane	ND	5.0	1.00	
1,2-Dichloroethane	ND	5.0	1.00	
1,1-Dichloroethene	ND	5.0	1.00	
c-1,2-Dichloroethene	ND	5.0	1.00	
t-1,2-Dichloroethene	ND	5.0	1.00	
1,2-Dichloropropane	ND	5.0	1.00	
1,3-Dichloropropane	ND	5.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Fazio's Cleaners / Woodland Hills, CA

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	1.00	
c-1,3-Dichloropropene	ND	5.0	1.00	
t-1,3-Dichloropropene	ND	5.0	1.00	
Ethylbenzene	ND	5.0	1.00	
2-Hexanone	ND	50	1.00	
Isopropylbenzene	ND	5.0	1.00	
p-Isopropyltoluene	ND	5.0	1.00	
Methylene Chloride	ND	50	1.00	
4-Methyl-2-Pentanone	ND	50	1.00	
Naphthalene	ND	50	1.00	
n-Propylbenzene	ND	5.0	1.00	
Styrene	ND	5.0	1.00	
1,1,1,2-Tetrachloroethane	ND	5.0	1.00	
1,1,2,2-Tetrachloroethane	ND	5.0	1.00	
Tetrachloroethene	ND	5.0	1.00	
Toluene	ND	5.0	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
1,1,1-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1.00	
Trichloroethene	ND	5.0	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	5.0	1.00	
Trichlorofluoromethane	ND	50	1.00	
1,3,5-Trimethylbenzene	ND	5.0	1.00	
Vinyl Acetate	ND	50	1.00	
Vinyl Chloride	ND	5.0	1.00	
p/m-Xylene	ND	5.0	1.00	
o-Xylene	ND	5.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
1,4-Bromofluorobenzene	99	60-132		
Dibromofluoromethane	97	63-141		
1,2-Dichloroethane-d4	102	62-146		
Toluene-d8	99	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B

Project: Fazio's Cleaners / Woodland Hills, CA

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
ARC-SV-18-5.0	Sample	Solid	GC/MS BB	02/12/15	02/13/15 16:00	150213S019
ARC-SV-18-5.0	Matrix Spike	Solid	GC/MS BB	02/12/15	02/13/15 16:27	150213S019
ARC-SV-18-5.0	Matrix Spike Duplicate	Solid	GC/MS BB	02/12/15	02/13/15 16:54	150213S019

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	40.76	82	42.72	85	61-127	5	0-20	
Carbon Tetrachloride	ND	50.00	39.43	79	39.36	79	51-135	0	0-29	
Chlorobenzene	ND	50.00	43.01	86	44.00	88	57-123	2	0-20	
1,2-Dibromoethane	ND	50.00	46.48	93	46.36	93	64-124	0	0-20	
1,2-Dichlorobenzene	ND	50.00	41.02	82	41.27	83	35-131	1	0-25	
1,2-Dichloroethane	ND	50.00	44.87	90	45.26	91	80-120	1	0-20	
1,1-Dichloroethene	ND	50.00	45.08	90	44.04	88	47-143	2	0-25	
Ethylbenzene	ND	50.00	44.48	89	45.70	91	57-129	3	0-22	
Toluene	ND	50.00	43.95	88	46.01	92	63-123	5	0-20	
Trichloroethene	ND	50.00	47.79	96	46.76	94	44-158	2	0-20	
Vinyl Chloride	ND	50.00	43.08	86	40.18	80	49-139	7	0-47	
p/m-Xylene	ND	100.0	91.45	91	92.00	92	70-130	1	0-30	
o-Xylene	ND	50.00	47.96	96	49.02	98	70-130	2	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	45.32	91	44.03	88	57-123	3	0-21	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B

Project: Fazio's Cleaners / Woodland Hills, CA

Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-025-26018	LCS	Solid	GC/MS UU	02/12/15	02/12/15 13:14	150212L025				
095-01-025-26018	LCSD	Solid	GC/MS UU	02/12/15	02/12/15 13:39	150212L025				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.87	100	46.28	93	80-120	73-127	7	0-20	
Carbon Tetrachloride	50.00	52.18	104	48.50	97	65-137	53-149	7	0-20	
Chlorobenzene	50.00	56.91	114	51.49	103	80-120	73-127	10	0-20	
1,2-Dibromoethane	50.00	48.98	98	48.84	98	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	55.65	111	52.00	104	80-120	73-127	7	0-20	
1,2-Dichloroethane	50.00	52.31	105	48.74	97	80-120	73-127	7	0-20	
1,1-Dichloroethene	50.00	53.55	107	52.79	106	68-128	58-138	1	0-20	
Ethylbenzene	50.00	56.24	112	54.45	109	80-120	73-127	3	0-20	
Toluene	50.00	50.76	102	47.39	95	80-120	73-127	7	0-20	
Trichloroethene	50.00	51.00	102	50.34	101	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	51.82	104	49.02	98	67-127	57-137	6	0-20	
p/m-Xylene	100.0	119.1	119	112.9	113	75-125	67-133	5	0-25	
o-Xylene	50.00	58.17	116	59.79	120	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	57.61	115	53.53	107	70-124	61-133	7	0-20	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5035
Method: EPA 8260B

Project: Fazio's Cleaners / Woodland Hills, CA

Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
095-01-025-26021	LCS	Solid	GC/MS UU	02/12/15	02/12/15 13:14	150212L035				
095-01-025-26021	LCSD	Solid	GC/MS UU	02/12/15	02/12/15 13:39	150212L035				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.87	100	46.28	93	80-120	73-127	7	0-20	
Carbon Tetrachloride	50.00	52.18	104	48.50	97	65-137	53-149	7	0-20	
Chlorobenzene	50.00	56.91	114	51.49	103	80-120	73-127	10	0-20	
1,2-Dibromoethane	50.00	48.98	98	48.84	98	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	55.65	111	52.00	104	80-120	73-127	7	0-20	
1,2-Dichloroethane	50.00	52.31	105	48.74	97	80-120	73-127	7	0-20	
1,1-Dichloroethene	50.00	53.55	107	52.79	106	68-128	58-138	1	0-20	
Ethylbenzene	50.00	56.24	112	54.45	109	80-120	73-127	3	0-20	
Toluene	50.00	50.76	102	47.39	95	80-120	73-127	7	0-20	
Trichloroethene	50.00	51.00	102	50.34	101	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	51.82	104	49.02	98	67-127	57-137	6	0-20	
p/m-Xylene	100.0	119.1	119	112.9	113	75-125	67-133	5	0-25	
o-Xylene	50.00	58.17	116	59.79	120	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	57.61	115	53.53	107	70-124	61-133	7	0-20	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

ARCADIS U.S., Inc.
320 Commerce, Suite 200
Irvine, CA 92602-1363

Date Received: 02/12/15
Work Order: 15-02-0902
Preparation: EPA 5030C
Method: EPA 8260B

Project: Fazio's Cleaners / Woodland Hills, CA

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-12-796-9386	LCS	Solid	GC/MS BB	02/13/15	02/13/15 13:48	150213L022	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		50.00	48.50	97	78-120	71-127	
Carbon Tetrachloride		50.00	43.38	87	49-139	34-154	
Chlorobenzene		50.00	49.37	99	79-120	72-127	
1,2-Dibromoethane		50.00	49.25	98	80-120	73-127	
1,2-Dichlorobenzene		50.00	49.97	100	75-120	68-128	
1,2-Dichloroethane		50.00	49.84	100	80-120	73-127	
1,1-Dichloroethene		50.00	53.43	107	74-122	66-130	
Ethylbenzene		50.00	51.18	102	76-120	69-127	
Toluene		50.00	48.34	97	77-120	70-127	
Trichloroethene		50.00	48.24	96	80-120	73-127	
Vinyl Chloride		50.00	47.52	95	68-122	59-131	
p/m-Xylene		100.0	103.4	103	75-125	67-133	
o-Xylene		50.00	54.41	109	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)		50.00	49.71	99	77-120	70-127	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 15-02-0902

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5035	867	GC/MS UU	2
EPA 8260B	EPA 5030C	849	GC/MS BB	2

Glossary of Terms and Qualifiers

Work Order: 15-02-0902

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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WORK ORDER #: 15-02-0902

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AREASIS

DATE: 02/12/15

TEMPERATURE: Thermometer ID: SC4 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 3.1 °C + 0.2 °C (CF) = 3.3 °C Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: Air Filter

Checked by: 678

CUSTODY SEALS INTACT:

Cooler _____ No (Not Intact) Not Present N/A Checked by: 678

Sample _____ No (Not Intact) Not Present Checked by: 977

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (^① (-10) 5) EnCores® TerraCores® (^③ *) _____

Aqueous: VOA VOAh VOAna₂ 125AGB 125AGBh 125AGBp 1AGB 1AGBna₂ 1AGBs

500AGB 500AGJ 500AGJs 250AGB 250CGB 250CGBs 1PB 1PBna 500PB

250PB 250PBn 125PB 125PBz_{na} 100PJ 100PJna₂ _____ _____ _____

Air: Tedlar® Canister Other: _____ Trip Blank Lot#: _____ Labeled/Checked by: 977

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 779

Preservative: h: HCL n: HNO₃ na₂: Na₂S₂O₃ na: NaOH p: H₃PO₄ s: H₂SO₄ u: Ultra-pure z_{na}: ZnAc₂+NaOH f: Filtered Scanned by: 779

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* (-i) to (-q), (-ll)



Appendix F

Laboratory Reports and
Chain-of-Custody Forms –
Soil Vapor



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(714) 449-9937 | FAX (714) 449-9685

**JONES ENVIRONMENTAL
LABORATORY RESULTS**

Client:	Arcadis	Report date:	2/13/2015
Client Address:	320 Commerce, Suite 200 Irvine, CA 92602	JEL Ref. No.:	C-2350
		Client Ref. No.:	CM010555.0004
Attn:	James Gonzales/Andrew Leavitt	Date Sampled:	2/13/2015
		Date Received:	2/13/2015
Project Name:	Fazio Cleaners	Date Analyzed:	2/13/2015
Project Address:	23383 Mulholland Drive Woodland Hills, CA	Physical State:	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B - Volatile Organics by GC/MS + Oxygenates

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers. Tubing placed in the ground for soil gas sampling was purged three different times as recommended by DTSC/RWQCB guidance documents. This purge test determined how many purges of the soil gas tubing were needed throughout the project. One, three and ten purge volumes were analyzed to make this determination.

A tracer gas mixture of n-propanol and n-pentane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No n-propanol or n-pentane was found in any of the samples reported herein.

The sampling rate was approximately 200 cc/min except when noted differently on the chain of custody record using a gas tight syringe. 3 purge volumes were used.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, Matrix Spike (MS) and Matrix Spike Duplicates (MSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of sampling.

Approval:

Steve Jones, Ph.D.
Laboratory Manager



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JONES ENVIRONMENTAL LABORATORY RESULTS

Client: Arcadis
Client Address: 320 Commerce, Suite 200
 Irvine, CA 92602

Report date: 2/13/2015
JEL Ref. No.: C-2350
Client Ref. No.: CM010555.0004

Attn: James Gonzales/Andrew Leavitt

Date Sampled: 2/13/2015

Project: Fazio Cleaners
Project Address: 23383 Mulholland Drive
 Woodland Hills, CA

Date Received: 2/13/2015

Date Analyzed: 2/13/2015

Physical State: Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

<u>Sample ID:</u>	ARC-SV-15 1P	ARC-SV-15 3P	ARC-SV-15 10P	ARC-SV-13	ARC-SV-13 DUP	<u>Practical Quantitation Limit</u>	<u>Units</u>
<u>JEL ID:</u>	C-2350-01	C-2350-02	C-2350-03	C-2350-04	C-2350-05		
Analytes:							
Benzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	ND	0.335	0.290	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

<u>Sample ID:</u>	ARC-SV-15 1P	ARC-SV-15 3P	ARC-SV-15 10P	ARC-SV-13	ARC-SV-13 DUP		
<u>JEL ID:</u>	C-2350-01	C-2350-02	C-2350-03	C-2350-04	C-2350-05	<u>Practical Quantitation</u>	<u>Units</u>
						<u>Limit</u>	
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	15.9	16.6	15.3	153*	173*	0.020	µg/L
Toluene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	ND	10.7*	11.0*	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	ND	ND	0.020	µg/L
Xylenes	ND	ND	ND	ND	ND	0.020	µg/L
MTBE	ND	ND	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	ND	ND	1.000	µg/L
TIC:							
n-propanol	ND	ND	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	ND	ND	0.020	µg/L
Dilution Factor	1	1	1	1/10*	1/10*		
Surrogate Recoveries:						QC Limits	
Dibromofluoromethane	98%	106%	82%	90%	94%	75 - 125	
Toluene-d ₈	103%	91%	102%	100%	100%	75 - 125	
4-Bromofluorobenzene	91%	96%	92%	96%	94%	75 - 125	
	C1-021315- C-2350	C1-021315- C-2350	C1-021315- C-2350	C1-021315- C-2350	C1-021315- C-2350		

ND= Not Detected

* = Dilutions for these compound(s); first number for all others



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JONES ENVIRONMENTAL LABORATORY RESULTS

Client: Arcadis
Client Address: 320 Commerce, Suite 200
 Irvine, CA 92602

Report date: 2/13/2015
JEL Ref. No.: C-2350
Client Ref. No.: CM010555.0004

Attn: James Gonzales
 Andrew Leavitt
Project: Fazio Cleaners
Project Address: 23383 Mulholland Drive
 Woodland Hills, CA

Date Sampled: 2/13/2015
Date Received: 2/13/2015
Date Analyzed: 2/13/2015
Physical State: Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID: ARC-SV-14 ARC-SV-16 ARC-SV-18

JEL ID:	C-2350-06	C-2350-07	C-2350-08	Practical Quantitation Limit	Units
Analytes:					
Benzene	ND	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	ND	0.020	µg/L
Bromoform	ND	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	ND	0.020	µg/L
Chloroform	ND	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	1.08	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample ID: ARC-SV-14 ARC-SV-16 ARC-SV-18

<u>JEL ID:</u>	C-2350-06	C-2350-07	C-2350-08	<u>Practical Quantitation Limit</u>	<u>Units</u>
Analytes:					
cis-1,3-Dichloropropene	ND	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	ND	0.020	µg/L
Freon 113	ND	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	ND	0.020	µg/L
Naphthalene	ND	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	ND	0.020	µg/L
Styrene	ND	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	0.020	µg/L
Tetrachloroethylene	17.0	23.6	51.4	0.020	µg/L
Toluene	ND	ND	ND	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	ND	0.020	µg/L
Trichloroethylene	0.466	0.444	7.16	0.020	µg/L
Trichlorofluoromethane	ND	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	ND	0.020	µg/L
Xylenes	ND	ND	ND	0.020	µg/L
MTBE	ND	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	ND	1.000	µg/L

TIC:					
n-propanol	ND	ND	ND	0.200	µg/L
n-pentane	ND	ND	ND	0.020	µg/L

Dilution Factor 1 1 1

<u>Surrogate Recoveries:</u>				<u>QC Limits</u>
Dibromofluoromethane	111%	82%	80%	75 - 125
Toluene-d ₈	90%	106%	100%	75 - 125
4-Bromofluorobenzene	98%	99%	92%	75 - 125

C1-021315- C1-021315- C1-021315-
C-2350 C-2350 C-2350

ND= Not Detected



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JONES ENVIRONMENTAL LABORATORY RESULTS

Client: Arcadis
Client Address: 320 Commerce, Suite 200
 Irvine, CA 92602

Report date: 2/13/2015
JEL Ref. No.: C-2350
Client Ref. No.: CM010555.0004

Attn: James Gonzales/Andrew Leavitt

Date Sampled: 2/13/2015
Date Received: 2/13/2015

Project: Fazio Cleaners
Project Address: 23383 Mulholland Drive
 Woodland Hills, CA

Date Analyzed: 2/13/2015
Physical State: Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

<u>Sample ID:</u>	METHOD	SAMPLING		
	BLANK	BLANK		
<u>JEL ID:</u>	C-2350-09	C-2350-10	<u>Practical</u>	<u>Units</u>
			<u>Quantitation</u>	
			<u>Limit</u>	
Analytes:				
Benzene	ND	ND	0.020	µg/L
Bromobenzene	ND	ND	0.020	µg/L
Bromodichloromethane	ND	ND	0.020	µg/L
Bromoform	ND	ND	0.020	µg/L
n-Butylbenzene	ND	ND	0.020	µg/L
sec-Butylbenzene	ND	ND	0.020	µg/L
tert-Butylbenzene	ND	ND	0.020	µg/L
Carbon tetrachloride	ND	ND	0.020	µg/L
Chlorobenzene	ND	ND	0.020	µg/L
Chloroform	ND	ND	0.020	µg/L
2-Chlorotoluene	ND	ND	0.020	µg/L
4-Chlorotoluene	ND	ND	0.020	µg/L
Dibromochloromethane	ND	ND	0.020	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	0.020	µg/L
1,2-Dibromoethane (EDB)	ND	ND	0.020	µg/L
Dibromomethane	ND	ND	0.020	µg/L
1,2- Dichlorobenzene	ND	ND	0.020	µg/L
1,3-Dichlorobenzene	ND	ND	0.020	µg/L
1,4-Dichlorobenzene	ND	ND	0.020	µg/L
Dichlorodifluoromethane	ND	ND	0.020	µg/L
1,1-Dichloroethane	ND	ND	0.020	µg/L
1,2-Dichloroethane	ND	ND	0.020	µg/L
1,1-Dichloroethene	ND	ND	0.020	µg/L
cis-1,2-Dichloroethene	ND	ND	0.020	µg/L
trans-1,2-Dichloroethene	ND	ND	0.020	µg/L
1,2-Dichloropropane	ND	ND	0.020	µg/L
1,3-Dichloropropane	ND	ND	0.020	µg/L
2,2-Dichloropropane	ND	ND	0.020	µg/L
1,1-Dichloropropene	ND	ND	0.020	µg/L

ND= Not Detected

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

<u>Sample ID:</u>	METHOD	SAMPLING		
	BLANK	BLANK		
<u>JEL ID:</u>	C-2350-09	C-2350-10	<u>Practical</u>	<u>Units</u>
			<u>Quantitation</u>	
			<u>Limit</u>	
Analytes:				
cis-1,3-Dichloropropene	ND	ND	0.020	µg/L
trans-1,3-Dichloropropene	ND	ND	0.020	µg/L
Ethylbenzene	ND	ND	0.020	µg/L
Freon 113	ND	ND	0.100	µg/L
Hexachlorobutadiene	ND	ND	0.020	µg/L
Isopropylbenzene	ND	ND	0.020	µg/L
4-Isopropyltoluene	ND	ND	0.020	µg/L
Methylene chloride	ND	ND	0.020	µg/L
Naphthalene	ND	ND	0.020	µg/L
n-Propylbenzene	ND	ND	0.020	µg/L
Styrene	ND	ND	0.020	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	0.020	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	0.020	µg/L
Tetrachloroethylene	ND	ND	0.020	µg/L
Toluene	ND	ND	0.020	µg/L
1,2,3-Trichlorobenzene	ND	ND	0.020	µg/L
1,2,4-Trichlorobenzene	ND	ND	0.020	µg/L
1,1,1-Trichloroethane	ND	ND	0.020	µg/L
1,1,2-Trichloroethane	ND	ND	0.020	µg/L
Trichloroethylene	ND	ND	0.020	µg/L
Trichlorofluoromethane	ND	ND	0.020	µg/L
1,2,3-Trichloropropane	ND	ND	0.020	µg/L
1,2,4-Trimethylbenzene	ND	ND	0.020	µg/L
1,3,5-Trimethylbenzene	ND	ND	0.020	µg/L
Vinyl chloride	ND	ND	0.020	µg/L
Xylenes	ND	ND	0.020	µg/L
MTBE	ND	ND	0.100	µg/L
Ethyl-tert-butylether	ND	ND	0.100	µg/L
Di-isopropylether	ND	ND	0.100	µg/L
tert-amylmethylether	ND	ND	0.100	µg/L
tert-Butylalcohol	ND	ND	1.000	µg/L
TIC:				
n-propanol	ND	ND	0.200	µg/L
n-pentane	ND	ND	0.020	µg/L
<u>Dilution Factor</u>	1	1		
<u>Surrogate Recoveries:</u>				<u>QC Limits</u>
Dibromofluoromethane	108%	104%		75 - 125
Toluene-d ₈	88%	95%		75 - 125
4-Bromofluorobenzene	102%	96%		75 - 125
	C1-021315- C-2350	C1-021315- C-2350		

ND= Not Detected



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**JONES ENVIRONMENTAL
 QUALITY CONTROL INFORMATION**

Client:	Arcadis	Report date:	2/13/2015
Client Address:	320 Commerce, Suite 200 Irvine, CA 92602	JEL Ref. No.:	C-2350
		Client Ref. No.:	CM010555.0004
Attn:	James Gonzales/Andrew Leavitt	Date Sampled:	2/13/2015
		Date Received:	2/13/2015
Project:	Fazio Cleaners	Date Analyzed:	2/13/2015
Project Address:	23383 Mulholland Drive Woodland Hills, CA	Physical State:	Soil Gas

EPA 8260B-Volatile Organics by GC/MS + Oxygenates

Sample Spiked:	Ambient Air		GC#:	C-021315-C-2350		
JEL ID:	C-2350-12	C-2350-13		C-2350-11		
Parameter	MS Recovery (%)	MSD Recovery (%)	RPD	Acceptability Range (%)	LCS	Acceptability Range (%)
Vinyl Chloride	85%	90%	6.1%	60-140	92%	70-130
1,1-Dichloroethylene	76%	79%	3.9%	60-140	79%	70-130
Cis-1,2-Dichloroethene	107%	117%	9.1%	70-130	92%	70-130
1,1,1-Trichloroethane	89%	91%	2.2%	70-130	88%	70-130
Benzene	98%	106%	7.4%	70-130	99%	70-130
Trichloroethylene	97%	103%	6.2%	70-130	98%	70-130
Toluene	96%	100%	4.7%	70-130	101%	70-130
Tetrachloroethene	79%	85%	7.1%	70-130	90%	70-130
Chlorobenzene	106%	109%	1.9%	70-130	111%	70-130
Ethylbenzene	82%	90%	8.7%	70-130	75%	70-130
1,2,4 Trimethylbenzene	88%	94%	6.3%	70-130	93%	70-130
Surrogate Recovery:						
Dibromofluoromethane	102%	101%		75-125	98%	75-125
Toluene-d ₈	88%	89%		75-125	93%	75-125
4-Bromofluorobenzene	82%	84%		75-125	82%	75-125

Method Blank = Not Detected

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 15%



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 Santa Fe Springs, CA 90670
 (714) 449-9937
 (562) 646-1611
 www.jonesenv.com

Chain-of-Custody Record

Client: Arcadis
 Project Name: Fazio Cleaners
 Project Address: 23383 Mulholland Drive
Woodland Hills, CA
 Project Contact: James Gonzales

Date: 2/13/2015
 Client Project #: CM010555-0004
 Turn Around Requested:
 Immediate Attention
 Rush 24-48 Hours
 Rush 72-96 Hours
 Normal
 Mobile Lab

SOIL GAS
 Purge Number: 1P 3P 7P 10P
 Purge Rate: 200 cc/min
 Shut in Test: / N
 Tracer:
 n-propanol
 n-pentane
 1,1-DFA
 Helium

Analysis Requested
 Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Soil Gas (SG)
8260 B (Water Only)
 Magnehelic Vacuum (InH₂O)
 Number of Containers

JEL Project #
C-2350
 Page 1 of 1
 Lab Use Only
 Sample Condition as Received:
 Chilled yes no
 Sealed yes no

Sample ID	Purge Number	Purge Volume	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample Number	Matrix	SG	SL	A	SG	Remarks/Special Instructions
ARC-SV-15 1P	1	434	2/13	0721	0724	C-2350-01	Soil (S)	X				Glass Gas tight Syringe
ARC-SV-15 3P	3	1301	2/13	0735	0742	C-2350-02	Soil (S)	X				"
ARC-SV-15 10P	10	4338	2/13	0750	0802	C-2350-03	Soil (S)	X				"
ARC-SV-13	3	1301	2/13	0836	0839	C-2350-04	Soil (S)	X				"
ARC-SV-13 Dup	3	1301	2/13	0836	0857	C-2350-05	Soil (S)	X				"
ARC-SV-13 d.l	3	1301	2/13	0905	0908	-	Soil (S)	X				"
ARC-SV-13 d.l Dup	3	1301	2/13	0905 ¹⁰¹²	0908 ¹⁰²⁰	-	Soil (S)	X				"
ARC-SV-14	3	1301	2/13	0943	0950	C-2350-06	Soil (S)	X				"
ARC-SV-16	3	1301	2/13	1003	1007	C-2350-07	Soil (S)	X				"
ARC-SV-18	3	1301	2/13	1040	1042	C-2350-08	Soil (S)	X				"

1 Relinquished by (signature)
A. Leavitt
 Company: AUS

Date: 2/13/15
 Time: 1120

2 Received by (signature)
Shawn Walker
 Company: JEL

Date: 2/13/15
 Time: 1120

Total Number of Containers
 The delivery of samples and the signature on this Chain of Custody form constitutes authorization to perform the analyses specified above under the Terms and Conditions set forth on the back hereof.
 EDD EDF



Appendix G

Laboratory Reports and
Chain-of-Custody Forms –
Sub-Slab Soil Vapor

3/17/2015

Mr. Andrew Leavitt
Arcadis U.S., Inc.
3750 Schaufele Avenue
Suite 225
Long Beach CA 90808

Project Name: Fazio's Cleaners
Project #:
Workorder #: 1502307R1

Dear Mr. Andrew Leavitt

The following report includes the data for the above referenced project for sample(s) received on 2/18/2015 at Air Toxics Ltd.

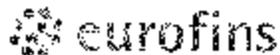
The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori
Project Manager



Air Toxics

Sample Transportation Notice

Requiring signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, packing or shipping of these samples. Requiring signature also indicates agreement to hold Eurofins, Oakland and indirectly Air Toxics Limited against any claim, demand or action of any kind, related to the collection, handling, or shipping of samples. DCL 11 Hotline (866) 457-4922

100 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager James Lazzolas
Collected by: (Print and Sign) Andrew Lazzolas
Company Air Toxics Email _____
Address 100 Blue Ravine Road State CA Zip _____
Phone _____ Fax _____

Project Info: <u>2014 CMC 10555 - 1007</u>	Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush	Lab Use Only Prescribed by _____ Date: _____ Prescription: _____ Date: _____
Project # _____	Project Name: <u>FZ2105 CMC1055</u>	

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Cylinder Pressure/Vacuum			
						Initial	Final	Receipt	Final
<u>01A</u>	<u>SS-02</u>	<u>24398</u>	<u>2/13/15</u>	<u>09:35</u>	<u>TO-15</u>	<u>-30</u>	<u>-5</u>		
<u>02A</u>	<u>SS-02-70F</u>	<u>30583</u>		<u>09:35</u>		<u>-26</u>	<u>-5</u>		
<u>03A</u>	<u>SS-03</u>	<u>11834</u>		<u>10:21</u>		<u>-29</u>	<u>-5</u>		
<u>04A</u>	<u>SS-04</u>	<u>34582</u>		<u>11:30</u>		<u>-30</u>	<u>-5</u>		

Released by: (signature) _____ Date/Time <u>2/13/15 11:00</u>	Received by: (signature) _____ Date/Time <u>[Signature] 2/13/15 10:05</u>	Notes: Please seal the sample cans when the order is received and the order is not at the site. Please change the top cap on the receipt as well. Email contact: James.Lazzolas@airtoxics.com
Requisitioned by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	
Retrieved by: (signature) _____ Date/Time _____	Received by: (signature) _____ Date/Time _____	

Lab Use Only	Shipper Name: <u>Air Toxics</u>	Air Bill # _____	Temp (C): <u>100</u>	Condition: <u>Good</u>	Custody Scale: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None	Work Order #: <u>1502307</u>
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Revised COC received via email on 3-16-15



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Sample Transportation Notice

Relinquishing signature on this document indicates that samples being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind, related to the collection, handling, or shipping of samples. D.O.I. Hotline :800/4E7-2822

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FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager James Lozales
Collected by: (Print and Sign) Andrew Lovitt
Company ACCO 3
Address 0 A Field State Zip
Phone Fax

Project Info: P.O. # CMO10555-0104
Project #
Project Name Fazio's Cies-105
Turn Around Time: Normal (checked) Rush
Pressurized by:
Date:
Pressurization Gas:
No He

Table with columns: Lab ID, Field Sample I.D. (Location), Can #, Date of Collection, Time of Collection, Analysis Requested, Canister Pressure/Vacuum (Initial, Final, Receipt, Final test)

Relinquished by: (signature) Date/Time 2/17/15 11:00
Received by: (signature) Date/Time 2/18/15 10:45
Notes:

Lab Use Only: Stripped Name, Air Bill #, Temp (C), Condition, Custody Seals Intact?, Work Order # 1502307

WORK ORDER #: 1502307R1

Work Order Summary

CLIENT:	Mr. Andrew Leavitt Arcadis U.S., Inc. 3750 Schaufele Avenue Suite 225 Long Beach, CA 90808	BILL TO:	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	562-496-3000	P.O. #	CM010555.0004
FAX:	562-429-1560	PROJECT #	Fazio's Cleaners
DATE RECEIVED:	02/18/2015	CONTACT:	Kyle Vagadori
DATE COMPLETED:	03/02/2015		
DATE REISSUED:	03/17/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	AUS-SS-02	TO-15	4.9 "Hg	15 psi
02A	AUS-SS-02-DUP	TO-15	6.3 "Hg	15 psi
03A	AUS-SS-03	TO-15	5.3 "Hg	15 psi
04A	AUS-SS-04	TO-15	5.1 "Hg	14.6 psi
05A	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 03/17/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
 Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.
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 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Arcadis U.S., Inc.
Workorder# 1502307R1

Four 1 Liter Summa Canister (100% Certified) samples were received on February 18, 2015. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on sample AUS-SS-03 due to the presence of high level target species.

The workorder was reissued on 03/17/15 per client's request for the following reasons:

1. to report results in ug/L.
2. to amend the identification of the following samples AUS-SS-02, AUS-SS-02-DUP, AUS-SS-03 and AUS-SS-04 per the revised chain of custody (COC) provided by the client on 03-16-15.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates

as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: AUS-SS-02

Lab ID#: 1502307R1-01A

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Ethanol	0.0091	0.26
Acetone	0.029	0.41
2-Propanol	0.012	0.24
2-Butanone (Methyl Ethyl Ketone)	0.014	0.018
4-Methyl-2-pentanone	0.0049	0.0056
Tetrachloroethene	0.0082	0.11

Client Sample ID: AUS-SS-02-DUP

Lab ID#: 1502307R1-02A

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Ethanol	0.0096	0.26
Acetone	0.030	0.38
2-Propanol	0.012	0.22
2-Butanone (Methyl Ethyl Ketone)	0.015	0.017
4-Methyl-2-pentanone	0.0052	0.0058
Tetrachloroethene	0.0087	0.093

Client Sample ID: AUS-SS-03

Lab ID#: 1502307R1-03A

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Ethanol	0.018	0.031
Acetone	0.058	0.11
cis-1,2-Dichloroethene	0.0097	0.011
Trichloroethene	0.013	0.15
Tetrachloroethene	0.017	5.9

Client Sample ID: AUS-SS-04

Lab ID#: 1502307R1-04A

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: AUS-SS-04

Lab ID#: 1502307R1-04A

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Ethanol	0.0090	0.023
Acetone	0.028	0.17
2-Butanone (Methyl Ethyl Ketone)	0.014	0.017
Tetrachloroethene	0.0081	0.22



Air Toxics

Client Sample ID: AUS-SS-02

Lab ID#: 1502307R1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022318	Date of Collection:	2/13/15 9:35:00 AM
Dil. Factor:	2.41	Date of Analysis:	2/23/15 06:30 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Freon 12	0.0060	Not Detected
Freon 114	0.0084	Not Detected
Chloromethane	0.025	Not Detected
Vinyl Chloride	0.0031	Not Detected
1,3-Butadiene	0.0027	Not Detected
Bromomethane	0.047	Not Detected
Chloroethane	0.013	Not Detected
Freon 11	0.0068	Not Detected
Ethanol	0.0091	0.26
Freon 113	0.0092	Not Detected
1,1-Dichloroethene	0.0048	Not Detected
Acetone	0.029	0.41
2-Propanol	0.012	0.24
Carbon Disulfide	0.015	Not Detected
3-Chloropropene	0.015	Not Detected
Methylene Chloride	0.042	Not Detected
Methyl tert-butyl ether	0.0043	Not Detected
trans-1,2-Dichloroethene	0.0048	Not Detected
Hexane	0.0042	Not Detected
1,1-Dichloroethane	0.0049	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.014	0.018
cis-1,2-Dichloroethene	0.0048	Not Detected
Tetrahydrofuran	0.0036	Not Detected
Chloroform	0.0059	Not Detected
1,1,1-Trichloroethane	0.0066	Not Detected
Cyclohexane	0.0041	Not Detected
Carbon Tetrachloride	0.0076	Not Detected
2,2,4-Trimethylpentane	0.0056	Not Detected
Benzene	0.0038	Not Detected
1,2-Dichloroethane	0.0049	Not Detected
Heptane	0.0049	Not Detected
Trichloroethene	0.0065	Not Detected
1,2-Dichloropropane	0.0056	Not Detected
1,4-Dioxane	0.017	Not Detected
Bromodichloromethane	0.0081	Not Detected
cis-1,3-Dichloropropene	0.0055	Not Detected
4-Methyl-2-pentanone	0.0049	0.0056
Toluene	0.0045	Not Detected
trans-1,3-Dichloropropene	0.0055	Not Detected
1,1,2-Trichloroethane	0.0066	Not Detected
Tetrachloroethene	0.0082	0.11
2-Hexanone	0.020	Not Detected



Air Toxics

Client Sample ID: AUS-SS-02

Lab ID#: 1502307R1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022318	Date of Collection:	2/13/15 9:35:00 AM
Dil. Factor:	2.41	Date of Analysis:	2/23/15 06:30 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Dibromochloromethane	0.010	Not Detected
1,2-Dibromoethane (EDB)	0.0092	Not Detected
Chlorobenzene	0.0055	Not Detected
Ethyl Benzene	0.0052	Not Detected
m,p-Xylene	0.0052	Not Detected
o-Xylene	0.0052	Not Detected
Styrene	0.0051	Not Detected
Bromoform	0.012	Not Detected
Cumene	0.0059	Not Detected
1,1,2,2-Tetrachloroethane	0.0083	Not Detected
Propylbenzene	0.0059	Not Detected
4-Ethyltoluene	0.0059	Not Detected
1,3,5-Trimethylbenzene	0.0059	Not Detected
1,2,4-Trimethylbenzene	0.0059	Not Detected
1,3-Dichlorobenzene	0.0072	Not Detected
1,4-Dichlorobenzene	0.0072	Not Detected
alpha-Chlorotoluene	0.0062	Not Detected
1,2-Dichlorobenzene	0.0072	Not Detected
1,2,4-Trichlorobenzene	0.036	Not Detected
Hexachlorobutadiene	0.051	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	111	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: AUS-SS-02-DUP

Lab ID#: 1502307R1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022319	Date of Collection:	2/13/15 9:35:00 AM
Dil. Factor:	2.56	Date of Analysis:	2/23/15 06:56 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Freon 12	0.0063	Not Detected
Freon 114	0.0089	Not Detected
Chloromethane	0.026	Not Detected
Vinyl Chloride	0.0033	Not Detected
1,3-Butadiene	0.0028	Not Detected
Bromomethane	0.050	Not Detected
Chloroethane	0.014	Not Detected
Freon 11	0.0072	Not Detected
Ethanol	0.0096	0.26
Freon 113	0.0098	Not Detected
1,1-Dichloroethene	0.0051	Not Detected
Acetone	0.030	0.38
2-Propanol	0.012	0.22
Carbon Disulfide	0.016	Not Detected
3-Chloropropene	0.016	Not Detected
Methylene Chloride	0.044	Not Detected
Methyl tert-butyl ether	0.0046	Not Detected
trans-1,2-Dichloroethene	0.0051	Not Detected
Hexane	0.0045	Not Detected
1,1-Dichloroethane	0.0052	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.015	0.017
cis-1,2-Dichloroethene	0.0051	Not Detected
Tetrahydrofuran	0.0038	Not Detected
Chloroform	0.0062	Not Detected
1,1,1-Trichloroethane	0.0070	Not Detected
Cyclohexane	0.0044	Not Detected
Carbon Tetrachloride	0.0080	Not Detected
2,2,4-Trimethylpentane	0.0060	Not Detected
Benzene	0.0041	Not Detected
1,2-Dichloroethane	0.0052	Not Detected
Heptane	0.0052	Not Detected
Trichloroethene	0.0069	Not Detected
1,2-Dichloropropane	0.0059	Not Detected
1,4-Dioxane	0.018	Not Detected
Bromodichloromethane	0.0086	Not Detected
cis-1,3-Dichloropropene	0.0058	Not Detected
4-Methyl-2-pentanone	0.0052	0.0058
Toluene	0.0048	Not Detected
trans-1,3-Dichloropropene	0.0058	Not Detected
1,1,2-Trichloroethane	0.0070	Not Detected
Tetrachloroethene	0.0087	0.093
2-Hexanone	0.021	Not Detected



Air Toxics

Client Sample ID: AUS-SS-02-DUP

Lab ID#: 1502307R1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022319	Date of Collection:	2/13/15 9:35:00 AM
Dil. Factor:	2.56	Date of Analysis:	2/23/15 06:56 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Dibromochloromethane	0.011	Not Detected
1,2-Dibromoethane (EDB)	0.0098	Not Detected
Chlorobenzene	0.0059	Not Detected
Ethyl Benzene	0.0056	Not Detected
m,p-Xylene	0.0056	Not Detected
o-Xylene	0.0056	Not Detected
Styrene	0.0054	Not Detected
Bromoform	0.013	Not Detected
Cumene	0.0063	Not Detected
1,1,2,2-Tetrachloroethane	0.0088	Not Detected
Propylbenzene	0.0063	Not Detected
4-Ethyltoluene	0.0063	Not Detected
1,3,5-Trimethylbenzene	0.0063	Not Detected
1,2,4-Trimethylbenzene	0.0063	Not Detected
1,3-Dichlorobenzene	0.0077	Not Detected
1,4-Dichlorobenzene	0.0077	Not Detected
alpha-Chlorotoluene	0.0066	Not Detected
1,2-Dichlorobenzene	0.0077	Not Detected
1,2,4-Trichlorobenzene	0.038	Not Detected
Hexachlorobutadiene	0.055	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: AUS-SS-03

Lab ID#: 1502307R1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022320	Date of Collection:	2/13/15 10:21:00 AM
Dil. Factor:	4.91	Date of Analysis:	2/23/15 07:21 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Freon 12	0.012	Not Detected
Freon 114	0.017	Not Detected
Chloromethane	0.051	Not Detected
Vinyl Chloride	0.0063	Not Detected
1,3-Butadiene	0.0054	Not Detected
Bromomethane	0.095	Not Detected
Chloroethane	0.026	Not Detected
Freon 11	0.014	Not Detected
Ethanol	0.018	0.031
Freon 113	0.019	Not Detected
1,1-Dichloroethene	0.0097	Not Detected
Acetone	0.058	0.11
2-Propanol	0.024	Not Detected
Carbon Disulfide	0.030	Not Detected
3-Chloropropene	0.031	Not Detected
Methylene Chloride	0.085	Not Detected
Methyl tert-butyl ether	0.0088	Not Detected
trans-1,2-Dichloroethene	0.0097	Not Detected
Hexane	0.0086	Not Detected
1,1-Dichloroethane	0.0099	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.029	Not Detected
cis-1,2-Dichloroethene	0.0097	0.011
Tetrahydrofuran	0.0072	Not Detected
Chloroform	0.012	Not Detected
1,1,1-Trichloroethane	0.013	Not Detected
Cyclohexane	0.0084	Not Detected
Carbon Tetrachloride	0.015	Not Detected
2,2,4-Trimethylpentane	0.011	Not Detected
Benzene	0.0078	Not Detected
1,2-Dichloroethane	0.0099	Not Detected
Heptane	0.010	Not Detected
Trichloroethene	0.013	0.15
1,2-Dichloropropane	0.011	Not Detected
1,4-Dioxane	0.035	Not Detected
Bromodichloromethane	0.016	Not Detected
cis-1,3-Dichloropropene	0.011	Not Detected
4-Methyl-2-pentanone	0.010	Not Detected
Toluene	0.0092	Not Detected
trans-1,3-Dichloropropene	0.011	Not Detected
1,1,2-Trichloroethane	0.013	Not Detected
Tetrachloroethene	0.017	5.9
2-Hexanone	0.040	Not Detected



Air Toxics

Client Sample ID: AUS-SS-03

Lab ID#: 1502307R1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022320	Date of Collection:	2/13/15 10:21:00 AM
Dil. Factor:	4.91	Date of Analysis:	2/23/15 07:21 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Dibromochloromethane	0.021	Not Detected
1,2-Dibromoethane (EDB)	0.019	Not Detected
Chlorobenzene	0.011	Not Detected
Ethyl Benzene	0.011	Not Detected
m,p-Xylene	0.011	Not Detected
o-Xylene	0.011	Not Detected
Styrene	0.010	Not Detected
Bromoform	0.025	Not Detected
Cumene	0.012	Not Detected
1,1,2,2-Tetrachloroethane	0.017	Not Detected
Propylbenzene	0.012	Not Detected
4-Ethyltoluene	0.012	Not Detected
1,3,5-Trimethylbenzene	0.012	Not Detected
1,2,4-Trimethylbenzene	0.012	Not Detected
1,3-Dichlorobenzene	0.015	Not Detected
1,4-Dichlorobenzene	0.015	Not Detected
alpha-Chlorotoluene	0.013	Not Detected
1,2-Dichlorobenzene	0.015	Not Detected
1,2,4-Trichlorobenzene	0.073	Not Detected
Hexachlorobutadiene	0.10	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	105	70-130



Air Toxics

Client Sample ID: AUS-SS-04

Lab ID#: 1502307R1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022321	Date of Collection:	2/13/15 11:30:00 AM
Dil. Factor:	2.40	Date of Analysis:	2/23/15 07:47 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Freon 12	0.0059	Not Detected
Freon 114	0.0084	Not Detected
Chloromethane	0.025	Not Detected
Vinyl Chloride	0.0031	Not Detected
1,3-Butadiene	0.0026	Not Detected
Bromomethane	0.047	Not Detected
Chloroethane	0.013	Not Detected
Freon 11	0.0067	Not Detected
Ethanol	0.0090	0.023
Freon 113	0.0092	Not Detected
1,1-Dichloroethene	0.0048	Not Detected
Acetone	0.028	0.17
2-Propanol	0.012	Not Detected
Carbon Disulfide	0.015	Not Detected
3-Chloropropene	0.015	Not Detected
Methylene Chloride	0.042	Not Detected
Methyl tert-butyl ether	0.0043	Not Detected
trans-1,2-Dichloroethene	0.0048	Not Detected
Hexane	0.0042	Not Detected
1,1-Dichloroethane	0.0048	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.014	0.017
cis-1,2-Dichloroethene	0.0048	Not Detected
Tetrahydrofuran	0.0035	Not Detected
Chloroform	0.0058	Not Detected
1,1,1-Trichloroethane	0.0065	Not Detected
Cyclohexane	0.0041	Not Detected
Carbon Tetrachloride	0.0076	Not Detected
2,2,4-Trimethylpentane	0.0056	Not Detected
Benzene	0.0038	Not Detected
1,2-Dichloroethane	0.0048	Not Detected
Heptane	0.0049	Not Detected
Trichloroethene	0.0064	Not Detected
1,2-Dichloropropane	0.0055	Not Detected
1,4-Dioxane	0.017	Not Detected
Bromodichloromethane	0.0080	Not Detected
cis-1,3-Dichloropropene	0.0054	Not Detected
4-Methyl-2-pentanone	0.0049	Not Detected
Toluene	0.0045	Not Detected
trans-1,3-Dichloropropene	0.0054	Not Detected
1,1,2-Trichloroethane	0.0065	Not Detected
Tetrachloroethene	0.0081	0.22
2-Hexanone	0.020	Not Detected



Air Toxics

Client Sample ID: AUS-SS-04

Lab ID#: 1502307R1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022321	Date of Collection: 2/13/15 11:30:00 AM
Dil. Factor:	2.40	Date of Analysis: 2/23/15 07:47 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Dibromochloromethane	0.010	Not Detected
1,2-Dibromoethane (EDB)	0.0092	Not Detected
Chlorobenzene	0.0055	Not Detected
Ethyl Benzene	0.0052	Not Detected
m,p-Xylene	0.0052	Not Detected
o-Xylene	0.0052	Not Detected
Styrene	0.0051	Not Detected
Bromoform	0.012	Not Detected
Cumene	0.0059	Not Detected
1,1,2,2-Tetrachloroethane	0.0082	Not Detected
Propylbenzene	0.0059	Not Detected
4-Ethyltoluene	0.0059	Not Detected
1,3,5-Trimethylbenzene	0.0059	Not Detected
1,2,4-Trimethylbenzene	0.0059	Not Detected
1,3-Dichlorobenzene	0.0072	Not Detected
1,4-Dichlorobenzene	0.0072	Not Detected
alpha-Chlorotoluene	0.0062	Not Detected
1,2-Dichlorobenzene	0.0072	Not Detected
1,2,4-Trichlorobenzene	0.036	Not Detected
Hexachlorobutadiene	0.051	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1502307R1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022308	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	2/23/15 12:22 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Freon 12	0.0025	Not Detected
Freon 114	0.0035	Not Detected
Chloromethane	0.010	Not Detected
Vinyl Chloride	0.0013	Not Detected
1,3-Butadiene	0.0011	Not Detected
Bromomethane	0.019	Not Detected
Chloroethane	0.0053	Not Detected
Freon 11	0.0028	Not Detected
Ethanol	0.0038	Not Detected
Freon 113	0.0038	Not Detected
1,1-Dichloroethene	0.0020	Not Detected
Acetone	0.012	Not Detected
2-Propanol	0.0049	Not Detected
Carbon Disulfide	0.0062	Not Detected
3-Chloropropene	0.0063	Not Detected
Methylene Chloride	0.017	Not Detected
Methyl tert-butyl ether	0.0018	Not Detected
trans-1,2-Dichloroethene	0.0020	Not Detected
Hexane	0.0018	Not Detected
1,1-Dichloroethane	0.0020	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.0059	Not Detected
cis-1,2-Dichloroethene	0.0020	Not Detected
Tetrahydrofuran	0.0015	Not Detected
Chloroform	0.0024	Not Detected
1,1,1-Trichloroethane	0.0027	Not Detected
Cyclohexane	0.0017	Not Detected
Carbon Tetrachloride	0.0031	Not Detected
2,2,4-Trimethylpentane	0.0023	Not Detected
Benzene	0.0016	Not Detected
1,2-Dichloroethane	0.0020	Not Detected
Heptane	0.0020	Not Detected
Trichloroethene	0.0027	Not Detected
1,2-Dichloropropane	0.0023	Not Detected
1,4-Dioxane	0.0072	Not Detected
Bromodichloromethane	0.0034	Not Detected
cis-1,3-Dichloropropene	0.0023	Not Detected
4-Methyl-2-pentanone	0.0020	Not Detected
Toluene	0.0019	Not Detected
trans-1,3-Dichloropropene	0.0023	Not Detected
1,1,2-Trichloroethane	0.0027	Not Detected
Tetrachloroethene	0.0034	Not Detected
2-Hexanone	0.0082	Not Detected



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1502307R1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022308	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 12:22 PM

Compound	Rpt. Limit (ug/L)	Amount (ug/L)
Dibromochloromethane	0.0042	Not Detected
1,2-Dibromoethane (EDB)	0.0038	Not Detected
Chlorobenzene	0.0023	Not Detected
Ethyl Benzene	0.0022	Not Detected
m,p-Xylene	0.0022	Not Detected
o-Xylene	0.0022	Not Detected
Styrene	0.0021	Not Detected
Bromoform	0.0052	Not Detected
Cumene	0.0024	Not Detected
1,1,2,2-Tetrachloroethane	0.0034	Not Detected
Propylbenzene	0.0024	Not Detected
4-Ethyltoluene	0.0024	Not Detected
1,3,5-Trimethylbenzene	0.0024	Not Detected
1,2,4-Trimethylbenzene	0.0024	Not Detected
1,3-Dichlorobenzene	0.0030	Not Detected
1,4-Dichlorobenzene	0.0030	Not Detected
alpha-Chlorotoluene	0.0026	Not Detected
1,2-Dichlorobenzene	0.0030	Not Detected
1,2,4-Trichlorobenzene	0.015	Not Detected
Hexachlorobutadiene	0.021	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	99	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 1502307R1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 08:30 AM

Compound	%Recovery
Freon 12	107
Freon 114	106
Chloromethane	101
Vinyl Chloride	97
1,3-Butadiene	86
Bromomethane	101
Chloroethane	91
Freon 11	104
Ethanol	72
Freon 113	101
1,1-Dichloroethene	97
Acetone	82
2-Propanol	81
Carbon Disulfide	93
3-Chloropropene	96
Methylene Chloride	82
Methyl tert-butyl ether	99
trans-1,2-Dichloroethene	98
Hexane	89
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	96
Tetrahydrofuran	81
Chloroform	97
1,1,1-Trichloroethane	103
Cyclohexane	96
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	98
Benzene	94
1,2-Dichloroethane	104
Heptane	103
Trichloroethene	97
1,2-Dichloropropane	84
1,4-Dioxane	90
Bromodichloromethane	99
cis-1,3-Dichloropropene	97
4-Methyl-2-pentanone	82
Toluene	95
trans-1,3-Dichloropropene	98
1,1,2-Trichloroethane	94
Tetrachloroethene	104
2-Hexanone	87



Air Toxics

Client Sample ID: CCV

Lab ID#: 1502307R1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 08:30 AM

Compound	%Recovery
Dibromochloromethane	102
1,2-Dibromoethane (EDB)	97
Chlorobenzene	95
Ethyl Benzene	98
m,p-Xylene	100
o-Xylene	100
Styrene	109
Bromoform	104
Cumene	103
1,1,2,2-Tetrachloroethane	85
Propylbenzene	93
4-Ethyltoluene	101
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	102
1,3-Dichlorobenzene	96
1,4-Dichlorobenzene	98
alpha-Chlorotoluene	133 Q
1,2-Dichlorobenzene	97
1,2,4-Trichlorobenzene	130
Hexachlorobutadiene	130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCS

Lab ID#: 1502307R1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 08:55 AM

Compound	%Recovery	Method Limits
Freon 12	100	70-130
Freon 114	101	70-130
Chloromethane	94	70-130
Vinyl Chloride	91	70-130
1,3-Butadiene	78	70-130
Bromomethane	98	70-130
Chloroethane	88	70-130
Freon 11	98	70-130
Ethanol	75	70-130
Freon 113	95	70-130
1,1-Dichloroethene	89	70-130
Acetone	76	70-130
2-Propanol	83	70-130
Carbon Disulfide	76	70-130
3-Chloropropene	84	70-130
Methylene Chloride	78	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	76	70-130
Hexane	83	70-130
1,1-Dichloroethane	85	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
cis-1,2-Dichloroethene	97	70-130
Tetrahydrofuran	76	70-130
Chloroform	90	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	92	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	92	70-130
Benzene	91	70-130
1,2-Dichloroethane	99	70-130
Heptane	99	70-130
Trichloroethene	93	70-130
1,2-Dichloropropane	83	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	90	70-130
4-Methyl-2-pentanone	85	70-130
Toluene	93	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	89	70-130
Tetrachloroethene	99	70-130
2-Hexanone	89	70-130

Client Sample ID: LCS

Lab ID#: 1502307R1-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 08:55 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	94	70-130
Chlorobenzene	90	70-130
Ethyl Benzene	94	70-130
m,p-Xylene	96	70-130
o-Xylene	97	70-130
Styrene	109	70-130
Bromoform	100	70-130
Cumene	100	70-130
1,1,2,2-Tetrachloroethane	83	70-130
Propylbenzene	93	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	103	70-130
1,2,4-Trimethylbenzene	101	70-130
1,3-Dichlorobenzene	94	70-130
1,4-Dichlorobenzene	95	70-130
alpha-Chlorotoluene	136 Q	70-130
1,2-Dichlorobenzene	94	70-130
1,2,4-Trichlorobenzene	118	70-130
Hexachlorobutadiene	121	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 1502307R1-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 09:20 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	88	70-130
Vinyl Chloride	93	70-130
1,3-Butadiene	79	70-130
Bromomethane	100	70-130
Chloroethane	90	70-130
Freon 11	99	70-130
Ethanol	75	70-130
Freon 113	96	70-130
1,1-Dichloroethene	95	70-130
Acetone	77	70-130
2-Propanol	83	70-130
Carbon Disulfide	79	70-130
3-Chloropropene	88	70-130
Methylene Chloride	78	70-130
Methyl tert-butyl ether	93	70-130
trans-1,2-Dichloroethene	81	70-130
Hexane	85	70-130
1,1-Dichloroethane	86	70-130
2-Butanone (Methyl Ethyl Ketone)	85	70-130
cis-1,2-Dichloroethene	101	70-130
Tetrahydrofuran	75	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	93	70-130
Carbon Tetrachloride	101	70-130
2,2,4-Trimethylpentane	94	70-130
Benzene	92	70-130
1,2-Dichloroethane	99	70-130
Heptane	100	70-130
Trichloroethene	96	70-130
1,2-Dichloropropane	83	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	99	70-130
cis-1,3-Dichloropropene	90	70-130
4-Methyl-2-pentanone	85	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	97	70-130
1,1,2-Trichloroethane	91	70-130
Tetrachloroethene	100	70-130
2-Hexanone	91	70-130

Client Sample ID: LCSD

Lab ID#: 1502307R1-07AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	3022304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 2/23/15 09:20 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	101	70-130
1,2-Dibromoethane (EDB)	97	70-130
Chlorobenzene	91	70-130
Ethyl Benzene	95	70-130
m,p-Xylene	99	70-130
o-Xylene	101	70-130
Styrene	111	70-130
Bromoform	102	70-130
Cumene	102	70-130
1,1,2,2-Tetrachloroethane	85	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	100	70-130
1,3,5-Trimethylbenzene	107	70-130
1,2,4-Trimethylbenzene	103	70-130
1,3-Dichlorobenzene	96	70-130
1,4-Dichlorobenzene	97	70-130
alpha-Chlorotoluene	141 Q	70-130
1,2-Dichlorobenzene	96	70-130
1,2,4-Trichlorobenzene	123	70-130
Hexachlorobutadiene	125	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	105	70-130