ASPIRE PUBLIC SCHOOLS

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By Alameda County Environmental Health 12:34 pm, Feb 22, 2016

February 19, 2016

Dilan Roe
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6540

Subject: Second Vapor Intrusion Evaluation Report for Building 200 for the Former Pacific Electric Motors Site 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411)

Dear Ms. Roe:

Enclosed is the Second Soil Vapor Intrusion Assessment Report for Building 200 for the Former Pacific Electric Motors Site 1009 66th Avenue, Oakland, California; Alameda County Environmental Health (ACEH) Fuel Leak Case Number RO0000411 ("the Site"). This report was prepared in response to a request from ACEH to evaluate potential vapor intrusion concerns related to residual volatile organic compounds that may be in soil, soil gas, and groundwater at the Site.

I certify under penalty of law that this document and all attachments are prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions or comments, please call Ms. Erica Kalve of ARCADIS at (415) 491-4530 extension 22, or me at (510) 434-5507.

Sincerely,

Carolyn Choy
Aspire Public Schools

Enclosure

College for Certain, LLC

SECOND VAPOR INTRUSION EVALUATION REPORT FOR BUILDING 200

Former Pacific Electric Motors Site
1009 66th Avenue
Oakland, California
(Fuel Leak Case Number RO0000411)

February 19, 2016

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SECOND VAPOR INTRUSION EVALUATION REPORT FOR BUILDING 200

Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411)

Angeline Tan

Project Environmental Engineer

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Senior Geologist

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Our Ref.:

EM009155.0017

Date:

February 19, 2016

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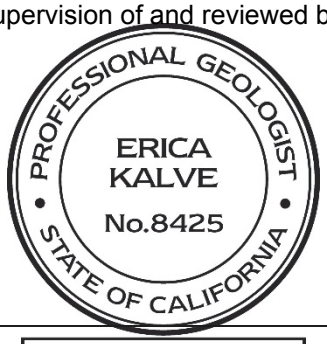
ACRONYMS AND ABBREVIATIONS

µg/m^3	micrograms per cubic meter
ACEH	Alameda County Environmental Health
Arcadis	Arcadis U.S., Inc.
ASTM	American Society for Testing and Materials
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAP	Corrective Action Plan
CFC	College for Certain, LLC
COPCs	constituents of potential concern
DTSC	Department of Toxic Substances Control
mL	milliliters
MTBE	methyl tertiary-butyl ether
PCBs	polychlorinated biphenyls
PEM	Former Pacific Electric Motors
QA	quality assurance
Site	former Pacific Electric Motors (PEM) Facility located at 1009 66th Avenue in Oakland, California
SVE/AS	soil-vapor extraction/air sparging
TBA	tert-Butyl alcohol
TPHg	total petroleum hydrocarbons as gasoline
TSCA	Toxic Substance Control Act
USEPA	United States Environmental Protection Agency
UST	underground storage tan

CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an ARCADIS U.S., Inc., California Professional Geologist .*



Erica Kalve, P.G. Expires Sept. 30, 2017 February 19, 2016 Date

Senior Geologist

California Professional Geologist (8245)

*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, and ordinances.

1. INTRODUCTION

Arcadis U.S. Inc. (Arcadis) has prepared this Second Vapor Intrusion Evaluation Report for Building 200 (report) on behalf of College for Certain. LLC (CFC) for the Former Pacific Electric Motors (PEM) Facility located at 1009 66th Avenue in Oakland, California ("the Site"; Figure 1). The purpose of this report is to assess the potential for vapor intrusion to occur into the existing Building 200 (Figure 2). The work summarized in this report was completed in accordance with the Department of Toxic Substances Control (DTSC) Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (the DTSC Vapor Intrusion Guidance Document; DTSC 2011), the *Revised Vapor Intrusion Evaluation Work Plan* (ARCADIS 2014; the work plan) submitted to the ACEH on September 12, 2014, and the *Work Plan Addendum for Vapor Intrusion Evaluation of Existing Building*, submitted to ACEH on November 24, 2014. ACEH provided work plan approval for the vapor intrusion evaluation of building 200 in a letter dated December 18, 2014.

Implementation of the work plan and work plan addendum was initiated in January 2015. The report titled, *Vapor Intrusion Evaluation Report for Building 200* (Arcadis 2015; the evaluation report), summarizes the soil vapor probe installation, baseline soil vapor sampling for the newly installed soil vapor probes, and crawl space and outdoor air sample results. As summarized in the evaluation report, benzene was detected above the respective health risk-based indoor air thresholds. The results were potentially attributable to ambient air based on a summary of ambient air monitoring data for the bay area. The evaluation report included a recommendation for additional soil vapor monitoring to evaluate changes in soil gas concentrations over time. As such, two subsequent soil vapor monitoring events were conducted on September 14, 2015 and January 28, 2016. Additionally, a second round of crawl space sampling was conducted on January 28, 2016. This report summarizes the additional field activities and sampling of two crawl spaces and five shallow vapor probes at the site (CS-1 and CS-2, and SVP-6 through SVP-10; Figure 3).

2. SITE DESCRIPTION AND HISTORY

2.1 Background

The Site is 2.51 acres and is located on the northwestern side of 66th Avenue between East 14th Street and San Leandro Street (Figure 1). The area around the Site is developed with a mixture of commercial, industrial, government, and multi-family residential buildings. The Site is currently owned by CFC.

The first industrial development of the property was in about 1948 when the two buildings were constructed for the former Pacific Electric Motors (PEM) facility. PEM occupied the Site from 1948 to 2001. Activities conducted at the Site by PEM included manufacturing specialty magnets, power supplies, and components, and repairing motors, generators, transformers, and magnets. A 2,000-gallon gasoline underground storage tank (UST) was reportedly installed at the Site by PEM in 1975. In addition, the gasoline shed in the fueling area may have stored vehicle lubricants and oil for vehicle maintenance.

The structures that were on the property were demolished between November 2009 and February 2010. The Site has been redeveloped into the Aspire Golden State College Preparatory Academy, which serves

grades 6 through 12 and has capacity for 570 students; the school opened in August 2011 (Figure 2). The school occupies approximately 1.4 acres and consists of the following site features:

- Six two-story buildings (approximately 41,430 square feet total including 24 full-sized classrooms, 4 labs, 3 girls and 3 boys restrooms, and 4 staff restrooms)
- Asphalt-paved parking area with access via two driveways on 66th Avenue (one for ingress and one for egress)
- Asphalt-paved area for recreation
- Asphalt-paved and concrete pedestrian walkways
- Planter and landscaped areas

As part of the redevelopment of the Site, the ground surface comprised of roadways, sidewalks, parking areas, buildings, and planter areas is serving as a cap to mitigate potential exposure to remaining polychlorinated biphenyls (PCBs) containing soil at the Site. Additionally, a new building (Building 300) was constructed and a VIM system was installed on that building between April 7 and 8, 2015 by Advanced Construction Technologies (ACT).

2.2 Environmental Site History

The Revised Corrective Action Plan (Revised CAP) summarized the results of previous investigations, presented the site conceptual model, quantified the baseline health risk with assumed exposures to the COPCs, developed site-specific risk-based cleanup goals, evaluated potential remedies, and presented an implementation plan for the selected remedies (ARCADIS 2009a). The Revised CAP was approved by the ACEH in their letter to Aspire Charter Schools dated August 13, 2009 (ACEH 2009).

Several remedial actions were implemented in accordance with the Revised CAP including:

- Soil excavation and removal of approximately 8,662 tons of soil containing elevated concentrations of lead, arsenic, PCBs, benzene, and total petroleum hydrocarbons as gasoline (TPHg); ARCADIS 2014.
- Air injection and soil-vapor extraction to reduce concentrations of TPHg, benzene, toluene, ethylbenzene, and xylenes, (BTEX), tert-Butyl alcohol (TBA), and methyl tertiary-butyl ether (MTBE) in groundwater, soil, and soil gas. Two phases of soil-vapor extraction/air sparging (SVE/AS) were implemented and an estimated 798 pounds of fuel vapors were recovered from the Site (ARCADIS 2014a).
- Areas of polychlorinated-biphenyl (PCB)-containing soil (and building materials) were remediated in accordance with the Revised CAP and Self-Implementing Cleanup Plan (ARCADIS 2009b, ARCADIS 2009C).

The implementation of the Revised CAP was reported to ACEH (and USEPA) in the report titled, Soil Removal Action Completion Report, dated September 15, 2010 (ARCADIS 2010b). Removal of soil and building materials affected by PCBs was documented in a letter report that was prepared in accordance with the Toxic Substance Control Act (TSCA) and transmitted to USEPA on August 13, 2010 (“the TSCA Report”; ARCADIS 2010a).

As documented in the Groundwater Monitoring Report (ARCADIS 2014a), the analytical results for groundwater samples collected at the Site indicate that concentrations of TPHg, BTEX, and MTBE have decreased over time and remain low. This decreasing trend in concentrations is likely the direct result of

the excavation and off-site disposal of fuel-affected soil that took place at the Site in 1995, 2002, and 2010, and the operation of the soil-vapor extraction/air sparging (SVE/AS) system. Additionally, the development plan for the property included the construction of buildings with a raised foundation approximately 18 inches above the ground to create a vented “crawl space” to create a passive system to further reduce the potential for soil vapors to intrude to the existing onsite buildings.

3. SOIL VAPOR AND CRAWL SPACE SAMPLING

As required by the work plan, soil vapor sampling was conducted in accordance with DTSC’s Active Soil Gas Investigation Advisory (DTSC 2012). Shut-in tests, leak check tests and purge volume tests were conducted on each of the soil vapor monitoring points as described in the work plan. Purge volume calculations, field conditions, flow rate, pump specifics, and other applicable information were recorded by field personnel on soil vapor sample collection logs and are included as Appendix A of this report.

The shut-in test was conducted by assembling the above-ground valves, lines and fittings downstream from the top of the soil gas monitoring point. The system was evacuated to a minimum measured vacuum of about 100 inches of water using a purge pump. The test was conducted while the sampling canister is attached with its valve in the closed position. The vacuum gauge was connected to the system with a “T”-fitting for at least one minute or longer with the field staff observing the reading. If there was any observable loss of vacuum, the fittings were adjusted until the vacuum in the sample train does not noticeably dissipate. After the shut-in test is validated, the sampling train was not altered and the quantitative leak test was performed.

The quantitative leak test was conducted on the sample manifold using the shroud and helium methodologies and helium was measured in the field using a handheld gas meter at the time of sample collection. The helium shroud concentrations were noted in the field notes (Appendix B) and helium was added to the shroud throughout the sample collection process to maintain the target concentration. Analytical samples were analyzed for helium using American Society for Testing and Materials (ASTM) Method 1946 to confirm that no significant leaks were present at the time of sample collection (Table 2).

The purge volume of 1,390 milliliters (mL) previously performed during a purge test at soil vapor point SVP-1 in August 2014 was used as a guide for each of the purge volumes for the other soil gas monitoring point. Following the completion of the helium leak test, the soil vapor samples were then collected using a 1-liter batch-certified SUMMA™ canister. Following the collection of the SUMMA canister sample, an additional soil vapor sample was collected using a TO-17 sorbent tube and low-flow air pump at a flow rate of ≤ 170 mL/min.

The crawl space samples were collected by placing one 6-liter, 100%-certified clean SUMMA™ canisters with a flow controller set to collect the samples over an 24-hour period at each crawl space location (Figure 3). Each SUMMA™ canister was fitted with 0.25-inch outer diameter (OD) telfon tubing cut long enough to reach into the middle of the crawl space. Crawl space air sampling was stopped when the canister vacuum has dropped to 5 inches of mercury (inHg).

The soil vapor samples were shipped by FedEx under appropriate chain-of-custody protocols to Eurofins Air Toxics Inc., in Folsom, California, for analysis of the following:

- TPHg, BTEX, MTBE, and naphthalene by Modified USEPA Method TO-15

- Naphthalene by Modified USEPA Method TO-17
- Fixed gases, including oxygen, carbon dioxide, methane, and helium by Modified ASTM Method D-1946

4. ANALYTICAL RESULTS

Soil vapor samples were collected at the site on September 14, 2015 from soil vapor probes SVP-6 and SVP-7. Soil vapor samples were not collected from soil vapor probes SVP-8, SVP-9 and SVP-10 because of tight vapor conditions. Crawl space samples (CS-1 and CS-2) and two outdoor air samples (OA-1 and OA-2) were collected at the site on January 28, 2016. Soil vapor samples were not collected from the soil vapor probes SVP-6 and SVP-7 because there was water present during purging; soil vapor samples were not collected from soil vapor probes SVP-8, SVP-9 and SVP-10 because of tight vapor conditions.

The analytical results are presented in Tables 1 and 2, and detected concentrations are discussed in detail below. Laboratory analytical reports are included as Appendix B.

4.1 Soil Vapor Analytical Results

- Benzene was detected above its laboratory reporting limit at concentration of 0.59 µg/m^3 in the soil vapor sample collected from SVP-7.
- Toluene was detected above its laboratory reporting limit at concentrations of 0.39 µg/m^3 in the soil vapor sample collected from SVP-6, and 12 µg/m^3 in soil vapor sample collected from SVP-7.
- Ethylbenzene was detected above its laboratory reporting limit at concentrations of 0.15 in the soil vapor sample collected from SVP-6, and 0.30 µg/m^3 in soil vapor sample collected from SVP-7.
- M,p-xylene was detected above its laboratory reporting limit at concentrations of 0.53 µg/m^3 in the soil vapor sample collected from SVP-6, and 0.91 µg/m^3 in soil vapor sample collected from SVP-7.
- O-xylene was detected above its laboratory reporting limit at concentrations of 0.27 µg/m^3 in the soil vapor sample collected from SVP-6, and 0.40 µg/m^3 in soil vapor sample collected from SVP-7.
- MTBE was detected above its laboratory reporting limit at concentrations of 2.7 µg/m^3 in the soil vapor sample collected from SVP-7, and 24 µg/m^3 in soil vapor sample collected from SVP-6.
- TPHg was detected above its laboratory reporting limit at concentrations of 400 µg/m^3 in the soil vapor sample collected from SVP-7, and 1,700 µg/m^3 in soil vapor sample collected from SVP-6.

Naphthalene was not detected in any of the soil vapor samples. All detected COPCs are below their health risk-based soil vapor thresholds (Table 1).

4.2 Crawl Space and Outdoor Air Analytical Results

- Benzene was detected above its laboratory reporting limit in the crawl space and outdoor air samples. Benzene concentrations are 1.2 µg/m^3 collected in the air sample from OA-1 and OA-2, and 1.3 µg/m^3 collected in the air sample from CS-1 and CS-2.
- Toluene was detected above its laboratory reporting limit and concentrations ranged from 3.7 µg/m^3 collected in the air sample from OA-1, to 5.9 µg/m^3 collected in the air sample from CS-1.

- Ethylbenzene was detected above its laboratory reporting limit and concentrations ranged from 0.83 µg/m^3 collected from the air sample from OA-1, to 0.94 µg/m^3 collected in the air sample from CS-1.
- M,p-xylene was detected above its laboratory reporting limit and concentrations ranged from 2.9 µg/m^3 collected in the air sample from OA-1, to 3.5 µg/m^3 collected in the air sample from CS-1.
- O-xylene was detected above its laboratory reporting limit at concentrations of 1.1 µg/m^3 collected in the air sample from OA-1, OA-2 and CS-2, and 1.4 µg/m^3 collected in the air sample from OA-2.
- TPHg was detected above its laboratory reporting limit in the crawl space samples. TPH-GRO concentrations are 230 µg/m^3 collected in the air sample from CS-2, and 300 µg/m^3 collected in the air sample from CS-1.

MTBE and naphthalene were not detected in any of the air samples. With the exception of benzene, all detected COPCs are below their health risk-based soil vapor thresholds (Table 1).

4.3 Fixed Gases and Biodegradation

The presence and concentration of oxygen and methane can be an indication of biodegradation of soil vapor in the subsurface. Typically, a decrease in hydrocarbon concentrations concurrent with a decrease in oxygen and an increase in methane are indicative of aerobic biodegradation of hydrocarbons. Fixed gases analytical data are summarized in Table 2. Laboratory analytical reports are included as Appendix B. As shown in Table 2, oxygen percentage measured at SVP-6 was 1.2 percent and at SVP-7 was 2.4 percent. Carbon dioxide percentages were 18 percent at SVP-6 and 3.3 percent at SVP-7. The oxygen percentages and the presence and concentrations of methane and oxygen at the two sample probe depths suggest an active biodegradation zone at each soil vapor probe location.

4.2 Soil Vapor Sampling Data Quality Assurance

For data QA purposes, multiple QA techniques were employed during the September 14, 2015 soil vapor sampling. Both shut-in and helium leak tests were performed during the soil vapor sample collection period to ensure integrity of the sampling system and to demonstrate that ambient air was not being permitted into the sampling train or entering the subsurface, potentially biasing the samples.

4.4 Leak Test Analytical Results

During the September 2015 soil vapor sampling event, helium was not detected in any of the soil vapor samples, supporting the sampling train integrity.

5. CONCLUSION AND RECOMMENDATIONS

Soil gas concentrations were screened against health based screening criteria developed for the protection of the resident using the methodology recommended by DTSC (DTSC 2014). The detected soil gas concentrations were below the health based screening criteria.

Although benzene in the crawl space samples exceeds the residential regional screening level (RSL) for indoor air, benzene concentrations detected during the January 2016 sample event are similar in the two

outdoor air samples. The low levels of benzene present in soil gas, coupled with the ambient levels of benzene in outdoor air, indicate that the concentrations detected in the crawl space samples are likely not attributable to vapor intrusion.

The detections of TPHg in soil gas and crawl space air, coupled with the absence of detected concentrations of TPHg in outdoor air indicate that a potential for vapor intrusion exists at Building 200. TPHg is the only COPC contributing to crawl space air, likely due to the fact that concentrations of TPHg in soil gas are approximately one order of magnitude higher in soil gas than in indoor air. Regardless, the concentrations detected in soil gas and crawl space is below the San Francisco Regional Water Quality Control Board's Environmental Screening Level (ESL) for residential land use. Since the levels of TPHg are below levels of concern, ongoing soil gas and crawl space sampling is not deemed necessary.

6. REFERENCES

ACEH. 2009. Revised CAP approval letter to Aspire Charter Schools dated August 13, 2009 (ACEH 2009)

Arcadis U.S., Inc. (ARCADIS). 2009a. Revised Corrective Action Plan, Proposed Aspire School Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case No. RO0000411). July 17.

———. 2009b. Toxic Substance Control Act Self-Implementing Cleanup Notification and Certification Former Pacific Electric Motors Facility 1009 66th Avenue in Oakland, California. October 23.

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———. 2010b. Soil Removal Action Completion Report, dated September 15, 2010

———. 2014a. Groundwater Monitoring Report, Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411). February 28.

———. 2014b. Vapor Intrusion Work Plan, Former Pacific Electric Motors Site, 1009 66th Avenue, Oakland, California (Fuel Leak Case Number RO0000411). July.

———.2014c. Revised Vapor Intrusion Evaluation Work Plan, Former Pacific Motors Site, 1009 66th Avenue, Oakland, California. September 12.

———.2015a. Building 300 Vapor and Indoor Air Monitoring Plan, Former Pacific Motors Site, 1009 66th Avenue, Oakland, California. March 20.

———.2015a. Vapor Intrusion Evaluation Report for Building 200, Former Pacific Motors Site, 1009 66th Avenue, Oakland, California. June 1.

California Department of Toxic Substances Control (DTSC). 2009. Vapor Intrusion Mitigation Advisory. April. Section 6.3.4 revised May 8.

———. 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance). October.

———. 2012. Advisory, Active Soil Gas Investigations. Jointly developed by the California Environmental Protection Agency Department of Toxic Substances Control, Los Angeles Regional Water Quality Control Board, and San Francisco Regional Water Quality Control Board. April.

———. 2014. Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note, HERO HHRA Note Number: 3. July.

TABLES

Table 1
Indoor Air and Soil Vapor Analytical Results
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

results reported in micrograms per cubic meter (ug/m3)

Sample ID	Sample Date	Benzene	Toluene	Ethyl Benzene	m,p-Xylene	o-Xylene	MTBE	TPH-GRO	Naphthalene (TO-15)	Naphthalene (TO-17)
Indoor Air Sample Results										
USEPA Residential RSL for Indoor Air/DTSC Note 3*		0.084	310	1.1	10	10	11	590**	0.083	0.083
OA-1	1/17/2015	**0.55**	1.6	0.32	1.0	0.36	<0.53	<60	<3.9	--
	1/28/2015	**1.2**	3.7	0.83	2.9	1.1	<0.58	<66	<4.2	--
OA-2	1/17/2015	**0.51**	1.2	0.23	0.73	0.28	<0.55	<62	<4.0	--
	1/28/2015	**1.2**	3.8	0.85	3.0	1.1	<0.57	<65	<4.1	--
CS-1	1/17/2015	**0.73**	5.3	0.89	4.3	0.92	<0.54	190	<3.9	--
	1/28/2015	**1.3**	5.9	0.94	3.5	1.4	<0.58	300	<4.2	--
CS-2	1/17/2015	**0.70**	5.6	1.0	4.7	1.1	<0.58	230	<4.2	--
	1/28/2015	**1.3**	5.1	0.86	3.1	1.1	<0.52	230	<3.8	--
Soil Gas Sample Results										
Adjusted Soil Gas Screening Level Future Residential Buildings[1*]		84	310,000	1,100	100,000	100,000	11,000	30,000**	83	83
SVP-6	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/2015	<0.27	0.39	0.15	0.53	0.27	24	1,700	<4.4	<17
	1/28/2017	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-7	1/17/2015	<2.4	<2.9	<3.3	<3.3	<3.3	<2.7	830	<16	<17
	9/14/2015	0.59	12	0.30	0.91	0.40	2.7	400	<4.4	<17
	1/28/2017	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-8	1/17/2015	3.6	7.4	<3.6	8.7	3.7	13	3,100	<18	<17
	9/14/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/28/2017	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-9	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/28/2017	NS	NS	NS	NS	NS	NS	NS	NS	NS
SVP-10	1/17/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	9/14/2015	NS	NS	NS	NS	NS	NS	NS	NS	NS
	1/28/2017	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 1
Indoor Air and Soil Vapor Analytical Results
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

results reported in micrograms per cubic meter (ug/m3)

Sample ID	Sample Date	Benzene	Toluene	Ethyl Benzene	m,p-Xylene	o-Xylene	MTBE	TPH-GRO	Naphthalene (TO-15)	Naphthalene (TO-17)

Notes

Bold indicates result above the screening level
USEPA = United States Environmental Protection Agency
RSL = Regional Screening Level
MTBE = methyl tert-butyl ether
CS = crawl space
1 = Attenuation factor for a future residential building is 0.001 (DTSC 2011).

< = not detected above the reporting limit
-- = not available; not analyzed
NS = not sampled; SVP-6 and SVP-9 could not be sampled due to water coming in the sample train; SVP-10 could not be sampled due to tight vapor conditions.

* = except as noted for TPHg
** = Environmental Screening Level for Residential Land Use, Table E, San Francisco Bay Regional Water Quality Control Board.

Reference:
California Department of Toxic Substances Control (DTSC). 2011. Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air

Table 2
Soil Vapor Analytical Results For Fixed Gases
Former Pacific Electric Motors Facility
1009 66th Avenue, Oakland, California

Compound Name / Location ID	Sample Date	Oxygen	Methane	Carbon Dioxide	Helium
		(%v)	(%v)	(%v)	(%v)
SVP-6	9/14/2015	1.2	0.23	18	<0.084
SVP-7	9/14/2015	2.4	0.15	3.3	<0.083
SVP-8	9/14/2015	NS	NS	NS	NS
SVP-9	9/14/2015	NS	NS	NS	NS
SVP-10	9/14/2015	NS	NS	NS	NS

Notes:
< = not detected above the reporting limit
%v = percent volume
NS = not sampled; SVP-6 and SVP-9 could not be sampled due to water coming in the sample train; SVP-10 could not be sampled due to tight vapor conditions.

FIGURES

REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. UAD., OAKLAND EAST AND SAN LEANDRO, CALIFORNIA, 2015.

0 2000' 4000'

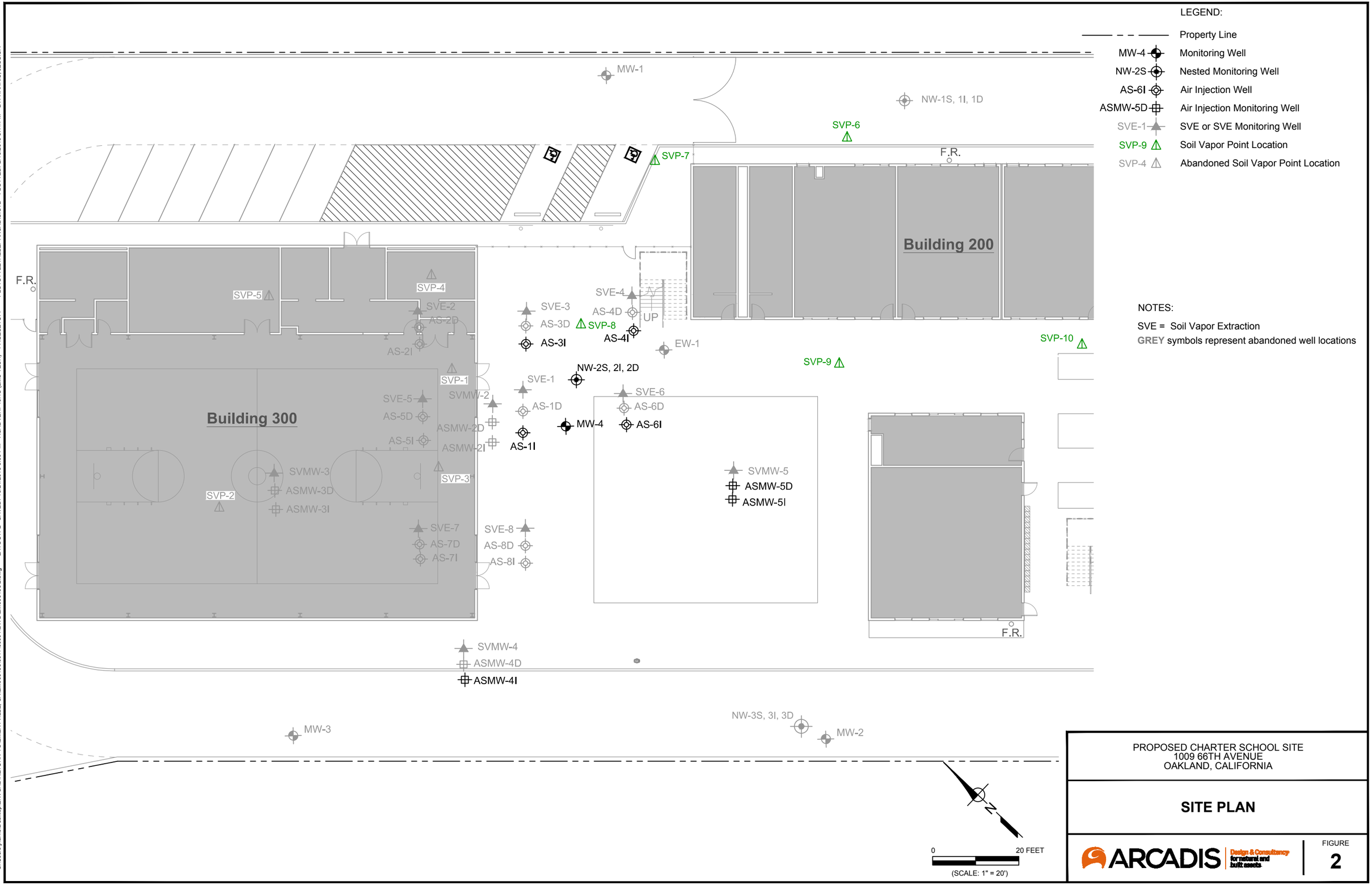
Approximate Scale: 1 in. = 2000 ft.

1009 66TH AVENUE, OAKLAND, CALIFORNIA

SITE VICINITY MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1



PROPOSED CHARTER SCHOOL SITE
1009 66TH AVENUE
OAKLAND, CALIFORNIA

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

CITY: EMERYVILLE, CA DIV/GROUP: ENVCAD DB: A. REYES, J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\RETURN-TO\EMERYVILLE, CA\EM009155\0017\000010\DWG\EM009155 2.dwg LAYOUT: 2 SAVED: 10/21/2015 9:06 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 2/19/2016 3:4 : PM BY: HARRIS, JESSICA

SVP-7		
Date	1/17/15	9/14/15
Ben□ene	□2.4	0.59
Tol□ene	□2.9	12
Ethylben□ene	□3.3	0.30
m,p-□ylene	□3.3	0.91
o-□ylene	□3.3	0.40
MTBE	□2.7	2.7
TPH-GRO	□30	400
Naph (TO-15)	□16	□4.4
Naph (TO-17)	□17	□17

CS-2		
Date	1/17/15	1/2□/16
Ben□ene	**0.70**	**1.3**
Tol□ene	5.6	5.1
Ethylben□ene	1.0	0.□6
m,p-□ylene	4.7	3.1
o-□ylene	1.1	1.1
MTBE	□0.5□	□0.52
TPH-GRO	23	230
Naph (TO-15)	□4.2	□3.□
Naph (TO-17)	---	---

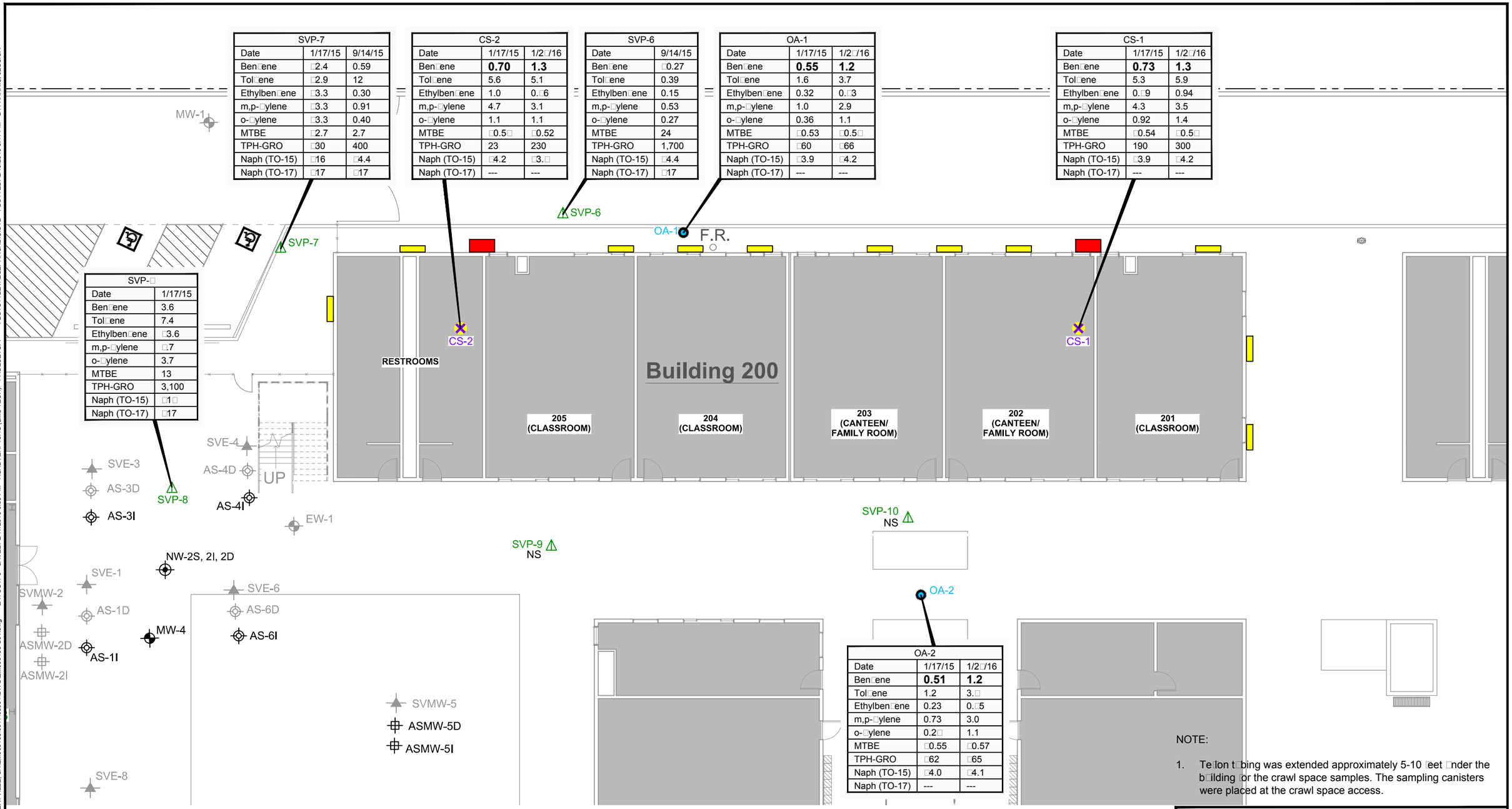
SVP-6	
Date	9/14/15
Ben□ene	□0.27
Tol□ene	0.39
Ethylben□ene	0.15
m,p-□ylene	0.53
o-□ylene	0.27
MTBE	24
TPH-GRO	1,700
Naph (TO-15)	□4.4
Naph (TO-17)	□17

OA-1		
Date	1/17/15	1/2□/16
Ben□ene	**0.55**	**1.2**
Tol□ene	1.6	3.7
Ethylben□ene	0.32	0.□3
m,p-□ylene	1.0	2.9
o-□ylene	0.36	1.1
MTBE	□0.53	□0.5□
TPH-GRO	□60	□66
Naph (TO-15)	□3.9	□4.2
Naph (TO-17)	---	---

CS-1		
Date	1/17/15	1/2□/16
Ben□ene	**0.73**	**1.3**
Tol□ene	5.3	5.9
Ethylben□ene	0.□9	0.94
m,p-□ylene	4.3	3.5
o-□ylene	0.92	1.4
MTBE	□0.54	□0.5□
TPH-GRO	190	300
Naph (TO-15)	□3.9	□4.2
Naph (TO-17)	---	---

SVP-□	
Date	1/17/15
Ben□ene	3.6
Tol□ene	7.4
Ethylben□ene	□3.6
m,p-□ylene	□.7
o-□ylene	3.7
MTBE	13
TPH-GRO	3,100
Naph (TO-15)	□1□
Naph (TO-17)	□17

OA-2		
Date	1/17/15	1/2□/16
Ben□ene	**0.51**	**1.2**
Tol□ene	1.2	3.□
Ethylben□ene	0.23	0.□5
m,p-□ylene	0.73	3.0
o-□ylene	0.2□	1.1
MTBE	□0.55	□0.57
TPH-GRO	□62	□65
Naph (TO-15)	□4.0	□4.1
Naph (TO-17)	---	---



LEGEND:

- Property Line
- MW-4 Monitoring Well
- NW-2S Nested Monitoring Well
- AS-6I Air Injection Well
- ASMW-5D Air Injection Monitoring Well
- SVE-1 SVE or SVE Monitoring Well
- SVP-9 Soil Vapor Point Location
- CS-1 Crawl Space Sampling Location[1]
- OA-1 O□tdoor Air Sampling Location
- 1 □t x 4 □t Vent
- 2 □t x 4 □t Access / Vent Well Crawl Space
- GREY symbols represent abandoned well locations

SVE = Soil Vapor Extraction
MTBE = Methyl Tertiary-B□tyl Ether
TPH-GRO = Total Petrole□m Hydrocarbons as Gasoline Range Organics
Naph (TO-15) = Naphthalene Sampled Using USEPA Method TO-15
Naph (TO-17) = Naphthalene Sampled Using USEPA Method TO-17
□ = Not Detected abo□e the Laboratory Reporting Limit Gi□en
NS = Not Sampled
--- = Not Sampled □or Naph (TO-17)
BOLD = Indicates Res□lt abo□e the Screening Le□el
All Results are in Micrograms per Cubic Meter (µg/m³)

0 15 FEET
(SCALE: 1" = 15')

NOTE:

1. Te□lon t□bing was extended approximately 5-10 □eet □nder the b□ilding □or the crawl space samples. The sampling canisters were placed at the crawl space access.

1009 66TH AVENUE, OAKLAND, CALIFORNIA

BUILDING 200 SOIL VAPOR AND CRAWL SPACE LOCATIONS AND ANALYTICAL RESULTS

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: EMERYVILLE, CA DIV/GROUP: ENVCAD DB: A. REYES, J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\RETURN-TO\EMERYVILLE, CA\EM009155\0017\00001\DWG\EM009155 C01.dwg LAYOUT: 3 SAVED: 2/17/2016 6:35 PM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 2/19/2016 3:41 PM BY: HARRIS, JESSICA

APPENDIX A

Soil Vapor Sample Collection Logs

ARCADIS

TABLE 1
SOIL GAS SAMPLING FIELD DATA
Aspire College

Personnel: C McGeown Landfill Gas Meter: _____ Date: 9/14/15 – 9/15/15
Site: Aspire College Project Number: EM009155.0017.00001

Date	Sample ID	Canister ID	Regulator ID	Leak Test Start Time	Start Leak Vacuum Pressure (in-Hg)	Leak test stop time	End Leak Vacuum Pressure (in-Hg)	Start Purge Time	End Purge Time	Begin Sampling Time	Initial Vacuum (in-Hg)	End Sampling Time	Final Vacuum (in-Hg)	He Shroud Range (%)	He Detected (ppm)	TO-17 Volume Collected (mL)	TO-17 Collected Time	VOC (ppm)	CH_4 (%)	O_2 (%)	CO_2 (%)
9/14	IA-1	13654 →								0844	-30	1555	-6								
	IA-2	1056 →								0845	-30	1556	-7								
	IA-3	22498 →								0846	-30	1557	-6.5								
	IA-4	25312 →								0847	-30	1558	-7								
	IA-5	31430 →								0849	-30	1559	-7.5								
	IA-6	4387 →								0850	-30	1600	-7								
	OA-3	33869 →								0900	-30	1554	-6.5								
	OA-4	33897 →								0856	-30	1552	-7.5								
	DUP-1	GL1229								0845	-30	1556	-7								
	SVP-6	GL1254	30559	0930	-10	1010	-10	1035	1129	1137	-30	1223	-6.5	11.3-26.5 ~~26.5-50.0~~	60	60	1236	11.1	0.1	16.1	4.3
	SVP-7	14873	30830	0931	-10	1010	-10	1230	1304	1307	-29.5	1351	-6.5	12.6-21.3	0.0	60	1353	0.2	0.0	9.7	2.1
	~~SVP-8*~~	~~12666~~	~~6470~~	~~0950~~	~~-10~~	~~1010~~	~~-10~~				~~-30~~										
	SVP-9*	GL1247	30968	0959	-10	1010	-10				-30										
	SVP-10**	34314	30940	1010	-10	1031	-10	1418			-30										
	R-1	12666	—	—	—	—	—	1543	1623	1633	-30	1650	0.0					0.0	0.0	10.0	0.0
	R-2	GL1247						1623	1704	1704	-30	1709	0.0					0.0	0.1	10.5	0.0
↓	R-3	34314						1704	1750	1750	-30	1755	0.0					0.0	0.0	11.5	0.0
9/15/15	SVP-8*	14117 →	30968	1405	-10	1420	-10	1415	1449		-30										

IA-2

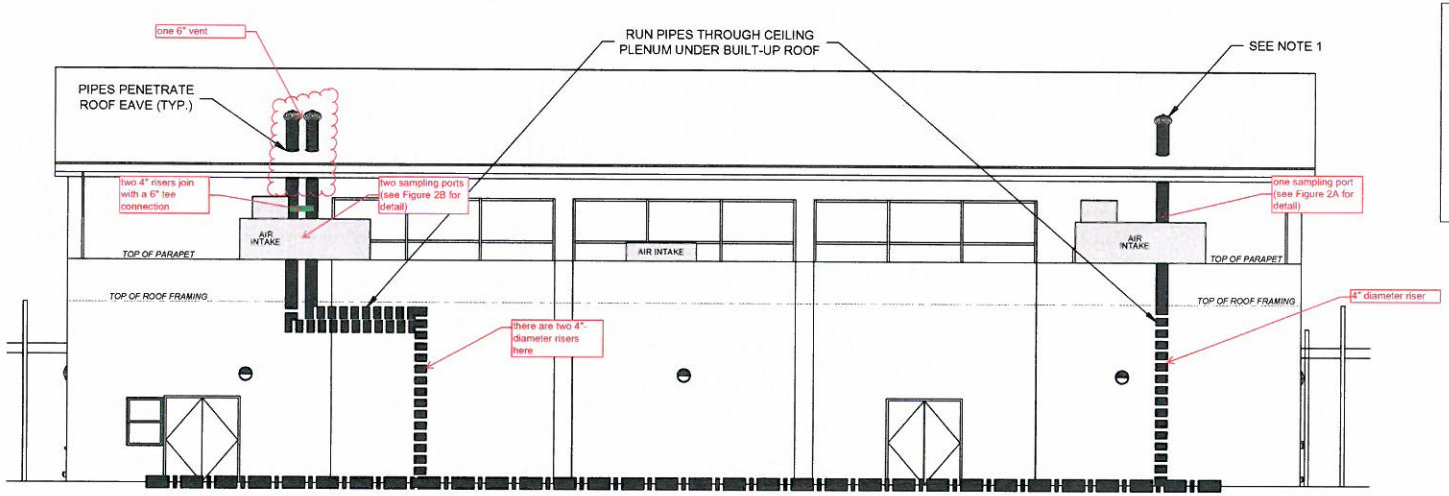
TO-17
SVP-6 G0144325
SVP-7 G0153864

	Initial Pressure	Final	Bars
R-1	0.0002	0.0000	
R-2	0.0000	0.0000	
R-3	0.0000	0.0000	

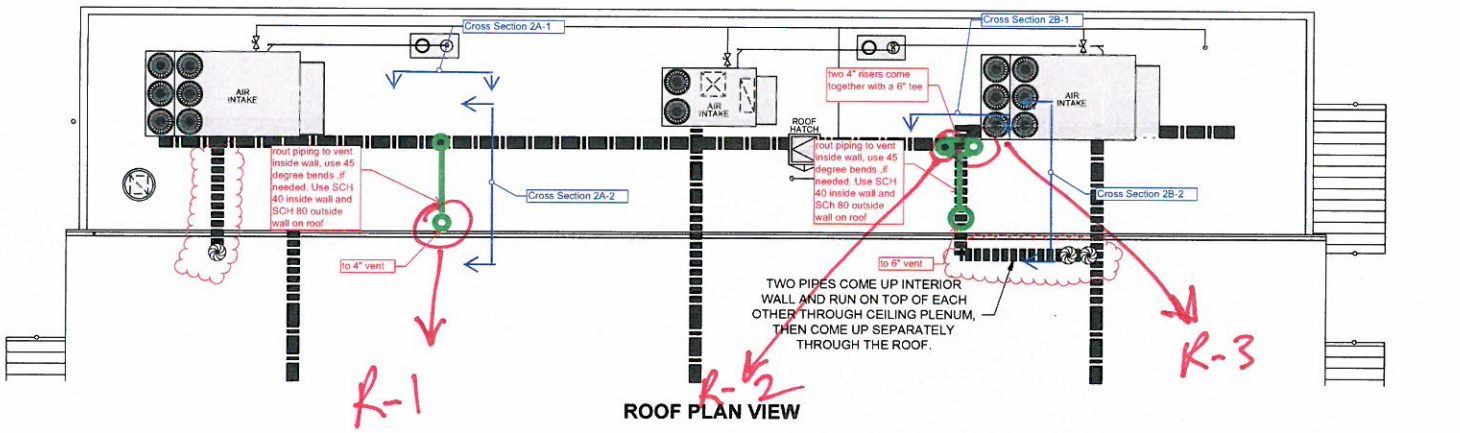
SVP-8* – vacuum of -17" Hg present on well side pressure (possible fouled probe or tight soils) ~~cannot locate, possibly lost due to construction activities / concrete resurfacing~~

SVP-10** – significant ↓ vacuum on well, no purge to volume extracted due to faults shorting Gilair-5 pump.

↳ SVP-9 → significant vacuum on well, no purge to volume extracted – not sampled



1 VC4 VC5 **NORTHEAST ELEVATION**



ROOF PLAN VIEW

LEGEND

- SUBSLAB GEO-SEAL® VAPOR-VENT ™ SYSTEM
- INTERIOR SCH. 40 PVC VENT RISER
- EXTERIOR SCH. 80 PVC VENT RISER (sch. 80 on exterior locations)
- EMPIRE VENTILATOR TV04G WIND TURBINE WITH THRUST BEARINGS

NOTES:

1. NO STACK HEIGHT REQUIREMENTS NEEDED AT THIS TIME, ADJUSTMENTS CAN BE MADE IN THE FIELD.
2. EXTERIOR PIPES MUST NOT OBSTRUCT ANY WINDOWS.

SOURCE:
K2A ARCHITECTURE + INTERIORS GRADING AND PAVING PLANS

CITY: EMERYVILLE, CA DIV/GROUP: ENV/CAD DB: A. REYES, J. HARRIS
C:\Users\harris\Desktop\ENV\CAD\RETURN-TO\EMERYVILLE, CA\EM009165\0017\000010\DWG\EM009165 VC6.dwg LAYOUT: VC6 SAVED: 1/8/2016 1:39 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: ARCADIS-PRX.CTB PLOTTED: 1/8/2016 9:37 AM BY: HARRIS, JESSICA
XREFS: IMAGES PROJECT NAME: —
EM009165\VC6\Stamp.jpg

0 4' 8'
APPROXIMATE SCALE IN FEET

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING: USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Chkd
1	01/07/15	UPDATED PER K2A COMMENTS	EK	LG

Professional Engineer's Name: LUCAS GOLDSTEIN
Professional Engineer's No.: C72455
State: CA | Date Signed: 11/03/14 | Project Mgr.: EK
Designed by: AK | Drawn by: AR/JLH | Checked by: RS

ARCADIS
ARCADIS U.S., INC.

PROPOSED CHARTER SCHOOL SITE ● 1009 66TH AVENUE, OAKLAND, CALIFORNIA
CONSTRUCTION DOCUMENTS

BUILDING 300 VAPOR COLLECTION PIPE PENETRATION DETAILS

CONSTRUCTION

ARCADIS Project No.: EM009165.0017.00001
Date: NOVEMBER 2014
ARCADIS 100 SMITH RANCH RD, STE 329 SAN RAFAEL, CA 94903 TEL 415.491.4530

VC6

APPENDIX B

Laboratory Analytical Reports

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9/29/2015
Ms. Angeline Tan
Arcadis U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek CA 94597

Project Name: Aspire College
Project #: EM009155.0017
Workorder #: 1509291

Dear Ms. Angeline Tan

The following report includes the data for the above referenced project for sample(s) received on 9/18/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-17 VI 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1509291

Work Order Summary

CLIENT:	Ms. Angeline Tan Arcadis U.S., Inc. 2999 Oak Road Suite 300 Walnut Creek, CA 94597	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	925-274-1100	**P.O. #**	EM009155.0017
FAX:	925-274-1103	**PROJECT #**	EM009155.0017 Aspire College
DATE RECEIVED:	09/18/2015	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	09/29/2015		

FRACTION #	NAME	TEST
01A	SVP-6	Modified TO-17 VI
02A	SVP-7	Modified TO-17 VI
03A	Lab Blank	Modified TO-17 VI
04A	CCV	Modified TO-17 VI
05A	LCS	Modified TO-17 VI
05AA	LCSD	Modified TO-17 VI

CERTIFIED BY: Heidi Hayes DATE: 09/29/15

Technical Director

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

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
Arcadis U.S., Inc.
Workorder# 1509291

Two TO-17 VI Tube samples were received on September 18, 2015. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

A modification that may be applied to EPA Method TO-17 at the client's discretion is the requirement to transport sorbent tubes at 4 deg C. Laboratory studies demonstrate a high level of stability for VOCs on the TO-17 'VI' tube at room temperature for periods of up to 14 days. Tubes can be shipped to and from the field site at ambient conditions as long as the 14-day sample hold time is upheld. Trip blanks and field surrogate spikes are used as additional control measures to monitor recovery and background contribution during tube transport.

Since the TO-17 VI application significantly extends the scope of target compounds addressed in EPA Method TO-15 and TO-17, the laboratory has implemented several method modifications outlined in the table below. Specific project requirements may over-ride the laboratory modifications.

Requirement	***TO-17***	***ATL Modifications***
Initial Calibration	%RSD</=30% with 2 allowed out up to 40%	VOC list: %RSD</=30% with 2 allowed out up to 40% SVOC list: %RSD</=30% with 2 allowed out up to 40%
Daily Calibration	%D for each target compound within +/-30%.	Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene within +/-40%D
Audit Accuracy	70-130%	Second source recovery limits for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene = 60-140%.
Distributed Volume Pairs	Collection of distributed volume pairs required for monitoring ambient air to insure high quality.	If site is well-characterized or performance previously verified, single tube sampling may be appropriate. Distributed pairs may be impractical for soil gas collection due to configuration and volume constraints.
Analytical Precision	</=20% RPD	<30% RPD for Fluorene, Phenanthrene, Anthracene, Fluoranthene, and Pyrene.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 0.06 L was used to convert ng to ug/m3 for the associated Lab Blank.

Definition of Data Qualifying Flags

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

B - Compound present in blank (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

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Summary of Detected Compounds
EPA METHOD TO-17

Client Sample ID: SVP-6

Lab ID#: 1509291-01A

No Detections Were Found.

Client Sample ID: SVP-7

Lab ID#: 1509291-02A

No Detections Were Found.

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Client Sample ID: SVP-6
Lab ID#: 1509291-01A
EPA METHOD TO-17

File Name:	**18091813**	**Date of Extraction: NA**	**Date of Collection: 9/14/15 12:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 08:18 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	95	50-150

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Client Sample ID: SVP-7
Lab ID#: 1509291-02A
EPA METHOD TO-17

File Name:	**18091814**	**Date of Extraction: NA**	**Date of Collection: 9/14/15 1:54:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 08:59 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600
Container Type: TO-17 VI Tube

Surrogates	%Recovery	Method Limits
Naphthalene-d8	95	50-150

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Client Sample ID: Lab Blank

Lab ID#: 1509291-03A

EPA METHOD TO-17

File Name:	**18091808**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 04:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Naphthalene	1.0	17	Not Detected	Not Detected

Air Sample Volume(L): 0.0600

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	88	50-150

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Client Sample ID: CCV
Lab ID#: 1509291-04A
EPA METHOD TO-17

File Name:	**18091803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 11:43 AM**

Compound	%Recovery
Naphthalene	115

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	109	50-150

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Client Sample ID: LCS
Lab ID#: 1509291-05A
EPA METHOD TO-17

File Name:	**18091804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 12:25 PM**

Compound	%Recovery	Method Limits
Naphthalene	118	70-130

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	102	50-150

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Client Sample ID: LCSD
Lab ID#: 1509291-05AA
EPA METHOD TO-17

File Name:	**18091805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 9/18/15 01:06 PM**

Compound	%Recovery	Method Limits
Naphthalene	119	70-130

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Naphthalene-d8	102	50-150

TO-17 SAMPLE COLLECTION

@Air Toxics LTD.

CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
Relinquishing 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, 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.T. Hotline (800) 467-4922.

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

Project Manager: Erica Kalve
Collected by: (Print and Sign) Cameron McGovern
Company: Arcadis Email: Erica.Kalve@arcadis.com
Address: 100 Smith Ranch Rd. 1st. 375 City: San Rafael State: CA Zip: 94903
Phone: 510. 206. 4514 Fax:

Project Info:
P.O. #:
Project #: EM009155.0017
Project Name: Aspire College

Turn Around Time: ☒ Normal ☐ Rush (specify)

Reporting Units: ☐ ppmv ☐ ppbv ☐ µg/m3 ☐ mg/m3

Lab I.D.	Field Sample I.D. (Location)	Engraved or Stamped Tube #	Date of Collection (mm/dd/yy)	Start Time (hr:min)	End Time (hr:min)	Pre-Test Flow Rate	Post-Test Flow Rate	Volume	Indoor/Outdoor % RH	Indoor/Outdoor Temp	Indoor Air	Outdoor Air	Soil Vapor	Other ( )
01A	SVP-6	G0144325	09/14/15	1236	1237	60mL/min	60mL/min	60mL		68	☐	☐	☒	☐
02A	SVP-7	G0153864	↓	1353	1354	↓	↓	↓		72	☐	☐	☒	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐
											☐	☐	☐	☐

Relinquished by: (signature) Cameron McGovern Date/Time 9/14/15 1500
Received by: (signature) Caroline McCartney EAR Date/Time 9/18/15 1140
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes: TO-17 - Naphthalene

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	Fedex		6.0°C	Good	Yes No (None)	1509291

eurofins | Air Toxics

2/8/2016
Ms. Angeline Tan
Arcadis U.S., Inc.
2999 Oak Road
Suite 300
Walnut Creek CA 94597

Project Name: Aspire College
Project #:
Workorder #: 1602010

Dear Ms. Angeline Tan

The following report includes the data for the above referenced project for sample(s) received on 2/1/2016 at Air Toxics Ltd.

The data and associated QC analyzed by Modified 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 Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1602010

Work Order Summary

CLIENT:	Ms. Angeline Tan Arcadis U.S., Inc. 2999 Oak Road Suite 300 Walnut Creek, CA 94597	**BILL TO:**	Accounts Payable Arcadis U.S., Inc. 630 Plaza Drive Suite 600 Highlands Ranch, CO 80129
PHONE:	925-274-1100	**P.O. #**	EM009155.0017
FAX:	925-274-1103	**PROJECT #**	Aspire College
DATE RECEIVED:	02/01/2016	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	02/08/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CS-1	Modified TO-15	4.9 "Hg	5.1 psi
01B	CS-1	Modified TO-15	4.9 "Hg	5.1 psi
02A	CS-2	Modified TO-15	2.4 "Hg	4.9 psi
02B	CS-2	Modified TO-15	2.4 "Hg	4.9 psi
03A	OA-1	Modified TO-15	5.1 "Hg	5 psi
03B	OA-1	Modified TO-15	5.1 "Hg	5 psi
04A	OA-2	Modified TO-15	4.9 "Hg	4.8 psi
04B	OA-2	Modified TO-15	4.9 "Hg	4.8 psi
05A	Lab Blank	Modified TO-15	NA	NA
05B	Lab Blank	Modified TO-15	NA	NA
06A	CCV	Modified TO-15	NA	NA
06B	CCV	Modified TO-15	NA	NA
07A	LCS	Modified TO-15	NA	NA
07AA	LCSD	Modified TO-15	NA	NA
07B	LCS	Modified TO-15	NA	NA
07BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Rayos DATE: 02/08/16

Technical Director

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

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Arcadis U.S., Inc.
Workorder# 1602010

Four 6 Liter Summa Canister (SIM Certified) samples were received on February 01, 2016. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the Full Scan and SIM acquisition modes. The method involves concentrating up to 1.0 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

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.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	</=30% RSD with 2 compounds allowed out to < 40% RSD	For Full Scan: 30% RSD with 4 compounds allowed out to < 40% RSD For SIM: Project specific; default criteria is </=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	For Full Scan: </= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers For SIM: Project specific; default criteria is </= 30% Difference with 10% of compounds allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The results for each sample in this report were acquired from two separate data files originating from the same analytical run. The two data files have the same base file name and are differentiated with a "sim" extension on the SIM data file.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. All the canisters used for this project have been certified to the Reporting Limit for the target analytes included in this workorder. Concentrations that are below the level at which the canister was certified may be false positives.

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Definition of Data Qualifying Flags

Nine 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.

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CS-1		
Lab ID:	1602010-01A	**Date/Time Analyzed:**	2/5/16 04:13 PM
Date/Time Collected:	1/28/16 08:58 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020516

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	91-20-3	0.52	D	4.2	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	66	300

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	99

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CS-1		
Lab ID:	1602010-01B	**Date/Time Analyzed:**	2/5/16 04:13 PM
Date/Time Collected:	1/28/16 08:58 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020516sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.041	0.041	0.26	1.3
Ethyl Benzene	100-41-4	0.017	0.028	0.14	0.94
m,p-Xylene	108-38-3	0.025	0.028	0.28	3.5
Methyl tert-butyl ether	1634-04-4	0.031	0.031	0.58	Not Detected
o-Xylene	95-47-6	0.013	0.028	0.14	1.4
Toluene	108-88-3	0.0070	0.024	0.12	5.9

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	106
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CS-2		
Lab ID:	1602010-02A	**Date/Time Analyzed:**	2/5/16 05:01 PM
Date/Time Collected:	1/28/16 09:00 AM	**Dilution Factor:**	1.45
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020517

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	91-20-3	0.47	D	3.8	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	59	230

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	111
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CS-2		
Lab ID:	1602010-02B	**Date/Time Analyzed:**	2/5/16 05:01 PM
Date/Time Collected:	1/28/16 09:00 AM	**Dilution Factor:**	1.45
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020517sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.037	0.037	0.23	1.3
Ethyl Benzene	100-41-4	0.015	0.025	0.12	0.86
m,p-Xylene	108-38-3	0.022	0.025	0.25	3.1
Methyl tert-butyl ether	1634-04-4	0.028	0.028	0.52	Not Detected
o-Xylene	95-47-6	0.012	0.025	0.12	1.1
Toluene	108-88-3	0.0063	0.022	0.11	5.1

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	109
4-Bromofluorobenzene	460-00-4	70-130	90
Toluene-d8	2037-26-5	70-130	97

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	OA-1		
Lab ID:	1602010-03A	**Date/Time Analyzed:**	2/5/16 05:41 PM
Date/Time Collected:	1/28/16 09:18 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020518

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	91-20-3	0.52	D	4.2	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	66	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	93
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	OA-1		
Lab ID:	1602010-03B	**Date/Time Analyzed:**	2/5/16 05:41 PM
Date/Time Collected:	1/28/16 09:18 AM	**Dilution Factor:**	1.61
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020518sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.041	0.041	0.26	1.2
Ethyl Benzene	100-41-4	0.017	0.028	0.14	0.83
m,p-Xylene	108-38-3	0.025	0.028	0.28	2.9
Methyl tert-butyl ether	1634-04-4	0.031	0.031	0.58	Not Detected
o-Xylene	95-47-6	0.013	0.028	0.14	1.1
Toluene	108-88-3	0.0070	0.024	0.12	3.7

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	92
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	OA-2		
Lab ID:	1602010-04A	**Date/Time Analyzed:**	2/5/16 06:19 PM
Date/Time Collected:	1/28/16 09:20 AM	**Dilution Factor:**	1.58
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020519

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	91-20-3	0.51	D	4.1	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	65	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	OA-2		
Lab ID:	1602010-04B	**Date/Time Analyzed:**	2/5/16 06:19 PM
Date/Time Collected:	1/28/16 09:20 AM	**Dilution Factor:**	1.58
Media:	6 Liter Summa Canister (SIM Certified)	**Instrument/Filename:**	msdv.i / v020519sim

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.040	0.040	0.25	1.2
Ethyl Benzene	100-41-4	0.016	0.027	0.14	0.85
m,p-Xylene	108-38-3	0.024	0.027	0.27	3.0
Methyl tert-butyl ether	1634-04-4	0.030	0.030	0.57	Not Detected
o-Xylene	95-47-6	0.013	0.027	0.14	1.1
Toluene	108-88-3	0.0069	0.024	0.12	3.8

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	107
4-Bromofluorobenzene	460-00-4	70-130	92
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	Lab Blank		
Lab ID:	1602010-05A	**Date/Time Analyzed:**	2/5/16 10:56 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020508d

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Naphthalene	91-20-3	0.32	D	2.6	Not Detected
TPH ref. to Gasoline (MW=100)	9999-9999-038	NA	D	41	Not Detected

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	89
Toluene-d8	2037-26-5	70-130	99

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	Lab Blank		
Lab ID:	1602010-05B	**Date/Time Analyzed:**	2/5/16 10:56 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020508simd

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.025	0.025	0.16	Not Detected
Ethyl Benzene	100-41-4	0.010	0.017	0.087	0.011 J
m,p-Xylene	108-38-3	0.015	0.017	0.17	0.028 J
Methyl tert-butyl ether	1634-04-4	0.019	0.019	0.36	Not Detected
o-Xylene	95-47-6	0.0083	0.017	0.087	0.015 J
Toluene	108-88-3	0.0044	0.015	0.075	0.014 J

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	91
Toluene-d8	2037-26-5	70-130	98

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CCV		
Lab ID:	1602010-06A	**Date/Time Analyzed:**	2/5/16 06:29 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020502

Compound	CAS#	%Recovery
Naphthalene	91-20-3	103
TPH ref. to Gasoline (MW=100)	9999-9999-038	100

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	102
4-Bromofluorobenzene	460-00-4	70-130	96
Toluene-d8	2037-26-5	70-130	101

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	CCV		
Lab ID:	1602010-06B	**Date/Time Analyzed:**	2/5/16 06:29 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020502sim

Compound	CAS#	%Recovery
Benzene	71-43-2	100
Ethyl Benzene	100-41-4	108
m,p-Xylene	108-38-3	105
Methyl tert-butyl ether	1634-04-4	106
o-Xylene	95-47-6	108
Toluene	108-88-3	104

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	99
Toluene-d8	2037-26-5	70-130	100

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	LCS		
Lab ID:	1602010-07A	**Date/Time Analyzed:**	2/5/16 07:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020503

Compound	CAS#	%Recovery
Naphthalene	91-20-3	75
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	99

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	LCSD		
Lab ID:	1602010-07AA	**Date/Time Analyzed:**	2/5/16 07:46 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020504

Compound	CAS#	%Recovery
Naphthalene	91-20-3	75
TPH ref. to Gasoline (MW=100)	9999-9999-038	Not Spiked

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	100
4-Bromofluorobenzene	460-00-4	70-130	94
Toluene-d8	2037-26-5	70-130	102

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	LCS		
Lab ID:	1602010-07B	**Date/Time Analyzed:**	2/5/16 07:10 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020503sim

Compound	CAS#	%Recovery
Benzene	71-43-2	105
Ethyl Benzene	100-41-4	110
m,p-Xylene	108-38-3	106
Methyl tert-butyl ether	1634-04-4	112
o-Xylene	95-47-6	110
Toluene	108-88-3	108

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	104
4-Bromofluorobenzene	460-00-4	70-130	95
Toluene-d8	2037-26-5	70-130	100

* % Recovery is calculated using unrounded analytical results.

MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN
Aspire College

Client ID:	LCSD		
Lab ID:	1602010-07BB	**Date/Time Analyzed:**	2/5/16 07:46 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msdv.i / v020504sim

Compound	CAS#	%Recovery
Benzene	71-43-2	106
Ethyl Benzene	100-41-4	112
m,p-Xylene	108-38-3	110
Methyl tert-butyl ether	1634-04-4	112
o-Xylene	95-47-6	116
Toluene	108-88-3	110

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	70-130	103
4-Bromofluorobenzene	460-00-4	70-130	97
Toluene-d8	2037-26-5	70-130	100

* % Recovery is calculated using unrounded analytical results.

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Sample Transportation Notice

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Page 1 of 1

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Collected by: (Print and Sign) Cameron McGovern
Company: ARCADIS
Email: angeline.tan@arcadis.com
Address: 2999 Oak Road, St 300 City: Walnut Creek State: CA Zip: 94597
Phone: 925-296-7829 Fax:

Project Info:
P.O. #: EM009155.0017
Project #:
Project Name: Ashford College

Turn Around Time: ☒ Normal ☒ Rush 5 day (specify)

Lab Use Only: Pressurized by: Date: Pressurization Gas: N₂ He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	CS-1	N0590	1/28/16	0858	TO-15 (SIM) TPH-g, BTEX, MTBE, naphthalene	-30	-5		
02A	CS-2	25259	↓	0900	↓	↓	-5		
03A	OA-1	33573	↓	0910	↓	↓	-7		
04A	OA-2	12001	↓	0920	↓	↓	-7		

Relinquished by: (signature) Cameron McGovern Date/Time: 1-29-16 1145
Received by: (signature) [signature] Date/Time: 2-1-16 1145

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Relinquished by: (signature) Date/Time
Received by: (signature) Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	GSO - O/s		NA	Good	Yes No None	1602011

Form 1293 rev.11

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