UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

January 12, 2023

Mr. Esteban Ybarra
Principal
San Miguel Elementary School
777 San Miguel Avenue
Sunnyvale, California 94085
Esteban.Ybarra@sesd.org

SENT VIA EMAIL

Re: Building-Specific Evaluation of Indoor Air and Mitigation Measures Report
Vapor Intrusion Investigation Findings – Effective VI Mitigation Systems
San Miguel Elementary School, 777 San Miguel Avenue, Sunnyvale, CA 94085
Triple Site Superfund Site (CERCLIS ID CAN000900265)

Dear Mr. Ybarra:

Thank you for your cooperation and participation in the U.S. Environmental Protection Agency's (EPA) trichloroethene (TCE) vapor intrusion investigations in Sunnyvale. The investigations are part of the EPA Superfund Triple Site environmental study being conducted in the San Miguel neighborhood (https://epa.gov/superfund/triplesite). The purpose of the vapor intrusion study is to investigate the potential for TCE vapors from nearby contaminated groundwater migrating into the indoor air of residences and schools in the area. Enclosed with this letter is a fact sheet that explains the investigation in more detail.

The enclosed Building-Specific Evaluation of Indoor Air Report (BSER) has been prepared by Locus Technologies, which EPA approved. The enclosed Final Report provides the current status of activities and data evaluation of the vapor intrusion investigation at your school campus. Section 6 of the enclosed Final Report summarizes your school's indoor air test results and the EPA-approved recommendations. Section 10 includes a long-term monitoring plan for both the mitigated buildings and the non-mitigated buildings. **Currently, the TCE indoor air levels at the San Miguel Elementary School meet EPA's requirements.**

The findings and next steps are summarized as follows:

*Buildings MC, MD, MF, MH, MI, MJ, MK, and ML***:** These buildings correspond to San Miguel Elementary School Buildings A, C, and D, the K Wings, as well as the library, Administrative office, and Cafeteria/Multi-use building (refer to Figure 1 of the enclosed Final Report for building naming convention). Indoor air test results from these buildings, between the years of 2015 to 2019, met EPA's requirements and did not show unacceptable indoor air health risks from vapor intrusion. Mitigation systems have therefore not been installed in these buildings. EPA is recommending

confirmatory long-term indoor air testing to ensure that TCE levels remain protective of human health over time (Section 10 of the Final Report).

*Building MG (SMES Building B)***:** Indoor air test results at Building MG in 2018 did not initially meet EPA's TCE Action Level of 2 $\mu g/m^3$ (micrograms per cubic meter). Therefore, in October 2018 a vapor intrusion mitigation system was installed at this building. Follow-up indoor air testing at Building B indicates that **the mitigation system is effective in controlling TCE vapor intrusion** and post-mitigation effectiveness monitoring meets EPA's requirements. Long-term post-mitigation effectiveness monitoring is recommended (Section 10 of the enclosed Final Report).

Buildings ML1, ML2, and MK1 (SMES Buildings E and PS): The three newest buildings on campus were mitigated preemptively during their construction in 2016. Locus Technologies and EPA provided technical direction to the Sunnyvale School District's installation of the vapor intrusion mitigation systems. Long-term post-mitigation effectiveness monitoring is recommended (Section 10 of the enclosed Final Report).

An Operations and Maintenance Plan for routine inspections has been prepared for the vapor intrusion mitigation systems (refer to Section 9 of the enclosed Final Report).

EPA Health Protection Goals

EPA's goal for Superfund site-related chemicals is to keep exposures below EPA's TCE Action Levels and long-term health protective screening levels. Exceeding EPA's TCE Urgent and Accelerated Response Action Levels of 6 $\mu g/m^3$ and 2 $\mu g/m^3$ indicate steps should be taken within days to weeks to quickly reduce TCE exposure because of the possible short-term effects to unborn children. The TCE 26-year exposure screening level of 0.48 $\mu g/m^3$ is used to guide actions that may be needed long-term to protect health. EPA uses this information to determine whether additional testing or response activities are necessary to confirm that levels continue to remain protective of human health over time. The enclosed California Office of Environmental Health Hazard Assessment for TCE provides more information on TCE health protective Action Levels and screening levels.

Next Steps

Locus Technologies will conduct routine long-term indoor air testing beginning this 2022/2023 winter season and then every five years beginning in winter 2023/2024. This is described in more detail in Section 10 of the enclosed Final Report. During this time, the vapor intrusion mitigation systems will follow normal continuous operations. The five-year period corresponds with EPA's in-depth protectiveness review of the Superfund Triple Site.

Locus Technologies will contact you to schedule upcoming indoor air testing this 2022/2023 winter season and continue to verify the performance of the vapor intrusion mitigation systems installed on the school campus.

If you have any questions on the vapor intrusion mitigation systems, please reach out to Nancy-Jeanne LeFevre (Project Technical Lead), Locus Technologies, at LeFevren@locustec.com.

Please call Locus' mitigation services at 408-329-6654 or e-mail Ms. LeFevre if any significant changes are conducted to your building in the future. Certain types of renovations can increase a building's likelihood for vapor intrusion. EPA or Locus Technologies can schedule a quick visit with you to go over any renovation plans and discuss if another round of testing or other response actions would be appropriate. The following are examples of building renovations that should be reported to Locus:

- Drilling holes through the floor for a new toilet or telephone/internet cable, which can create a new pathway for vapors to enter the building.
- Changes to the heating system, which could pull vapors into the building.
- Plans to remodel beyond cosmetic changes (for example, any construction that may affect the foundation, crawlspace, or HVAC system of your building).

If you have any questions regarding the findings of the enclosed Final Report or any concerns, please feel free to reach out to me at Abreu.Lilian@epa.gov or call me at 415-972-3010.

Thank you again for your cooperation and participation in this vapor intrusion investigation.

Sincerely,

LILIAN ABREU
Digitally signed by LILIAN ABREU
Date: 2023.01.12 17:04:00 -08'00'

Lilian Abreu, PhD
Remedial Project Manager
Superfund and Emergency Management Division

cc (via email): J. Wesley Hawthorne, Locus Technologies
Nancy-Jeanne LeFevre, Locus Technologies
Shau-Luen Barker, Philips Semiconductors, Inc.
Cynthia Woo, Aptim Federal Services, LLC

Enclosures:

EPA Fact Sheet of the Triple Site Vapor Intrusion Investigation (April 2016)

California Office of Environmental Health Hazard Assessment for TCE

Final Building-Specific Indoor Air Sampling and Mitigation Measures Evaluation Report for San Miguel Elementary School, dated January 12, 2023

Expansion of EPA's Testing Area Community Indoor Air Update

Progress on mitigating homes and schools affected by vapor intrusion and step-out sampling to new homes on Coachella, San Pablo & San Patricio Avenues

U.S. Environmental Protection Agency • Region 9 • San Francisco, CA • April 2016

Philips, AMD 901-902 Thompson Place, TRW Microwave Superfund Sites ("Triple Site"), Sunnyvale, California

The U.S. Environmental Protection Agency (EPA) continues to request permission from certain residents in the Duane/San Miguel neighborhood to collect indoor air samples. EPA is also expanding the sampling area to include more residences based on newly collected data. This sampling is part of a study of the potential for vapor intrusion (a process where vapors from groundwater contamination may migrate into indoor air). In 2015 and 2016, EPA sampled 130 homes and 34 buildings at all four neighborhood schools. Six of the 34 school buildings and 20 of the 130 residences tested (households on Duane Avenue, Carmel Avenue, San Luisito Way and San Miguel Avenue) showed some evidence of potential vapor intrusion, primarily in crawlspaces. EPA is evaluating sampling results and overseeing the design and installation of mitigation systems to prevent vapors from accumulating indoors. **Based on these findings, EPA continues to recommend testing in all homes in the area that have not yet been sampled.** There is no cost to owners or tenants selected for this testing. To sign up for the sampling, please contact Lilian Abreu, the EPA Project Manager, at (415) 972-3010 or by e-mail to *Abreu.Lilian@epa.gov*.

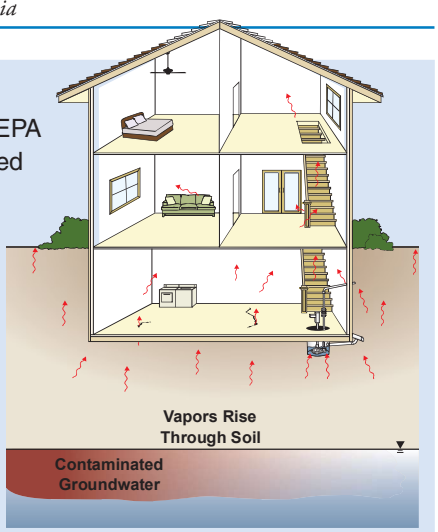


Figure 1: Vapor intrusion into a residence.

TCE and Vapor Intrusion

The main chemical of concern in this investigation is trichloroethene (TCE). TCE is a type of volatile organic chemical (VOC) which can move as vapors from groundwater through soil under certain conditions. If vapors move under a building it is possible for them to pass through cracks and other openings in the foundation and enter the indoor air (see Figure 1). If this happens, and if the levels of VOCs are high enough and prolonged enough, it may create a health risk.

TCE is present in the groundwater due to historical semiconductor and other electronics manufacturing operations from the early years of Silicon Valley (dating back to the 1960s). Since the 1980s, the parties responsible for the environmental cleanup have been conducting activities to contain and clean up TCE in the shallow groundwater.



Note: Your drinking water does not come from groundwater in this area. Neighborhood drinking water comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

Sampling Results

During the past year of indoor air sampling, 130 households (out of over 400 total) and 34 school buildings – Rainbow Montessori, San Miguel Elementary, The King's Academy and Children's Creative Learning Center (CCLC) were sampled. Many households and classrooms showed no evidence of vapor intrusion, having levels similar to outdoor air (which has low concentrations of TCE typical of the South Bay area).

As expected, the majority of locations sampled at the four schools showed low concentrations of TCE which do not pose a health risk and fully meet EPA's requirements for protecting children's and teachers' health. None of the CCLC samples showed any evidence of vapor intrusion. However, TCE was detected in the crawlspaces underneath certain other school buildings and in some classroom locations. Most of these classroom locations showed TCE when EPA sampled under "ventilation-off" conditions.

Additionally, 20 of 130 residences showed some indication of vapor intrusion in crawlspaces above EPA's acceptable level. Similar to the results of the school sampling, indoor air levels in most residences met EPA's health-protective requirements. Out of precaution, mitigation systems are being designed for these residences and six school buildings. Additional testing is ongoing at the other school buildings to determine if mitigation systems or longer-term monitoring would be appropriate to further reduce risk.

In the meantime, sampling continues and residents can call anytime to sign up for testing. EPA recommends a minimum of two rounds of testing at all households, including at least one round of winter testing.

Why is the Testing Area Expanding?

Based on newly collected data showing homes affected by vapor intrusion on the easternmost boundary of the testing area (San Miguel Avenue), EPA has also expanded the sampling area. This "step-out" sampling area includes certain homes on Coachella, San Pablo and San Patricio Avenues (see Figure 2).

The "Triple Site"

Informally known by the collective term "Triple Site", the site includes three groundwater TCE sites – the Advanced Micro Devices 901/902 Thompson Place Superfund Site (AMD 901/902 Site), the Philips (formerly Signetics) Site (Philips Site), and the TRW Microwave Superfund Site (TRW Site).

The Triple Site also includes the area of the neighborhood (see map), which has been impacted by TCE-containing groundwater — elevated above the acceptable level of 5 micrograms per liter (ug/L).

What Happens Next?

Due to the potential for unacceptable vapor intrusion occurring on Duane Avenue, Carmel Avenue, San Luisito Way and San Miguel Avenue, EPA recommends testing within the sampling area shown, including the adjacent step-out area. Residents can call or e-mail anytime to sign up. When signing up for the sampling, please call (or e-mail) and leave a message with your name, telephone number, mailing address and/or e-mail address and the best time to reach you.



Figure 3: Home Indoor Air Sampler

With residents' permission, two rounds of sampling will be conducted, including at least one round during the winter heating season. The process for testing TCE in indoor air is not disruptive, and simply involves placing a small sampling device in the home (for example, on a shelf or counter) and in the crawlspace beneath the home over a 24-hour to 2-week period.

During the testing, residents should avoid using chemicals which can interfere with the testing (such as on dry-cleaned clothing, paints, or carpet cleaners). EPA will notify each resident individually of the results within a few weeks after the testing. If a site-related vapor intrusion issue is found, there will be no cost to residents or property owners to put in place a solution. EPA will distribute another fact sheet in late 2016 and hold another community meeting to provide an update on the investigation and discuss next steps for the community.

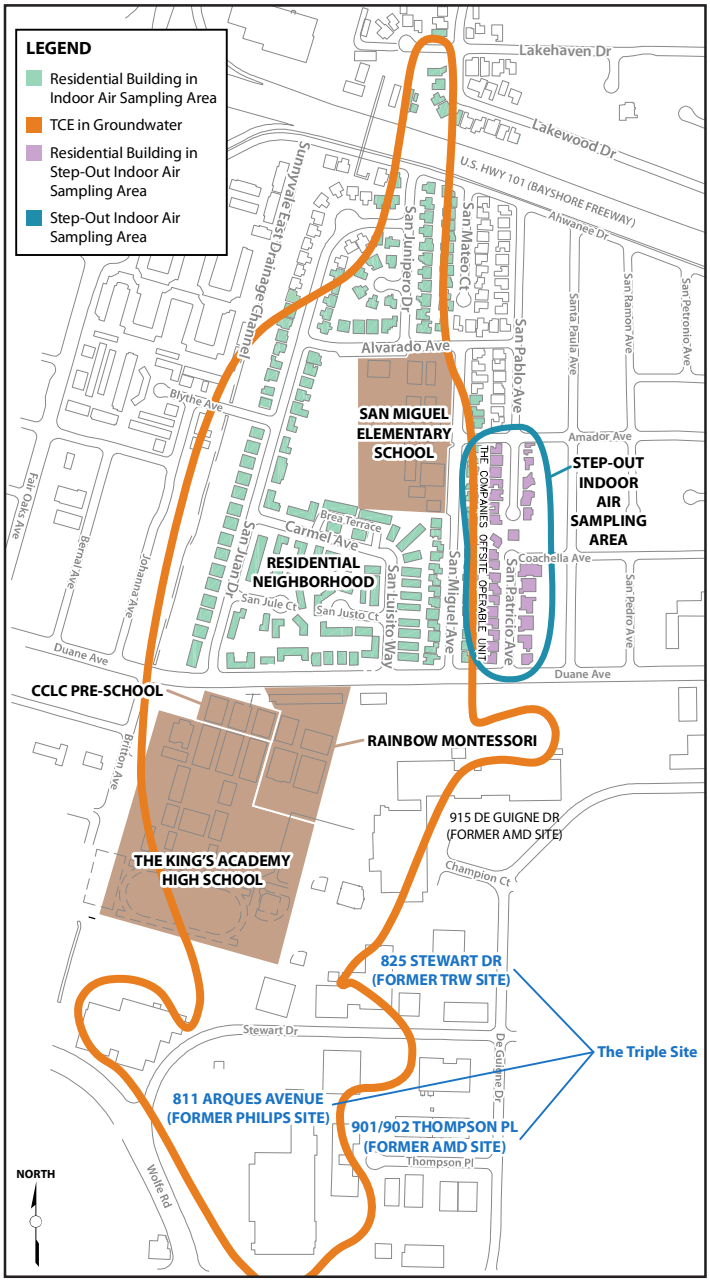


Figure 2: Original indoor air sampling area and step-out indoor air sampling area. Approximate extent of TCE contamination above 5 micrograms per liter (µg/L) in shallow groundwater (around 10 feet).

Who Do I Contact If I Would Like My Home Sampled?

Please contact any of the following if you would like your home sampled:

Lilian Abreu, PhD
EPA Project Manager
415-972-3010
Abreu.Lilian@epa.gov

Trichloroethylene (TCE) in Indoor Air

What is Trichloroethylene (TCE)?

- Trichloroethylene (TCE or trichloroethene) is a toxic, clear, colorless liquid. Liquid TCE evaporates quickly into the air. It is not flammable.
- TCE is primarily used in industry to remove grease from metal parts and to make refrigerants.
- TCE can also be found in consumer products such as automotive degreasers, stain removers, paint removers, and adhesives.

How can I be exposed to TCE?

Common ways people may be exposed to TCE include:

- Living or working in a building that is above soil or groundwater contaminated with TCE;
- Working in industries that produce or use TCE;
- Using TCE-containing products at home.

How can TCE affect my health?

- Short-term exposure to TCE in the first trimester of pregnancy may increase the risk of heart defects in the baby.
- Long-term exposure to TCE can impact the immune system, kidney, male reproductive system, and liver. Long-term exposures also increase the risk of kidney cancer and possibly other types of cancer.
- The health effects of TCE depend on many factors, such as:
  - The amount of TCE in air,
  - How long people breathe it, and
  - Individual sensitivity to the chemical.

What can I do to reduce my exposure to TCE in my home?

- Avoid using products containing TCE, and follow directions when using them.
- Ventilate your home frequently by opening the windows and doors.
- For more information reducing your exposure to chlorinated chemicals, such as TCE, see the Air Resources Board factsheet on *Chlorinated Chemicals in Your Home* (**https://www.arb.ca.gov/research/indoor/clguide.pdf**).

Office of Environmental Health Hazard Assessment (OEHHA), California Environmental Protection Agency
Sacramento | California | November 2018

Trichloroethylene (TCE) in Indoor Air

What do the TCE screening levels mean?

The TCE screening levels are used to guide actions that may be needed to protect health. The screening levels are indoor air concentrations of TCE that should not pose harm even to sensitive people, including children, pregnant women, and those who have health issues. The non-cancer screening level is set below levels thought to cause adverse "non-cancer" effects, including those cited on the previous page. If someone is exposed to concentrations above, but near these values, health effects are not expected to occur, because of the protective factors included in the calculations. The cancer screening level is set at a concentration that is not expected to pose a significant cancer risk from long-term exposure.

Screening Levels for Trichloroethylene in Indoor Air[1]

Residential ($\mu g/m^3$)	**Commercial** ($\mu g/m^3$)	**Description**
0.48	3.0	Protects against cancer
2.1	8.8	Protects from health effects other than cancer

$\mu g/m^3$ = micrograms per cubic meter

What do the TCE action levels mean?

The TCE action levels signal when steps should be taken to quickly reduce TCE exposure because of the possible short-term effects to unborn children. TCE levels at or above the "accelerated action levels" tell regulators that actions should be taken within a few weeks to reduce TCE levels. TCE levels at or above the "urgent action levels" tell regulators that actions should be taken within a few days to reduce TCE levels. Possible ways to quickly reduce TCE levels in indoor air include increasing the ventilation or using an air purifier with an activated charcoal filter.

Action Levels for Trichloroethylene in Indoor Air[2]

Residential ($\mu g/m^3$)	**Commercial** ($\mu g/m^3$) (8-hr work day)	**Commercial** ($\mu g/m^3$) (10-hr work day)	**Action if Exceeded**
2	8	7	Accelerated: take action within a few weeks to reduce TCE levels in air
6	24	21	Urgent: take action within a few days to reduce TCE levels in air

$\mu g/m^3$ = micrograms per cubic meter

[1] US Environmental Protection Agency. 2018. Regional Screening Levels for Chemical Contaminants at Superfund Sites. May 2018. **https://www.epa.gov/risk/regional-screening-levels-rsls**

[2] US Environmental Protection Agency. 2014. Memorandum: EPA Region 9 Interim Action Levels and Response Recommendations to Address Potential Developmental Hazards Arising from Inhalation Exposures to TCE in Indoor Air from Subsurface Vapor Intrusion. June 30.

Report

Final Building-Specific Evaluation of Indoor Air and Mitigation Measures
San Miguel Elementary School (777 San Miguel Avenue, Sunnyvale, CA)
Triple Site Offsite Operable Unit
Sunnyvale, California

Privileged and Confidential

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Date Published: 12 January 2023

Table of Contents

LIST OF TABLES 3
LIST OF FIGURES 4
LIST OF APPENDICES 5
LIST OF ACRONYMS AND ABBREVIATIONS 6
1. Introduction 7
1.1 Purpose 7
1.2 TCE Screening and Action Levels and Vapor Intrusion Mitigation Systems 9
1.3 Project Team Contacts 11
2. Building/Property Identification 11
3. Communications Plan 13
4. Chronology of Vapor Intrusion Investigation 15
5. Data Evaluation 28
5.1 Quality Assurance/Quality Control Results and Usability 28
5.1.1 Field QC Samples 29
5.1.1.1 Duplicates 29
5.1.1.2 Field Blanks 29
5.1.2 Laboratory QA/QC Samples 29
5.1.2.1 Method Blanks 30
5.1.2.2 Surrogates and Laboratory Control Spike/Laboratory Control Spike Duplicates 30
5.2 Results with Background Outdoor Air Interferences 31
5.3 Results with Indoor Source Interferences 31
6. Building Sampling Results and Recommendations 32
7. Vapor Intrusion Mitigation System Description 33
8. Mitigation Termination Criteria 35
9. Operations and Maintenance Plan 35
9.1 Final Sampling Plan 36
9.1.1 Operational Failure Analyses and Plans to Prevent Reoccurrence 37

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9.1.2 Health and Safety 37
9.1.3 Quality Assurance / Quality Control 37
9.1.4 Retention of Records 38
9.1.5 Contact Information 38
10. Building-Specific Sampling Plan Addenda 38
10.1 Final Sampling Plan 39
10.2 Long-Term Sampling Plan 39
11. References 43

TABLES
FIGURES
APPENDICES

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LIST OF FIGURES

FIGURE NO.	TITLE
1	Location Map
2	Air and Soil Gas Sampling Locations
3	As-Built Active Vapor Intrusion Mitigation System Layout: Building MG
4	As-Built Passive Vapor Intrusion Mitigation System Layout: ML1, ML2, and MK1
5	Vapor Intrusion Mitigation System Vent Stack Locations

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LIST OF TABLES

TABLE NO.	TITLE
1	Air Sampling Analytical Results
2	Soil Gas Sampling Analytical Results

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LIST OF APPENDICES

APPENDIX	TITLE
A	Executed Access Agreement/s (Confidential)
B	Air Sampling Standard Operating Procedures using Radiello Samplers
C	Blank Field Forms for Use as Applicable
D	Non-Residential Building Survey Field Forms
E	SMDS Generic System Design Diagram (NOT APPLICABLE)
F	SMDS Specifications (NOT APPLICABLE)
G	SMDS As-Built Diagram (NOT APPLICABLE)
H	SMDS Occupant Information Sheet (NOT APPLICABLE)
I	SSDS Generic System Diagram (NOT APPLICABLE)
J	SSDS Specifications
K	SSDS As-Built Diagram (See Figures 3 and 4)
L	SSDS Occupant Information Sheet
M	Vapor Intrusion Mitigation System Installation Field Forms
N	Operations and Maintenance Inspections Field Forms
O	City of Sunnyvale Permit/s for Vapor Intrusion Mitigation System
P	Post-Mitigation Effectiveness Monitoring Field Forms
Q	Analytical Laboratory Reports and Chain-of-Custodies
R	Records of Previous Communications to Property Owners

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LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
1,1,1-TCA	1,1,1-trichloroethane
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
AMD	Advanced Micro Devices
BSER	Building-Specific Evaluation of Indoor Air and Mitigation Measures Report
cis-1,2-DCE	cis-1,2-dichloroethene
DTSC	Department of Toxic Substances Control
DQO	Data Quality Objectives
EPA	United States Environmental Protection Agency
HVAC	Heating, Ventilation and Air Conditioning
Locus	Locus Technologies
OOU	Offsite Operable Unit
PCE	tetrachloroethene
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SMDS	Sub-Membrane Depressurization System
SSDS	Sub-Slab Depressurization System
TCE	trichloroethene (trichloroethylene)
trans-1,2-DCE	trans-1,2-dichloroethene
VOCs	Volatile Organic Compounds

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1. Introduction

This Building-Specific Evaluation of Indoor Air and Mitigation Measures Report (BSER) was prepared by Locus Technologies (Locus) in accordance with the Indoor Air / Vapor Intrusion Sampling and Analysis Removal Work Plan for the Triple Site Offsite Operable Unit in Sunnyvale, California (Vapor Intrusion Work Plan) (Locus, 2020; https://semspub.epa.gov/src/document/09/100024154). The Vapor Intrusion Work Plan was prepared in response to the 2019 Administrative Settlement Agreement and Order on Consent between the United States Environmental Protection Agency (EPA) and Philips Semiconductors, Inc. (Philips) for Evaluation of Vapor Intrusion to Indoor Air and Conditional Evaluation and Implementation of Mitigation Measures for the Triple Site Offsite Operable Unit (OOU) (EPA, 2019; https://semspub.epa.gov/src/document/09/100018488). The settlement was entered into voluntarily by Philips, Advanced Micro Devices, Inc. (AMD), Northrop Grumman Systems Corporation, and the EPA with an effective date of 22 September 2019.

1.1 Purpose

This Final BSER provides the current status of activities (Section 4) and data evaluation (Section 5) of the vapor intrusion investigation for the subject property.

This Final BSER was prepared as prescribed in the Flow Chart for Implementation of the site-wide Vapor Intrusion Work Plan (Work Plan Flow Chart, Figure 5 of the Vapor Intrusion Work Plan), which is designed for the evaluation of individual properties identified for vapor intrusion investigation. The Work Plan Flow Chart identifies action items, deliverables, and communications in a coordinated process flow.

This Final BSER documents that after at least two winter heating season indoor air sampling events there is no evidence of vapor intrusion that exceeds EPA's health screening values in

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Buildings MC, MD, MF, MH, MI, MJ, MK and ML (refer to Figure 2). No additional indoor air sampling is required for these buildings at this time, as there is no evidence of unacceptable indoor air health risks related to subsurface contamination from the Superfund site.. Recommendations for long-term confirmatory indoor air monitoring at these non-mitigated school buildings are provided in Section 10.2. The need for additional indoor air sampling will re-evaluated if site or building conditions change or if new and relevant information about the building is identified.

This Final BSER also documents that after at least two winter heating season indoor air sampling events following installation of sub-slab depressurization mitigation systems in Buildings ML1, ML2, MK1, and MG (refer to Figure 2), these vapor intrusion mitigation systems have been found to be effective and the indoor air meets EPA's long-term health-protective Screening Level (0.48 micrograms per cubic meter [µg/m^3]) in the occupiable space. Ongoing operations and maintenance and long-term sampling of the vapor intrusion mitigation systems is described in Section 9 and Section 10 respectively.

Ultimately, additional post-removal site controls may be needed for properties within the Triple Site Offsite Operable Unit. Additional post-removal site controls may include:

- Recorded agreements and/or tracking system to help provide notice to current and future owners, occupants, and EPA and Locus when there is a change in building ownership or configuration.
- Recorded agreements providing EPA and Locus the necessary access to maintain, operate, and remove, when appropriate, the vapor intrusion mitigation system.
- Mapping or tracking system to help ensure that stakeholders are informed of the appropriate construction specifications and the need for consultation with EPA when making inquiries with the City of Sunnyvale regarding the property.

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A plan for post-removal site controls will be prepared upon EPA approval of other BSERs at properties throughout the neighborhood.

1.2 TCE Screening and Action Levels and Vapor Intrusion Mitigation Systems

Trichloroethene (TCE) belongs to a chemical category called volatile organic compounds, which are used in degreasers, paint removers, adhesives, and manufacturing. Vapor intrusion is a process where vapors from historic releases to groundwater may migrate inside buildings. Drinking water at the property does not come from groundwater.

The EPA sets forth screening levels and action levels for concentrations of trichloroethene (TCE) in ambient indoor air. The following is a summary of TCE screening and action levels that drive the vapor intrusion investigation and the vapor intrusion mitigation systems that may be warranted. Detailed information on vapor intrusion mitigation systems are in the Vapor Intrusion Work Plan.

The Accelerated Response Action Level for TCE, is defined as a detection of TCE in ambient air samples at concentrations greater than 2 micrograms per cubic meter (µg/m^3). For a confirmed vapor intrusion occurrence of TCE above this level, responsive action will be taken within a few weeks to reduce TCE in the air. For a confirmed vapor intrusion occurrence of TCE above the Urgent Response Action Level, defined at 6 µg/m^3, a responsive action will be taken within a few days to reduce TCE in the air. Interim measures may be implemented first while options for sustained mitigation measures are considered.

Possible interim measures to quickly reduce the TCE levels of indoor air may include increased ventilation or using an air purifier with an activated carbon filter. Sustained mitigation measures may include a sub-membrane depressurization system (SMDS) or sub-slab depressurization system (SSDS). These vapor intrusion mitigation systems are designed to draw air from

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underneath a residence and route that air to a plastic vent stack (riser pipe). The system prevents the entrance of underground vapors into the building. The vent stack transfers these vapors directly to the outdoor air where they immediately dilute and are broken down by sunlight. Vapor intrusion mitigation systems may be active (using a powered fan) or passive (using convection) to move air up the stack and into outdoor air.

EPA's TCE health risk Screening Level of 0.48 micrograms per cubic meter (µg/m^3) is set at a concentration that is not expected to pose a significant cancer risk from long-term exposure (26-years) over a lifetime incorporating a margin of safety. Indoor air TCE between 0.48 and 2 µg/m^3 is still within the acceptable health risk management range. These are concentration levels that are reasonably protective of human health over a lifetime. If indoor air sampling confirms a result within the health risk management range, a weight-of-evidence approach will be used to determine if a vapor intrusion mitigation system is recommended.

Ultimately, additional post-removal site controls may be needed for properties within the Triple Site Offsite Operable Unit. Additional post-removal site controls may include:

- Recorded agreements and/or tracking system to help provide notice to current and future owners, occupants, and EPA and Locus when there is a change in building ownership or configuration.
- Recorded agreements providing EPA and Locus the necessary access to maintain, operate, and remove, when appropriate, the vapor intrusion mitigation system.
- Mapping or tracking system to help ensure that stakeholders are informed of the appropriate construction specifications and the need for consultation with EPA when making inquiries with the City of Sunnyvale regarding the property.

A plan for post-removal site controls will be prepared upon EPA approval of other BSERs at properties throughout the neighborhood.

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1.3 Project Team Contacts

The Project Team consists of the following main personnel:

Role	Name	Contact
Project Coordinator & Community Involvement Coordinator	J. Wesley Hawthorne	(415) 799-9937 hawthornej@locustec.com
Project Technical Lead	Nancy-Jeanne LeFevre	(650) 450-8286 lefevren@locustec.com
Manager of Environmental Services	Africa Espina	(415) 799-9821 guzuna@locustec.com
Field Coordinator	Alan Tuan	(408) 781-2150 tuana@locustec.com
EPA Project Manager	Lilian Abreu, PhD	(415) 972-3064 Abreu.Lilian@epa.gov

In case of any questions or concerns regarding an installed vapor intrusion mitigation system at the subject property, please call Locus Technologies at 408-329-6654 at any time to speak to a mitigation system representative.

2. Building/Property Identification

The subject property is located at 777 San Miguel Avenue in Sunnyvale, CA, and entails 12 buildings used for educational purposes (Figure 1). The building layouts are presented in the attached Figure 2, which also identifies where air samples have been collected. Air sample location identifier names in Figure 2 correspond to the "Location ID" in the attached tables presenting the air sampling results. Building MB is part of the subject property; however, it is

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operated by a separate organization (California Young World). Therefore, the indoor air evaluation of this building was prepared as a separate report.

The buildings can be characterized as follows:

- Building MA was a one-story portable building with 8 units having individual crawlspaces; approximately 15,000 square feet. This building was removed in 2016, and was located in the area of current Building MK1. Building MA appears in the site-wide Vapor Intrusion Work Plan (Locus, 2020).
- Buildings MC, MD are one-story slab-on-grade buildings with approximately 6,875 square feet each. These buildings are used as classrooms and also contain bathrooms.
- Building ME was a one-story portable building with 4 units and a crawlspace; approximately 7,800 square feet. This building was removed in 2016, and was located in the area of current Buildings ML1 and ML2. Building ME appears in the site-wide Vapor Intrusion Work Plan (Locus, 2020).
- Building MF is a one-story slab-on-grade building with approximately 5,500 square feet. This building is used as an administrative office.
- Buildings MG, MI, and MK are one-story slab-on-grade buildings with approximately 10,000 square feet each. MG is used as a lab and also contains classrooms and bathrooms. MI contains classrooms and bathrooms. MK is used for social work, Resource Specialist Programs, and speech pathology; it also contains classrooms and bathrooms.
- Building MH is a one-story slab-on-grade building with approximately 8,200 square feet. MH contains a library, storage spaces, a kitchen, a janitor's room, and a computer lab.

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- Building MJ is a one-story slab-on-grade building with approximately 6,300 square feet. MJ contains classrooms and bathrooms.
- Building ML is a one-story slab-on-grade building with approximately 18,000 square feet. ML is a cafeteria and also functions as a multi-purpose room with a stage. ML also contains two classrooms with attached bathrooms.
- Buildings ML1, ML2, and MK1 were built in 2016. Buildings ML1 and ML2 are each 1,992 square feet; Building MK1 is 4,260 square feet. These buildings contain a 1-foot 3-inch tall crawl space with a rat slab floor. These buildings are used as classrooms and also contain bathrooms. Building layouts are included in the figures of this report.

3. Communications Plan

Property access was established with property owner/s in advance of any vapor intrusion investigation activities (for example, air sampling, mitigation, or operations and maintenance) on the subject property. The owner/s signed the access agreement on 16 December 2014, and the agreement was fully executed on 8 January 2015; the agreement can be found in an appendix attached to this report. Records of previous communication to San Miguel Elementary School are included in Appendix R. If requested by the owner, EPA and/or Locus Technologies will discuss with the owner the BSER via a phone call.

Although uncommon, in the event that indoor air trichlorethene (TCE) sampling results exceed EPA's Urgent Response Action Level of 6 micrograms per cubic meter (µg/m^3), the owner would be notified via phone and/or email of sampling results and the proposed next steps. If applicable, tenants will also be notified.

Additionally, air sampling results will be communicated via email and/or phone if:

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1. Indoor air results exceed the Accelerated Response Action Level of 2 micrograms per cubic meter (µg/m^3) TCE.
2. Owner/s, tenant/s, or owner's representatives inquire of sampling results.

The primary contacts at the Sunnyvale School District are:

- Kathy Rouse, Manager of Operations Sunnyvale School District, 408-522-8225, kathy.rouse@sesd.org
- Esteban Ybarra, Principal, San Miguel Elementary School, 777 San Miguel Avenue, Sunnyvale, CA, 408-522-8278, esteban.ybarra@sesd.org
- Nicole Fiala, Assistant Principal, 777 San Miguel Avenue, Sunnyvale, CA, 408-522-8278, nicole.fiala@sesd.org

The primary contacts have indicated the following preferences for communication:

- Phone/email

Post-mitigation effectiveness monitoring and operations and maintenance of the vapor intrusion mitigation systems will be coordinated directly with the primary contacts. The primary contacts will be notified in instances that arise following any, if applicable, building walkthroughs or vapor intrusion mitigation system operations and maintenance inspections. Relevant feedback might include findings of leaking pipes, or other information that would be pertinent to the maintenance of the property.

Ultimately, the BSER will be provided to the San Miguel Elementary School Principal. If property owners or primary contacts have any questions regarding this BSER, Locus Technologies may be contacted using the Project Team Contacts table in Section 1.3.

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4. Chronology of Vapor Intrusion Investigation

The following summary provides a timeline of events at the subject property. The appendices include field logs for building surveys (Appendix D), post-mitigation effectiveness monitoring events (Appendix P), and operations and maintenance inspections (Appendix N).

Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
8 January 2015		Access Agreement fully executed with EPA		EPA Letter to school community prior to vapor intrusion investigation activities dated August 2014. Informational meeting was held December 10, 2014.

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
10 January 2015	MA, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML	School Building Survey; this is the first activity at 777 San Miguel conducted in accordance with the *Work Plan for Additional Vapor Intrusion Evaluation* (Locus, 2015)	Vapor intrusion pathway locations such as floor drains were identified (Figure 2), building usage (as mapped in Figure 2) and potential sources of volatile organic compounds identified (some portables underwent remodeling: new carpets and repainted due to major leaks from previous year; foam gap filler were used in some portables; dry-erase board cleaner in some rooms) and HVAC system (no fresh outdoor air intake at Buildings MG, MI, MJ, and MK). See building survey forms in Appendix D for more information.	
26 January 2015	MA, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML	Campus-Wide Air Sampling (HVAC system on)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level at most buildings; one ambient result in Building MG in risk management range)	Letter from EPA to San Miguel school community dated March 2015

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
14-15 April 2015	MA, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML	Campus-Wide Sampling (HVAC system off)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at most buildings; Buildings MC and MG results meet EPA's health-protective screening criteria (TCE in risk management range). Results from indoor air sampling in 2015 was reported in an Indoor Air Evaluation Report (Locus, 2015) (refer to Section 11)	EPA held meeting with San Miguel school community on May 14, 2015.
16-17 December 2015	MA, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML	Campus-Wide Sampling Event (HVAC system on)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at most buildings; Buildings MC and MG results meet EPA's health-protective screening criteria (TCE in risk management range).	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
9 June 2016	ML1, ML2, MK1	Meet with school personnel regarding preemptive vapor intrusion mitigation plans for the school's planned new construction of Buildings ML1, ML2 and MK1 (Locus, 2016)	Mitigation plans specify passive sub-slab depressurization systems for vapor intrusion mitigation. The passive system uses convection (instead of a fan) to move air up the vent stack and into outdoor air.	EPA fact sheet letter sent to 4 schools dated January 2016. EPA to San Miguel Elementary School letter dated October 2016

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
28 July 2016	ML1, ML2, MK1	Preemptive vapor intrusion mitigation plan approved by EPA for Building ML1, ML2 and MK1 (passive systems) (Locus, 2016)	Due to school district requirements, the passive vapor intrusion mitigation system installation was contracted by the school directly with the mitigation contractor. On 30 August 2016, Locus reviewed the specifications of the proposed system and found them to be in conformance with the EPA-approved mitigation plan. Ultimately, vent stacks were installed by construction contractors during offsite building construction. Soil gas collector, membrane, and final connection of stack to soil gas collector was conducted by the mitigation contractor.	
13-19 September 2016	ML1, ML2, MK1	Membrane and soil gas collector components of passive sub-slab depressurization systems (Section 7) installed for Buildings ML1, ML2, and MK1	The passive vapor intrusion mitigation system as-built drawings can be found in Figure 4.	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
6 October 2016	ML1, ML2, MK1	Riser pipes installed for Buildings ML1, ML2, and MK1, preemptive passive mitigation installation complete	The passive vapor intrusion mitigation system as-built drawings can be found in Figure 4. Post-installation sampling postponed until at least 6 months following the school's completion of the new building interiors, in order to reduce the potential for secondary sources of VOCs.	
1-2 November 2017	ML1, ML2, MK1	Post-mitigation effectiveness monitoring for Buildings ML1, ML2, and MK1 (passive systems)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) in the occupiable space; vapor intrusion pathway samples meet EPA's health-protective screening criteria (TCE in risk management range).	
28 November 2017	ML1, ML2, MK1	Quarterly operations and maintenance inspection of passive vapor intrusion mitigation systems for Buildings ML1, ML2, and MK1		

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
4-5 December 2017	ML1, ML2, MK1	Post-mitigation effectiveness monitoring for Buildings ML1, ML2, and MK1 (passive systems)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) in the occupiable space; vapor intrusion pathway sample at Building MK1 meets EPA's health-protective screening criteria s (TCE in risk management range).	
29-30 January 2018	MC, MD, MF, MG, MH, MI, MJ, MK, ML	Campus-Wide Air Sampling Event (except mitigated buildings ML1, ML2, and MK1) (HVAC system on)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at most buildings; Buildings MC, MD, MG, MI, and MK results meet EPA's health-protective screening criteria (TCE in risk management range).	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
22-23 February 2018	MC, MD, MF, MG, MH, MI, MJ, MK, ML	Campus-Wide Air Sampling Event (except mitigated buildings ML1, ML2, and MK1) (HVAC system off)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at many buildings; Buildings MC, MD, and MI results meet EPA's health-protective screening criteria (TCE in risk management range); Building MG does not meet EPA's health-protective screening criteria (TCE above EPA's short-term Screening Level)	
18 March 2018	MG	Confirmation sampling at Building MG (HVAC system off) including removing potential VOC-containing chemicals prior to sampling	EPA's health-protective screening criteria are not met in one of three vapor intrusion pathway samples (TCE above EPA's short-term short-term Accelerated Response Action Level). Plans for soil gas sampling initiated.	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
28 March 2018	ML1, ML2, MK1	Post-mitigation effectiveness monitoring and quarterly operations and maintenance inspection for Buildings ML1, ML2 and MK1 (passive systems)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	
11 June 2018	MG	Vapor Pins for soil gas sampling installed in floor of Room B4 in Building MG in accordance with discussions (verbal and email) with the school		
13 June 2018	MG	Soil gas sampling from vapor pins in Room B4 in Building MG	TCE concentrations observed up to 3400 µg/m^3 in soil gas below Room B4. Vapor intrusion mitigation planning initiated for Building MG.	
10 September 2018	MG	Meet with school personnel regarding vapor intrusion mitigation plan for Building MG	Mitigation plan specifies active sub-slab depressurization system for vapor intrusion mitigation. The active system uses a fan to move air up the vent stack and into outdoor air.	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
9 October 2018	MG	Meet with school personnel to finalize details regarding vapor intrusion mitigation for Building MG (active system)		
13-15 October 2018	MG	Vapor intrusion mitigation system installation for Building MG (active system)	System running as of 15 October 2018. The active vapor intrusion mitigation system as-built drawing can be found in Figure 3.	
6-7 November 2018	MG	Post-mitigation effectiveness monitoring for Building MG (active system), and roofer completed roof penetration for the vent stack	Meets EPA's health-protective screening criteria (TCE in risk management range), but elevated TCE in outdoor air (1.5 µg/m^3) interfered with evaluation of system effectiveness. Notably, all indoor air TCE results were below outdoor air TCE.	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
11-12 December 2018	ML1, ML2, MK1, MG	Post-mitigation effectiveness monitoring at all four buildings (noted at left), and quarterly operations and maintenance inspection for Buildings ML1, ML2, and MK1	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	
5-6 February 2019	MC, MD, MF, MH, MI, MJ, MK, ML	Campus-Wide Air Sampling Event (except mitigated buildings ML1, ML2, MK1, and MG) (HVAC system on)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at most buildings; Buildings MC and MI results meet EPA's health-protective screening criteria (TCE in risk management range)	
21-22 February 2019	MC, MD, MF, MH, MI, MJ, MK, ML	Campus-Wide Air Sampling Event (except mitigated buildings ML1, ML2, MK1, and MG) (HVAC system off)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level) at most buildings; Buildings MC and MI results meet EPA's health-protective screening criteria (TCE in risk management range)	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
27 February 2019	ML1, ML2, MK1, MG	Quarterly operations and maintenance inspection for Buildings ML1, ML2 and MK1 (passive systems), and MG (active system)		
6-7 May 2019	MG	Post-mitigation effectiveness monitoring and quarterly operations and maintenance inspection for Building MG (active system)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	
16 September 2019	MG	Quarterly operations and maintenance inspection for Building MG (active system)		
18 December 2019	MG	Post-mitigation effectiveness monitoring and quarterly operations and maintenance inspection for Building MG (active system)	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
8 November 2021	MC, MD, MF, MG, MH, MI, MJ, MK, ML, ML1, ML2, MK1	Final BSER recommending long-term sampling and operations and maintenance for the mitigated buildings MG, ML1, ML2, and MK1 (Locus, 2021).	Provided to EPA	BSER delivered to owner 1 December 2021
2 December 2021	MG, ML1, ML2, MK1	Post-mitigation effectiveness monitoring	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	
21 November 2022	MG, ML1, ML2, MK1	Post-mitigation effectiveness monitoring	Meets EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level)	
14 December 2022	MG, ML1, ML2, MK1	Operations and maintenance inspection		

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Date	Building	Activity	Notable Findings	Record of Letter Notification (Appendix R)
12 January 2023	MC, MD, MF, MG, MH, MI, MJ, MK, ML, ML1, ML2, MK1	Revised Final BSER including recommendations for long-term air sampling for non-mitigated buildings based on building conditions and mitigation status.	Provided to EPA	

5. Data Evaluation

Table 1 presents all of the air sampling laboratory analytical data collected to date that was used for the evaluation of potential TCE vapor intrusion to human health-based screening levels and to confirm that the vapor intrusion mitigation systems are operating properly.

Sections 5.1 through 5.3 below provide an explanation of any data collected from the subject property that were identified as invalid. Data results may be invalid due to field or laboratory quality issues or due to the detection of TCE from potential indoor or outdoor sources that is not related to vapor intrusion. Table 2 provides soil gas data collected from the properties; refer to Section 4 for findings from evaluation of soil gas data.

5.1 Quality Assurance/Quality Control Results and Usability

Quality assurance/quality control (QA/QC) samples were collected to determine the accuracy of field and laboratory procedures during sampling activities in accordance with the Quality Assurance Project Plan (QAPP), Appendix C of the Vapor Intrusion Work Plan. QA/QC of samples

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collected by EPA was completed by EPA as a separate effort; however, if EPA found any of the data to be unusable, those findings are discussed herein. Laboratory reports are provided in the appendix for samples collected by Locus Technologies. Laboratory reports for samples collected by EPA and its contractors are available upon request.

5.1.1 Field QC Samples

Field QC duplicates and field blanks were collected to assess the potential for contamination associated with field sampling equipment, containers, and procedures.

5.1.1.1 Duplicates

Duplicate samples were collected to determine if two side-by-side samples have the same result within acceptable limits. Sample results are considered to be comparable if the relative percent difference (RPD) of the field duplicate and the primary sample are within 25% of each other. No duplicate samples for the subject property were outside of RPD limits.

5.1.1.2 Field Blanks

Field blanks of known clean samples were evaluated to determine if any analytes (such as TCE) were introduced travelling to and from the laboratory. There were no detections in any field blanks associated with the subject property.

5.1.2 Laboratory QA/QC Samples

Laboratory QA/QC samples were prepared and analyzed to determine whether laboratory procedures were followed during routine operations.

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5.1.2.1 Method Blanks

Clean method blanks were analyzed to determine if any analytes (such as TCE) were improperly detected. No compounds were detected in any method blanks associated with analytical data for the subject property.

5.1.2.2 Surrogates and Laboratory Control Spike/Laboratory Control Spike Duplicates

Percent recovery of surrogates and laboratory control spike/laboratory control spike duplicates (LCS/LCSD) was evaluated against the limits of 70-130%. Since 2015, more than 24 analytical batches have been associated with analytical data for the subject property. There were 12 analytical batches with an LCS (and/or the associated LCSD) outside of percent recovery limits. In all instances, the laboratory control spikes were not performed using project samples. Additionally, TCE was within LCS/LCSD recovery limits for all analytical batches. Furthermore, of the 10 (or more) compounds spiked for TO-17 analysis (Radiello passive samplers) and of the 60 (or more) compounds spiked for TO-15 analysis (Summa canisters), only one to three compounds were outside of percent recovery limits in the subject analytical batches, with the exception of two TO-15 (Summa canister) analytical batches from the 26 January 2015 sampling event. For these two analytical batches, 10 compounds exceeded the percent recovery limits, but none of the compounds were Chemicals of Concern for the site. All other percent recoveries were within limits. Ultimately, no data was excluded from evaluation of potential vapor intrusion on the basis of percent recovery of surrogates or LCS/LCSD.

Relative percent difference (RPD) of LCS/LCSDs was evaluated against the limit of 20% RPD for sampling by EPA Method TO-17 and 25% RPD for sampling by EPA Method TO-15 SIM. LCS/LCDS RPDs were within limits for all analytical batches associated with the subject property.

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5.2 Results with Background Outdoor Air Interferences

Since 2015, background outdoor air TCE concentrations from the surrounding neighborhood north of Duane Avenue have ranged from not detected up to 1.6 µg/m³. Table 1 includes the background outdoor air TCE concentrations measured on the same dates as the samples collected at the subject property. TCE in background outdoor air would be from unknown sources and not expected to be from TCE in groundwater and vapor intrusion.

As shown in Table 1, the following indoor air sampling event/s entailed elevated outdoor air TCE concentrations (above 0.48 µg/m³): 6 November 2018 (1.5 µg/m³). This event was the second post-mitigation effectiveness monitoring event for evaluation of the effectiveness of the Building MG active vapor intrusion mitigation system. Indoor air TCE data from Building MG on this date were in the risk management range, but elevated TCE in outdoor air interfered with evaluation of system effectiveness. Notably, all indoor air TCE results were below outdoor air TCE. Furthermore, Building MG was re-sampled on 11 December 2018; outdoor air was not elevated on that date and indoor air met mitigation system effectiveness criteria.

5.3 Results with Indoor Source Interferences

Trichloroethene (TCE) is used in some household products such as wood finishes, adhesives, paint removers, and stain removers. The TCE in these products may evaporate into the air and can result in detections during indoor air sampling. Locus conducted building surveys prior to sample placement and attempted to identify and isolate these products. Additionally, tetrachloroethene (PCE) is a chemical commonly used in dry cleaning and can degrade into TCE. PCE is not known to be a potential concern for vapor intrusion at the project site, so the detection of both PCE and TCE during air sampling can indicate indoor source interferences unrelated to vapor intrusion. Interviews are conducted along with building surveys with

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residents to determine potential construction, dry cleaning, hobbies, and activities that may contribute indoor air interferences with respect to vapor intrusion evaluation.

As shown in Table 1, PCE was detected periodically in air samples collected at the property. As described in the chronology of the vapor intrusion investigation (Section 4), building surveys were conducted and for each building and while investigating potential indoor sources, chemical products of concern were removed prior to sampling and stored and sampled in enclosed containers. Ultimately, no individual chemical product was specifically identified as an indoor chemical source. In addition, PCE concentrations, when detected at the buildings, were consistently below EPA's long-term screening level. Furthermore, low levels of PCE detected during post-mitigation effectiveness monitoring did not interfere with evaluation of vapor intrusion mitigation system effectiveness.

6. Building Sampling Results and Recommendations

The vapor intrusion evaluation at the subject property can be summarized as follows:

- The indoor air results from Buildings MC, MD, MF, MH, MI, MJ, MK, and ML, have consistently met EPA's health-protective screening criteria (TCE below EPA's long-term Screening Level or in the risk management range) without mitigation. The sampling results from our investigation suggest that the potential for unacceptable vapor intrusion is unlikely and no additional indoor air sampling is required for these buildings. Recommendations for long-term confirmatory indoor air monitoring at these non-mitigated school buildings are provided in Section 10.2.
- The vapor intrusion investigation for the remaining four buildings is also complete: MG, ML1, ML2, and MK1. Building MG was mitigated in light of indoor

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air concentrations in exceedance of EPA's health-protective screening criteria (TCE above EPA's short-term Accelerated Response Action Level). Building ML1, ML2 and MK1 were mitigated preemptively during construction of those buildings. Post-installation sampling, which included at least two winter heating season sampling events, from all four of these buildings meet mitigation criteria (air sample results in the occupiable space are at or below the EPA long-term Screening Level under normal occupancy conditions).

7. Vapor Intrusion Mitigation System Description

A vapor intrusion mitigation system called a sub-slab depressurization system (SSDS) was installed for four buildings at the subject property to prevent the entrance of underground TCE vapors into the building. As introduced in Section 1.2, these vapor intrusion mitigation systems are designed to draw air from underneath a residence and route that air to a plastic vent stack (riser pipe). The vent stack transfers these vapors directly to the outdoor air where they immediately dilute and are broken down by sunlight. The mitigation system layouts of the sub-slab depressurization systems can be found in Figures 3 and 4; the locations of the vent stacks are shown using aerial imagery in Figure 5.

The active sub-slab depressurization system (SSDS) of Building MG uses a fan to move air up the vent stack and into outdoor air and comprises the following key components:

- Vertical vent stack located along the west side exterior of the building, to expel to outdoor air the ground vapors captured by the system.
- Suction fan connected to the metal vent stack that draws ground vapors from underneath the building.
- Electricity supplied through interior electrical source

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- Sub-slab horizontal pipe extended through footing and connected to the suction fan
- Alarm dialer that communicates with Locus directly if the fan or power stops working
- Ports for collecting air samples for laboratory analysis and for measuring vacuum (negative pressure) and airflow rates generated by fan operation.
- Per the school's request, neither a local alarm, information placard, nor system component labels were installed

The passive sub-slab depressurization systems (SSDS) for Buildings ML1, ML2, and MK1 uses convection (instead of a fan) to move air up the vent stack and into outdoor air and comprises the following key components:

- Soil gas collector on the crawlspace floor fill material, which routes ground vapors to a vertical vent stack
- A 10 mil polyolefin ASTM E-1745 Class A vapor barrier laid over the soil gas collector (caulked and taped as well as mechanically fastened at footings) to capture ground vapors.
- The 2-inch layer of concrete (called a rat slab for purposes of protecting the building against rodent intrusion) was poured over the sealed membrane, and in accordance with original school building construction plan sets.
- The soil gas collector has a collection point connected to a vertical vent stack (3-inch PVC pipe) inside each building to expel captured ground vapors to outdoor air
- Vent stack exhausts are installed one foot above the roof line with a screen cover (rodent guard); vent stacks for Building ML1 and ML2 are located within the walls and, therefore, inaccessible. The vent stack for Building MK1 is located within a storage closet.

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- Ports for collecting air samples for laboratory analysis and for measuring vacuum (negative pressure) and airflow rates generated by fan operation or convection currents.

The vapor intrusion mitigation systems components' specifications (dimensions, materials, models), as-built system layouts (building layouts showing location of system components), and City of Sunnyvale permit/s are included in the figures and appendices. The Occupant Information Sheet is also included in the appendix, for distribution to occupants during follow-up operations and maintenance. For recordkeeping purposes, field forms from the installation can also be found in the appendices.

8. Mitigation Termination Criteria

The vapor intrusion mitigation systems will be operated until indoor air sample results meet the following criteria without operation of the vapor intrusion mitigation system: results in the occupiable space are at or below the EPA long-term Screening Level of 0.48 µg/m^3 for TCE. EPA approval will be obtained prior to mitigation termination. The trigger to begin sampling for the evaluation of mitigation termination may be determined based on a combination of factors, such as, standpipe vent vapor sample results, regional soil gas screening levels, site-specific fate and transport modeling, and TCE groundwater concentrations.

9. Operations and Maintenance Plan

An Operations and Maintenance is needed to ensure the installed vapor intrusion mitigation systems meet performance expectations for as long as necessary. To accomplish that goal, this Operations and Maintenance Plan will include:

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- Plans for indoor, outdoor, and vapor intrusion pathway air sampling; including sampling events during the winter heating season (refer to Section 10.2)
- Procedures for maintenance of vapor intrusion mitigation systems
- Frequency of inspections
- Required City building/safety permits or demonstration that required building/safety permit applications have been submitted with a placeholder Appendix for the final building/safety permit
- Occupant Information Sheets
- As-built drawings

9.1 Final Operations and Maintenance Plan

To ensure the proper operation of the vapor intrusion mitigation systems, Locus and its subcontractors (if applicable) will inspect the systems (described in Section 7) annually:

- Approximately in September of every year.

The inspector is licensed by the California State License Board and is certified and listed by the National Radon Safety Board for radon mitigation.

The inspections will be scheduled in coordination with the primary contacts, and will include checking and repairing as necessary damage to the vent stack, seals on the vent stack, fan operation (including vacuum in vent stack, airflow, and fan amperage), and electrical components. The inspector will follow the O&M Inspection Field Form as found in the appendix. The inspector will also note the condition of the other remaining school buildings where mitigation systems are not installed.Each inspection is estimated to last three hours or less.

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9.1.1 Operational Failure Analyses and Plans to Prevent Reoccurrence

The remote alarm system on active systems (locations shown in the as-built system layout attached) will communicate directly with Locus whenever the fan operation fails, that is, when the vacuum measurement falls below 0.25 inches of water (WC). Locus will respond, as soon as possible, to troubleshoot the system or complete any adjustments or repairs needed and will coordinate all visits with the primary contacts. Note that having the fan off for several days for service or during power outages will have little impact on the overall indoor air quality as it takes time for soil vapors to accumulate underneath the structure at significant levels and then migrate to indoor air. Per school request, there is no audio or visual indicator of fan failure in order to prevent nuisance to occupants.

Any necessary adjustments or repairs identified through remote alarm-responses or routine inspections will be implemented with the intent to prevent reoccurrence. If reoccurrence is found not to have been prevented, necessary additional actions will be evaluated.

9.1.2 Health and Safety

A detailed description of the health and safety measures for personnel operating and maintaining the vapor intrusion mitigation systems is included in the site's Health and Safety Plan – Field Work Activities for Operation and Maintenance. Operation and maintenance activities will be conducted exclusively by Locus personnel and its contractors until such time as mitigation criteria are met with EPA approval and the owner requests to keep, operate, and maintain the system. If the property owner or occupants would like to request a copy of the Health and Safety Plan, please call Locus' mitigation services at 408-329-6654.

9.1.3 Quality Assurance / Quality Control

Vapor intrusion mitigation system operation and maintenance will comply with the Quality Assurance and Quality Control (QA/QC) guidelines specified in the Quality Assurance Project

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Plan (QAPP) for the Vapor Intrusion Work Plan, and all subsequent QAPP addendums. If the property owner or occupants would like to request a copy of the QAPP, please call Locus' mitigation services at 408-329-6654.

9.1.4 Retention of Records

Field forms completed on the subject property to date are included in the appendices of this BSER. All records associated with operations and maintenance of the vapor intrusion mitigation systems will be stored in accordance with the QAPP and made available when requested. If the property owner or occupants would like to request a copy of the records associated with operations and maintenance of the vapor intrusion mitigation systems subsequent to the date of this BSER, please call Locus' mitigation services at 408-329-6654.

9.1.5 Contact Information

In case of any questions or concerns regarding the vapor intrusion mitigation systems, please call Locus Technologies at 408-329-6654 at any time to speak to a vapor intrusion mitigation system representative. This is the same phone number the property owner or occupants would call in the event of a fan failure. If the call is not answered directly, a voice message may be left. A Locus technician will respond to the voice message for system inspection and re-start, if needed.

Additional contact information for the area vapor intrusion mitigation project is provided in Section 2.

10. Building-Specific Sampling Plan Addenda

Building surveys, sampling, and data evaluation procedures will be conducted in accordance with the Vapor Intrusion Work Plan. The sampling plan for the subject property is more

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specifically defined herein. Section 10.1 identifies documentation associated with the sampling conducted to date. Section 10.2 describes planned additional sampling.

10.1 Final Sampling Plan

This Final Sampling Plan was prepared to summarize documentation of the building surveys and sampling conducted to date. Refer to Section 4 for the chronology of sampling events. Refer to Section 6 for the vapor intrusion investigation findings. The associated building survey form/s and, if applicable, post-mitigation effectiveness monitoring forms are attached. The building layouts are included in attached figures. Sample locations are shown on the building layouts, which were selected based on the findings described in the survey/s or, if mitigated, based on earlier post-installation sampling plans. Sampling was completed consistent with winter sampling protocols of the Vapor Intrusion Work Plan, including targeting temperatures lower than 55 degrees Fahrenheit.

10.2 Long-Term Sampling Plan

10.2.1 Mitigated Buildings

Initial post-mitigation effectiveness monitoring through the second winter heating season of operation of the four sub-slab depressurization systems (SSDS) (Buildings MK1, ML1, ML2, and MG) have been completed. Based on these data, the systems are found to be effective at the mitigation of TCE vapor intrusion.

To verify the effectiveness and performance of the installed vapor intrusion mitigation systems, long-term sampling will be conducted at the following Location IDs: MG-AMB-1, MG-AMB-2, MG-PATH-1, MG-PATH-2, MG-PATH-3, MG-PATH-5, ML-1-AMB-1, ML-1-PATH-1, ML2-

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AMB-1, and ML2-PATH-1 in order to capture the locations having the highest historical TCE concentrations and as approved by EPA on 24 November 2021.

Long-term sampling will be performed as follows:

- Winter 2022/2023 (November 2022 through February 2023)
- Then every 5 years starting in winter 2023/2024 (November 2023 through February 2024), to align with EPA Five-Year Reviews.

The maximum time between indoor air sampling events for vapor intrusion mitigation system performance monitoring will be five years. If site or building conditions change or if new and relevant information about the building or site conditions is identified, the sampling frequency may be adjusted as necessary. For example, if building changes result in a greater potential for vapor intrusion, more frequent indoor air monitoring may be warranted.

Where concentrations do not meet effectiveness criteria, the residence and vapor intrusion mitigation system will be surveyed to evaluate for potential chemical sources. The field forms for post-mitigation effectiveness monitoring and, if needed, building surveys are included in the appendices.

If it is found necessary to improve the performance of the vapor intrusion mitigation system, the initial post-mitigation effectiveness monitoring schedule (through two consecutive winter heating seasons of operation) will start after improvements are implemented. If sampling conditions can be arranged such that interior ventilation is minimized in the occupiable space (for example, without active HVAC), effectiveness criteria will be evaluated under those conditions. The goal of such improvements, if deemed necessary, will be modify the components of the vapor intrusion mitigation system/s, detailed in Section 7 to meet effectiveness criteria.

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Sampling events will be scheduled in coordination with the tenant. Routine system inspections and maintenance will be aligned with when sampling will be conducted to the extent possible. In cases where routine system inspections are not aligned with sampling dates, the samplers will document in field notes the fan operation (on/off), the vacuum (inches water column), and any usual circumstances that should be considered for possible follow-up by operation and maintenance personnel.

10.2.2 All Other Buildings

Long-term confirmatory sampling at non-mitigated buildings (MC, MD, MI, MF, MH, MJ, MK, ML) will be performed as follows:

- Winter 2022/2023 (November 2022 through February 2023)
- Every 5 years starting in winter 2023/2024 (November 2023 through February 2024), to align with EPA Five-Year Reviews

The maximum time between indoor air sampling events for confirmatory sampling will be five years.

In order to capture the locations having the highest historical TCE concentrations while also accounting for spatial coverage, the following logic was used for selecting sample locations for long-term monitoring:

- If historical results of a building are all ≤0.48 µg/m³, pick the one sample location having the highest measured TCE.
- If any historical results of a building are greater than 0.48 µg/m³, pick the two sample locations having the highest measured TCE that are not in the same room (for spatial coverage).

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- Restrooms open to the outdoors and not connected to building HVAC will be excluded from this analysis.

Based on application of this logic to all available sampling data, the following 12 locations will be sampled (refer to Figure 2):

- Building MC: MC-AMB-1, MC-AMB-2
- Building MD: MD-AMB-2, MD-AMB-1
- Building MI: MI-AMB-2, MI-PATH-2
- Building MF: MF-PATH-1
- Building MH: MH-AMB-2
- Building MJ: MJ-PATH-2
- Building MK: MK-PATH-1, MK-AMB-2
- Building ML: ML-PATH-1

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11. References

Department of Toxic Substances Control (DTSC), October 2011, *Vapor Intrusion Mitigation Advisory*, Revision 1. https://dtsc.ca.gov/wp-content/uploads/sites/31/2016/01/VIMA_Final_Oct_20111.pdf

EPA Office of Solid Waste and Emergency Response, June 2015, *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air*, OSWER Publication 9200.2-154. https://www.epa.gov/vaporintrusion/technical-guide-assessing-and-mitigating-vapor-intrusion-pathway-subsurface-vapor

Environmental Protection Agency Region 9, 2019, *CERCLA Docket No. 2019-05: Administrative Settlement Agreement and Order on Consent for Removal Site Evaluation And Removal Action,* 19 September. https://semspub.epa.gov/src/document/09/100018488

Locus Technologies, 2015, *Work Plan for Additional Vapor Intrusion Evaluation, The Companies Offsite Operable Unit, Sunnyvale, California, 1 May 2014 (last revised 7 January 2015)*, 7 January.

Locus Technologies, 2016, *Mitigation Plan – Buildings L1, L2, K, and CYW. Offsite Operable Unit, Sunnyvale, California,* 25 July.

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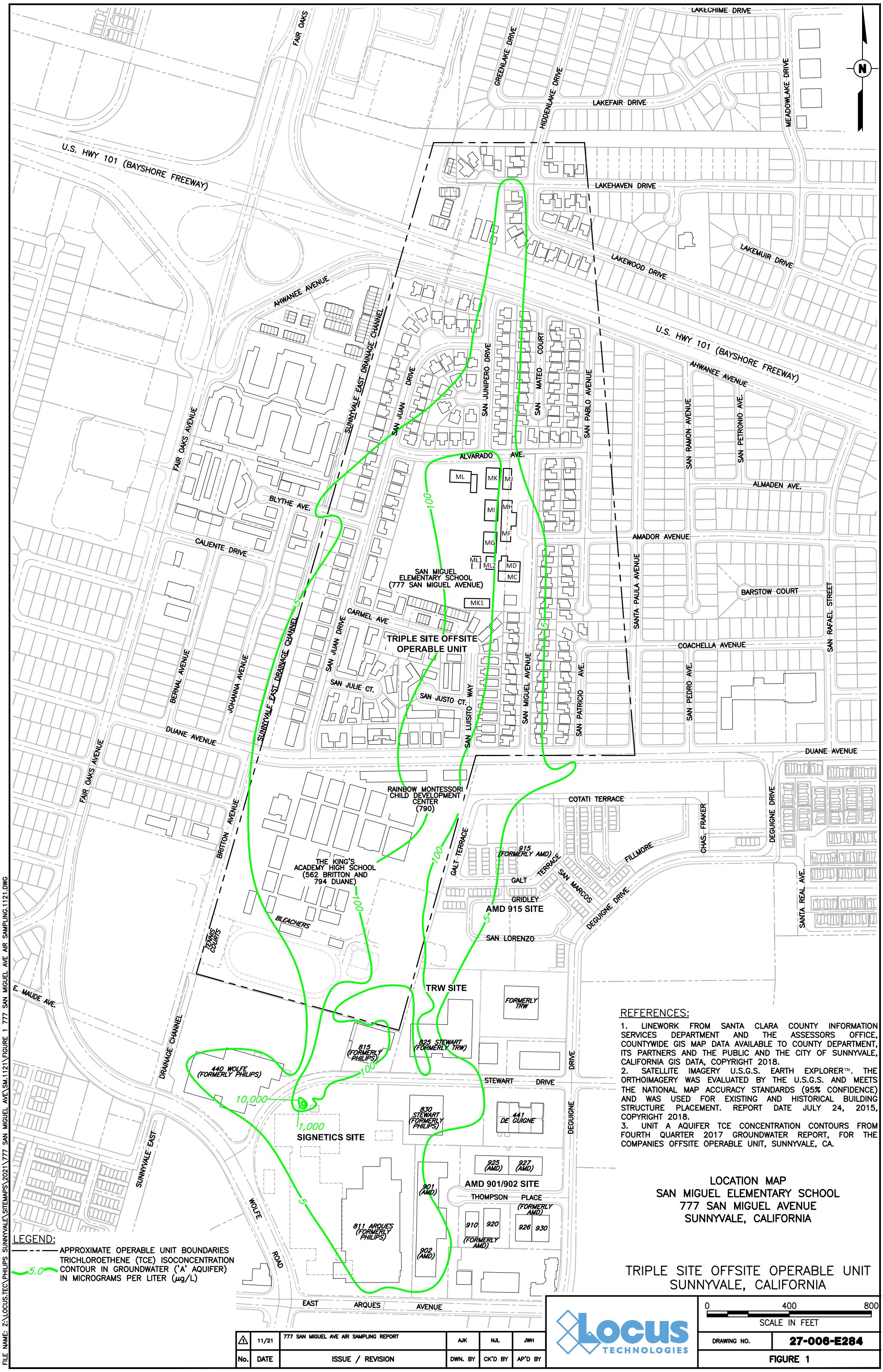
Locus Technologies, 2020, *Work Plan for Indoor Air / Vapor Intrusion Sampling and Analysis Removal, Triple Site Offsite Operable Unit, Sunnyvale, California*, 9 November. https://semspub.epa.gov/src/document/09/100024154

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Locus Technologies, 2021, *Final Building-Specific Evaluation of Indoor Air and Mitigation Measures Report, San Miguel Elementary School (777 San Miguel Avenue, Sunnyvale, CA), Triple Site Offsite Operable Unit, Sunnyvale, California*, 8 November.

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FIGURES



LEGEND:

——— — — ——— APPROXIMATE OPERABLE UNIT BOUNDARIES

5.0 TRICHLOROETHENE (TCE) ISOCONCENTRATION CONTOUR IN GROUNDWATER ('A' AQUIFER) IN MICROGRAMS PER LITER (µg/L)

REFERENCES:

1. LINEWORK FROM SANTA CLARA COUNTY INFORMATION SERVICES DEPARTMENT AND THE ASSESSORS OFFICE, COUNTYWIDE GIS MAP DATA AVAILABLE TO COUNTY DEPARTMENT, ITS PARTNERS AND THE PUBLIC AND THE CITY OF SUNNYVALE, CALIFORNIA GIS DATA, COPYRIGHT 2018.
2. SATELLITE IMAGERY U.S.G.S. EARTH EXPLORER™. THE ORTHOIMAGERY WAS EVALUATED BY THE U.S.G.S. AND MEETS THE NATIONAL MAP ACCURACY STANDARDS (95% CONFIDENCE) AND WAS USED FOR EXISTING AND HISTORICAL BUILDING STRUCTURE PLACEMENT. REPORT DATE JULY 24, 2015, COPYRIGHT 2018.
3. UNIT A AQUIFER TCE CONCENTRATION CONTOURS FROM FOURTH QUARTER 2017 GROUNDWATER REPORT, FOR THE COMPANIES OFFSITE OPERABLE UNIT, SUNNYVALE, CA.

LOCATION MAP
SAN MIGUEL ELEMENTARY SCHOOL
777 SAN MIGUEL AVENUE
SUNNYVALE, CALIFORNIA

TRIPLE SITE OFFSITE OPERABLE UNIT
SUNNYVALE, CALIFORNIA

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	11/21	777 SAN MIGUEL AVE AIR SAMPLING REPORT	AJK	NJL	JWH

Locus TECHNOLOGIES

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SCALE IN FEET

DRAWING NO. 27-006-E284

FIGURE 1

FILE NAME: Z:\LOCUS.TEC\PHILIPS SUNNYVALE\SITEMAPS\2021\777 SAN MIGUEL AVE\SM.1121\FIGURE 1 777 SAN MIGUEL AVE AIR SAMPLING.1121.DWG

ALVARADO AVE.

SAN JUAN DRIVE

SAN MIGUEL AVENUE

AMADOR AVENUE

CARMEL AVE

BREA TERRACE

SAN MIGUEL ELEMENTARY SCHOOL
777 SAN MIGUEL AVENUE

BUILDING ML
STAGE AREA
CAFETERIA/ MULTI-USE
K5
K6
KITCHEN
FOYER
RR
ML-AMB-1
ML-AMB-2
ML-AMB-3
ML-PATH-1
ML-OUT-1

BUILDING MK
K3
K4
SPEECH
SOCIAL WORKER
RSP PROGRAM
MK-AMB-1
MK-AMB-2
MK-PATH-1

BUILDING MJ
K1
K2
MJ-AMB-1
MJ-AMB-2
MJ-PATH-1
MJ-PATH-2
MJ-PATH-3
MJ-OUT-1

BUILDING MI
A1
A2
A3
A4
MI-AMB-1
MI-AMB-2
MI-PATH-1
MI-PATH-2

BUILDING MH
STORAGE JANITOR
COMPUTER
KITCHEN
LIB.
STORAGE
MH-AMB-1
MH-AMB-2
MH-PATH-1

BUILDING MF
OFFICE
MF-AMB-1
MF-AMB-2
MF-PATH-1

BUILDING MG
B1
B2
B3
B4
B LAB
UNOCCUPIED
MG-AMB-1
MG-AMB-2
MG-PATH-1
MG-PATH-2
MG-PATH-3
MG-PATH-4
MG-PATH-5
MG-SUM-SOIL1
MG-SUM-SOIL2

BUILDING ML1
E1
E2
E3
E4
CRAWL SPACE (TYP.)
ML1-AMB-1
ML1-PATH-1
ML1-PATH-2

BUILDING ML2
ML2-AMB-1
ML2-PATH-1
ML2-PATH-2
ME-OUT-1

BUILDING MD
C1
C2
C3
C4
MD-AMB-1
MD-AMB-2
MD-PATH-1
MD-PATH-2

BUILDING MC
D1
D2
D3
MC-AMB-1
MC-AMB-2
MC-PATH-1
MC-PATH-2
MC-PATH-3

BUILDING MK1
PS-1
PS-2
PS-3
PS-4
CRAWL SPACE (TYP.)
PROGRAM
STORAGE
MK1-AMB-1
MK1-AMB-2
MK1-AMB-3
MK1-AMB-4
MK1-PATH-1
MK1-PATH-2

BUILDING MB (CYW)
CRAWL SPACE

N

LEGEND:

- AIR MONITORING LOCATIONS
- SOIL BORING FOR SOIL GAS
- FLOOR DRAINS

AMB – INDOOR AIR
OUT – OUTDOOR AIR
PATH – VAPOR INTRUSION PATHWAY AIR
RM – ROOM
RR – RESTROOM
(F) – FEMALE
(M) – MALE

NOTES:

1. BUILDINGS MA AND ME WERE REMOVED IN 2016. BUILDINGS ML1 AND ML2 ARE BUILT IN THE PROXIMITY OF ME. BUILDING MK1 WAS BUILT IN THE PROXIMITY OF MA.
2. BUILDING MB (ALSO KNOWN AS CYW) SAMPLE RESULTS ARE REPORTED UNDER SEPARATE COVER.
3. BUILDINGS ML1, ML2, AND MK1 HAVE PASSIVE SUB-SLAB DEPRESSURIZATION SYSTEMS. BUILDING MG HAS AN ACTIVE SUB-SLAB DEPRESSURIZATION SYSTEM. THESE SYSTEMS MITIGATE VAPOR INTRUSION.
4. ALL BUILDINGS HAVE SLAB-ON-GRADE CONSTRUCTION EXCEPT ML1, ML2, AND MK, WHICH CONTAIN 1-FOOT 3-INCH TALL CRAWL SPACES WITH A RAT SLAB FLOOR.

REFERENCES:

1. LINEWORK FROM SANTA CLARA COUNTY INFORMATION SERVICES DEPARTMENT AND THE ASSESSORS OFFICE, COUNTYWIDE GIS MAP DATA AVAILABLE TO COUNTY DEPARTMENT, ITS PARTNERS AND THE PUBLIC AND THE CITY OF SUNNYVALE, CALIFORNIA GIS DATA, COPYRIGHT 2018.
2. SATELLITE IMAGERY U.S.G.S. EARTH EXPLORER™. THE ORTHOIMAGERY WAS EVALUATED BY THE U.S.G.S. AND MEETS THE NATIONAL MAP ACCURACY STANDARDS (95% CONFIDENCE). REPORT DATE JULY 24, 2015, COPYRIGHT 2018.

AIR AND SOIL GAS SAMPLING LOCATIONS
SAN MIGUEL ELEMENTARY SCHOOL
777 SAN MIGUEL AVENUE
SUNNYVALE, CALIFORNIA

TRIPLE SITE OFFSITE OPERABLE UNIT
SUNNYVALE, CALIFORNIA

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
2	10/21	RE-ISSUED FOR 777 SAN MIGUEL AVE AIR SAMPLING REPORT	AJK	NJL	JWH

LOCUS TECHNOLOGIES

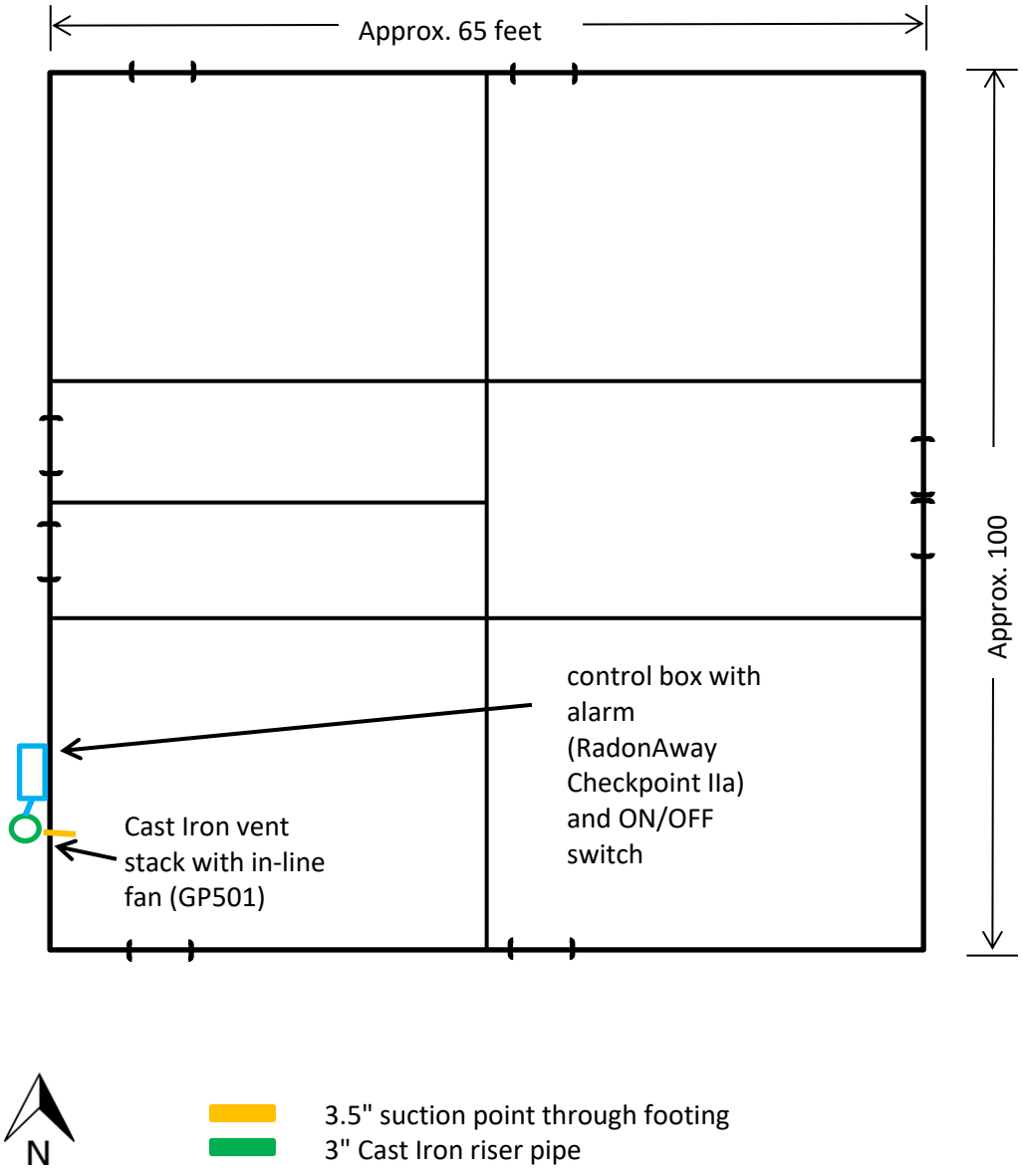
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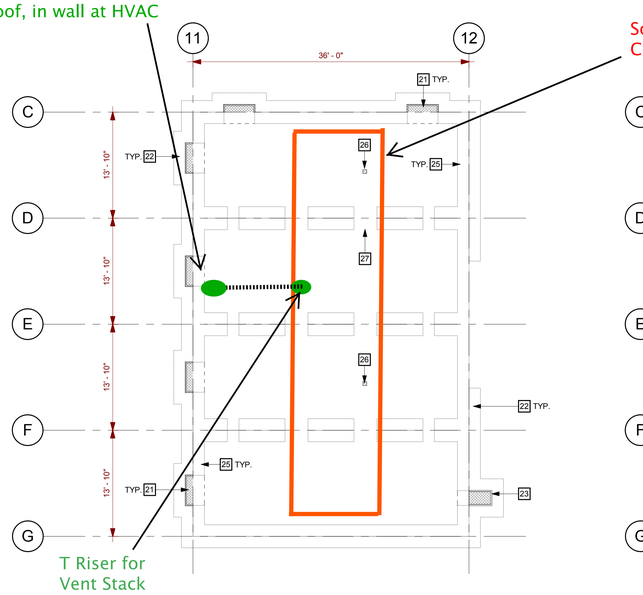
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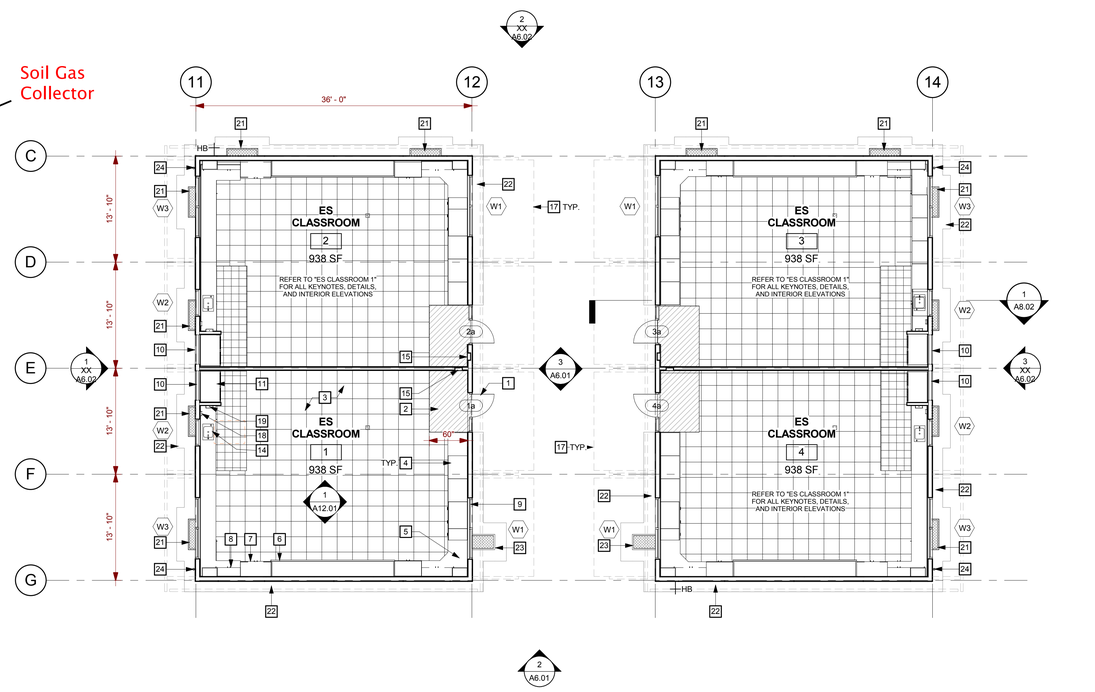
FIGURE 2

FILE NAME: Z:\LOCUS.TEC\PHILIPS SUNNYVALE\SITEMAPS\2021\777 SAN MIGUEL AVE\SM.1121\FIGURES 2-3 777 SAN MIGUEL AVE AIR SAMPLING.1121.DWG

FIGURE 3
As-Built Active Vapor Intrusion Mitigation System Layout
Building MG
San Miguel Elementary School, Building B
777 San Miguel Avenue
Sunnyvale, California



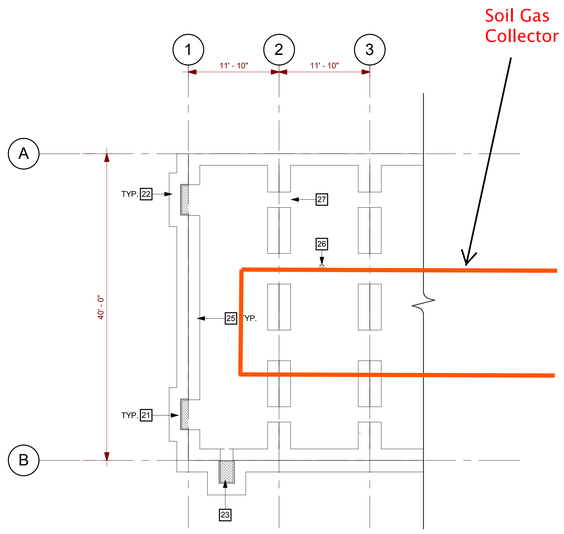


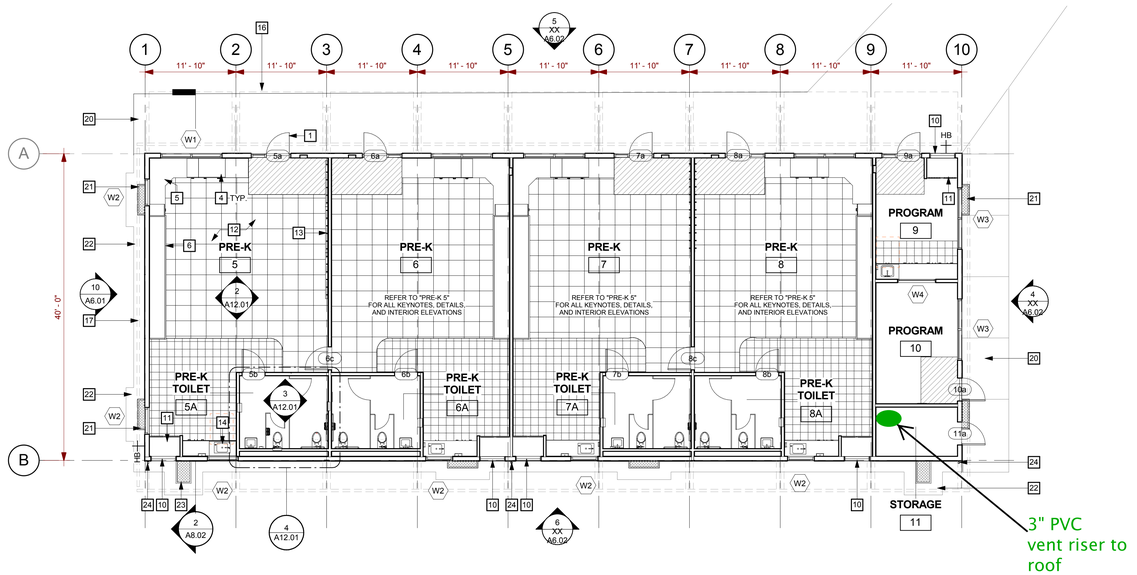


NOTE:
CONTRACTOR TO REFER TO MODULAR DRAWINGS FOR FOUNDATION CRITERIA AND DETAILS

4 BUILDING L1, L2 - FLOOR PLAN
SCALE: 1/8" = 1'-0"

1 BUILDING L1, L2 - FLOOR PLAN
SCALE: 1/8" = 1'-0"





NOTE:
CONTRACTOR TO REFER TO MODULAR DRAWINGS FOR FOUNDATION CRITERIA AND DETAILS

5 BUILDING K - FLOOR PLAN
SCALE: 1/8" = 1'-0"

2 BUILDING K - FLOOR PLAN
SCALE: 1/8" = 1'-0"

FIGURE 4
AS-BUILT PASSIVE VAPOR INTRUSION MITIGATION SYSTEM LAYOUT: BUILDINGS ML1, ML2, AND MK1
SAN MIGUEL ELEMENTARY SCHOOL
777 SAN MIGUEL AVENUE, SUNNYVALE, CALIFORNIA

GENERAL SHEET NOTES

A REFER TO ELECTRICAL DRAWINGS FOR EXTENT OF ELECTRICAL WORK.

B PROVIDE WALL BLOCKING AT ALL TOILET FIXTURE AND ACCESSORY MOUNTING LOCATIONS. SEE TYPICAL BACKING AND BLOCKING DETAILS. ALL ACCESSORIES TO BE MOUNTED AT ACCESSIBLE HEIGHT AND/OR PER CODE.

C FOR INTERIOR FINISHES NOT SHOWN, REFER TO INTERIOR ELEVATIONS & FINISH SCHEDULE

D WATER SUPPLY AND DRAIN PIPES ACCESSIBLE UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER LAVATORIES, TYP.

E CABINET ELEVATIONS SHOWN IN THE INTERIOR ELEVATIONS ARE FOR REFERENCE ONLY. ACTUAL DESIGN CRITERIA AND SIZES ARE DESIGNATED IN THE CASEWORK SCHEDULE USING THE WOODWORK INSTITUTES 'CABINET DESIGN SERIES (CDS)' NUMBERING SYSTEM. WHERE INDIVIDUAL CASEWORK DESIGN REQUIREMENTS DO NOT FIT WITHIN THE CDS NUMBERING SYSTEM, CABINETS ARE DETAILED SEPERATELY AS REFERENCED IN THE CASEWORK SCHEDULE.

F MANUAL ROLLER SHADES ARE TO BE LOCATED AT ALL EXTERIOR WINDOWS. SHADES TO BE ANCHORED INTO BLOCKING OR FRAMING BEHIND THE WALL FINISH. VISIBLE BLOCKING OR ANCHORAGE TO WINDOW FRAMES IS NOT PERMITTED. CONTRACTOR TO COORDINATE ALL INSTALLATION AND ANCHORAGE REQUIREMENTS PRIOR TO ORDERING.

NEW FLOOR PLAN KEYNOTES

1	ALUMINUM STOREFRONT SYSTEM W/ DOOR, SIDELIGHTS, & TRANSOM, SEE WINDOW SCHEDULE.
2	WALK-OFF CARPET @ DOOR, SEE FINISH SCHEDULE.
3	CARPET TILE FLOORING, SEE INTERIOR FINISH SCHEDULE.
4	PREFINISHED CASEWORK SEE INTERIOR ELEVATIONS AND CASEWORK SCHEDULE.
5	TEACHER'S DESK.
6	TEACHING WALL UNIT, SEE DETAIL 6/A11.01.
7	IPAD CHARGING CART STORAGE CABINET, SEE CASEWORK SCHEDULE & S.E.D.
8	UPPER CABINETS W/ DOORS SEE INTERIOR ELEVATIONS AND CASEWORK SCHEDULE.
9	ALUMINUM-FRAMED WINDOW, SEE WINDOW SCHEDULE.
10	LOUVERED WALL VENT @ HVAC UNIT, TYP. CLEAR ANODIZED.
11	HVAC UNIT IN FULL-HEIGHT CABINET
12	VCT FLOORING, TYP. PATTERN AS SHOWN. SEE INTERIOR FINISH SCHEDULE.
13	COAT HOOKS SEE INTERIOR ELEVATIONS FOR LOCATIONS.
14	ACCESSIBLE SINK WITH BUBBLER & ACCESSIBLE CABINET UNDERNEATH
15	SEMI-RECESSED FIRE EXTINGUISHER CABINET, PROVIDE MIN. 2A10BC EXTINGUISHER. SEE DETAIL 13/A9.01.
16	LINE OF MTL SHADE AWNING BELOW, TYP.
17	LINE OF STEEL AWNING, TYP.
18	SOAP DISPENSER SEE DETAIL 5/A9.02.
19	PAPER TOWEL DISPENSER, SEE DETAIL 5/A9.02.
20	CONCRETE WALK, SEE INCREMENT 1 DRAWINGS
21	BELOW GRADE FOUNDATION VENT GRILLE, 12"X48", TYP.
22	PERIMETER CONCRETE APRON, SEE LANDSCAPE & CIVIL
23	FOUNDATION ACCESS/VENT GRILLE, 24"X36", TYP.
24	DOWNSPOUT, CONNECT TO EXISTING DOWNSPOUT
25	CONCRETE STEM WALL, TYP. SEE SECTION, FOUNDATION DESIGN TO CONFIRM WITH RECOMMENDATIONS OF GEOTECH REPORT.
26	AREA DRAIN, WHERE OCCURS. COORDINATE DRAIN LOCATION WITH INCREMENT 1 CIVIL DRAWINGS.
27	DRAINAGE GAPS AT CONCRETE STEM WALLS, TYP.

GRAPHIC KEY

F.E.C. SEMI RECESSED FIRE EXTINGUISHER CABINET.
F.E.C. SURFACE MOUNTED FIRE EXTINGUISHER CABINET.
FIRE EXTINGUISHER CABINETS.
HB HOSE BIB

BUILDING KEY

(N) MODULAR BUILDING (INCREMENT 2)
(E) BUILDING NO WORK
NEW MODULAR BLDG L1 & L2 SHALL BE BASED ON DSA PC 02-113977
NEW MODULAR BLDG K SHALL BE BASED ON DSA PC 02-113911

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387 S. 1st Street, Suite 300
San Jose, CA 95113
tel: (408)-300-5160
fax: (408)-300-5121

PROJECT
SAN MIGUEL NEW CLASSROOMS & CANOPY MODERNIZATION - INCREMENT 2

SUNNYVALE SCHOOL DISTRICT

CONSULTANT

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RENEWAL 08/31/2017

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DSA FILE NUMBER 43-54
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REVISIONS

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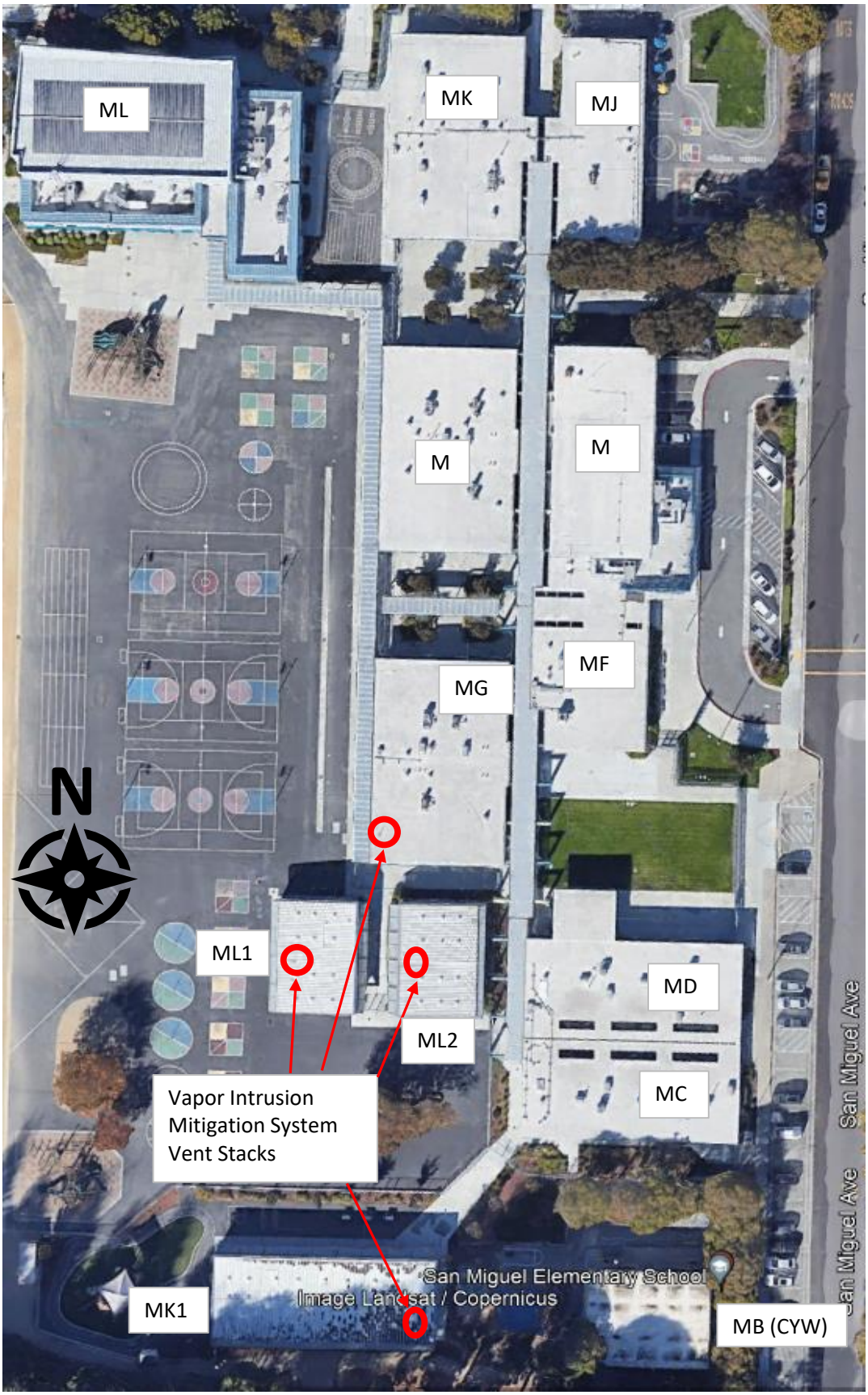
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Figure 5. Vapor Intrusion Mitigation System Vent Stack Locations
777 San Miguel Ave, Sunnyvale, California
Triple Site Offsite Operable Unit



TABLES

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
Building MA																	
MA-AMB-1	Classroom Second from East	MA-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MA-AMB-1	Classroom Second from East	MA-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.12	ND 0.21	ND 0.63	ND 0.17
MA-AMB-1	Classroom Second from East	MA-AMB-1D-012615	01/26/2015	8 Hours	TO-15	FD			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MA-AMB-1	Classroom Second from East	MA-AMB-1D-012615	01/26/2015	8 Hours	TO-15-SIM	FD			ND 0.17	ns	ND 0.12	ND 0.061	ns	ND 0.12	ND 0.21	ND 0.61	ND 0.16
MA-AMB-1	Classroom Second from East	MA-AMB-1--041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MA-AMB-1	Classroom Second from East	MA-AMB-1D-041415	04/14/2015	24 Hours	TO-17	FD		HVAC-OFF	ND 0.19	0.41 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MA-AMB-1	Classroom Second from East	MA-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.53 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.071
MA-AMB-1	Classroom Second from East	MA-AMB-1D-121615	12/16/2015	24 Hours	TO-17	FD			ND 0.20	0.52 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.1	ND 0.11 C	0.079
Building MC																	
MC-AMB-1	Classroom D3	MC-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.5	ns	ns	ns	ns	ns	ns	ns
MC-AMB-1	Classroom D3	MC-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.22	ns	ND 0.16	ND 0.080	ns	ND 0.16	ND 0.27	ND 0.80	ND 0.22
MC-PATH-1	Bathroom	MC-PATH-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MC-PATH-1	Bathroom	MC-PATH-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.18	ns	ND 0.13	ND 0.064	ns	ND 0.13	ND 0.22	ND 0.64	0.2
MC-AMB-1	Classroom D3	MC-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.45 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	**0.71**
MC-PATH-1	Bathroom	MC-PATH-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.48 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MC-AMB-1	Classroom D3	MC-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.57 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.1	ND 0.11 C	**1.4**
MC-PATH-1	Bathroom	MC-PATH-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.51 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.22
MC-AMB-1	Classroom D3	MC-AMB-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.47 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.13	ND 0.11 C	**0.7**
MC-AMB-2	Classroom D2	MC-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.46 C	ND 0.10 C	ND 0.084 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	**0.68**
MC-PATH-2	Classroom D3	MC-PATH-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.49 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**0.68**
MC-PATH-3	Subroom of Classroom D2	MC-PATH-3-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.46 C	ND 0.10 C	ND 0.086 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	**0.6**
MC-AMB-1	Classroom D3	MC-AMB-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.54 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**1.2**
MC-AMB-2	Classroom D2	MC-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**1.7**
MC-PATH-2	Classroom D3	MC-PATH-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.56 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**1.2**
MC-PATH-3	Subroom of Classroom D2	MC-PATH-3-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.58 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**1.2**
MC-AMB-1	Classroom D3	MC-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.41 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	0.33	ND 0.14 C	**0.55**
MC-AMB-2	Classroom D2	MC-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.45 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.3	ND 0.14 C	**0.76**
MC-PATH-1	Bathroom	MC-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.49 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.28	ND 0.14 C	0.15
MC-PATH-2	Classroom D3	MC-PATH-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.53 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.27	ND 0.14 C	**0.51**
MC-PATH-3	Subroom of Classroom D2	MC-PATH-3-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.28	ND 0.14 C	**0.7**
MC-AMB-1	Classroom D3	MC-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	**0.66**
MC-AMB-2	Classroom D2	MC-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.52 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	**1.5**
MC-PATH-1	Bathroom	MC-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.58 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MC-PATH-2	Classroom D3	MC-PATH-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.50 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	**0.62**
MC-PATH-3	Subroom of Classroom D2	MC-PATH-3-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.53 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	**1.1**
Building MD																	
MD-AMB-1	Classroom C1	MD-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MD-AMB-1	Classroom C1	MD-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.16	ns	ND 0.12	ND 0.060	ns	ND 0.12	ND 0.21	ND 0.60	ND 0.16
MD-AMB-1	Classroom C1	MD-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.43 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	0.15
MD-AMB-1	Classroom C1	MD-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.55 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.13	ND 0.11 C	0.32
MD-AMB-2	Classroom C2	MD-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.48 C	ND 0.10 C	ND 0.084 C	ns	ND 0.10 C	ND 0.14	0.11 C	**0.83**
MD-PATH-1	Classroom C2	MD-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.46 C	ND 0.10 C	ND 0.086 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	**0.77**
MD-PATH-2	Bathroom	MD-PATH-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.55 C	ND 0.11 C	ND 0.091 C	ns	ND 0.11 C	ND 0.15	0.13 C	**0.52**
MD-AMB-2	Classroom C2	MD-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.6**
MD-AMB-2	Classroom C2	MD-AMB-2D-022218	02/22/2018	24 Hours	TO-17	FD		HVAC-OFF	ND 0.38	0.55 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.61**
MD-PATH-1	Classroom C2	MD-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.57 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.62**
MD-PATH-2	Bathroom	MD-PATH-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.55 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MD-AMB-1	Classroom C1	MD-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.40 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.32	ND 0.14 C	0.27
MD-AMB-2	Classroom C2	MD-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.48 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.43	ND 0.14 C	0.44
MD-PATH-1	Classroom C2	MD-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.43 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.31	ND 0.14 C	0.39
MD-PATH-2	Bathroom	MD-PATH-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.54 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.31	ND 0.14 C	0.15
MD-AMB-1	Classroom C1	MD-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.54 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	0.28
MD-AMB-1	Classroom C1	MD-AMB-1D-02212019	02/21/2019	24 Hours	TO-17	FD		HVAC-OFF	ND 0.38	0.54 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	0.28
MD-AMB-2	Classroom C2	MD-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.54 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	0.39
MD-PATH-1	Classroom C2	MD-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.53 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	0.4
MD-PATH-2	Bathroom	MD-PATH-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.39	0.51 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
Building ME																	
ME-AMB-1	Classroom Second from South	ME-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ME-AMB-1	Classroom Second from South	ME-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.16	ns	ND 0.12	ND 0.060	ns	ND 0.12	ND 0.21	ND 0.60	ND 0.16
ME-PATH-1	Crawl Space	ME-PATH-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ME-PATH-1	Crawl Space	ME-PATH-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	0.19
ME-AMB-1	Classroom Second from South	ME-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	0.58 J	0.40 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	0.073
ME-PATH-1	Crawl Space	ME-PATH-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.20	0.53 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	ND 0.072
ME-AMB-1	Classroom Second from South	ME-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			0.26	0.52 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.096	ND 0.11 C	0.14
ME-PATH-1	Crawl Space	ME-PATH-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.21	0.60 C	ND 0.12 C	ND 0.095 C	ns	ND 0.12 C	0.11	ND 0.12 C	0.25
Building MF																	
MF-AMB-1	East Central Classroom	MF-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MF-AMB-1	East Central Classroom	MF-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.13	ND 0.22	ND 0.63	ND 0.17
MF-AMB-1	East Central Classroom	MF-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.44 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MF-AMB-1	East Central Classroom	MF-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.52 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.18	ND 0.11 C	0.16
MF-AMB-2	Staff Room	MF-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.45 C	ND 0.10 C	ND 0.084 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	0.29
MF-PATH-1	South Bathroom	MF-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.47 C	ND 0.10 C	ND 0.084 C	ns	ND 0.10 C	ND 0.14	0.11 C	0.3
MF-AMB-2	Staff Room	MF-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MF-PATH-1	South Bathroom	MF-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.59 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MF-AMB-1	East Central Classroom	MF-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.44 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.27	ND 0.14 C	ND 0.13
MF-AMB-2	Staff Room	MF-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.3	ND 0.14 C	ND 0.13
MF-PATH-1	South Bathroom	MF-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.19 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MF-AMB-1	East Central Classroom	MF-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.46 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MF-AMB-2	Staff Room	MF-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MF-PATH-1	South Bathroom	MF-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
Building MG																	
MG-AMB-1	Room B4	MG-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MG-AMB-1	Room B4	MG-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	0.45
MG-AMB-1	Room B4	MG-AMB-1-01262015	01/26/2015	8 Hours	TO-15 SIM	REG			ND 0.27	0.55	ND 0.2	ND 0.2	ns	ND 0.2	0.21 J	ND 0.2	**0.49**
MG-AMB-1	Room B4	MG-AMB-ID-012615	01/26/2015	8 Hours	TO-15	FD			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MG-AMB-1	Room B4	MG-AMB-ID-012615	01/26/2015	8 Hours	TO-15-SIM	FD			ND 0.18	ns	ND 0.13	ND 0.065	ns	ND 0.13	ND 0.22	ND 0.65	0.43
MG-AMB-1	Room B4	RMG-003-AMB-1-012615	01/26/2015	7 Days	TO-17	REG			0.025 J	0.11 J	ND 0.01	ND 0.01	ns	ND 0.01	0.056	ND 0.01	0.44
MG-AMB-1	Room B4	MG-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.48 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	**0.99**
MG-AMB-1	Room B4	MG-AMB-1D-041415	04/14/2015	24 Hours	TO-17	FD		HVAC-OFF	ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	**0.8**
MG-AMB-1	Room B4	RMG-AMB01-041515	04/15/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.072	0.46 J	ND 0.072 J	ND 0.072 J	ns	ND 0.072 J	ND 0.057	ND 0.072 J	**0.97**
MG-AMB-1	Room B4	MG-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.59 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.13	ND 0.11 C	**0.95**
MG-AMB-1	Room B4	MG-AMB-1_121715	12/16/2015	24 Hours	TO-17	REG			ND 0.072	0.78 J	ND 0.072	ND 0.072	ns	ND 0.072	0.3	ND 0.072	**1**
MG-AMB-1	Room B4	MG-AMB-1D-121615	12/16/2015	24 Hours	TO-17	FD			ND 0.20	0.57 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.14	ND 0.11 C	**0.94**
MG-AMB-1	Room B4	MG-AMB-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.58 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	0.37
MG-AMB-2	Room B1	MG-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.44 C	ND 0.10 C	ND 0.086 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	**0.53**
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.46 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**1.2**
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.44 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**0.94**
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.48 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**0.68**
MG-AMB-1	Room B4	MG-AMB-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**2.2**
MG-AMB-2	Room B1	MG-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.54 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	0.45
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**1.1**

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.53 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.94**
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.55 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	0.48
MG-AMB-1	Room B4	MG-AMB-1-031818	03/18/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**1.7**
MG-AMB-1	Room B4	MG-AMB-1D-031818	03/18/2018	24 Hours	TO-17	FD		HVAC-OFF	ND 0.36	0.48 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**1.8**
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-031818	03/18/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.55 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**1.2**
MG-PATH-4	Room B4 (on N wall on HVAC air-intake grate)	MG-PATH-4-031818	03/18/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.55 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.14 #	ND 0.14 C	**2.1**
MG-PATH-5	Boy's Bathroom	MG-PATH-5-031818	03/18/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.53 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	0.14 #	ND 0.14 C	0.41
MG-AMB-1	Room B4	MG-AMB-1-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**0.87**
MG-AMB-1	Room B4	MG-AMB-1D-11062018	11/06/2018	24 Hours	TO-17	FD	Active SSDS		ND 0.35	0.48 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**0.86**
MG-AMB-2	Room B1	MG-AMB-2-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.42 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**0.55**
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.15	ND 0.14 C	**1.4**
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**1.3**
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.41 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**0.57**
MG-PATH-4	Room B4 (on N wall on HVAC air-intake grate)	MG-PATH-4-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.47 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**0.91**
MG-PATH-5	Boy's Bathroom	MG-PATH-5-11062018	11/06/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.56 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	**1.4**
MG-AMB-1	Room B4	MG-AMB-1-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.41 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.27
MG-AMB-2	Room B1	MG-AMB-2-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.40 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.21
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.45 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.32
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.42 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	0.37	ND 0.14 C	0.34
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.40 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.21
MG-PATH-4	Room B4 (on N wall on HVAC air-intake grate)	MG-PATH-4-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.43 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.3
MG-PATH-5	Boy's Bathroom	MG-PATH-5-12112018	12/11/2018	24 Hours	TO-17	REG	Active SSDS		ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.35
MG-AMB-1	Room B4	MG-AMB-1-050619	05/06/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.37 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-2	Room B1	MG-AMB-2-050619	05/06/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.30 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-2	Room B1	MG-AMB-2D-050619	05/06/2019	24 Hours	TO-17	FD	Active SSDS		ND 0.35	0.29 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-050619	05/06/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.36 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-050619	05/06/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.35 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-050619	05/06/2019	24 Hours	TO-17	FB	Active SSDS		ND 0.35	0.27 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-4	Room B4 (on N wall on HVAC air-intake grate)	MG-PATH-4-050619	05/06/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.39 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-1	Room B4	MG-AMB-1-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.40 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	ND 0.14	ND 0.13 C	ND 0.13
MG-AMB-2	Room B1	MG-AMB-2-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.37 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	ND 0.14	ND 0.13 C	0.17
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.38 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.40 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.36 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.15

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MG-PATH-4	Room B4 (on N wall on HVAC air-intake grate)	MG-PATH-4-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.35	0.42 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-5	Boy's Bathroom	MG-PATH-5-121819	12/18/2019	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.43 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.14
MG-AMB-1	Room B4	MG-AMB-1-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	0.16 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-2	Room B1	MG-AMB-2-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.53 C	ND 0.13 C	ND 0.11 C	0.17 C	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.51 C	ND 0.13 C	ND 0.11 C	0.18 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	0.17 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.48 C	ND 0.13 C	ND 0.11 C	0.12 C	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-5	Boy's Bathroom	MG-PATH-5-120221	12/02/2021	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.40 C	ND 0.13 C	ND 0.11 C	0.23 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-1	Room B4	MG-AMB-1-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.38 C	ND 0.26 C	ND 0.11 C	**0.17 C**	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-1	Room B4	MG-AMB-1-D-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.40 C	ND 0.26 C	ND 0.11 C	**0.18 C**	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-AMB-2	Room B1	MG-AMB-2-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.28 C	ND 0.27 C	ND 0.11 C	0.11 C	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-1	Room B4 (in NW corner under sink)	MG-PATH-1-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.37	0.48 C	ND 0.27 C	ND 0.11 C	**0.24 C**	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MG-PATH-2	Lab B (southernmost closet on west wall)	MG-PATH-2-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.48 C	ND 0.27 C	ND 0.11 C	**0.20 C**	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-3	Room B1 (in SW corner under sink)	MG-PATH-3-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.36	0.34 C	ND 0.27 C	ND 0.11 C	**0.17 C**	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MG-PATH-5	Boy's Bathroom	MG-PATH-5-112122	11/21/2022	24 Hours	TO-17	REG	Active SSDS		ND 0.37	0.62 C	ND 0.27 C	ND 0.11 C	**0.37 C**	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
		Building MH															
MH-AMB-1	Library (LRC)	MH-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.1	ns	ns	ns	ns	ns	ns	ns
MH-AMB-1	Library (LRC)	MH-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.16	ns	ND 0.12	ND 0.059	ns	ND 0.12	ND 0.20	ND 0.59	ND 0.16
MH-AMB-1	Library (LRC)	MH-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.47 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MH-AMB-1	Library (LRC)	MH-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.52 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.12
MH-AMB-2	Computer Lab	MH-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.43 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	0.31
MH-PATH-1	Kitchen (Staff Room)	MH-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.44 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	0.11 C	0.3
MH-AMB-2	Computer Lab	MH-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.62 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MH-AMB-2	Computer Lab	MH-AMB-2D-022218	02/22/2018	24 Hours	TO-17	FD		HVAC-OFF	ND 0.37	0.63 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MH-PATH-1	Kitchen (Staff Room)	MH-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MH-AMB-1	Library (LRC)	MH-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.32	ND 0.14 C	ND 0.13
MH-AMB-2	Computer Lab	MH-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	0.32	ND 0.14 C	ND 0.13
MH-PATH-1	Kitchen (Staff Room)	MH-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.47 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.29	ND 0.14 C	ND 0.13
MH-AMB-1	Library (LRC)	MH-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.48 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MH-AMB-2	Computer Lab	MH-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MH-PATH-1	Kitchen (Staff Room)	MH-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.47 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
		Building MI															
MI-AMB-1	Classroom A1	MI-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MI-AMB-1	Classroom A1	MI-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	ND 0.17

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MI-AMB-1	Classroom A1	MI-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.43 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MI-AMB-1	Classroom A1	MI-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.54 C	ND 0.10 C	ND 0.087 C	ns	ND 0.10 C	ND 0.095	ND 0.11 C	0.15
MI-AMB-2	Classroom A4	MI-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.50 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**0.62**
MI-PATH-1	Northside Classroom A4	MI-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.57 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	ND 0.14	0.12 C	**0.64**
MI-PATH-2	North Closet in Central Room	MI-PATH-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.49 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.14	ND 0.11 C	0.4
MI-AMB-2	Classroom A4	MI-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.67 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.72**
MI-PATH-1	Northside Classroom A4	MI-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.62 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.66**
MI-PATH-2	North Closet in Central Room	MI-PATH-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.59 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.15
MI-AMB-1	Classroom A1	MI-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.31	ND 0.14 C	ND 0.13
MI-AMB-2	Classroom A4	MI-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.58 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.35	ND 0.14 C	**0.51**
MI-AMB-2	Classroom A4	MI-AMB-2D-02052019	02/05/2019	24 Hours	TO-17	FD			ND 0.36	0.57 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.3	ND 0.14 C	**0.5**
MI-PATH-1	Northside Classroom A4	MI-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.53 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.27	ND 0.14 C	**0.52**
MI-PATH-2	North Closet in Central Room	MI-PATH-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.27	ND 0.14 C	0.16
MI-AMB-1	Classroom A1	MI-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MI-AMB-2	Classroom A4	MI-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.48 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.58**
MI-PATH-1	Northside Classroom A4	MI-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.72 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	**0.55**
MI-PATH-2	North Closet in Central Room	MI-PATH-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.58 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	0.15
		Building MJ															
MJ-AMB-1	Classroom K2	MJ-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MJ-AMB-1	Classroom K2	MJ-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.12	ND 0.061	ns	ND 0.12	ND 0.21	ND 0.61	ND 0.16
MJ-AMB-1	Classroom K2	MJ-AMB-1D-012615	01/26/2015	8 Hours	TO-15	FD			ns	ND 1.1	ns	ns	ns	ns	ns	ns	ns
MJ-AMB-1	Classroom K2	MJ-AMB-1D-012615	01/26/2015	8 Hours	TO-15-SIM	FD			ND 0.16	ns	ND 0.12	ND 0.059	ns	ND 0.12	ND 0.20	ND 0.59	0.22
MJ-AMB-2	Classroom K1	MJ-AMB-1-01262015	01/26/2015	8 Hours	TO-15 SIM	REG			ND 0.27	0.5	ND 0.2	ND 0.2	ns	ND 0.2	0.18 J	ND 0.2	0.15 J
MJ-AMB-2	Classroom K1	RMJ-002-AMB-1-012615	01/26/2015	7 Days	TO-17	REG			0.034 J	0.17 J	ND 0.01	ND 0.01	ns	ND 0.01	0.071 J	ND 0.01	0.1 J
MJ-AMB-2	Classroom K1	RMJ-002-AMB-2-012615	01/26/2015	7 Days	TO-17	FD			0.037 J	0.17 J	ND 0.01	ND 0.01	ns	ND 0.01	0.084 J	ND 0.01	0.1 J
MJ-PATH-1	South Bathroom	MJ-PATH-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MJ-PATH-1	South Bathroom	MJ-PATH-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	ND 0.17
MJ-PATH-3	Classroom K1 Bathroom	MJ-PATH-1-01262015	01/26/2015	8 Hours	TO-15 SIM	REG			ND 0.27	0.5	ND 0.2	ND 0.2	ns	ND 0.2	ND 0.34	ND 0.2	0.14 J
MJ-PATH-3	Classroom K1 Bathroom	RMJ-002-PATH-1-012615	01/26/2015	7 Days	TO-17	REG			0.027 J	0.14 J	ND 0.01	ND 0.01	ns	ND 0.01	0.069 J	ND 0.01	0.1 J
MJ-AMB-1	Classroom K2	MJ-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	ND 0.068
MJ-AMB-1	Classroom K2	MJ-AMB-1D-041415	04/14/2015	24 Hours	TO-17	FD		HVAC-OFF	ND 0.19	0.43 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	ND 0.068
MJ-PATH-1	South Bathroom	MJ-PATH-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.46 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.091	ND 0.10 C	ND 0.068
MJ-AMB-1	Classroom K2	MJ-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.56 C	ND 0.10 C	ND 0.087 C	ns	ND 0.10 C	ND 0.095	ND 0.11 C	0.14
MJ-AMB-1	Classroom K2	MJ-AMB-1D-121615	12/16/2015	24 Hours	TO-17	FD			ND 0.20	0.58 C	ND 0.10 C	ND 0.087 C	ns	ND 0.10 C	ND 0.095	ND 0.11 C	0.13

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
MJ-PATH-1	South Bathroom	MJ-PATH-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.50 C	ND 0.10 C	ND 0.086 C	ns	ND 0.10 C	ND 0.095	ND 0.11 C	0.12
MJ-AMB-2	Classroom K1	MJ-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.55 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	0.12 C	0.24
MJ-AMB-2	Classroom K1	MJ-AMB-2D-012918	01/29/2018	24 Hours	TO-17	FD			ND 0.20	0.52 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	0.24
MJ-PATH-2	Classroom K1	MJ-PATH-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.21	0.49 C	ND 0.11 C	ND 0.091 C	ns	ND 0.11 C	ND 0.15	0.12 C	0.26
MJ-AMB-2	Classroom K1	MJ-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.58 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MJ-PATH-2	Classroom K1	MJ-PATH-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.61 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MJ-AMB-1	Classroom K2	MJ-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.3	ND 0.14 C	ND 0.13
MJ-AMB-2	Classroom K1	MJ-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.28	ND 0.14 C	ND 0.13
MJ-PATH-1	South Bathroom	MJ-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.54 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	0.33	ND 0.14 C	ND 0.13
MJ-PATH-2	Classroom K1	MJ-PATH-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.38	ND 0.14 C	ND 0.14
MJ-AMB-1	Classroom K2	MJ-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.49 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MJ-AMB-2	Classroom K1	MJ-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.46 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
MJ-PATH-1	South Bathroom	MJ-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.54 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MJ-PATH-2	Classroom K1	MJ-PATH-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.46 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
		Building MK1															
MK1-AMB-1	Classroom PS-3	MK1-AMB-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.39 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.22
MK1-AMB-2	Classroom PS-2	MK1-AMB-2-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.46 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.28
MK1-PATH-1	Crawl Space	MK1-PATH-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.60 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	ND 0.098	ND 0.11 C	**0.6**
MK1-AMB-3	Bathroom in Classroom PS-2	MK1-AMB-3-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.45 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	0.16	ND 0.11 C	ND 0.073
MK1-AMB-4	Bathroom in Classroom PS-3	MK1-AMB4-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.48 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	0.18	ND 0.11 C	ND 0.074
MK1-PATH-2	Vault on South Side	MK1-PATH-2-120517	12/05/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.56 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	0.11	ND 0.11 C	**0.49**
MK1-AMB-1	Classroom PS-3	MK1-AMB-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.35	0.45 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.14
MK1-AMB-2	Classroom PS-2	MK1-AMB-2-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.35	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.15
MK1-PATH-1	Crawl Space	MK1-PATH-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.31
MK1-AMB-3	Bathroom in Classroom PS-2	MK1-AMB-3-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.40 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.18
MK1-AMB-4	Bathroom in Classroom PS-3	MK1-AMB-4-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.47 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.21
MK1-PATH-2	Vault on South Side	MK1-PATH-2-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.37	0.54 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.43
MK1-AMB-1	Classroom PS-3	MK1-AMB-1-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.46 C	ND 0.13 C	ND 0.11 C	0.20 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MK1-AMB-4	Bathroom in Classroom PS-3	MK1-AMB-4-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.46 C	ND 0.13 C	ND 0.11 C	0.29 C	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MK1-AMB-4	Bathroom in Classroom PS-3	MK1-AMB-4-D-120221	12/02/2021	24 Hours	TO-17	FD	Passive SSDS		ND 0.36	0.44 C	ND 0.13 C	ND 0.11 C	0.23 C	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MK1-PATH-1	Crawl Space	MK1-PATH-1-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.38	0.50 C	ND 0.14 C	ND 0.12 C	0.13 C	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MK1-AMB-1	Classroom PS-3	MK1-AMB-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.30 C	ND 0.27 C	ND 0.11 C	**0.15 C**	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MK1-AMB-4	Bathroom in Classroom PS-3	MK1-AMB-4-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.35 C	ND 0.27 C	ND 0.11 C	**0.22 C**	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
MK1-PATH-1	Crawl Space	MK1-PATH-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.38	0.69 C	ND 0.28 C	ND 0.12 C	**0.32 C**	ND 0.14 C	ND 0.15	ND 0.15 C	0.24

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
Building MK																	
MK-AMB-1	Classroom K3	MK-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MK-AMB-1	Classroom K3	MK-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	0.44
MK-AMB-1	Classroom K3	MK-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.48 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	0.068
MK-AMB-1	Classroom K3	RMK-AMB01-041515	04/15/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.072	0.64 J	ND 0.072 J	ND 0.072 J	ns	ND 0.072 J	ND 0.057	ND 0.072 J	0.074
MK-AMB-1	Classroom K3	MK-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.61 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.095	ND 0.11 C	0.33
MK-AMB-2	RSP Program Room	MK-AMB-2-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.60 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	0.48
MK-PATH-1	South Closet of Central Room	MK-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.56 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	**0.53**
MK-PATH-1	South Closet of Central Room	MK-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.67 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.29
MK-AMB-1	Classroom K3	MK-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.50 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.31	ND 0.14 C	0.29
MK-AMB-2	RSP Program Room	MK-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.54 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.3	ND 0.14 C	0.15
MK-PATH-1	South Closet of Central Room	MK-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.54 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.24	ND 0.14 C	0.19
MK-AMB-1	Classroom K3	MK-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.49 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
MK-AMB-2	RSP Program Room	MK-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.43 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
MK-PATH-1	South Closet of Central Room	MK-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.51 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.16
Building ML1																	
ML1-AMB-1	North Classroom	ML1-AMB-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.34 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	0.1	ND 0.11 C	0.22
ML1-PATH-1	Crawl Space	ML1-PATH-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.56 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.097	ND 0.11 C	**0.53**
ML1-AMB-1	North Classroom	ML1-AMB-1-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.40 C	ND 0.10 C	ND 0.087 C	ns	ND 0.10 C	0.21	ND 0.11 C	ND 0.071
ML1-PATH-2	Vault on North Side	ML1-PATH-2-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.53 C	ND 0.11 C	ND 0.091 C	ns	ND 0.11 C	0.15	ND 0.12 C	ND 0.074
ML1-AMB-1	North Classroom	ML1-AMB-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.34	0.44 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	ND 0.14	ND 0.13 C	0.15
ML1-PATH-1	Crawl Space	ML1-PATH-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.33
ML1-AMB-1	North Classroom	ML1-AMB-1-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.43 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.17
ML1-PATH-2	Vault on North Side	ML1-PATH-2-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.34
ML1-AMB-1	North Classroom	ML1-AMB-1-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.52 C	ND 0.13 C	ND 0.11 C	0.12 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
ML1-PATH-1	Crawl Space	ML1-PATH-1-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.38	0.53 C	ND 0.14 C	ND 0.12 C	0.13 C	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
ML1-AMB-1	North Classroom	ML1-AMB-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.34 C	ND 0.27 C	ND 0.11 C	**0.13 C**	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
ML1-PATH-1	Crawl Space	ML1-PATH-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.37	0.61 C	ND 0.28 C	ND 0.11 C	**0.26 C**	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
Building ML2																	
ML2-AMB-1	South Classroom	ML2-AMB-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.40 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.23
ML2-PATH-1	Crawl Space	ML2-PATH-1-110117	11/01/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.54 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	0.11	ND 0.11 C	**0.53**
ML2-AMB-1	South Classroom	ML2-AMB-1-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.43 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	0.18	ND 0.11 C	0.087
ML2-PATH-2	Vault on West Side	ML2-PATH-2-120417	12/04/2017	24 Hours	TO-17	REG	Passive SSDS		ND 0.20	0.52 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	0.16	ND 0.11 C	ND 0.073
ML2-AMB-1	South Classroom	ML2-AMB-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.35	0.30 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	ND 0.14	ND 0.13 C	0.14

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777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
ML2-AMB-1	South Classroom	ML2-AMB-1D-032818	03/28/2018	24 Hours	TO-17	FD	Passive SSDS		ND 0.35	0.36 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	ND 0.14	ND 0.13 C	0.14
ML2-PATH-1	Crawl Space	ML2-PATH-1-032818	03/28/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.51 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	0.31
ML2-AMB-1	South Classroom	ML2-AMB-1-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.35	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.17
ML2-PATH-2	Vault on West Side	ML2-PATH-2-12112018	12/11/2018	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.36
ML2-AMB-1	South Classroom	ML2-AMB-1-120221	12/02/2021	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.37 C	ND 0.13 C	ND 0.11 C	0.12 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
ML2-AMB-1	South Classroom	ML2-AMB-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.36	0.25 C	ND 0.26 C	ND 0.11 C	0.10 C	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
ML2-PATH-1	Crawl Space	ML2-PATH-1-112122	11/21/2022	24 Hours	TO-17	REG	Passive SSDS		ND 0.37	0.62 C	ND 0.28 C	ND 0.11 C	**0.25 C**	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
		Building ML															
ML-AMB-1	Kitchen	ML-AMB-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ML-AMB-1	Kitchen	ML-AMB-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.12	ND 0.21	ND 0.63	ND 0.17
ML-AMB-2	Classroom K5	ML-AMB-2-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ML-AMB-2	Classroom K5	ML-AMB-2-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.12	ND 0.061	ns	ND 0.12	ND 0.21	ND 0.61	ND 0.16
ML-AMB-2	Classroom K5	ML-AMB-2D-012615	01/26/2015	8 Hours	TO-15	FD			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ML-AMB-2	Classroom K5	ML-AMB-2D-012615	01/26/2015	8 Hours	TO-15-SIM	FD			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.12	ND 0.21	ND 0.63	ND 0.17
ML-AMB-1	Kitchen	ML-AMB-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.47 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	ND 0.068
ML-AMB-2	Classroom K5	ML-AMB-2-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	ND 0.068
ML-AMB-2	Classroom K5	ML-AMB-2D-041415	04/14/2015	24 Hours	TO-17	FD		HVAC-OFF	ND 0.19	0.39 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.092	ND 0.11 C	ND 0.068
ML-AMB-1	Kitchen	ML-AMB-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.57 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.21
ML-AMB-2	Classroom K5	ML-AMB-2-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.20	0.52 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.17
ML-AMB-2	Classroom K5	ML-AMB-2D-121615	12/16/2015	24 Hours	TO-17	FD			ND 0.20	0.56 C	ND 0.10 C	ND 0.087 C	ns	ND 0.11 C	ND 0.096	ND 0.11 C	0.17
ML-AMB-3	Classroom K6	ML-AMB-3-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	0.17	ND 0.11 C	0.31
ML-AMB-3	Classroom K6	ML-AMB-3D-012918	01/29/2018	24 Hours	TO-17	FD			ND 0.19	0.42 C	ND 0.10 C	ND 0.083 C	ns	ND 0.10 C	ND 0.13	ND 0.11 C	0.31
ML-PATH-1	Classroom K6	ML-PATH-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.20	0.50 C	ND 0.11 C	ND 0.089 C	ns	ND 0.11 C	ND 0.14	ND 0.11 C	0.32
ML-AMB-2	Classroom K5	ML-AMB-2-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.59 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	0.14
ML-AMB-3	Classroom K6	ML-AMB-3-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.53 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
ML-PATH-1	Classroom K6	ML-PATH-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.14
ML-AMB-1	Kitchen	ML-AMB-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.35	0.53 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.27	ND 0.14 C	0.21
ML-AMB-2	Classroom K5	ML-AMB-2-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.35	0.43 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	0.28	ND 0.13 C	ND 0.13
ML-AMB-3	Classroom K6	ML-AMB-3-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.49 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.28	ND 0.14 C	ND 0.13
ML-PATH-1	Classroom K6	ML-PATH-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.36	0.46 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.29	ND 0.14 C	ND 0.13
ML-AMB-1	Kitchen	ML-AMB-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.36	0.48 C	ND 0.13 C	ND 0.11 C	ns	ND 0.14 C	ND 0.14	ND 0.14 C	ND 0.13
ML-AMB-2	Classroom K5	ML-AMB-2-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.52 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
ML-AMB-3	Classroom K6	ML-AMB-3-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.48 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14
ML-PATH-1	Classroom K6	ML-PATH-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.37	0.48 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	ND 0.14

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	Location Description	Field Sample ID	Date Sampled	Sample Duration	Lab Method	Sample Purpose	Mitigation Status	HVAC Status									
		Outdoor Air Samples															
ME-OUT-1	SE of Room B2	ME-OUT-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ME-OUT-1	SE of Room B2	ME-OUT-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.062	ns	ND 0.12	ND 0.21	ND 0.62	ND 0.17
MJ-OUT-1	SW of Room K2	MJ-OUT-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
MJ-OUT-1	SW of Room K2	MJ-OUT-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.13	ND 0.22	ND 0.63	ND 0.17
MJ-OUT-1	SW of Room K2	MJ-OUT-1-01262015	01/26/2015	5 Hours	TO-15 SIM	REG			ND 0.27	0.56	ND 0.2	ND 0.2	ns	ND 0.2	0.2 J	ND 0.2	ND 0.26
ML-OUT-1	south of Bldg ML	ML-OUT-1-012615	01/26/2015	8 Hours	TO-15	REG			ns	ND 1.2	ns	ns	ns	ns	ns	ns	ns
ML-OUT-1	south of Bldg ML	ML-OUT-1-012615	01/26/2015	8 Hours	TO-15-SIM	REG			ND 0.17	ns	ND 0.13	ND 0.063	ns	ND 0.12	ND 0.21	ND 0.63	ND 0.17
ME-OUT-1	SE of Room B2	ME-OUT-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.20	0.60 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.097	ND 0.11 C	ND 0.072
MJ-OUT-1	SW of Room K2	MJ-OUT-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.20	0.57 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.097	ND 0.11 C	ND 0.072
ML-OUT-1	south of Bldg ML	ML-OUT-1-041415	04/14/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.20	0.51 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.097	ND 0.11 C	ND 0.072
ME-OUT-1	SE of Room B2	ME-OUT-1-050215	05/02/2015	24 Hours	TO-17	REG		HVAC-OFF	ND 0.20	0.46 C	ND 0.11 C	ND 0.088 C	ns	ND 0.11 C	ND 0.097	ND 0.11 C	ND 0.072
ME-OUT-1	SE of Room B2	ME-OUT-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.21	0.60 C	ND 0.12 C	ND 0.095 C	ns	ND 0.12 C	ND 0.10	ND 0.12 C	0.2
ME-OUT-1	SE of Room B2	ME-OUT-1_121715	12/16/2015	24 Hours	TO-17	REG			ND 0.078	0.81 J	ND 0.078	ND 0.078	ns	ND 0.078	0.29	ND 0.078	0.23
MJ-OUT-1	SW of Room K2	MJ-OUT-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.21	0.61 C	ND 0.12 C	ND 0.095 C	ns	ND 0.12 C	0.11	ND 0.12 C	0.16
ML-OUT-1	south of Bldg ML	ML-OUT-1-121615	12/16/2015	24 Hours	TO-17	REG			ND 0.21	0.59 C	ND 0.12 C	ND 0.095 C	ns	ND 0.12 C	ND 0.10	ND 0.12 C	0.19
MD1-OUT01	Outside	MD1-OUT-1_091416	09/13/2016	24 Hours	TO-17	REG			ND 0.071	0.67	ND 0.071	ND 0.071	ns	ND 0.071	ND 0.056	ND 0.071	0.063
MC-OUT-1	Outside	MC1-OUT-1_091416	09/13/2016	24 Hours	TO-17	REG			ND 0.071	0.65	ND 0.071	ND 0.071	ns	ND 0.071	ND 0.056	ND 0.071	0.053
ML1-OUT-1	Outside	ML1-OUT-1-110117	11/01/2017	24 Hours	TO-17	REG			ND 0.20	0.59 C	ND 0.11 C	ND 0.090 C	ns	ND 0.11 C	ND 0.10	ND 0.12 C	ND 0.074
MK1-OUT-1	Outside Main Door	MK1-OUT-1-120417	12/04/2017	24 Hours	TO-17	REG			ND 0.21	0.59 C	ND 0.11 C	ND 0.092 C	ns	ND 0.11 C	0.17	ND 0.12 C	ND 0.075
ME-OUT-1	SE of Room B2	ME-OUT-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.21	0.68 C	ND 0.11 C	ND 0.095 C	ns	ND 0.12 C	ND 0.15	0.19 C	0.42
MJ-OUT-1	SW of Room K2	MJ-OUT-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.21	0.58 C	ND 0.11 C	ND 0.094 C	ns	ND 0.12 C	ND 0.15	0.20 C	0.4
ML-OUT-1	south of Bldg ML	ML-OUT-1-012918	01/29/2018	24 Hours	TO-17	REG			ND 0.21	0.60 C	ND 0.11 C	ND 0.093 C	ns	ND 0.11 C	ND 0.15	0.17 C	0.46
ME-OUT-1	SE of Room B2	ME-OUT-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.58 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MJ-OUT-1	SW of Room K2	MJ-OUT-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.58 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
ML-OUT-1	south of Bldg ML	ML-OUT-1-022218	02/22/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.63 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
ME-OUT-1	SE of Room B2	ME-OUT-1-031818	03/18/2018	24 Hours	TO-17	REG		HVAC-OFF	ND 0.39	0.65 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MG-OUT-1	West of Bldg MG	MG-OUT-1-11062018	11/06/2018	24 Hours	TO-17	REG			ND 0.34	0.58 C	ND 0.13 C	ND 0.10 C	ns	ND 0.13 C	0.15	ND 0.13 C	**1.5**
MG-OUT-1	West of Bldg MG	MG-OUT-1-12112018	12/11/2018	24 Hours	TO-17	REG			ND 0.37	0.50 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	ND 0.15	ND 0.14 C	0.37
ME-OUT-1	SE of Room B2	ME-OUT-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.37	0.57 C	ND 0.14 C	ND 0.11 C	ns	ND 0.14 C	0.31	0.20 C	ND 0.14
MJ-OUT-1	SW of Room K2	MJ-OUT-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.38	0.55 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	0.33	0.17 C	ND 0.14
ML-OUT-1	south of Bldg ML	ML-OUT-1-02052019	02/05/2019	24 Hours	TO-17	REG			ND 0.35	0.53 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	0.2	0.14 C	ND 0.13
ME-OUT-1	SE of Room B2	ME-OUT-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.39	0.56 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MJ-OUT-1	SW of Room K2	MJ-OUT-1-02212019	02/21/2019	24 Hours	TO-17	REG		HVAC-OFF	ND 0.38	0.56 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14

TABLE 1
AIR SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Chemical Name									1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	Chloroform	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene	Trichloroethene (TCE)
								Accelerated Response Screening Level**	1000	5200	1.8	73	100	8.3	40	83	2*
								Most Conservative Screening Level**	1000	5200	1.8	70	0.12	8.3	0.46	83	0.48*
Location ID	**Location Description**	**Field Sample ID**	**Date Sampled**	**Sample Duration**	**Lab Method**	**Sample Purpose**	**Mitigation Status**	**HVAC Status**									
ML-OUT-1	**south of Bldg ML**	**ML-OUT-1-02212019**	**02/21/2019**	**24 Hours**	**TO-17**	**REG**		**HVAC-OFF**	ND 0.39	0.56 C	ND 0.14 C	ND 0.12 C	ns	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MG-OUT-1	**West of Bldg MG**	**MG-OUT-1-050619**	**05/06/2019**	**24 Hours**	**TO-17**	**REG**			ND 0.36	0.44 C	ND 0.13 C	ND 0.11 C	ns	ND 0.13 C	ND 0.14	ND 0.14 C	ND 0.13
ME-OUT-1	**SE of Room B2**	**ME-OUT-1-120221**	**12/02/2021**	**24 Hours**	**TO-17**	**REG**			ND 0.38	0.48 C	ND 0.14 C	ND 0.12 C	0.10 C	ND 0.14 C	ND 0.15	ND 0.15 C	ND 0.14
MG-OUT-1	**West of Bldg MG**	**MG-OUT-1-112122**	**11/21/2022**	**24 Hours**	**TO-17**	**REG**			ND 0.40	0.68 C	ND 0.29 C	ND 0.12 C	**0.29 C**	ND 0.15 C	ND 0.16	ND 0.15 C	ND 0.14

Notes:

All units in µg/m^3

ND - Not detected, reporting limit shown; ns - Not sampled

AMB - Indoor air; OUT - Outdoor air; PATH - Vapor intrusion pathway air

J - Estimated; C - Estimated concentration due to uptake rate; M - Matrix Interference; R - Result rejected due to laboratory analytical issues

Results in exceedance of the Most Conservative Screening Level are **Bold**; Results in exceedance of the Accelerated Response Screening Level are **Underlined**

SSDS - Sub-Slab Depressurization System; Active - SSDS is powered by fan; Passive - SSDS does not have fan, uses convection

HVAC-OFF - Heating Ventilation and Air Conditioning systems were turned off prior to and throughout the duration of sampling

*See text for how screening and action levels are used in decision framework

**See Triple Site OOU Vapor Intrusion Work Plan for more details

TABLE 2
SOIL GAS SAMPLING ANALYTICAL RESULTS
777 SAN MIGUEL AVENUE, SUNNYVALE, CA
TRIPLE SITE OFFSITE OPERABLE UNIT

Location ID	Date Sampled	Sample Purpose	Field Sample ID	Lab Method	Trichloroethene (TCE)	1,1,1-Trichloroethane (TCA)	1,1,2-Trichlorotrifluoroethane (CFC 113)	1,1-Dichloroethane (1,1-DCA)	1,1-Dichloroethene (1,1-DCE)	cis-1,2-Dichloroethene	Tetrachloroethene (PCE)	trans-1,2-Dichloroethene
MG-SUM-OUT1	06/13/2018	REG	MG-SUM-OUT1-061318	TO-15	1.6	ND 0.87	ND 1.2	ND 0.65	ND 0.63	ND 0.63	ND 1.1	ND 0.63
MG-SUM-SOIL1	06/13/2018	REG	MG-SUM-SOIL1-061318	TO-15	200	2.4	2.7	ND 0.65	ND 0.63	ND 0.63	ND 1.1	ND 0.63
MG-SUM-SOIL2	06/13/2018	REG	MG-SUM-SOIL2-061318	TO-15	3400	ND 14	23	ND 10	ND 10	ND 10	ND 18	ND 10
MG-SUM-SOIL2	06/13/2018	FD	MG-SUM-SOIL2D-061318	TO-15	3300	ND 14	22	ND 11	ND 10	ND 10	ND 18	ND 10

Notes:
All units in $\mu g/m^3$
ND - Not detected, reporting limit shown
OUT - Outdoor air
SOIL - Soil gas sample
REG - Regular sample
FD - Field duplicate

Appendix A
Executed Access Agreement/s

777 SAN MIGUEL

SAMPLING ACCESS AGREEMENT

This Sampling Access Agreement ("Agreement") is entered into on this 16th day of December 2014, between Valley Management Group ("Owner") and the U.S. Environmental Protection Agency ("EPA").

Terms and Conditions

1. Access. Owner grants EPA and its designated agents, contractors, and representatives access to the property located at 777 San Miguel Ave, Sunnyvale, CA in Sunnyvale, California (the "Property"), for the purpose of obtaining indoor air samples as part of EPA's indoor air quality investigations in Sunnyvale, California. Access to the Property will be at such times and locations and along such routes as are acceptable to Owner for the sole purpose of conducting indoor air sampling. All sampling conducted under this Agreement shall be without cost to Owner. No other activities shall be conducted without the consent of Owner.

2. Non-Interference. EPA's indoor air sampling work will at all times be conducted in such a way as to minimize interference with the Owner's use and enjoyment of the Property. EPA will at all times keep the Property free from accumulations of materials.

3. Restoration. When EPA's indoor air sampling work has finished, EPA shall remove any and all materials brought onto the Property by EPA.

4. Termination. This Agreement will terminate when EPA has completed the indoor air sampling activities.

5. Warranty. Owner warrants and represents that he/she: (a) is the owner of the Property and has the authority to enter into this Agreement to grant access to EPA to perform indoor air sampling work; (b) will refrain from using common sources of TCE during the sampling period; and (c) will not move, tamper with, or damage sampling equipment.

6. Choice of Laws. This Agreement shall be governed by and interpreted in accordance with federal law and, where appropriate, the laws of the State of California.

7. Entire Agreement. This Agreement constitutes the entire agreement of the parties and may not be amended or modified, except in writing and signed by the parties.

OWNER

Signature: Jennifer Sanchez

Name: Jennifer Sanchez, Agent

Date: 12/16/14

EPA

Signature: Melanie Morash

Name: Melanie Morash

Title: Project Manager

Date: 1/8/15

Appendix B
Air Sampling Standard Operating Procedures using Radiello Samplers

SIGMA-ALDRICH®

Diffusive Sampling

How to Use radiello Diffusive Samplers

radiello Parts and Components



The essential parts of *radiello* are the **adsorbing cartridge**, the **diffusive body**, and the **supporting plate** with the bar code indication. Apart from the adsorbing cartridge, all of the other components can be used multiple times.

The adsorbing cartridges for thermo desorption can also be reused.



(1) Open the plastic bag, draw the **adsorbent cartridge** out from the tube and put it in the **diffusive body**. The lower part of the diffusive body holds a seat for the central positioning of the cartridge (see right). The cartridge must be inserted fully into the diffusive body.





(2) Keeping the diffusive body in a vertical position, screw it onto the supporting plate

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(3) Keep note of start date and time and insert the barcode label in the pocket without peeling it off





(4) Place assembled device on worker or location to be monitored. Keep note of the date and time and expose *radiello* .

Sampling has started!





(5) Keep note of the date and time of the end of exposure. Place the cartridge into the tube, peel off the label and stick it onto the tube such that the barcode is parallel to the axis of the tube. Forward the tube with the adsorber cartridge to the lab for analysis.



(6) Analytes are desorbed from the *radiello* tube using either **solvent desorption** (CS_2, CH_3CN, etc.) or **thermal desorption**. Spent cartridges are discarded. (Thermal desorption cartridges can be reused.)

Complete analytical protocols for each analyte class are supplied in the *radiello* Manual.

Appendix C
Blank Field Forms for Use as Applicable

CONFINED SPACE ENTRY CHECKLIST

Project Name: PhilipsTriple Site Location:_____ ~~Date:~~_____

Occupant Consent Access Date:_____ Contractor: _____

Job Description:_____

PERSONNEL:			
Entry Supervisor:	(print)	(sign)	(date)
Standby Persons: Standby persons are trained in First Aid/CPR/emergency procedures (check)			
Primary Standby:	(print)	(sign)	(date)
Second Standby:	(print)	(sign)	(date)
Entrants (all entrants have been trained in the site hazards and appropriate safety measures (check)			

JOB HAZARD EVALUATION: (list the hazards expected to be on site)			
Physical Hazards		Chemical Hazards	
Head injury	Electrical		
Slips/trips/falls			
Heat			
Biological hazards			

PRECAUTIONS TO BE TAKEN:	Yes	N/A
Warning/caution signs have been posted and are in place.		X
All hazardous energy sources are locked out/tagged out.		X
All piping/process lines to the confined space have been blinded or disconnected.		X
Fuel sources (acetylene tanks, gasoline, etc.) have been removed from the confined space.		X
Mechanical ventilation is used, and has been inspected for reliability and effectiveness.		
All electrical equipment is grounded, insulated, and GFCI used as appropriate.		
Measures have been implemented to reduce ignition sources and static charge (including bonding).		
The Sunnyvale Fire Department has been notified of the confined space entry by calling the non-emergency dispatch line: 408-730-7180. **FOR EMERGENCIES DIAL 9-1-1.**	X	
Other (list):		

PERSONAL PROTECTIVE EQUIPMENT:			
Respiratory protection (type)	NA	Boots (type)	work
Protective clothing (type)	Work	Other	
Gloves (type)	Work	Other	

(complete page 2)

Project Name: PhilipsTriple Site Location:_____ ~~Date:~~_____

Occupant Consent Access Date:_____ Contractor: _____

Job Description:_____

EMERGENCY EQUIPMENT: (check only if it has been inspected/tested)			
Safety Harnesses/lifelines		SCBA (attach inspection checklist)	
Tripod/winch		Fire extinguisher	X
Communications (type)		First aid/trauma kit	X
Eyewash		Other	

Date	Time	Oxygen 19.5–23.5?	<10% LEL?	H2S <10 ppm?	( )	Location	Activities, Remarks	Initials
							Calibration	
							Pre-Entry	

DIAGRAMS:

Post-Installation Sampling Field Form (SSDS or SMDS)

Triple Site

Sampler/Company: _____

RES/Bldg ID: _____

Date: _____

Occupant Consent Access Date: _____

Vent Stack Sample Collected?: _____

Visual System Checks	Condition (Good or Poor*)
Piping upstream of fan (e.g. attached and undamaged)	
Riser Pipe (e.g. attached and undamaged)	
Weather-Proof Box (e.g. weather-proof)	
System Manometer (e.g. working, visible)	
Sampling Port (e.g. working, free of obstruction)	
System Labeling (e.g. in place, legible)	
Riser Pipe Seals (e.g. seals in tact)	
Information Placards (e.g. in tact, legible)	

System Readings	Value
Fan Number[#]	
Fan Condition (Good or Poor*)	
Fan Status As Found (On or Off)**	
Fan Status During Sampling (On or Off)**	
Pressure*** (inches WC)	

*a "poor" finding necessitates corrective action

** If the fan is found in the off position, turn it back on prior to sampling. If the fan cannot be turned on due to fan failure, note that on the field form and notify a Locus technician.

*** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

[#] Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

O&M Inspection (SMDS or SSDS)

Triple Site Field Form

Location/Address/RES/Bldg#: _____

Date & Time: _____

Inspector/Company: _____

Locus Project Number: _____

Occupant Consent Access Date: _____

Visual System Checks	Condition (Good or Poor*)
Fan#	
Piping upstream of fan (e.g. attached and undamaged)	
Riser Pipe (e.g. attached and undamaged)	
Exhaust Varmint Guard (e.g. in tact)	
Audible Alarm (e.g. working condition)	
Plumbing Box Out (e.g. undamaged)	
System Manometer (e.g. working)	
Sampling Port (e.g. working, free of obstruction)	
System Labeling (e.g., in place, legible)	
Riser Pipe Seals (e.g. seals in tact)	
Liner (e.g. no breaches/damage)	
Liner Edge (e.g. sealed)	
Carbon Monoxide Detector (if applicable) (e.g. working)	
Information Placards (e.g. in tact, legible)	
Owner/Tenant has current information/Notification sheet	

After the post-installation indoor air sampling period (through the second winter of operation), O&M Forms must be pre-filled out with the Target Operating Range.

Target Operating Range[1]	Pressure ("wc)**	Flow (CFM)	Fan Amperage
Fan#			

Current System Measurements	Pressure ("wc)**	Flow (CFM)	Fan Amperage	Within Target Operating Range? (Y/N)
Fan#				

*a "poor" finding necessitates corrective action

** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

1 This is the target operating range as established during the post-installation indoor air sampling period (through the second winter of operation); these fields will be blank until such time as post-installation indoor air sampling is complete and the target operating range established therefrom.

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

Appendix D
Non-Residential Building Survey Field Forms

Non-Residential Survey Form Part 4 - populated by San Miguel Elementary School personnel in 1Q 2015; this annotation added 11/8/2021 by NJL

San Miguel Info.

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐Air Handler(s) ☒Package Units ☒Window/Wall systems ☒Radiant heating (electric or water/steam)

☐Evaporative Coolers ☒Heat pump ☐Built-up ☐None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) Some - not all wings A, B, K + staff Rm not equipped w/ fresh air intake

Have the systems been evaluated for

ASHRAE Standard 62 compliance? _____

When was the system last tested and balanced? 10/28/14 (provide report if available)

Report is 72 pages long - (if you want it let me know) not attached at this time

Is the ventilation system automated (building automation system)? Yes

If yes is the data recorded or can it be recorded? Yes

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: Yes
  - Are economizers opening and closing properly? Yes
  - minimum and maximum settings cfm or % 20% min 100% max
- Manual adjustable outdoor air intakes NO
  - Settings _____
- Fixed outdoor air intakes? NO
- Potential outdoor air intake not installed? NO
- Outdoor air intake not easily installed (e.g., split system, radiant heating) Yes

How frequently are the ventilation systems serviced? Quarterly (every 3 mo.)

Are filters in good condition (*i.e.* not restricting airflow)? Yes

 Non-Residential Survey Form Part 4 - populated by San Miguel Elementary School personnel in 1Q 2015; this annotation added 11/8/2021 by NJL

Days and hours of operation for each ventilation system Mon-Fri 7-3pm

Do any of the ventilation systems operate during nights and weekends? NO reduced settings?

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? locked

What are the temperature settings? (note if seasonally variable) Days 72°-74° F Nights off Weekends off

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☒ Outdoor air temperature/enthalpy ☒ CO_2 concentration ☐ Other _____

Is there power exhaust? yes

Is the power exhaust setting dependent on ☒ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? NO

Can airflow be detected at indoor intakes and exhausts? Yes

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? NO

Is ventilation being supplied or returned under a false floor above the building slab? NO

Are ducting components routed through a basement, crawlspace, or utility vault area? NO

Is a boiler or heater present in a basement or crawlspace? NO describe _____

Non-Residential Survey Form Part 4 - populated by San Miguel Elementary School personnel in 1Q 2015; this annotation added 11/8/2021 by NJL

Outdoor air intakes

Where are the outdoor air intakes located? Roofs + Exterior Walls

Are any outdoor air intakes physically obstructed?
NO

Are any intakes near sources of chemicals / sewer vents?
NO

Are there carbon filters present in the ventilation system? NO

What make and model of filters are present and how often are they changed?

Clarcor Pleated filters - KPSTD1
filters changed every 3 months + 6 months
(wall mounts = 3 mo) (RTU's = 6 mo)

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MA

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 15,000 First Floor 15,000

Is there an attached warehouse/shop space? ____ describe its use: _____

Foundation Type (Check appropriate boxes)

☐ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☒ Crawl Space ☐ Basement ☐ None

Describe Portables (8 units w/ individual crawlspaces)

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MA

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

_____

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals expanded foam gap filler used

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? Crawlspace (indivd. for each unit)

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? _____

Describe any strong odors. Vocs from portables

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☐ Steel ☐ Wood ☒ Other Portables

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? No

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~8ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MA

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☒ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? No

Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____ ,

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? NO

Are there elevators in the building? NO

If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? No

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

~~Crawl~~

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

P-9 through P-12 to be removed (temp used during renovation)
P-6 for sampling

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MA

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MA

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

> **Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.**

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MA

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MA

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MB

PART 1: General Information

Business Name: California Learning World

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@seed.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 6am 6pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 3,000 First Floor 3,000

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☐ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☒ Crawl Space ☐ Basement ☐ None

Describe Portable

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
remodeling months ago after major leaks reported

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals portable unit

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? None

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? _____

Do parts of the indoor environment appear stagnant? _____

Describe any strong odors. New materials from portables

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? _____

Does the building have an attached mechanical room? _____

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~9ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☒ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? _____

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? _____
Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____ ,

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? NO

Are there elevators in the building? NO
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? _____

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? _____

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

Paula Ann

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

Ambient & pathway → southside room

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MB

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MB

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MC

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8718 Email: christina.ballantyne@seed.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 6,875 First Floor 6,875

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MC

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
Complete renovation last year (carpets, paint, new plastic tabletops)

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals_____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals_____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? No

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. dry erase/carpet D-1, D-2; ~~D-3~~ (same) dry erase/carpet; D-3 new materials throughout
air freshener

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? yes (D-1, D-2, D-3)

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~8-9ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MC

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? mechanical rooms off each classroom
Is this space occupied? No At what frequency/duration? _____
Are there potential pathways in this space? No

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? No

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

D-3 has lowest odor & no air freshener

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MC

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MC

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MC

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MC

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MD

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christha Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christha.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 6,875 First Floor 6,875

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MD

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
complete renovation last year (carpet, paint, plastic tabletops)

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals ~~Bzi~~ _____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals dry-erase board cleaner

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

~~&~~

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? No

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. new materials; D-2 strong air freshener

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? NO

Does the building have an attached mechanical room? yes, in each classroom

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~8-9 ft

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MD

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? mech rooms & classrooms
Is this space occupied? No At what frequency/duration? _____
Are there potential pathways in this space? No

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? in bathrooms, but outdoor access only ~~detached from classrooms~~

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MD

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MD

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MD

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MD

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** ME

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 7,800 First Floor 7,800

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☐ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☒ Crawl Space ☐ Basement ☐ None

Describe portable units (4)

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ME

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

_____

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

None

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals From portable unit bldg materials

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

~~crawlspace beneath P3~~

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? Crawlspace Underneath, contiguous under all 4 units, Accessible behind unit P-3

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. VOCs from portables

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☐ Steel ☐ Wood ☐ Other portable unit

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? No

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? 8 ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ME

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☒ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? None seen

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? No

Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____ ,

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No

If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? _____

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? None Seen

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

~~P4 through P12 to be removed (temp. used during renovation)~~

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ME

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ME

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

> **Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.**

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ME

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: ME

Additional Notes:

V

Non-Residential Survey Form

Date: 11/10/15 **Site:** San Miguel **EPA Building Number #:** MF

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christine Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christine.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☐ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 5,500 First Floor 5,500

Is there an attached warehouse/shop space? ____ describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MF

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
Complete renovation last year (carpet, paint, plastic tabletops)

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals_____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals_____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? sewer cleanout (though tightly sealed) in Health Room

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. new materials

Building Construction

Building Construction Materials?

☐ Concrete ☐ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? _____

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? 9-10ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MF

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? No

Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No

If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? In bathrooms

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

Sewer cleanout in healthroom is tightly sealed

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MF

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MF

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MF

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MF

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MG

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@seed.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 10,000 First Floor 10,000

Is there an attached warehouse/shop space? ____ describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MG

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
Renovated (carpet, paint, plastic tabletops) last year

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

~~New~~

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals ~~New~~

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? No

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. air freshener B-1 in classrooms; new carpet & dry erase markers; new materials throughout

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? Fan Study Room

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? 9 ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MG

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? mech/elec rooms of study room

Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No

If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? No

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

Room B-2 unused, No strong odors in B-4

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MG

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MG

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MG

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MG

Additional Notes:

Non-Residential Survey Form

Date: 1/10/2015 **Site:** San Miguel **EPA Building Number #:** MH

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am - 3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 8,200 First Floor 8,200

Is there an attached warehouse/shop space? N describe its use: chem storage; elec./utility room

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MH

A

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

Across-campus upgrade 1 year ago (carpet, paint, etc)

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

cooking in staff lounge (elec. stove & dishwasher)

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop? electrical & adjacent storage room

☐ Yes ☐ No

Please list the general types of chemicals graffiti remover, H_2O_2

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? bathroom floor drains

Were windows/doors/roll-up doors kept open? Yes (electrical room windows - high on wall)

Is there evidence of significant negative pressure? _____

Do parts of the indoor environment appear stagnant? _____

Describe any strong odors. New carpet smell / new materials

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? _____

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~8ft in staff rooms; ≥ 10ft in student & elec room

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MH

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have: No

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? perhaps in electrical room but no evidence is visible
Are these:
Connected to subsurface vaults? No
Connected to utilities closer to potential VI sources? No
In areas where pressure differential would cause air to flow through them? No

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? electrical room w/ open louvers but no active ventilation & storage
Is this space occupied? No At what frequency/duration? N/A
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No (former historic furnace no longer operated)

Are there elevators in the building? No
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? 1/2" piping x6 but not significant

What is the condition of the foundation/slab? average; 1/8-in cracks

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? men's bathrooms & women's

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

floor drain in men's bathroom (& ~~probably~~ women's bathroom)

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MH

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MH

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____

Have the systems been evaluated for ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____

If yes is the data recorded or can it be recorded? _____

Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____ Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MH

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MH

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 Site: San Miguel EPA Building Number #: MI

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 10,000 First Floor 10,000

Is there an attached warehouse/shop space? N describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MI

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):
Complete renovation (carpet, paint, plastic table tops)
Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals dry erase markers in 4 classrooms

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals sharpies in A-3, A-1, A-2, A-4

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? No

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? _____

Describe any strong odors. new materials

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? Fan Study room

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? 9aft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MI

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? elec room off study room
Is this space occupied? _____ At what frequency/duration? _____ # meth.
Are there potential pathways in this space? _____ ,

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? N/A

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? No

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MI

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MI

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____.
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MI

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MI

Additional Notes:

Non-Residential Survey Form

Date: 11/10/15 **Site:** San Miguel **EPA Building Number #:** MJ

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 6,300 First Floor 6,300

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MJ

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

Refurb (carpet, paint, plastic tabletops) last year

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

None

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals_____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals_____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? bathroom floor drains

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? No

Describe any strong odors. New carpet smell/new materials

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? No

Does the building have an attached mechanical room? No

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ≥10ft ceilings

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MJ

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? NO

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? NO

Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No

If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? _____

Are there significant utilities penetrating the floor/slab? _____

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? Undersink in both Room K2 & K1 & in bathrooms

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MJ

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MJ _____

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or %_____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

100% recirculated (no fresh air intake)

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MJ

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MJ

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 **Site:** San Miguel **EPA Building Number #:** MK

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: _____ Number of Stories: 1

Approximate Building Area (square feet): Total 10,000 First Floor 10,000

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MK

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

_____

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

_____

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals_____

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals_____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? Floor drain in K-3 bathroom & K-4 bathroom

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? No

Do parts of the indoor environment appear stagnant? bathroom in Room K-3; storage rooms w/ no ventilation (but no moisture)

Describe any strong odors. New carpet smell/new materials

Building Construction

Building Construction Materials?

☐ Concrete ☒ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? NO

Does the building have an attached mechanical room? Separate Furnace Rooms (2) not accessible from occupied areas. + mech rooms off of central room

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~8ft

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MK

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? No

Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? _____
Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? No

Are there elevators in the building? No
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? _____

Are there significant utilities penetrating the floor/slab? No

What is the condition of the foundation/slab? _____

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? K-3 Room - bathroom, K-4 Room bathroom

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MK

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MK

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** MK

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: MK

Additional Notes:

Non-Residential Survey Form

Date: 1/10/15 Site: San Miguel EPA Building Number #: ML

PART 1: General Information

Business Name: San Miguel Elementary

Address: 777 San Miguel
Sunnyvale, CA

Tenant Information (if applicable)

Contact Name: Christina Ballantyne Interviewed: ☐ Yes ☐ No

Phone: 408-522-8278 Email: Christina.ballantyne@sesd.org

Owner/Landlord Information **Consent Access** ☐ Yes ☐ No Date: _____

Name: _____ Interviewed: ☐ Yes ☐ No

Phone: _____ Email: _____

Building/Business Type (Check appropriate boxes)

☒ School/Day-Care ☐ Retail Store ☐ Office Space ☐ Warehouse ☐ Manufacturing

☐ Single level Office/Warehouse ☐ Multi-story ☐ Strip-mall ☐ Multi-tenant ☐ Warehouse

Other ☐ _____

Building Occupancy

Typical Days/Hours of occupancy 7am-3pm M-F

Typical Days/Hours of ventilation system operation 24/7

Building Characteristics

Year/Decade Built: 2011 Number of Stories: 1

Approximate Building Area (square feet): Total 18,000 First Floor 18,000

Is there an attached warehouse/shop space? No describe its use: _____

Foundation Type (Check appropriate boxes)

☒ Slab-on-Grade ☐ Slab-above-Grade (elevated/cap-slab on fill) ☐ Crawl Space ☐ Basement ☐ None

Describe _____

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ML

PART 2: Factors Impacting Indoor Air Quality and Sampling

Questions

Describe renovation, painting, or significant cleaning activities that have occurred over the last 6 months (what was done, what area, and when):

2-3 yr old building

Describe any open combustion in the building. (smoking/incense/candles/cooking/burning)

Cooking in cafeteria kitchen

Have site chemicals of concern been used or stored in the building or adjacent warehouse/shop?

☐ Yes ☐ No

Please list the general types of chemicals janitor's chemicals off kitchen in janitor's closet

Have any significant amounts of volatile chemicals been used recently? ☐ Yes ☐ No

Please list the chemicals _____

Describe any instance of water/groundwater present in the basement/crawlspace (including sumps):

_____

Observations

What is the temperature relative to outside? _____

What pathways to the subsurface were observed? floor drains in kitchen & bathrooms in K-6 & K-5 & off kitchen

Were windows/doors/roll-up doors kept open? No

Is there evidence of significant negative pressure? NO

Do parts of the indoor environment appear stagnant? see below

Describe any strong odors. Room K-6 (whiteboard markers); entry to gym/cafeteria & janitor closet off of gym/cafeteria itself & kitchen/gym; new materials throughout

Building Construction

Building Construction Materials?

☒ Concrete ☐ Concrete Block ☐ Steel ☐ Wood ☐ Other _____

Does the building have an at-grade or below-grade garage? NO

Does the building have an attached mechanical room? None Seen

Is the building slab constructed with post-tension concrete? _____

What are the ceiling heights? ~10ft in classrooms

≥20ft in gym/cafeteria

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: ML

Pathway Analysis

Does the building have a basement or sub-surface structures that are/have:

☐ Unfinished ☐ Exposed soil ☐ Damp or flooded ☐ Unsealed utility lines ☐ Other _____

Are there utilities that penetrate the slab that may be conduits for soil vapor? None seen
Are these:
Connected to subsurface vaults? _____
Connected to utilities closer to potential VI sources? _____
In areas where pressure differential would cause air to flow through them? _____

Is there non-ventilated space in the building (maintenance /electrical / server rooms)? NO w/ possible exception of main entry
Is this space occupied? _____ At what frequency/duration? _____
Are there potential pathways in this space? _____

Are there significant heat sources or other systems that may generate a significant negative pressure near the floor/slab? Cooking in industrial kitchen

Are there elevators in the building? NO
If the elevators are hydraulic plunger how deep does the piston penetrate below the slab? _____

Are there significant utilities penetrating the floor/slab? _____

What is the condition of the foundation/slab? good (2-3 yrs. old)

Was the building constructed with a subslab system or barrier? _____

Are there floor drains? bathroom in Room K-6 & K-5; kitchen; bathroom off kitchen

If the foundation design specifications and/or as-built drawings are available attach.

Other Information (that may be of importance in understanding the indoor air quality)

_____

_____

_____

Potential Sampling Locations

General notes on potential sample locations and type. Tentative sampling date(s) and preferred times.

_____

_____

_____

On a separate page, draw/attach the general floor plan of the building and denote potential locations of sample collection. Indicate locations of doors, windows, ventilation system components, indoor air contaminant sources and field instrument readings.

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ML

PART 3: Inventory of Potential Indoor Chemical Sources:

Instructions: List items/products in the building or the attached warehouse/shop that may contain site compounds of concern. These should be removed prior to sampling. Also, list items/products that that give off significant volatiles. These may interfere with chemical analysis. Include chemicals that may be tracked into the house from an occupant. This could be chemical usage at work or in an attached workshop/garage. A portable instrument, such as a photo-ionization detector (PID) can be used to help locate volatile chemicals.

Examples of products that may contain trichloroethene (TCE): gun cleaner, rubber cement, solvent degreasers, spot removers, correction fluid, electrical motor cleaner (also be aware that older products are more likely to contain TCE).

Potential chemical source	Location of Product Source	Photograph, ingredients, PID reading?

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ML

PART 4: Building Heating/Cooling/Ventilation Systems

Systems Present

What types of systems are used for heating, cooling and ventilation? Check all that apply.

☐ Air Handler(s) ☐ Package Units ☐ Window/Wall systems ☐ Radiant heating (electric or water/steam)

☐ Evaporative Coolers ☐ Heat pump ☐ Built-up ☐ None Comments _____

Do the systems present provide make-up/fresh air? (Y/N) _____
Have the systems been evaluated for
ASHRAE Standard 62 compliance? _____

Fresh air should be supplied in all commercial/industrial/institutional settings. ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, has guidelines on how much air should be supplied. Meeting these requirements generally helps to mitigate VI impacts.

When was the system last tested and balanced? _____ (attach report if available)

Is the ventilation system automated (building automation system)? _____
If yes is the data recorded or can it be recorded? _____
Note that the ventilation settings should be evaluated in the automation system and verified manually where possible.

System operations

For each of the ventilation systems describe how is outdoor air supplied?

- Economizers: _____
  - Are economizers opening and closing properly? _____
  - minimum and maximum settings cfm or % _____
- Manual adjustable outdoor air intakes _____
  - Settings _____
- Fixed outdoor air intakes? _____
- Potential outdoor air intake not installed? _____
- Outdoor air intake not easily installed (e.g., split system, radiant heating) _____

How frequently are the ventilation systems serviced? _____

Are filters in good condition (*i.e.* not restricting airflow)? _____

Days and hours of operation for each ventilation system _____

Do any of the ventilation systems operate during nights and weekends? _____ reduced settings? _____

Are the temperature / ventilation settings locked or routinely adjusted by the occupants? _____

What are the temperature settings? (note if seasonally variable) Days _____ Nights _____
Weekends _____

If there is an economizer, does the system control outdoor air supply using: (check all that apply)

☐ Outdoor air temperature/enthalpy ☐ CO_2 concentration ☐ Other _____

*self-contained ventilation system in kitchen area off of cafeteria

Non-Residential Survey Form

Date: 1/10/2015 **Site:** _____ **EPA Building Number #:** ML

Is there power exhaust? _____

Is the power exhaust setting dependent on ☐ economizer damper position ☐ Static pressure

Does the system use variable air volume distribution (VAV)? _____

Can airflow be detected at indoor intakes and exhausts? _____

Other Ventilation Issues impacting vapor intrusion potential.

Does the ventilation system have any underground components? _____

Is ventilation being supplied or returned under a false floor above the building slab? _____

Are ducting components routed through a basement, crawlspace, or utility vault area? _____

Is a boiler or heater present in a basement or crawlspace? _____ describe_____

Outdoor air intakes

Where are the outdoor air intakes located? _____

Are any outdoor air intakes physically obstructed? _____

Are any intakes near sources of chemicals / sewer vents? _____

Are there carbon filters present in the ventilation system? _____

What make and model of filters are present and how often are they changed? _____

Ventilation zones and settings

Zone/ Room	System Type	Supply Air Total cfm (range if VAV)	Supply Air % outdoor (range)	Ducted y/n	Return Air cfm	Ducted y/n

Non-Residential Survey Form

Date: 1/10/2015 Site: _____ EPA Building Number #: ML

Additional Notes:

Field Notes

Triple Site Oversight Activities at San Miguel Elementary School Classroom B4

March 18, 2018

Sunday, March 18, 2018

At 0730, Xuan An Truong (E2 Consulting Engineers, Inc. [E2] on behalf of Aptim Federal Services [APTIM]), Vladimir Pavlushkin, and Wesley Hawthorne (Locus Technologies [Locus]), arrived at San Miguel Elementary School at 777 San Miguel Avenue, Sunnyvale California. The team met with the district maintenance worker, Mr. Ricky Corrales. Mr. Corrales turned off the alarm and checked to make sure the heating, ventilation, and air conditioning (HVAC) system for Classroom B4 was off. Locus' team performed re-survey of Classroom B4 for potential indoor sources and resampling with HVAC-off conditions (see the attached photograph log for additional details). During the re-survey of the classroom, the team found one can of spray adhesive and two cans of hair spray.

No staff or community members approached the team with any questions or concerns during on-site activities. Site activities ended at 0802.

Photograph Log



Photograph No. **1**: San Miguel Elementary School Classroom B4 – Sign on the door stating that indoor air sampling is in progress and to keep the door closed.
(March 18, 2018; photo by Ann Truong)



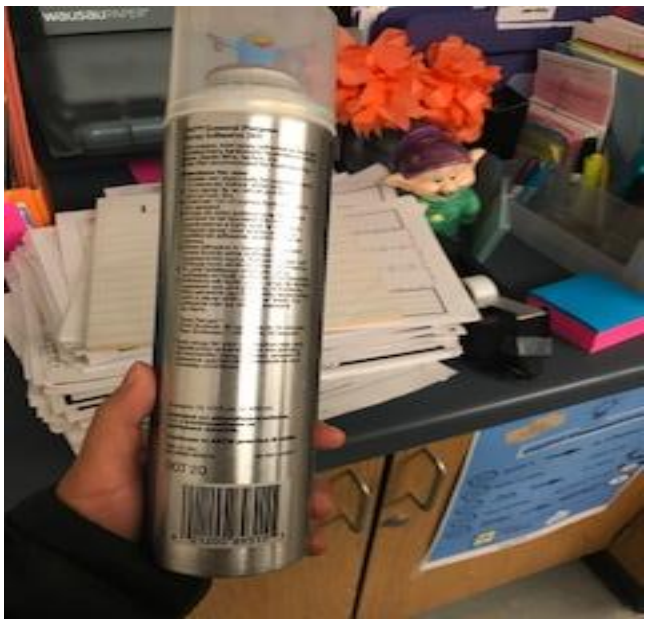
Photograph No. **2**: San Miguel Elementary School Classroom B4 – Sampler MG-AMB-1 and MG-AMB-1D. Locus team placed the samplers on the table in the corner of the classroom.
(March 18, 2018; photo by Ann Truong)



Photograph No. **3**: San Miguel Elementary School Classroom B4 – Sampler MG-PATH-1 underneath the sink of the classroom.
(March 18, 2018; photo by Ann Truong)



Photograph No. **4**: San Miguel Elementary School Classroom B4 – The general-purpose spray adhesive bottle found in the classroom.
(March 18, 2018; photo by Ann Truong)



Photograph No. **5**: San Miguel Elementary School Classroom B4 – The general-purpose spray adhesive bottle found in the classroom.
(March 18, 2018; photo by Ann Truong)



Photograph No. **6**: San Miguel Elementary School Classroom B4 – Sampler MG-PATH-4 placed on at the vent.
(March 18, 2018; photo by Ann Truong)



Photograph No. **7**: San Miguel Elementary School Classroom B4 – Sign on the door
(March 18, 2018; photo by Ann Truong



Photograph No. **8**: San Miguel Elementary School Classroom B4 – Sampler MG-PATH-5 placed near the floor drain in the bathroom adjacent to Classroom B4.
(March 18, 2018; photo by Ann Truong)



Photograph No. 9: San Miguel Elementary School Classroom B4 – Sampler ME-OUT-1 near Building ME.
(March 18, 2018; photo by Ann Truong)

Appendix E
SMDS Generic System Design Diagram
(NOT APPLICABLE)

Appendix F
SMDS Specifications
(NOT APPLICABLE)

Appendix G
SMDS As-Built Diagram
(NOT APPLICABLE)

Appendix H
SMDS Occupant Information Sheet
(NOT APPLICABLE)

Appendix I
SSDS Generic System Design Diagram
(NOT APPLICABLE)

Appendix J
SSDS Specifications
Building MG

RadonAway®
The world's leading radon fan manufacturer

RP Series



Radon Mitigation Fan

All RadonAway® fans are specifically designed for radon mitigation. RP Series Fans provide superb performance, run ultra-quiet and are attractive. They are ideal for most sub-slab radon mitigation systems.

Features

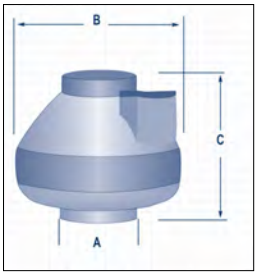
- Energy efficient
- Ultra-quiet operation
- Meets all electrical code requirements
- Water-hardened motorized impeller
- Seams sealed to inhibit radon leakage (RP140 & RP145 double snap sealed)
- ETL Listed - for indoor or outdoor use
- Thermally protected motor
- Rated for commercial and residential use

MODEL	P/N	FAN DUCT DIAMETER	WATTS	MAX. PRESSURE"WC	TYPICAL CFM vs. STATIC PRESSURE WC				
					0"	.5"	1.0"	1.5"	2.0"
RP140	23029-1	4"	15-21	0.8	135	70	-	-	-
RP145	23030-1	4"	41-72	2.1	166	126	82	41	3
RP260	23032-1	6"	50-75	1.6	272	176	89	13	-
RP265	23033-1	6"	91-129	2.3	334	247	176	116	52
RP380	28208	8"	95-152	2.3	497	353	220	130	38

Made in USA with US and imported parts

ETL Listed

All RadonAway inline radon fans are covered by our 5-year, hassle-free warranty



Model	A	B	C
RP140	4.5"	9.7"	8.5"
RP145	4.5"	9.7"	8.5"
RP260	6"	11.75"	8.6"
RP265	6"	11.75"	8.6"
RP380	8"	13.41"	10.53"

For Further Information Contact

8/15
P/N 02008

SENSAPHONE®
REMOTE MONITORING SOLUTIONS



Sensaphone Sentinel with Cellular Modem
Technical Specifications

ALARM NOTIFICATION METHODS:

E-Mail, Text Messages, Voice Phone Calls

Programmable alarm escalation levels

Comprehensive scheduling per input, profile, and alarm destination

Unlimited number of User Profiles

Multiple contact types per user

INPUTS:

12 Universal Inputs

- Normally Open / Normally Closed Dry Contact
- 2.8K / 10K Thermistor
- 4-20mA Current Loop
- Pulse Count
- 12 Bit Resolution

TEMPERATURE SENSING RANGE:

-109° to 168°F | -85° to 76°C

RELAY OUTPUT:

Programmable. Rated for 1A 30VAC/ 1A 30VDC

DATA LOGGING:

Unlimited samples securely stored on the Sentinel servers

Programmable sampling Interval - 1 min to 24 hrs

User programmable channel selection

CELLULAR COMMUNICATION:

3G Cellular Modem for use on Verizon, AT&T or Rogers

BATTERY BACKUP:

4.8V 2000mAHr NiMh Battery pack (included)

12V 3000 mAHR SLA Battery (included)

Provides 8 hours of backup

LOCAL INDICATORS:

12 Alarm Status LEDs

- Power LED • Online LED
- Standby LED • Ethernet link and Activity LEDs

POWER REQUIREMENTS:

Comes with 12VDC plug-in power supply.

(International power options available).

ENVIRONMENTAL:

Operating Humidity:
0-90% RH, non–condensing

Operating Temperature:
32° to 122°F | 0° to 50°C

PHYSICAL:

Dimensions:
12.5 x 12.2 x 7.0” | 318 x 310 x 178mm

Weight: 10.5 lbs. | 4.7 kg

STANDARDS:

FCC Part 15 – Class A Compliant

ENCLOSURE:

NEMA-4 rated plastic housing when ordered with the cellular modem.

901 Tryens Road • Aston, PA 19014 • PH: 877-373-2700 • F: 610-558-0222 • www.sensaphone.com

Appendix J
SSDS Specifications
Buildings ML1, ML2, and MK1

VAPORBLOCK® VB6 & VB10

High Performance Underslab Vapor Barrier

RAVEN ENGINEERED FILMS

Product Description

VaporBlock® is a high performance, underslab vapor barrier designed to retard moisture migration through concrete slabs and concrete walls to protect your structure from:

- MOLD: VaporBlock® reduces moisture condensation within a structure, impeding the growth of molds, mildews, and fungi.
- MOISTURE: VaporBlock® protects flooring materials by maintaining moisture levels well below the requirements of ASTM E-1745-11.
- RADON: VaporBlock® is used as a component of radon mitigation systems to protect indoor air quality and occupant health.

VaporBlock® is one of the most effective underslab vapor barriers on the market today! Benefits include:

- Low moisture vapor permeability
- Superior puncture resistance
- High tensile tear strength
- Resistance to decay and degradation

VaporBlock® is manufactured to strict conformance specifications under our ISO 9001-2008 Certified Management System to consistently exceed ASTM standards and project expectations. Raven's accredited lab ensures VaporBlock® meets the highest possible quality standards across multiple industries. VaporBlock® is supported with independent testing. Results are available upon request, as required under ASTM E-1745-11. VaporBlock® is readily available through nation-wide distribution:

- Available in 6, 10 and 15 mil for optimal project flexibility (VB15 on seperate data sheet)
- Larger roll sizes equal lower installation costs

Raven Industries manufactures VaporBlock® and controls all aspects from start to finish assuring the final product meets our high performance standards. Raven is a publicly-traded company, with over 50 years of stability and service excellence to stand behind our products with a future of innovation and growth.

VaporBlock® UNDERSLAB VAPOR RETARDER



Vapor Barrier - Commercial

Product	Part #
VAPORBLOCK 6	VB6
VAPORBLOCK 10	VB10

APPLICATIONS

- Underslab Vapor Retarder/Barrier
- Foundation Wall Vapor Retarder
- Radon Retarder

Note: All instructions on architectural or structural drawings should be reviewed and followed. Detailed installation instructions accompany each roll of VaporBlock and can also be located on our website.

ASTM E-1643 also provides general installation information for vapor retarders. All VaporBlock series materials can be installed with print or color facing up or down and will provide the same performance.

ASTM E-1745-11, "Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs".

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VAPORBLOCK® VB6 & VB10

High Performance Underslab Vapor Barrier

		VAPORBLOCK VB6	VAPORBLOCK VB10	ASTM E 1745-11 Class A, B & C[1]
PROPERTIES	**TEST METHOD**	Imperial	Imperial	Imperial
Appearance		Blue	Blue	-
Thickness, Nominal		6 mil	10 mil	-
Roll Size		15 ft x 200 ft	15 ft x 200 ft	-
Weight		29 lbs/MSF	49 lbs/MSF	-
Classification	ASTM E1745-11	CLASS C	CLASS A, B & C	Class A, B, or C
Tensile Strength Average MD & TD (New Material) (After Exposure)	ASTM E154 Section 9, (D882)	32 lbs/in 25 lbs/in	52 lbs/in 53 lbs/in	Class A = 45 lbs/in Class B = 30 lbs/in Class C = 13.6 lbs/in Minimum
Puncture Resistance	ASTM D1709 Method B	>1500 g	>2600 g	Class A = 2200 g Class B = 1700 g Class C = 475 g Minimum
Permeance (New Material) (After Conditioning)	ASTM E154 Section 7 ASTM E96 Procedure B ASTM E154 Section 8, E96 Section 11, E96 Section 12, E96 Section 13, E96	0.090 *Perms 0.105 0.124 0.097 0.099	0.0146 *Perms 0.0153 0.0151 0.0160 0.0181	Class A, B, & C 0.1 *Perms Maximum
WVTR	ASTM E96 Procedure B	0.080 grain/hr-ft^2	0.0084 grain/hr-ft^2	-
Maximum Use Temperature		180° F	180° F	-
Minimum Use Temperature		-70° F	-70° F	-

* grains/(ft^2·hr·in Hg)

[1] Referencing ASTM E1745-11, Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs

VaporBlock® UNDERSLAB VAPOR BARRIER

VaporBlock® can be identified as blue in color printed with the VaporBlock® logo and the conformance information listing ASTM E-1745, classifications.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at www.RavenEFD.com

RAVEN INDUSTRIES

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Toll Free: **800-635-3456**
Email: **efdsales@ravenind.com**
www.ravenefd.com
3/14 EFD 1485

Scan QR Code to download current technical data sheets via the Raven website.

Soil Gas Collector™ Mat Specifications

PROPERTIES	METHOD	VALUE
Soil Gas Collector Core		
Core material	Plastic	Polystyrene
Compressive strength	ASTM D-1621 (Modified)	4300 PSF
Geometry	Cuspated	Waffle like
Core configuration	Standard	Double sided
Core width	Standard	3/4 inch
Core depth	Standard	5/8 inch
Soil Gas Collector Fabric		
Weight	ASTM D-1910	4
Tensile strength	ASTM D-1682-64	145
Elongation at break (96)	ASTM D-1682-64	115
Mullen burst strength (PSD)	ASTM D-75 1	170
Puncture strength	ASTM D-75 1	5
A.O.S. (Equivalent sieve)	COE CW-02215	70/100
Modulas at 10% elongation (Lbs)	ASTM D-1682-64	785
Trap tears (Lbs)	ASTM D-2263	75
Coefficient of permeability (Cm/sec)	ASTM D-737	0.03
Permittivity (Sec-1)	ASTM D4491-85	0.8
Accelerated weathering strength (Fed)	STD #191-5804	80
Soil Gas Collector Binding Method		
External binder	Standard	Sewn
Type stitching	Standard	Lock stitch
Type thread	Standard	HB92 nylon
Tensile strength	Standard	11 Lbs
Thread gage	Standard	2 IOx4denier
Chemically impervious	Standard	MI natural

LIQUID NAILS® ADHESIVE

PROJECTS

Construction Adhesive

LN-704/LNP-704 **Interior**

A proven, high-quality, waterproof adhesive that creates a strong durable bond.

100% SATISFACTION GUARANTEED!



PRODUCT DESCRIPTION

LIQUID NAILS® Projects Construction Adhesive, LN-704 offers water clean-up when wet, develops strength rapidly, and has excellent water resistance and long-term holding power when set. Projects Construction Adhesive is certified by the GREENGUARD Environmental Institute to meet their Children and Schools standard for indoor air quality. LN-704 meets all air quality regulations.

RECOMMENDED FOR interior installations and all common building materials, including:

- Paneling
- Molding
- Drywall
- Plywood/hardboard
- Foamboard
- Styrofoam® Brand Insulation
- InsulPink® Foam Insulation Board
- Medium density fiberboard
- Corkboard
- Foamback tub surrounds
- Furring strips
- Masonry/concrete
- Ceramic tile repairs
- Foamular® Rigid Foam Insulation

Foamular and InsulPink are registered trademarks of Owens-Corning Fiberglas Technology, Inc.
Styrofoam is a registered trademark of the Dow Chemical Company.

NOT RECOMMENDED FOR exterior use or for application of ceiling tile, finished floors, mirrors, plastic & vinyl, marble & granite, or foamboard to foamboard. LN-704 should not be used in basement applications.

Please research all installation instructions and read entire label for safety, health & environmental information prior to use.

Look for other LIQUID NAILS products which are right for your specific project.

PRODUCT ADVANTAGES

- Safer for indoor use
- High-strength bond
- Very low odor
- Easy water clean-up
- Bridges gaps up to 3/8"
- No harmful fumes
- Up to 30 minutes open time
- Non-staining
- Will not attack foam insulation
- VOC compliant

Children & Schools GREENGUARD® Indoor Air Quality Certified

Read Label and Material Safety Data Sheet Prior to Use.
See other cautions on last page.

LIQUID NAILS® ADHESIVE

PROJECTS

Construction Adhesive

SURFACE PREPARATION
Surfaces must be clean, dry, and structurally sound. Cut and pre-fit materials prior to installation.

APPLYING THE PRODUCT
Insert tube into caulking gun. Cut nozzle to desired bead size marked on nozzle. Puncture inner seal with nail or wire. Apply adhesive in temperature of 60°F or higher. Press material into place. Lift off for 2-4 minutes, then press back into place. Material should not be applied to skinned adhesive. Do not apply to moist concrete or masonry.
Note: One surface must be porous.

Bonding material to furring strips or studs: Apply a zigzag 1/4" bead of adhesive to each strip or stud to be covered by material. Position materials so edges meet at stud center. Press firmly into place. Finishing nails required at top and bottom.

Bonding foamboard, foamback tub surrounds, paneling, corkboard, brick veneer, etc. to flat surfaces: Cover entire substrate with 1/4" vertical zig-zag bead a maximum of 12" apart and within 1-1/2" of all edges.

CLEAN-UP
Use water for wet adhesive. Use mineral spirits or adhesive remover for dry adhesive.

DISPOSAL
Place **empty** containers in normal refuse for disposal. Remove residual product from the container, allow product to dry, and dispose of in conjunction with normal household waste. Contact your sanitation department or household hazardous waste coordinator for information concerning possible re-use of unused caulks and sealants. EAD-C8

LIMITED WARRANTY
AkzoNobel warrants satisfaction with this product when handled and applied according to label instructions. If this product is not as warranted, please call 1-800-634-0015 for refund or product replacement details. This warranty excludes labor or the cost of labor and is given as the exclusive warranty and remedy. **No warranty of merchantability, fitness for purpose or other warranty, express or implied, is made.** AkzoNobel shall not be liable for any special, incidental or consequential damages. Some states do not allow the exclusion of incidental or consequential damages, so the limitations may not apply. This warranty gives specific legal rights. You may also have other rights that vary from state to state.

WARNING! CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. **This product contains a chemical known to the state of California to cause cancer and birth defects, or other reproductive harm.** Contains Crystalline Silica. If sanding, wear a dust mask to avoid breathing of sanding dust. Avoid contact with eyes and skin. **FIRST AID:** For skin contact, wash thoroughly with soap and water. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Remove contaminated clothing. For eye contact, flush immediately with plenty of water for at least 15 minutes. **Get medical attention.** If swallowed, **get medical attention immediately.** If inhalation causes discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, get medical attention. ***For emergency information, customer service, MSDS or additional safety and chronic hazard information, call 1-800-634-0015.*** **KEEP FROM FREEZING.** MAC11-0705

LN-704 TECHNICAL INFORMATION

Base: Latex emulsion
Color: Off-white
Appearance: Smooth gunnable paste
Application Temperature:
40° to 100° F (5° to 38° C)
Service Temperature: up to 120° F (49° C)
Adhesion: Excellent to most common building materials
Bridging Ability: Good; bridges gaps to 1/4" (.64cm)
Shear Strength:
24 hours – 300 psi
48 hours – 350 psi
28 days – 400 psi
R.T. Static Load in Shear:
10 lbs. No failure in 72 hours.
Tensile Strength:
24 hours – 60 psi avg.
7 days – 75 psi avg.
Durability: Resistant to oxidation, 20 year life
Flexibility: Good
Water Resistance: Good
Aging: Good
Freeze-Thaw Stable: Passes 5 cycles
Bleed: None
Staining: None
Odor: Mild Acrylic
Working Time: 30 minutes
Weight Per Gallon: 12.18 pounds (5.8 kg)
Viscosity: 400,000 CPS
Volatiles: 38%
Solids: 62%
Flammability: Nonflammable
Flash Point: Exceeds 200°F (93°C)
Coverage: Using full round 1/4" (.64 cm) bead: 10.5 oz. (310 ml) - 32 lineal feet (10 lineal meters)
Shelf Life: 12 months from date of purchase
MAX VOC: 14 g/L

Akzo Nobel Paints LLC
15885 West Sprague Rd.
Strongsville, OH 44136
www.liquidnails.com
Customer Service 1-800-634-0015

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ACCESSORIES

SEAMING TAPES & OTHER ACCESSORIES FOR PLASTIC SHEETING

From tie-down fasteners to field seaming tape, Raven Industries has the accessories you need to maximize your film's versatility and minimize installation time on the job.

ACCESSORY TAPES AND EPOXY

VaporBond Tape (TVB4)



This white single-sided tape combines a heavy-duty, weather-resistant polyethylene backing with an aggressive rubber adhesive. VaporBond Tape offers excellent seaming capabilities for our materials with an "Easy Tear" feature to reduce installation time. TVB4 has a WVTR of 0.18 perms per ASTM D3833. Typical applications include vapor retarders, covers and liners.
Available in 4" x 210' roll.

R25B Tape (R25B)



R25B Tape is a single sided aggressive synthetic elastomeric adhesive that bonds instantly to properly prepared polyethylene and polypropylene. The black polymer backing and adhesive is specially formulated to provide years of performance even in direct sunlight. A poly release liner provides for ease of installation.
Available in 4" x 100' roll.

VaporSeal™ Tape (TVSP4/TVSP12)



VaporSeal™ Tape is a patented single-sided 7-layer gas barrier tape with a release liner for ease of installation. The backing contains a layer of highly impermeable EVOH designed to block migration of radon, methane and VOC's. An aggressive acrylic adhesive provides outstanding adhesion to polyethylene over a wide temperature range. Typical uses include joining, repairing and sealing gas/moisture barriers.
Available in 4" x 160' and 12" x 50' rolls.

Butyl Seal Tape (TP2BR)



Butyl seal is a double-sided reinforced aggressive black butyl rubber tape used to join panels of polyethylene and polypropylene together by overlapping the edges and applying Butyl Seal in between. It is also used to adhere to concrete walls and footings when properly prepared. Butyl Seal is non-hardening and flexible.
Available in 2" x 50' roll.

VaporBoot Tape (TBOOT)



VaporBoot Tape is a single-sided elastomeric butyl tape used to complete pipe boot installations (sealing the boot to the pipe). The 100% stretchable Butyl adhesive features excellent adhesion values and 3-D stretching that can be easily molded to multiple surfaces without any creases and folds.
Available in 2" x 16.4' roll.

POUR-N-SEAL™ (PNS1G)



POUR-N-SEAL™ is a gray two part medium viscosity high strength epoxy used to seal around multiple pipe penetrations in tight areas where pipe boots are not practical, when installing VaporBlock moisture and gas barriers. (Adhesive backed 1" weather stripping foam required—sold separately).

ADDITIONAL ACCESSORIES

VaporBoot\VaporBoot G System (VBOOT\VBOOTGOS)



The VaporBoot System is designed to assist in securing pipe and other penetrations that run vertically through the vapor retarder material. The VaporBoot System offers a quick solution and is delivered to the jobsite in a complete package. VaporBoots are produced from high performance VaporBlock® and VaporBlock® G™ material.

Package Contents:
25 - VaporBoots (18" x 18", w/precut center marker)
1 - roll of VaporBoot Tape

VaporBoot Plus Preformed Pipe Boots (VBPBT)



VaporBoot Plus Preformed Pipe Boots are produced from heavy 40 mil co-extruded polyethylene and barrier resins for excellent strength and durability. The preformed boots are stepped to fit 1" to 4" wide pipe penetrations. VaporBoot Plus Preformed Pipe Boots are available in quantities of 12 per box.

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ACCESSORIES

SEAMING TAPES & OTHER ACCESSORIES FOR PLASTIC SHEETING

ADDITIONAL ACCESSORIES (CONTINUED)

Dura♦Skrim® Reinforced Sandbags



Dura♦Skrim reinforced sandbags are used to secure large covers and liners to prevent wind damage. Stock bags are produced with strong Dura♦Skrim 8 & 12 mil reinforced polyethylene. These 15" wide x 24" long bags are designed to hold 35 lbs. Sandbags are also available in other Raven reinforced materials with minimum order requirements. 11.8" Cable Ties are also available.

Dura-Clip™ (CLIP11)



These full size clips are 11" long and fit most commercial scaffolding. Dura-Clips will securely fasten your poly sheeting to scaffolding, reducing wind whip and increasing the life of your enclosure. Clips are normally placed about every 3' onto the enclosure.

Tie-Down Buttons (BUTI) & Tarp Grabbers (BUTEZ)



Tie-Down Buttons & Tarp Grabbers help keep plastic sheeting securely in place. Tie-Down Buttons are designed to eliminate traditional grommets in plastic sheeting up to 10 mil thick and are reusable plastic fittings that are easy to install in any position. Tarp Grabbers are up to 4 times stronger than a brass grommet and are typically used in heavier plastic sheeting from 10 mil to 30 mil thick. Great for equipment covers, large storage covers and truck tarps.

Raven Welding Rod



Raven Welding Rod is used for field seaming, repairs and detail work, such as installing pipe boots. Packaged in 25 lb spools, it is available in 4mm and 5mm sizes to fit most brands of extrusion guns. Raven Welding Rod is made from a thermally UV stabilized LLDPE resin and is available in both black and white to correspond with the color of geomembranes being utilized.

TAPE ACCESSORY PROPERTIES

PROPERTIES	VaporBond Tape (TVB4)	VaporSeal™ Tape (TVSP4)	VaporBoot Tape (TBOOT)	R25B Tape (R25B)	Butyl Seal Tape (TP2BR)
BACKING	6.7 mil Polyethylene	2 mil LDPE	30 mil EPDM	8 mil Multipolymer	NA
ADHESIVE	3.3 mil Rubber Based Pressure-Sensitive	7 mil Acrylic Adhesive Pressure-Sensitive	20 mil Butyl Rubber	17 mil Synthetic Elastomeric	40 mil Butyl Rubber
COLOR	White	Silver	Black	Black	Black
TYPE	Single Sided	Single Sided	Single Sided	Single Sided	Double Sided
SIZE	4" x 210'	4" x 160' / 12" x 50'	2" x 16.4'	4" x 100'	2" x 50'
ROLLS PER CASE	12	12 / 4	64	6	20
WEIGHT PER CASE	45 lbs	50 lbs / 18 lbs	45 lbs	33 lbs	55 lbs
ADHESION VALUES	35 oz. / in. (to steel)	80 oz. / in. (to steel)	145 oz. / in. (to steel)	144 oz. / in. (to steel)	88 oz. / in. (to steel)
PERMS	0.89 g/(24h*100 in^2)	0.014 g/(24h*100 in^2)	N/A	<0.005 g/(24h*100 in^2)	0.82 g/(24h*100 in^2)
SERVICE TEMP.	-40° F to +180° F	-40° F to +190° F	+14° F to +122° F	+20° F to +180° F	0° F to +170° F
MIN. APPLICATION TEMP.	50° F	50° F	14° F	35° F	35° F
IDEAL STORAGE TEMP./HUMIDITY	70° F w/ 40-50 %	60°-80° F w/ 40-60 %	70° F w/ 70 %	70° F w/ 40-50 %	70° F w/ 40-50 %

Scan QR Code to download current technical data sheets via the Raven website.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. Chemical resistance, odor transmission, longevity as well as other performance criteria is not implied or given and actual testing must be performed for applicability in specific applications and/or conditions. RAVEN INDUSTRIES MAKES NO WARRANTIES AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage. Limited Warranty available at wwww.RavenEFD.com

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efdsales@ravenind.com
www.ravenefd.com

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Vapor Barrier X-mas Tree Fasteners - 1000/bag

SKU: 67063

Be the first to review this product

White. Securely affix barrier to wall. 1000/bag.

NOTICE

Log In to Purchase

RadonAway is a B2B business only. You must be an approved RadonAway customer to purchase products through this website. If you are an existing RadonAway customer and need a website login, click here. If you are a professional and would like to become a RadonAway customer, click here.

Add to Wishlist

Add to Compare Share

Product Categories

- Radon Fans +
- HRVs / ERVs +
- Radon System Components +
- Mitigation Tools & Diagnostic Aids +
- Sealing Products +
- Crawlspace Moisture and Radon Control +
- Sump Pumps & Accessories +
- Pipe Accessories +
- Radon System Accessories +
- Radon in Water Removal Systems +
- Radon Testing +
- Spruce Inline Ventilation +
- Canada Fulfillment +
- Air Purifiers

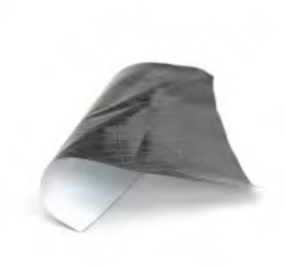
1-2 day shipping in most of US Read more...

Five year manufacturer's warranty on

Details | Additional Info | Reviews | Conditions of Sale

Tree Fast.250"x.80"(1,000/Bag)

Related



Dura-Skrim 24' x 50' x 12 mil. White/Black
Add to Wishlist



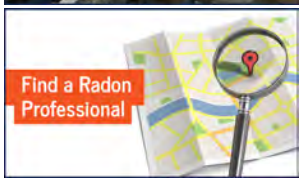
Vapor Barrier X-mas Tree Fasteners - 100/bag
Add to Wishlist

RadonAway fans

Free technical support for our customers

Contact Us









Appendix K
SSDS As-Built Diagra
(See Figures 3 and 4)

Appendix L
SSDS Occupant Information Sheet

locustec.com

HEADQUARTERS:
SILICON VALLEY
299 Fairchild Drive
Mountain View, CA 94043
Tel: 650-960-1640
Fax: 415-360-5889
Email: info@locustec.com

SAN FRANCISCO
LOS ANGELES
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PITTSBURGH
BOSTON

Information Sheet for TCE Vapor Intrusion Mitigation System

Installed at San Miguel Elementary School Buildings L1, L2 and K

777 San Miguel Avenue in Sunnyvale, CA

Under the oversight of the U.S. Environmental Protection Agency (EPA), Locus Technologies (Locus) sampled the air inside and underneath the former buildings to determine if there is a potential for unacceptable TCE vapor intrusion to occur. To address this potential, Locus installed a vapor intrusion mitigation system underneath the new buildings – called a passive sub-slab depressurization system (passive SSDS) – to mitigate vapor intrusion to indoor air.

How the Mitigation System Is Constructed

The mitigation system was installed underneath the buildings and includes a vent mat covered by a plastic vapor barrier (an air-tight liner) beneath the buildings' concrete slabs. The mat for each building is connected to a plastic vent stack (a riser pipe) inside of each building (within the walls of L1 and L2; within a storage closet of K).

The system prevents the entrance of underground vapors into the building. The warm air surrounding the interior vent stack generates upward flow in the vent stack, which transfers the underground vapors directly to the outdoor air where they immediately dilute and are broken down by sunlight.

Why the System Needs to be Maintained

The vent stack is designed to function continuously to ensure safe indoor air. If you suspect a problem with the system, please call Locus at 408-329-6654. If needed, Locus will send out a technician to inspect the system and will coordinate all visits with you. Please note that having a system issue for several days will have little impact on the air quality because it takes some time for vapors from the soil to enter and accumulate indoors.

How Often the System Is Inspected

The system will be inspected routinely at no cost to you. A qualified service technician will make quarterly visits during the first year to check parts and make any necessary repairs. If all of these visits are satisfactory then annual visits may be made thereafter. These visits will be coordinated with the school at a time that is convenient.

Follow-Up Air Sampling and How You Can Help

Air samples will be collected periodically from the crawlspace and indoors to confirm that the system is working property to keep indoor air safe from TCE vapor intrusion. Sampling appointments will be coordinated with the school at a convenient time.

Out of caution, air sampling will be more frequent the first year. You can help during the air sampling by keeping windows and doors closed as much as possible, to represent the air quality without natural ventilation.

For any questions or concerns, please call Locus Technologies Mitigation Services at 408-329-6654.

locustec.com

HEADQUARTERS:
SILICON VALLEY
299 Fairchild Drive
Mountain View, CA 94043
Tel: 650-960-1640
Fax: 415-360-5889
Email: info@locustec.com

SAN FRANCISCO
LOS ANGELES
PHOENIX
ASHEVILLE
PITTSBURGH
BOSTON

Information Sheet for TCE Vapor Intrusion Mitigation System

Installed at Building MG (B), San Miguel Elementary

777 San Miguel Avenue in Sunnyvale, CA

Under the oversight of the U.S. Environmental Protection Agency (EPA), Locus Technologies (Locus) sampled the air inside the building to determine if there is a potential for unacceptable TCE vapor intrusion to occur. To address this potential, Locus installed a vapor intrusion mitigation system at the building – called a sub-slab depressurization system (SSDS) – to mitigate vapor intrusion to indoor air.

How the Mitigation System Is Constructed

The mitigation system includes a horizontal steel collection pipe beneath the slab under the building. The collection pipe is connected to a suction fan that draws air from underneath the slab and routes that air to a plastic vent stack (riser pipe) outside the west wall of the building.

The system prevents the entrance of underground vapors into the building. The vent stack and suction fan transfer these vapors directly to the outdoor air where they immediately dilute and are broken down by sunlight.

Why the System Needs to Remain On

The fan for the mitigation system is designed to run continuously (24 hours/day, 365 days/year) to ensure safe indoor air. There is an alarm system that will communicate directly with Locus indicating that the fan has failed or if there is a power failure. If you find that the system is off, please call Locus at 408-329-6654. If needed, Locus will send out a technician to inspect the system and will coordinate all visits with you. Please note that having the fan off for several days for service or during a power outage will have little impact on the air quality because it takes some time for vapors from the soil to enter and accumulate indoors.



Mitigation System on West Wall of Building MG (B)

How Often the System Is Inspected

The system will be inspected routinely at no cost to you. A qualified service technician will make quarterly visits during the first year to check parts and make any necessary repairs. If all of these visits are satisfactory then annual visits will be made thereafter. These visits will be coordinated with the property manager and/or owner at a time that is convenient.

Follow-Up Air Sampling and How You Can Help

Air samples will be collected periodically from the indoors to confirm that the system is working properly to keep indoor air safe from TCE vapor intrusion. Sampling appointments will be coordinated with you at a time that is convenient.

Out of caution, air sampling will be more frequent the first year. You can help during the air sampling by keeping windows and doors closed as much as possible, to represent the air quality without natural ventilation.

For any questions or concerns, please call Locus Technologies Mitigation Services at 408-329-6654.

Appendix M
Mitigation System Installation Field Forms

(NOT APPLICABLE FOR ML1, ML2 AND MK1, WHICH WERE INSTALLED BY OTHERS)

DAILY FIELD ACTIVITY LOG

Project Name: TRIPLE SITE - SMES MG
Field Activity: SAWCUT-EXCAVATE/SSDS/BACKFILL
Weather: CLEAR / 65-75° F

Project No.: 27006 OR 9016
Date: 10/13 - 10/15
Logged by: RICKY KAZAKOFF
Page: ____ of ____

TIME	DAILY ACTIVITIES AND EVENTS
10/13/18	
8:45	ARRIVED ONSITE (ALL FORMS ALREADY HERE)
8:55	BEGAN WORK - SAWCUTTING
9:00	JACKHAMMERING / EXCAVATING
9:45	BREAK (20 MIN)
10:35	REACHED BOTTOM OF FOOTING = 30" DEEP
	- CLEARING OUT SOIL
	- BARRICADING AREA
11:30	CLEANED UP TOOLS & MATERIALS (BASE ROCK & SOIL)
	OFFSITE
11:45	
10/14/18	
6:50	ONSITE (WAITING FOR CEMENT SCANNERS)
7:02	ROBERT ONSITE
7:10	BEGAN SCANNING / MARKED REBAR
8:00	FINISHED SCANNING
8:05	OFFSITE (ROBERT) / WAITING FOR RICKY + FRED
8:10	RICKY (ON-CALL SCHOOL UTILITY GUY) OPENED B4 AND CIRCUIT ROOM
8:32	FRED ARRIVED ONSITE
8:50	UNLOADED TRUCK / FILLING CORE DRILL WATER TANK
9:00	BEGAN CORING (PILOT HOLE FIRST = INDICATED FOOTING IS "14")
9:45	THROUGH FOOTING / OPENING UP COLLECTION PIT @ END OF CORING
10:30	BUILDING SUCTION PIPE / VENT STACK
12:30	GAL. STEEL PIPE MOUNTED + HOOKED UP TO FAN
13:07	MIN ONSITE / RICKY OFFSITE
17:05	RICKY BACK ONSITE / MIN OFFSITE
19:38	COMPLETED SYSTEM
19:45	OFFSITE

10/15/18
8:30 ARRIVED ONSITE / WAITING FOR ALL FORMS
8:40 ALL FORMS ONSITE - BEGAN BACKFILLING
9:25 SET REBAR / BEGAN PAVING
10:20 CEMENT IN PLACE - RESURFACED EVERY HOUR
13:00 ALL FORMS OFFSITE - RICKY TOUCHING UP PAINT
14:00 OFFSITE

Comments/Remarks:

Appendix N
Operations and Maintenance Inspection Field Forms

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Inspector/Company: Fred Ellrott

Location/Address/RES#: 777 San Miguel, San Miguel Elementary School PS-Bldg K

Client/RP: Locus/OOU

pe in post-mitigation implementation data and compare to subsequent inspection measurement

Visual System Checks	Date	Time	Condition (Good or Poor*)	Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#, NONE	—	—	N/A	Fan _____						
Piping upstream of fan	—		N/A	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	11/28/17		GOOD	Fan NONE	11/28/17	1730 hrs	N/A	N/A	N/A	N/A
Exhaust Varmint Guard	11/28/17		GOOD							
Audible Alarm			N/A							
Plumbing Box Out			N/A							
System Manometer			N/A							
Sampling Port			N/A							
System Labeling			N/A							
Riser Pipe Seals	11/28/17		GOOD							
Liner Breaches/Damage	11/28/17		UNABLE TO ACCESS							
Liner Edge Seals	11/28/17		UNABLE TO ACCESS							
Carbon Monoxide Detector (if applicable)			N/A							
Information Placards			N/A							
Owner/Tenant has current information/Notification sheet										

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked: THIS IS A PASSIVE SYSTEM
THE LINER IS UNDER THE CEMENT
VENT MATTING IS INSTALLED UNDER THE LINER

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona*, Freescale Semiconductor, Inc., June 2013.

THE COLLECTION MATTING IS VENTED THROUGH A PIPE AT THE NORTH EAST CORNER OF THE BUILDING UNDER THE MECHANICAL ROOM. THE PIPE CONNECTS TO A RISER PIPE INSIDE THE WALL THAT RUNS OUT THROUGH THE ROOF

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Inspector/Company: Fred Ellrott

Location/Address/RES#: 777 San Miguel SAN MIGUEL Bld. L2 E-1, E-3

Client/RP: Locus/OBU

pe in post-mitigation implementation data and compare to subsequent inspection measurement

Visual System Checks	Date	Time	Condition (Good or Poor*)	Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan*, NONE	11/28/17		N/A	Fan _____						
Piping upstream of fan	"		N/A	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	11/28		Good	Fan NONE	11/29/17	1730 Hrs	N/A	N/A	N/A	N/A
Exhaust Varmint Guard	11/28		Good							
Audible Alarm			N/A							
Plumbing Box Out			N/A							
System Manometer			N/A							
Sampling Port			N/A							
System Labeling			N/A							
Riser Pipe Seals	11/28		Good							
Liner Breaches/Damage	11/28		UNABLE TO ACCESS							
Liner Edge Seals	11/28		UNABLE TO ACCESS							
Carbon Monoxide Detector (if applicable)			N/A							
Information Placards			N/A							
Owner/Tenant has current information/Notification sheet										

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

*Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

THIS IS A PASSIVE SYSTEM THE LINER IS UNDER THE CEMENT. VENT MATNL IS INSTALLED UNDER THE LINER.

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona*, Freescale Semiconductor, Inc., June 2013.

THE MATTNL IS VENTED THROUGH A PIPE ON THE NORTH EAST SIDE OF THE BUILDING THAT CONNECTS TO A RISER PIPE INSIDE THE WALL

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Inspector/Company: Fred Ellrott

Location/Address/RES#: 777 San Miguel SAN MIGUEL Bld. L1 E-2, E-4

Client/RP: Locus/OOU

pe in post-mitigation implementation data and compare to subsequent inspection measurement

Visual System Checks	Date	Time	Condition (Good or Poor*)	Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan*, NONE		—	—	Fan _____						
Piping upstream of fan			N/A	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	11/28		Good	Fan NONE	11/28/17	1730hrs	—	—	—	—
Exhaust Varmint Guard	11/28		Good							
Audible Alarm			N/A							
Plumbing Box Out			N/A							
System Manometer			N/A							
Sampling Port			N/A							
System Labeling			N/A							
Riser Pipe Seals	11/28		Good							
Liner Breaches/Damage	11/28		UNABLE TO ACCESS							
Liner Edge Seals	11/28		UNABLE TO ACCESS							
Carbon Monoxide Detector (if applicable)			N/A							
Information Placards			N/A							
Owner/Tenant has current information/Notification sheet										

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

*Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked):

THIS IS A PASSIVE SYSTEM. THE LINER IS INSTALLED UNDER THE SLAB. VENT MATTING IS INSTALLED UNDER THE LINER

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona*, Freescale Semiconductor, Inc., June 2013.

THE VENT PIPE CONNECTS UNDER THE BUILDING. FROM A PIPE CONNECTED TO THE VENT MATTING TO A PIPE THAT RUNS INSIDE THE WALL TO THE ROOF. PIPE CONNECTION IS AUNDER THE BUILDING AGAINST THE SOUTHWEST WALL

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES – L1

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

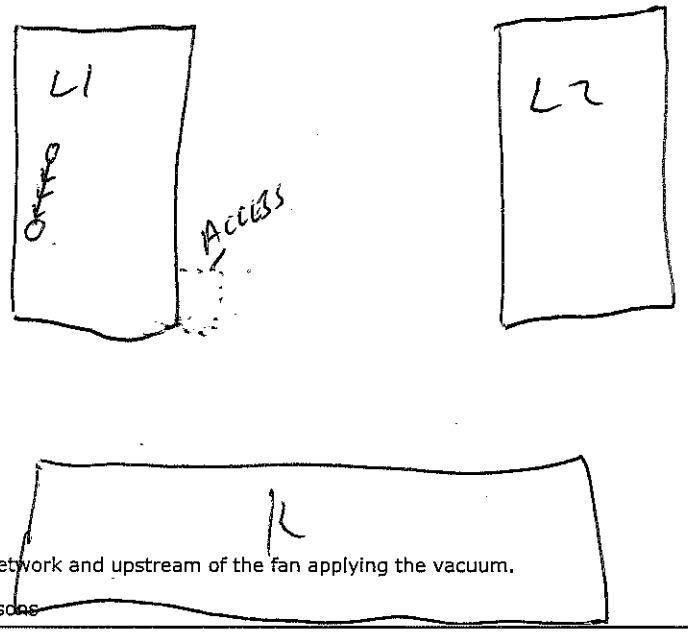
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe			GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling			
Riser Pipe Seals	3/28/18		GOOD
Liner Breaches/Damage		BELOW CEMENT	
Liner Edge Seals		BELOW CEMENT	
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECTION OF VENT PIPE FROM WHERE IT COMES OUT OF CEMENT TO WHERE IT CONNECTS TO BUILT IN STACK

CRACKS IN "RAT" SLAB

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - L2

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

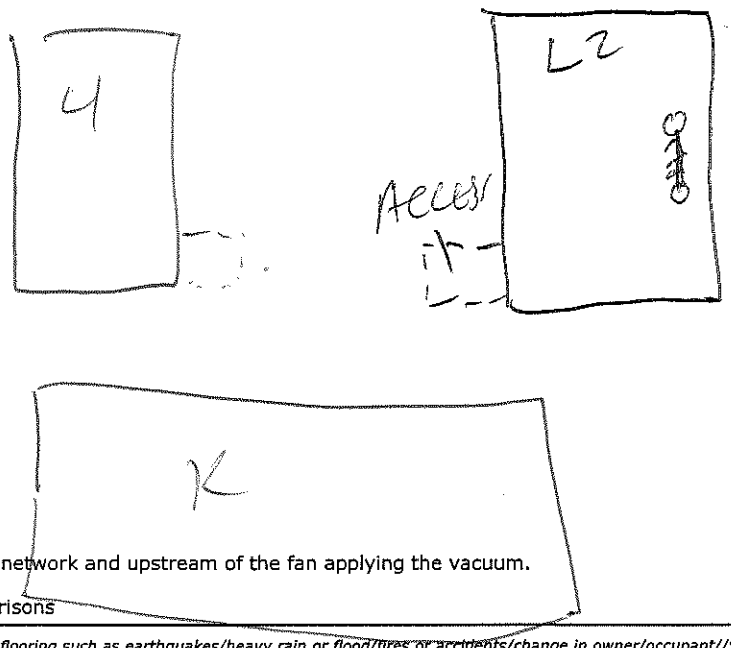
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe	3/28/18		GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling	N/A		
Riser Pipe Seals	3/28/18		GOOD
Liner Breaches/Damage		BELOW CEMENT	
Liner Edge Seals		BELOW CEMENT	
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECTION OF VENT PIPE FROM WHERE IT COMES OUT OF THE CEMENT TO WHERE IT CONNECTS TO THE BUILT IN STACK

CRACKS IN "RAT" SLAB

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - K

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

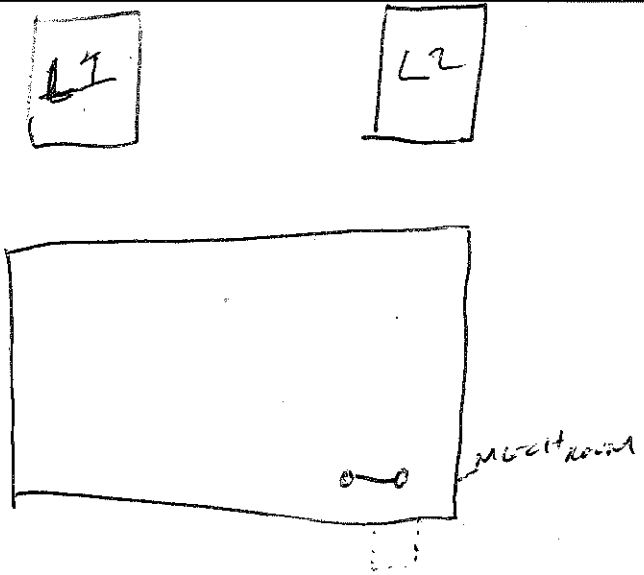
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe			GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling	N/A		
Riser Pipe Seals			
Liner Breaches/Damage	(3/28/18)		GOOD
Liner Edge Seals			BELOW CEMENT
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECT VENT PIPE WITH IT COMES OUT OF THE CEMENT AND CONNECTS TO STACK BUILT INTO THE BUILDING

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES – K (PASSIVE)

Inspector/Company: FRED ELLIOTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan* N/A	12/11/18	1500	N/A
Piping upstream of fan	N/A		N/A
Riser Pipe	N/A	1500	GOOD
Exhaust Varmint Guard	N/A	→	
Audible Alarm	N/A		N/A
Plumbing Box Out	N/A	→	
System Manometer	N/A	→	
Sampling Port	N/A	→	
System Labeling	12/11/18	1515	GOOD
Riser Pipe Seals	12/11/18	1515	GOOD
Liner Breaches/Damage	N/A	→	
Liner Edge Seals	N/A	→	
Carbon Monoxide Detector (if applicable)	N/A		N/A
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM
MATTING MATERIAL UNDER LINER BELOW RATSLAB.
CHECKED SEALS AROUND PIPE GOING THROUGH CEMENT, OK.

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - L1 (PASSIVE)

Inspector/Company: FRED ELLROTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan* PASSIVE	12/11/18	1520	N/A
Piping upstream of fan	12/11/18	1520	N/A
Riser Pipe	12/11/18	1520	GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		N/A
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling	N/A		
Riser Pipe Seals	12/11/18	1520	GOOD
Liner Breaches/Damage	N/A		
Liner Edge Seals	N/A		
Carbon Monoxide Detector (if applicable)	N/A		N/A
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						
Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

*Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM
MATTING MATERIAL UNDER LINER BELOW RATSLAB
CHECKED SEAL AROUND PIPE GOING THROUGH CEMENT. (OK)

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - L2 (PASSIVE)

Inspector/Company: FRED ELLROTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan* PASSIVE	12/11/18	1535	N/A
Piping upstream of fan	N/A		N/A
Riser Pipe	12/11/18	1535	GOOD
Exhaust Varmint Guard	N/A	→	
Audible Alarm	N/A	→	N/A
Plumbing Box Out	N/A	→	
System Manometer	N/A	→	
Sampling Port			
System Labeling			
Riser Pipe Seals	12/11/18	1535	GOOD
Liner Breaches/Damage	N/A	→	
Liner Edge Seals	N/A	→	
Carbon Monoxide Detector (if applicable)	N/A	→	N/A
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						
Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM
MATTING BELOW LINER UNDER RAT SCAB
CHECKED SEAL AROUND THE PIPE WHERE IT GOO THROUGH THE CONCRETE

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: 777 SAN MIGUEL "L2"

Inspector/Company: FRED ELLIOTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan# NONE	2/27/19	1600	—
Piping upstream of fan	N/A	—	—
Riser Pipe	2/27/19	1610	GOOD
Exhaust Varmint Guard	2/27/19	1610	GOOD
Audible Alarm	N/A	—	—
Plumbing Box Out	N/A	—	—
System Manometer	N/A	—	—
Sampling Port	N/A	—	—
System Labeling	2/27/19	1620	GOOD
Riser Pipe Seals	2/27/19	1620	GOOD
Liner Breaches/Damage	2/27/19	1625	BELOW CEMENT
Liner Edge Seals	2/27/19	1625	BELOW CEMENT
Carbon Monoxide Detector (if applicable)	N/A	—	—
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan# NONE	—	—	—	—	—	—

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM. MATTING AND LINER BELOW CEMENT
INSPECTED RISER PIPE UNDER CLASSROOM
THE REST OF THE PIPING IS INSIDE THE WALL

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: 777 SAN MIGUEL "L1"

Inspector/Company: FRED ELLROTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan# NONE	2/27/19	1510	N/A
Piping upstream of fan	N/A	—	—
Riser Pipe	2/27/19	1525	GOOD
Exhaust Varmint Guard	2/27/19	1540	GOOD
Audible Alarm	N/A	—	—
Plumbing Box Out	N/A	—	—
System Manometer	N/A	—	—
Sampling Port	N/A	—	—
System Labeling			
Riser Pipe Seals	2/27/19	1550	GOOD
Liner Breaches/Damage	2/27/19	1550	BELOW SLAB
Liner Edge Seals	2/27/19	1550	BELOW SLAB
Carbon Monoxide Detector (if applicable)	N/A	—	—
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan# NONE	—	—	—	—	—	—

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM MATTING AND LINER BELOW CEMENT
INSPECTED RISER PIPE UNDER THE CLASSROOM.
THE REST OF THE PIPE IS BEHIND THE WALL

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: 777 SAN MIGUEL "K"

Inspector/Company: FRED ELLROTT

Client/RP:

Occupant Consent Access Date:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan# NONE	2/27/19	1430	N/A
Piping upstream of fan	N/A	—	—
Riser Pipe	2/27/19	1445	GOOD
Exhaust Varmint Guard	2/27/19		GOOD
Audible Alarm	N/A	—	—
Plumbing Box Out	N/A	—	—
System Manometer	N/A	—	—
Sampling Port	N/A	—	—
System Labeling	2/27/19		GOOD
Riser Pipe Seals	2/27/19	1450	GOOD
Liner Breaches/Damage	2/27/19	1455	BELOW SLAB
Liner Edge Seals	2/27/19	1455	BELOW SLAB
Carbon Monoxide Detector (if applicable)	N/A	—	—
Information Placards			
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						
Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan# NONE	—	—	—	—		—

*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

PASSIVE SYSTEM. MATTING AND LINER UNDER RAT SLAB
INSPECTED RISER PIPE, UNDER THE CLASSROOM
THE REST OF THE PIPE IS BEHIND THE WALL

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SSDS Mitigation System Performance Inspection Field Form

"Building MG"; noted 11/8/2021 by NJL

Inspector/Company: FRED ELLIOTT

Location/Address/RES#: 777 SAN MIGUEL "B"

Client/RP:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)	**Initial System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#, GAPSOL	2/27/19	1615	GOOD	Fan _____						
Piping upstream of fan	2/27/19	1615	GOOD	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	2/27/19	1615	GOOD	Fan 125639	2/27/19	1620	-4.2	8		0.6
Exhaust Varmint Guard	2/27/19	1620	GOOD							
Audible Alarm	N/A	—	—							
Plumbing Box Out	N/A	—	—							
System Manometer	N/A	—	—							
Sampling Port	2/27/19	1620	GOOD							
System Labeling	2/27/19	1620	GOOD							
Riser Pipe Seals	2/27/19	1630	GOOD							
Carbo Monoxide Detector (if applicable)	N/A	—	—							
Information Placards	2/27/19	1630	GOOD							
Owner/Tenant has current information/Notification sheet										

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action and inclusion in periodic reporting to EPA.

**SSDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked: "T" TOP CRITTER GUARD

CHECKED VAC SWITCH AND AUTO DIALER.

METAL PIPE BELOW FAN SAMPLING & VAC TUBE IN RUBBER 3X4 COUPLING

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SSDS Mitigation System Performance Inspection Field Form

Inspector/Company: FRED ELLIOTT

Location/Address/RES#: SAN MIGUEL ELEMENTARY SCHOOL - BUILDING MG (B)

Client/RP:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)	**Initial System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#, GP501	5/6/19	1515	GOOD	Fan _____						
Piping upstream of fan	5/6/19	1520	GOOD	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	5/6/19	1522	GOOD	Fan 175639	05/6/19	1540	-4.01	3.9		0.8
Exhaust Varmint Guard	5/6/19	1545	GOOD							
Audible Alarm	N/A	N/A	N/A							
Plumbing Box Out	N/A	N/A	N/A							
System Manometer	N/A	N/A	N/A							
Sampling Port	5/6/19	1520	GOOD							
System Labeling	5/6/19	1520	GOOD							
Riser Pipe Seals	5/6/19	1535	GOOD							
Carbo Monoxide Detector (if applicable)	N/A	N/A	N/A							
Information Placards	5/6/19	1540	GOOD							
Owner/Tenant has current information/Notification sheet										

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action and inclusion in periodic reporting to EPA.

**SSDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

METAL PIPE AND COVER ARE GOOD AUTO DIALER CHECKED OK. CHECKED VAC SWITCH.

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona*, Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SSDS Mitigation System Performance Inspection Field Form

Inspector/Company: FRED ELLIOTT

Location/Address/RES#: 777 SAN MIGUEL B

"Building MG"; noted 11/8/2021 by NJL

Client/RP:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#, 125639	9/16/19	3:30	GOOD
Piping upstream of fan	9/16/19	3:30	GOOD
Riser Pipe	9/16/19	3:41	GOOD
Exhaust Varmint Guard	9/16/19	3:45	GOOD
Audible Alarm			N/A
Plumbing Box Out			N/A
System Manometer			N/A
Sampling Port	9/16/19	3:50	GOOD
System Labeling	9/16/19	3:51	GOOD
Riser Pipe Seals	9/16/19	3:40	GOOD
Carbo Monoxide Detector (if applicable)			N/A
Information Placards	9/16/19	3:55	GOOD
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan _____						
Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan _____	9/16/19	3:30	-3.81	12		0.7

GPS01

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action and inclusion in periodic reporting to EPA.

**SSDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked: METAL PIPE FROM SIDEWALK UP TO FAN CHECKED AUTO DIALER, 2 ALARMS CKD GK. "T" TOP ON TOP OF PIPE

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance (O&M)

SSDS Mitigation System Performance Inspection Field Form

Inspector/Company: FRED ELLIOTT

Location/Address/RES#: 777 SAN MIGUEL B

"Building MG"; noted 11/8/2021 by NJL

Client/RP:

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#, 125639	9/16/19	3:30	GOOD
Piping upstream of fan	9/16/19	3:30	GOOD
Riser Pipe	9/16/19	3:41	GOOD
Exhaust Varmint Guard	9/16/19	3:45	GOOD
Audible Alarm			N/A
Plumbing Box Out			N/A
System Manometer			N/A
Sampling Port	9/16/19	3:50	GOOD
System Labeling	9/16/19	3:51	GOOD
Riser Pipe Seals	9/16/19	3:40	GOOD
Carbo Monoxide Detector (if applicable)			N/A
Information Placards	9/16/19	3:55	GOOD
Owner/Tenant has current information/Notification sheet			

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan _____						
Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan _____	9/16/19	3:30	-3.81	12		0.7

GPS01

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

*a "poor" finding necessitates corrective action and inclusion in periodic reporting to EPA.

**SSDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked: METAL PIPE FROM SIDEWALK UP TO FAN CHECKED AUTO DIALER, 2 ALARMS CKD GK. "T" TOP ON TOP OF PIPE

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

Operations & Maintenance Inspection (SMDS or SSDS)

Triple Site Field Form

Location/Address/RES/Bldg#: SAN MIGUEL

Date & Time: 12/14/22 340

Inspector/Company: FRED ECKERT

LZ

Locus Project Number:

Occupant Consent Access Date:

Visual System Checks	Condition (Good or Poor*)
Fan#	NO FAN
Piping upstream of fan (e.g. attached and undamaged)	
Riser Pipe (e.g. attached and undamaged)	
Exhaust Varmint Guard (e.g. in tact)	
Audible Alarm (e.g. working condition)	
Plumbing Box Out (e.g. undamaged)	
System Manometer (e.g. working)	
Sampling Port (e.g. working, free of obstruction)	
System Labeling (e.g., in place, legible)	
Riser Pipe Seals (e.g. seals in tact)	
Liner (e.g. no breaches/damage)	
Liner Edge (e.g. sealed)	
Carbon Monoxide Detector (if applicable) (e.g. working)	
Information Placards (e.g. in tact, legible)	
Owner/Tenant has current information/Notification sheet	

After the post-installation indoor air sampling period (through the second winter of operation), O&M Forms must be pre-filled out with the Target Operating Range.

Target Operating Range[1]	Pressure ("wc)**	Flow (CFM)	Fan Amperage	
Fan#				
Current System Measurements	Pressure ("wc)**	Flow (CFM)	Fan Amperage	Within Target Operating Range? (Y/N)
Fan# NO FAN				

*a "poor" finding necessitates corrective action

** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

1 This is the target operating range as established during the post-installation indoor air sampling period (through the second winter of operation); these fields will be blank until such time as post-installation indoor air sampling is complete and the target operating range established therefrom.

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services/change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant/System shut-off or failed/notification worked:

CHECKED PIPE & PIPE SEAL AT CEMENT

LOTS OF TRASH UNDER BUILDING

Operations & Maintenance Inspection (SMDS or SSDS)

Triple Site Field Form

Location/Address/RES/Bldg#: SAN MIGUEL

Date & Time: 12/14/22

Inspector/Company: MODERN TT

Locus Project Number:

Occupant Consent Access Date:

Visual System Checks	Condition (Good or Poor*)
Fan#	
Piping upstream of fan (e.g. attached and undamaged)	
Riser Pipe (e.g. attached and undamaged)	
Exhaust Varmint Guard (e.g. in tact)	
Audible Alarm (e.g. working condition)	
Plumbing Box Out (e.g. undamaged)	
System Manometer (e.g. working)	
Sampling Port (e.g. working, free of obstruction)	
System Labeling (e.g., in place, legible)	
Riser Pipe Seals (e.g. seals in tact)	
Liner (e.g. no breaches/damage)	
Liner Edge (e.g. sealed)	
Carbon Monoxide Detector (if applicable) (e.g. working)	
Information Placards (e.g. in tact, legible)	
Owner/Tenant has current information/Notification sheet	

4

After the post-installation indoor air sampling period (through the second winter of operation), O&M Forms must be pre-filled out with the Target Operating Range.

Target Operating Range[1]	Pressure ("wc)**	Flow (CFM)	Fan Amperage	
Fan#				
Current System Measurements	Pressure ("wc)**	Flow (CFM)	Fan Amperage	Within Target Operating Range? (Y/N)
Fan# NO FAN				

*a "poor" finding necessitates corrective action

** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

1 This is the target operating range as established during the post-installation indoor air sampling period (through the second winter of operation); these fields will be blank until such time as post-installation indoor air sampling is complete and the target operating range established therefrom.

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked):

CHECKED PIPE & PIPE SEAL AT CEMENT, O/K

MINOR CRACKS IN CEMENT NOTED

Operations & Maintenance Inspection (SMDS or SSDS)

Triple Site Field Form

Location/Address/RES/Bldg#: SAN MIGUEL

Inspector/Company: FROELLROTT

Locus Project Number:

Occupant Consent Access Date:

Date & Time: 12/14/22 340

MK1

Visual System Checks	Condition (Good or Poor*)
Fan#	NONE
Piping upstream of fan (e.g. attached and undamaged)	
Riser Pipe (e.g. attached and undamaged)	
Exhaust Varmint Guard (e.g. in tact)	
Audible Alarm (e.g. working condition)	
Plumbing Box Out (e.g. undamaged)	
System Manometer (e.g. working)	
Sampling Port (e.g. working, free of obstruction)	
System Labeling (e.g., in place, legible)	
Riser Pipe Seals (e.g. seals in tact)	
Liner (e.g. no breaches/damage)	
Liner Edge (e.g. sealed)	
Carbon Monoxide Detector (if applicable) (e.g. working)	
Information Placards (e.g. in tact, legible)	
Owner/Tenant has current information/Notification sheet	

After the post-installation indoor air sampling period (through the second winter of operation), O&M Forms must be pre-filled out with the Target Operating Range.

Target Operating Range[1]	Pressure ("wc)**	Flow (CFM)	Fan Amperage	
Fan#				
Current System Measurements	Pressure ("wc)**	Flow (CFM)	Fan Amperage	Within Target Operating Range? (Y/N)
Fan# NO FAN				

*a "poor" finding necessitates corrective action

** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

1 This is the target operating range as established during the post-installation indoor air sampling period (through the second winter of operation); these fields will be blank until such time as post-installation indoor air sampling is complete and the target operating range established therefrom.

Changed Conditions or Anomalies (change in flooring or joints, new utility lines or services, change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant/System shut-off or failed/notification worked:

GROUND VENTS RESTRICTED BY LEAFS
NEEDS TO BE KEEP CLEAR

CHECKED PIPE & PIPESEAL AT CEMENT

Operations & Maintenance Inspection (SMDS or SSDS)

Triple Site Field Form

Location/Address/RES/Bldg#: SAN MIGUEL

Date & Time: 12/14/22 330

Inspector/Company: FRED EZZELL

MG (B-4)

Locus Project Number:

Occupant Consent Access Date:

Visual System Checks	Condition (Good or Poor*)
Fan* GP501	GOOD
Piping upstream of fan (e.g. attached and undamaged)	GOOD
Riser Pipe (e.g. attached and undamaged)	GOOD
Exhaust Varmint Guard (e.g. in tact)	GOOD
Audible Alarm (e.g. working condition)	N/A
Plumbing Box Out (e.g. undamaged)	N/A
System Manometer (e.g. working)	N/A
Sampling Port (e.g. working, free of obstruction)	GOOD
System Labeling (e.g., in place, legible)	GOOD
Riser Pipe Seals (e.g. seals in tact)	GOOD
Liner (e.g. no breaches/damage)	N/A
Liner Edge (e.g. sealed)	N/A
Carbon Monoxide Detector (if applicable) (e.g. working)	N/A
Information Placards (e.g. in tact, legible)	
Owner/Tenant has current information/Notification sheet	/

After the post-installation indoor air sampling period (through the second winter of operation), O&M Forms must be pre-filled out with the Target Operating Range.

Target Operating Range[1]	Pressure ("wc)**	Flow (CFM)	Fan Amperage	
Fan#				
Current System Measurements	Pressure ("wc)**	Flow (CFM)	Fan Amperage	Within Target Operating Range? (Y/N)
Fan# 125639	4.07	9	0.6	

*a "poor" finding necessitates corrective action

** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

1 This is the target operating range as established during the post-installation indoor air sampling period (through the second winter of operation); these fields will be blank until such time as post-installation indoor air sampling is complete and the target operating range established therefrom.

Changed Conditions or Anomalies (change in flooring or joints; new utility lines or services; change to dirt flooring such as earthquakes; heavy rain or flood; fires or accidents; change in owner/occupant); System shut-off or failed notification worked:

CHECKED ~~GOOD~~ METAL SUCTION PIPE, ETC.
CHECKED AUTO DIALER
CHECKED VACUUM SWITCH, OK

Appendix O
City of Sunnyvale Permit/s fo Mitigation System
(NOT APPLICABLE)

Appendix P
Post-Installation Mitigation Sampling Field Forms

DAILY FIELD ACTIVITY LOG

Project Name: OSW - TRIPLE SITE
Field Activity: SAMPLING - INDOOR AIR
Weather:

Project No.:
Date: 12/4/14
Logged by: LINDA
Page: 2 of 2

TIME	DAILY ACTIVITIES AND EVENTS
16:20	ARRIVE TO CYW - KIDS & STAFF PRESENT. EMERSON GAVE GREEN LIGHT TO PLACE AMB SAMPLE. PATH SAMPLE DEPLOYED THR CO ACCESS BEHND BLD. INSPECTED EXT COMP OF MIT SYST - NO ISSUES
16:42	CREW MOVED TO SAN MIGUEL SCHOOL - LINDA COMMUNICATED W/ CHRISTIAN (CUSTODIAN) TO OPEN CLASSROOMS IN "U" & "L2" BLD. AMB SAMPLE DEPLOYED ~~IN~~ CENTER OF ROOM. PATH SAMPLE RELOCATED FOR L2 BLD TO FRONT OF CLASSROOM SW CORNER-FID "ML2-PATH-2"
16:50	L1 AMB DEPLOYED & PLACED CENTER OF ROOM. PATHWAY RELOCATED TO NW CORNER FID ML1-PATH-2"
17:05	SECOND CUSTODIAN OPENED DOORS TO "K" BLD. PLACED AMB SAMPLE 2ND ROOM WEST OF CYW. RELOCATED TO ~~BATH~~ RESTROOM FID "MK1-AMB-3"
17:17	PLACED AMB IN THIRD ROOM W OF CYW. RELOC TO RESTROOM - FID "MK1-AMB-4"
17:25	CUSTODIAN UNLOCKED GATE TO ACCESS REAR OF BUILDING. SAMPLE RELOCATED TO FLOOR GRATE BEHIND THIRD ROOM W OF CYW. LOCATION SEEMED THE MOST CENTRAL TO BUILDING.
17:37	PLACE OUT CAMPLE UNDER AWNING ON FRONT OF BUILDING.
17:42	LEFT SCHOOL GROUNDS

Comments/Remarks:

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES – L1

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

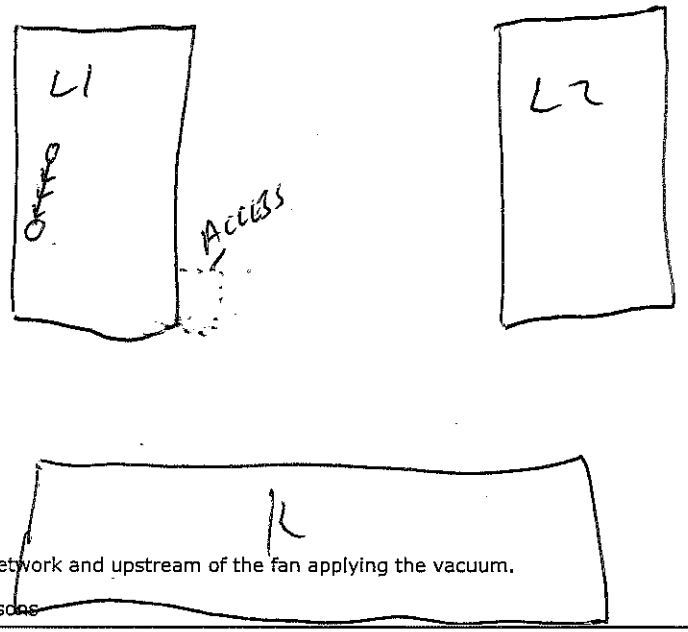
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe			GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling			
Riser Pipe Seals	3/28/18		GOOD
Liner Breaches/Damage		BELOW CEMENT	
Liner Edge Seals		BELOW CEMENT	
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECTION OF VENT PIPE FROM WHERE IT COMES OUT OF CEMENT TO WHERE IT CONNECTS TO BUILT IN STACK

CRACKS IN "RAT" SLAB

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - L2

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

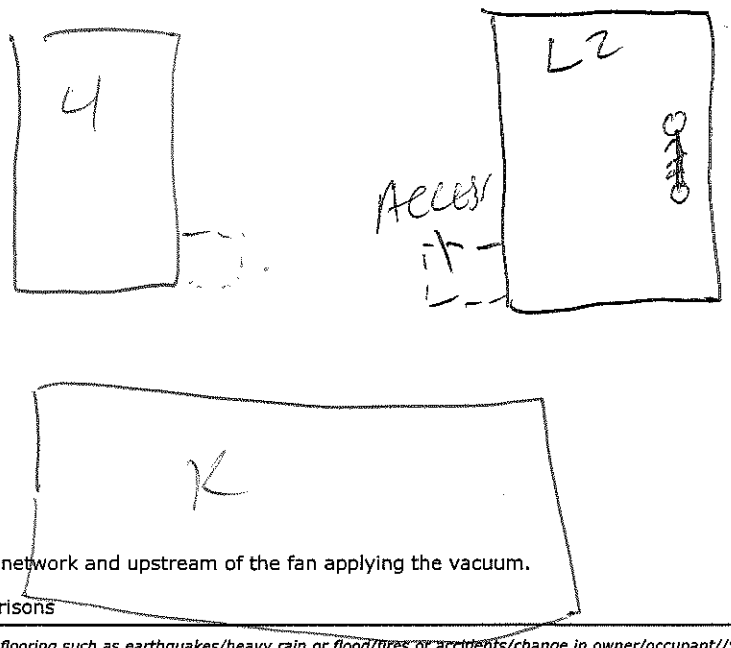
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe	3/28/18		GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling	N/A		
Riser Pipe Seals	3/28/18		GOOD
Liner Breaches/Damage		BELOW CEMENT	
Liner Edge Seals		BELOW CEMENT	
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECTION OF VENT PIPE FROM WHERE IT COMES OUT OF THE CEMENT TO WHERE IT CONNECTS TO THE BUILT IN STACK

CRACKS IN "RAT" SLAB

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

Operations & Maintenance (O&M)

SMDS Mitigation System Performance Inspection Field Form

Location/Address/RES#: SMES - K

Inspector/Company: Fred Ellrott/ Fred Ellrott

Client/RP: Philips Triple Site

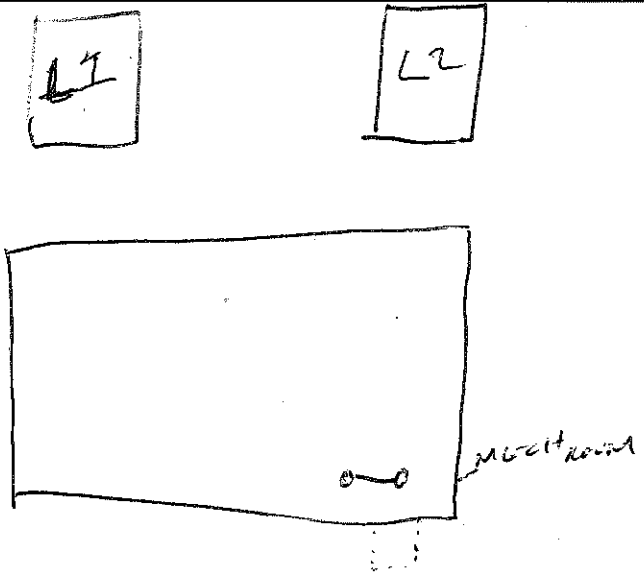
Occupant Consent Access Date: 3/28/18

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)
Fan#	N/A		N/A
Piping upstream of fan	N/A		
Riser Pipe			GOOD
Exhaust Varmint Guard	N/A		
Audible Alarm	N/A		
Plumbing Box Out	N/A		
System Manometer	N/A		
Sampling Port	N/A		
System Labeling	N/A		
Riser Pipe Seals			
Liner Breaches/Damage	(3/28/18)		GOOD
Liner Edge Seals			BELOW CEMENT
Carbon Monoxide Detector (if applicable)	N/A		
Information Placards	N/A		
Owner/Tenant has current information/Notification sheet	N/A		

Initial System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						

Current System Measurements	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#						



*a "poor" finding necessitates corrective action

**SMDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

INSPECT VENT PIPE WITH IT COMES OUT OF THE CEMENT AND CONNECTS TO STACK BUILT INTO THE BUILDING

Manometer, micromanometer, and/or velometer calibration certificate(s) must be filed as QA-backup with inspection reports to EPA

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

* NO FAN

SSDS Post-Mitigation Sampling Field Form

Sampler/Company: RICKY K. & VLAD P. / LOCUS TECHNOLOGIES

RES#: SMES-MG(B)

Date: 11/6/18

Occupant Consent Access Date:

Vent Stack Sample Collected?:

Visual System Checks	Condition (Good or Poor*)
Piping upstream of fan	GOOD
Riser Pipe	GOOD
Weather-Proof Box	GOOD
System Manometer	N/A
Sampling Port	N/A USED HOSE ROUTED TO VACUUM SWITCH FOR
System Labeling	GOOD
Riser Pipe Seals	GOOD
Information Placards	N/A

System Readings	Value
Fan Number# B4	
Fan Condition (Good or Poor*)	GOOD
Fan Status As Found (On or Off)**	ON
Fan Status During Sampling (On or Off)**	ON
Vacuum (inches WC), if system-dedicated manometer is present	-3.9

*a "poor" finding necessitates corrective action

** If the fan is found in the off position, turn it back on prior to sampling. If the fan cannot be turned on due to fan failure, note that on the field form and notify a Locus technician.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

CHRISTINA 408 522 8278
KATHY 408 522 8225 x1055

SMDS Post-Mitigation Sampling Field Form

Sampler/Company: RICKY K. / LOCUS TECHNOLOGIES

RES#: SMES - K, L1, L2, MG

Date: 12/11/18

Occupant Consent Access Date:

Vent Stack Sample Collected?:

*K, L1, L2 PASSIVE

MG SYSTEM

Visual System Checks	Condition (Good or Poor*) K, L1, L2	MG
Piping upstream of fan	N/A	GOOD
Riser Pipe	GOOD	GOOD
Weather-Proof Box	N/A	GOOD
System Manometer	N/A	N/A
Sampling Port	N/A	N/A
System Labeling	GOOD	GOOD
Riser Pipe Seals	GOOD	GOOD
Information Placards	N/A	GOOD

System Readings	Value
Fan Number#	*WILL DEFINE ON NEXT VISIT
Fan Condition (Good or Poor*)	GOOD
Fan Status As Found (On or Off)**	ON
Fan Status During Sampling (On or Off)**	ON
Vacuum (inches WC), if system-dedicated manometer is present	-3.9

*NO OHM INSPECTION FOR BUILDING MG SYSTEM (SSDS). TOO SOON

*a "poor" finding necessitates corrective action

** If the fan is found in the off position, turn it back on prior to sampling. If the fan cannot be turned on due to fan failure, note that on the field form and notify a Locus technician.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

Operations & Maintenance (O&M)

SSDS Mitigation System Performance Inspection Field Form

Inspector/Company: FRED ELLROTT

Location/Address/RES#: 777 SAN MIGUEL BLDG "B"

Client/RP:

GP501

type in post-mitigation implementation data and compare to subsequent inspection measurements

Visual System Checks	Date	Time	Condition (Good or Poor*)	**Initial System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Fan#: 125639	12/18/15	1430	GOOD	Fan _____						
Piping upstream of fan	12/18/15	1440	GOOD	**Current System Measurements**	Date	Time	Vacuum ("wc)**	Flow (CFM)	Within 25% (Y/N)	Fan Amperage
Riser Pipe	12/18/15	1440	GOOD	Fan 125639	12/18/15	1430	-4.0	3.89		0.8
Exhaust Varmint Guard	12/18/15	1445	GOOD							
Audible Alarm	N/A	—	—							
Plumbing Box Out	N/A	—	—							
System Manometer	12/18/15	1445	GOOD							
Sampling Port	12/18/15	1450	GOOD							
System Labeling	12/18/15	1450	GOOD							
Riser Pipe Seals	12/18/15	1500	GOOD							
Carbo Monoxide Detector (if applicable)	N/A	—	—							
Information Placards	12/18/15	1430	GOOD							
Owner/Tenant has current Information/Notification sheet										

**SSDS Vacuum is measured in the piping downstream of the vapor collecting pipe network and upstream of the fan applying the vacuum.

#Fan numbering should be unique to Arques mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

CAST IRON PIPE FROM COLLECTION PIT TO BOTTOM OF FAN. CHECKED AUTO DIALER
COVER CRACKED FROM SOCCER BALL REMOVED MAGNETICALLY

see for reference: *Residential Vapor Intrusion Mitigation System Operations and Maintenance Plan, 52nd Street Motorola Superfund Site Operable Unit 1 Area, Phoenix, Arizona* , Freescale Semiconductor, Inc., June 2013.

SSDS Post-Mitigation Sampling Field Form

Sampler/Company: RICKY KAZAKOFF + NICOLE LOOK / LOCUS TECHNOLOGIES

RES#: SMES - MG

Date: 5/6/19

Occupant Consent Access Date: 4/23/19

Vent Stack Sample Collected?:

Visual System Checks	Condition (Good or Poor*)
Piping upstream of fan	GOOD
Riser Pipe	GOOD
Weather-Proof Box	GOOD
System Manometer	N/A
Sampling Port	N/A; USED HOSE ROUTED TO VACUUM SWITCH
System Labeling	GOOD
Riser Pipe Seals	GOOD
Information Placards	GOOD

System Readings GP 501	Value
Fan Number# BH	125639
Fan Condition (Good or Poor*)	GOOD
Fan Status As Found (On or Off)**	ON
Fan Status During Sampling (On or Off)**	ON
Vacuum (inches WC), if system-dedicated manometer is present	4.01

*a "poor" finding necessitates corrective action

** If the fan is found in the off position, turn it back on prior to sampling. If the fan cannot be turned on due to fan failure, note that on the field form and notify a Locus technician.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

N/A

DAILY FIELD ACTIVITY LOG

Project Name: Philips - OOU
Field Activity: SMES Sampling
Weather: 58°F Sunny clear

Project No.: 2700608/9018
Date: 11/21/22
Logged by: Alan Tran
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
16:00	Meet @ Front office of SMES w/ Nicole, Josh and Rose (APTIM)
	Check in, Custodian unlocks classrooms for us.
16:18	Begin Sample placements
17:07	Finish Sample placements
17:15	Check mitigation system at MG. Take vacuum reading.
17:30	OFF-SITE

Comments/Remarks:

DAILY FIELD ACTIVITY LOG

Project Name: Philips – OOU
Field Activity: SMES Sampling Pickups
Weather: 58°F Sunny/Clear

Project No.: 2700608/9018
Date: 11/22/22
Logged by: Alan Tunn
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
16:00	Arrive ON SITE, meet w/ Madeline and Josh
	Check in @ front office of SMES. Gain access to classrooms.
16:04	Begin Sample Pickups.
16:50	Finish sample Pickups.
17:05	OFF-SITE

Comments/Remarks:

Post-Installation Sampling Field Form (SSDS or SMDS)

Triple Site

Sampler/Company: Alan Tuan / LOCUS

RES/Bldg ID: SMES-MG

Date: 11/21/22

Occupant Consent Access Date: 11/10/22

Vent Stack Sample Collected?: NO

Visual System Checks	Condition (Good or Poor*)
Piping upstream of fan (e.g. attached and undamaged)	GOOD
Riser Pipe (e.g. attached and undamaged)	GOOD
Weather-Proof Box (e.g. weather-proof)	GOOD
System Manometer (e.g. working, visible)	N/A
Sampling Port (e.g. working, free of obstruction)	GOOD
System Labeling (e.g. in place, legible)	GOOD
Riser Pipe Seals (e.g. seals in tact)	GOOD
Information Placards (e.g. in tact, legible)	GOOD

System Readings	Value
Fan Number#	125634
Fan Condition (Good or Poor*)	GOOD
Fan Status As Found (On or Off)**	ON
Fan Status During Sampling (On or Off)**	ON
Pressure*** (inches WC)	-4.05

*a "poor" finding necessitates corrective action

** If the fan is found in the off position, turn it back on prior to sampling. If the fan cannot be turned on due to fan failure, note that on the field form and notify a Locus technician.

*** Pressure is measured in the piping downstream of (above) the fan applying the vacuum.

Fan numbering should be unique to Triple Site mitigation network for future comparisons

Changed Conditions or Anomalies (change in flooring or joints/new utility lines or services//change in dirt flooring such as earthquakes/heavy rain or flood/fires or accidents/change in owner/occupant//System shut-off or failed/notification worked:

Appendix Q
Analytical Laboratory Reports and Chain-of-Custodies

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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 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager J. W. HAWTHORNE

Collected by: (Print and Sign) Hawthorne / Hammond leferson@locustech.com

Company Locus Tech Email hawthorne@locustech.com

Address 299 Fairchild Dr City Mtn View State CA Zip 94043

Phone 415-799-9937 Fax

Project Info:
P.O. # 30-12752
Project # 27006-08-9018
Project Name Triple Site

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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	MA-AMB-1-012615	6L007	1/26/15	654-1454	TO-15-SIM	-30	-5.5		
02A	MA-AMB-1D-012615	11897	1/26/15	656-1454		-30	-5.0		
03A	MC-AMB-1-012615	32113	1/26/15	704-1457		-29	-10		
04A	MC-PATH-1-012615	34390	1/26/15	659-1455		-30	-6		
05A	MD-AMB-1-012615	3960	1/26/15	708-1501		-28.5	-5		
06A	ME-AMB-1-012615	34419	1/26/15	712-1502		-28	-5		
07A	ME-PATH-1-012615	34270	1/26/15	713-1505		-30	-7		
08A	ME-OUT-1-012615	934	1/26/15	710-1506		-29.5	-5		
09A	MF-AMB-1-012615	24221	1/26/15	703-1501		-30	-7		
10A	MG-AMB-1-012615	35998	1/26/15	704-1503		-29.5	-5		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	1/27/2015 1310	[signature]	FAT 1/28/15 0920
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 #
	UPS		NA	Good	Yes No None	1501343

Form 1293 rev.11

eurofins | Air Toxics

2/5/2015
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006-08-9018
Workorder #: 1501343

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 1/28/2015 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 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

eurofins | Air Toxics

WORK ORDER #: 1501343

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	01/28/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/05/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	MA-AMB-1-012615	Modified TO-15	4.9 "Hg	4.8 psi
01B	MA-AMB-1-012615	Modified TO-15	4.9 "Hg	4.8 psi
02A	MA-AMB-1D-012615	Modified TO-15	4.1 "Hg	4.9 psi
02B	MA-AMB-1D-012615	Modified TO-15	4.1 "Hg	4.9 psi
03A	MC-AMB-1-012615	Modified TO-15	10 "Hg	5.1 psi
03B	MC-AMB-1-012615	Modified TO-15	10 "Hg	5.1 psi
04A	MC-PATH-1-012615	Modified TO-15	4.9 "Hg	5.1 psi
04B	MC-PATH-1-012615	Modified TO-15	4.9 "Hg	5.1 psi
05A	MD-AMB-1-012615	Modified TO-15	3.7 "Hg	4.9 psi
05B	MD-AMB-1-012615	Modified TO-15	3.7 "Hg	4.9 psi
06A	ME-AMB-1-012615	Modified TO-15	3.9 "Hg	4.8 psi
06B	ME-AMB-1-012615	Modified TO-15	3.9 "Hg	4.8 psi
07A	ME-PATH-1-012615	Modified TO-15	4.5 "Hg	4.9 psi
07B	ME-PATH-1-012615	Modified TO-15	4.5 "Hg	4.9 psi
08A	ME-OUT-1-012615	Modified TO-15	4.3 "Hg	5 psi
08B	ME-OUT-1-012615	Modified TO-15	4.3 "Hg	5 psi
09A	MF-AMB-1-012615	Modified TO-15	4.9 "Hg	4.9 psi
09B	MF-AMB-1-012615	Modified TO-15	4.9 "Hg	4.9 psi
10A	MG-AMB-1-012615	Modified TO-15	4.5 "Hg	4.8 psi
10B	MG-AMB-1-012615	Modified TO-15	4.5 "Hg	4.8 psi
11A	Lab Blank	Modified TO-15	NA	NA
11B	Lab Blank	Modified TO-15	NA	NA
12A	CCV	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1501343

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	01/28/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/05/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
12B	CCV	Modified TO-15	NA	NA
13A	LCS	Modified TO-15	NA	NA
13AA	LCSD	Modified TO-15	NA	NA
13B	LCS	Modified TO-15	NA	NA
13BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:  DATE: 02/05/15

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

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

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

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Locus Technologies
Workorder# 1501343

Ten 6 Liter Summa Canister (SIM Certified) samples were received on January 28, 2015. 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

The Chain of Custody (COC) information for sample MA-AMB-1D-012615 did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

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.

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.

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

Client Sample ID: MA-AMB-1-012615

Lab ID#: 1501343-01A

No Detections Were Found.

Client Sample ID: MA-AMB-1-012615

Lab ID#: 1501343-01B

No Detections Were Found.

Client Sample ID: MA-AMB-1D-012615

Lab ID#: 1501343-02A

No Detections Were Found.

Client Sample ID: MA-AMB-1D-012615

Lab ID#: 1501343-02B

No Detections Were Found.

Client Sample ID: MC-AMB-1-012615

Lab ID#: 1501343-03A

No Detections Were Found.

Client Sample ID: MC-AMB-1-012615

Lab ID#: 1501343-03B

No Detections Were Found.

Client Sample ID: MC-PATH-1-012615

Lab ID#: 1501343-04A

No Detections Were Found.

Client Sample ID: MC-PATH-1-012615

Lab ID#: 1501343-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.032	0.037	0.17	0.20

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

Client Sample ID: MD-AMB-1-012615

Lab ID#: 1501343-05A

No Detections Were Found.

Client Sample ID: MD-AMB-1-012615

Lab ID#: 1501343-05B

No Detections Were Found.

Client Sample ID: ME-AMB-1-012615

Lab ID#: 1501343-06A

No Detections Were Found.

Client Sample ID: ME-AMB-1-012615

Lab ID#: 1501343-06B

No Detections Were Found.

Client Sample ID: ME-PATH-1-012615

Lab ID#: 1501343-07A

No Detections Were Found.

Client Sample ID: ME-PATH-1-012615

Lab ID#: 1501343-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.031	0.035	0.17	0.19

Client Sample ID: ME-OUT-1-012615

Lab ID#: 1501343-08A

No Detections Were Found.

Client Sample ID: ME-OUT-1-012615

Lab ID#: 1501343-08B

No Detections Were Found.

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

Client Sample ID: MF-AMB-1-012615

Lab ID#: 1501343-09A

No Detections Were Found.

Client Sample ID: MF-AMB-1-012615

Lab ID#: 1501343-09B

No Detections Were Found.

Client Sample ID: MG-AMB-1-012615

Lab ID#: 1501343-10A

No Detections Were Found.

Client Sample ID: MG-AMB-1-012615

Lab ID#: 1501343-10B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.031	0.084	0.17	0.45

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Client Sample ID: MA-AMB-1-012615

Lab ID#: 1501343-01A

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

File Name:	**v013015**	**Date of Collection: 1/26/15 2:54:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 1/30/15 04:24 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: MA-AMB-1-012615

Lab ID#: 1501343-01B

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

File Name:	**v013015sim**	**Date of Collection:**	**1/26/15 2:54:00 PM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**1/30/15 04:24 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: MA-AMB-1D-012615

Lab ID#: 1501343-02A

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

File Name:	**v013016**	**Date of Collection: 1/26/15 2:54:00 PM**	
Dil. Factor:	**1.54**	**Date of Analysis: 1/30/15 04:59 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: MA-AMB-1D-012615

Lab ID#: 1501343-02B

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

File Name:	**v013016sim**	**Date of Collection:**	**1/26/15 2:54:00 PM**
Dil. Factor:	**1.54**	**Date of Analysis:**	**1/30/15 04:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.16	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: MC-AMB-1-012615

Lab ID#: 1501343-03A

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

File Name:	**v013017**	**Date of Collection: 1/26/15 2:57:00 PM**	
Dil. Factor:	**2.02**	**Date of Analysis: 1/30/15 05:34 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.20	Not Detected	1.5	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: MC-AMB-1-012615

Lab ID#: 1501343-03B

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

File Name:	**v013017sim**	**Date of Collection:**	**1/26/15 2:57:00 PM**
Dil. Factor:	**2.02**	**Date of Analysis:**	**1/30/15 05:34 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.020	Not Detected	0.080	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.80	Not Detected
1,1-Dichloroethane	0.040	Not Detected	0.16	Not Detected
cis-1,2-Dichloroethene	0.040	Not Detected	0.16	Not Detected
1,1,1-Trichloroethane	0.040	Not Detected	0.22	Not Detected
Trichloroethene	0.040	Not Detected	0.22	Not Detected
Tetrachloroethene	0.040	Not Detected	0.27	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: MC-PATH-1-012615

Lab ID#: 1501343-04A

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

File Name:	**v013018**	**Date of Collection: 1/26/15 2:55:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 1/30/15 06:10 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: MC-PATH-1-012615

Lab ID#: 1501343-04B

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

File Name:	**v013018sim**	**Date of Collection:**	**1/26/15 2:55:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**1/30/15 06:10 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Trichloroethene	0.032	0.037	0.17	0.20
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: MD-AMB-1-012615

Lab ID#: 1501343-05A

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

File Name:	**v013019**	**Date of Collection:**	**1/26/15 3:01:00 PM**
Dil. Factor:	**1.52**	**Date of Analysis:**	**1/30/15 06:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: MD-AMB-1-012615

Lab ID#: 1501343-05B

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

File Name:	**v013019sim**	**Date of Collection:**	**1/26/15 3:01:00 PM**
Dil. Factor:	**1.52**	**Date of Analysis:**	**1/30/15 06:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: ME-AMB-1-012615

Lab ID#: 1501343-06A

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

File Name:	**v013020**	**Date of Collection: 1/26/15 3:02:00 PM**	
Dil. Factor:	**1.52**	**Date of Analysis: 1/30/15 07:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: ME-AMB-1-012615

Lab ID#: 1501343-06B

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

File Name:	**v013020sim**	**Date of Collection:**	**1/26/15 3:02:00 PM**
Dil. Factor:	**1.52**	**Date of Analysis:**	**1/30/15 07:20 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: ME-PATH-1-012615

Lab ID#: 1501343-07A

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

File Name:	**v013021**	**Date of Collection:**	**1/26/15 3:05:00 PM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**1/30/15 07:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

eurofins | Air Toxics

Client Sample ID: ME-PATH-1-012615

Lab ID#: 1501343-07B

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

File Name:	**v013021sim**	**Date of Collection:**	**1/26/15 3:05:00 PM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**1/30/15 07:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	0.035	0.17	0.19
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: ME-OUT-1-012615

Lab ID#: 1501343-08A

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

File Name:	**v013022**	**Date of Collection: 1/26/15 3:06:00 PM**	
Dil. Factor:	**1.56**	**Date of Analysis: 1/30/15 08:31 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: ME-OUT-1-012615

Lab ID#: 1501343-08B

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

File Name:	**v013022sim**	**Date of Collection:**	**1/26/15 3:06:00 PM**
Dil. Factor:	**1.56**	**Date of Analysis:**	**1/30/15 08:31 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

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

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Client Sample ID: MF-AMB-1-012615

Lab ID#: 1501343-09A

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

File Name:	**v013023**	**Date of Collection: 1/26/15 3:01:00 PM**	
Dil. Factor:	**1.59**	**Date of Analysis: 1/30/15 09:06 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130

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Client Sample ID: MF-AMB-1-012615

Lab ID#: 1501343-09B

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

File Name:	**v013023sim**	**Date of Collection:**	**1/26/15 3:01:00 PM**
Dil. Factor:	**1.59**	**Date of Analysis:**	**1/30/15 09:06 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: MG-AMB-1-012615

Lab ID#: 1501343-10A

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

File Name:	**v013024**	**Date of Collection: 1/26/15 3:03:00 PM**	
Dil. Factor:	**1.56**	**Date of Analysis: 1/30/15 09:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: MG-AMB-1-012615

Lab ID#: 1501343-10B

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

File Name:	**v013024sim**	**Date of Collection:**	**1/26/15 3:03:00 PM**
Dil. Factor:	**1.56**	**Date of Analysis:**	**1/30/15 09:41 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	0.084	0.17	0.45
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1501343-11A

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

File Name:	**v013006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 09:39 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1501343-11B

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

File Name:	**v013006sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 09:39 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	101	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1501343-12A

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

File Name:	**v013002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 06:29 AM**	

Compound	**%Recovery**
Freon 113	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: CCV

Lab ID#: 1501343-12B

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

File Name:	**v013002sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 06:29 AM**	

Compound	%Recovery
1,1-Dichloroethene	96
trans-1,2-Dichloroethene	101
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	99
Trichloroethene	95
Tetrachloroethene	95

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1501343-13A

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

File Name:	**v013003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 07:09 AM**	

Compound	%Recovery	Method Limits
Freon 113	93	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCSD

Lab ID#: 1501343-13AA

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

File Name:	**v013004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 07:50 AM**	

Compound	%Recovery	Method Limits
Freon 113	97	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	101	70-130

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Client Sample ID: LCS

Lab ID#: 1501343-13B

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

File Name:	**v013003sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 07:09 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	92	70-130
trans-1,2-Dichloroethene	83	70-130
1,1-Dichloroethane	97	70-130
cis-1,2-Dichloroethene	105	70-130
1,1,1-Trichloroethane	94	70-130
Trichloroethene	90	70-130
Tetrachloroethene	89	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: LCSD

Lab ID#: 1501343-13BB

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

File Name:	**v013004sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 1/30/15 07:50 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	91	70-130
trans-1,2-Dichloroethene	83	70-130
1,1-Dichloroethane	97	70-130
cis-1,2-Dichloroethene	106	70-130
1,1,1-Trichloroethane	95	70-130
Trichloroethene	91	70-130
Tetrachloroethene	91	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

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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 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager J. W. HAWTHORNE

Collected by: (Print and Sign) Hawthorne / Hmmmmbd lefevren@locustech.com

Company Locus Tech Email hawthornej@locustech.com

Address 299 Fairchild Dr City Mtn View State CA Zip 94043

Phone 415-749-9937 Fax

Project Info:

P.O. # 30-12752

Project # 27006-08-9018

Project Name Triple Site

Turn Around Time:

☒ Normal

☐ Rush

specify

Lab Use Only

Pressurized by:

Date:

Pressurization Gas: N_2 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	MG-AMB-1D-012615	35250	1/26/15	709-1503	TO-15-SIM	-30	-7		
02A	MH-AMB-1-012615	11884	1/26/15	702-1500		-27	-4		
03A	MI-AMB-1-012615	6L0052	1/26/15	700-1459		-29.5	-6		
04A	MJ-AMB-1-012615	35796	1/26/15	652-1452		-30	-5.5		
05A	MJ-AMB-1D-012615	21003	1/26/15	652-1253		-30	-4		
06A	MJ-PATH-1-012615	2627	1/26/15	653-1452		-29.5	-5		
07A	MJ-OUT-1-012615	22509	1/26/15	659-1453		-30	-6		
08A	MK-AMB-1-012615	6L001	1/26/15	654-1454		-30	-6		
09A	ML-AMB-2-012615	25301	1/26/15	656-1455		-30	-5.5		
10A	ML-AMB-2D-012615	9568	1/26/15	656-1455	↓	-30	-6		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Nancy Jean Hmm	1/27/2015 13:00	Emil McGill EATL	1/28/15 0920
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 #
	UPS		NA	Good	Yes No None	150134

Form 1293 rev.11

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2/9/2015
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006-08-9018
Workorder #: 1501344

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 1/28/2015 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 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

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WORK ORDER #: 1501344

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	01/28/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/05/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	MG-AMB-ID-012615	Modified TO-15	5.5 "Hg	4.9 psi
01B	MG-AMB-ID-012615	Modified TO-15	5.5 "Hg	4.9 psi
02A	MH-AMB-1-012615	Modified TO-15	3.5 "Hg	4.8 psi
02B	MH-AMB-1-012615	Modified TO-15	3.5 "Hg	4.8 psi
03A	MI-AMB-1-012615	Modified TO-15	4.3 "Hg	5 psi
03B	MI-AMB-1-012615	Modified TO-15	4.3 "Hg	5 psi
04A	MJ-AMB-1-012615	Modified TO-15	4.1 "Hg	4.9 psi
04B	MJ-AMB-1-012615	Modified TO-15	4.1 "Hg	4.9 psi
05A	MJ-AMB-1D-012615	Modified TO-15	2.8 "Hg	5.1 psi
05B	MJ-AMB-1D-012615	Modified TO-15	2.8 "Hg	5.1 psi
06A	MJ-PATH-1-012615	Modified TO-15	3.7 "Hg	5.5 psi
06B	MJ-PATH-1-012615	Modified TO-15	3.7 "Hg	5.5 psi
07A	MJ-OUT-1-012615	Modified TO-15	4.9 "Hg	5 psi
07B	MJ-OUT-1-012615	Modified TO-15	4.9 "Hg	5 psi
08A	MK-AMB-1-012615	Modified TO-15	4.3 "Hg	5.1 psi
08B	MK-AMB-1-012615	Modified TO-15	4.3 "Hg	5.1 psi
09A	ML-AMB-2-012615	Modified TO-15	3.9 "Hg	4.9 psi
09B	ML-AMB-2-012615	Modified TO-15	3.9 "Hg	4.9 psi
10A	ML-AMB-2D-012615	Modified TO-15	4.5 "Hg	5.1 psi
10B	ML-AMB-2D-012615	Modified TO-15	4.5 "Hg	5.1 psi
11A	Lab Blank	Modified TO-15	NA	NA
11B	Lab Blank	Modified TO-15	NA	NA
11C	Lab Blank	Modified TO-15	NA	NA

Continued on next page

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WORK ORDER #: 1501344

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	01/28/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/05/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
11D	Lab Blank	Modified TO-15	NA	NA
12A	CCV	Modified TO-15	NA	NA
12B	CCV	Modified TO-15	NA	NA
12C	CCV	Modified TO-15	NA	NA
12D	CCV	Modified TO-15	NA	NA
13A	LCS	Modified TO-15	NA	NA
13AA	LCSD	Modified TO-15	NA	NA
13B	LCS	Modified TO-15	NA	NA
13BB	LCSD	Modified TO-15	NA	NA
13C	LCS	Modified TO-15	NA	NA
13CC	LCSD	Modified TO-15	NA	NA
13D	LCS	Modified TO-15	NA	NA
13DD	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 02/05/15

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

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
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LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Locus Technologies
Workorder# 1501344

Ten 6 Liter Summa Canister (SIM Certified) samples were received on January 28, 2015. 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

Sample identification for sample MJ-PATH-1-012615 was not provided on the sample tag. Therefore the information on the Chain of Custody was used to process and report the sample.

The Chain of Custody (COC) information for sample MK-AMB-1-012615 did not match the information on the canister with regard to canister identification. The information on the canister was used to process and report the sample.

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.

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.

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

Client Sample ID: MG-AMB-ID-012615

Lab ID#: 1501344-01A

No Detections Were Found.

Client Sample ID: MG-AMB-ID-012615

Lab ID#: 1501344-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.033	0.081	0.18	0.43

Client Sample ID: MH-AMB-1-012615

Lab ID#: 1501344-02A

No Detections Were Found.

Client Sample ID: MH-AMB-1-012615

Lab ID#: 1501344-02B

No Detections Were Found.

Client Sample ID: MI-AMB-1-012615

Lab ID#: 1501344-03A

No Detections Were Found.

Client Sample ID: MI-AMB-1-012615

Lab ID#: 1501344-03B

No Detections Were Found.

Client Sample ID: MJ-AMB-1-012615

Lab ID#: 1501344-04A

No Detections Were Found.

Client Sample ID: MJ-AMB-1-012615

Lab ID#: 1501344-04B

No Detections Were Found.

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

Client Sample ID: MJ-AMB-1D-012615

Lab ID#: 1501344-05A

No Detections Were Found.

Client Sample ID: MJ-AMB-1D-012615

Lab ID#: 1501344-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.030	0.041	0.16	0.22

Client Sample ID: MJ-PATH-1-012615

Lab ID#: 1501344-06A

No Detections Were Found.

Client Sample ID: MJ-PATH-1-012615

Lab ID#: 1501344-06B

No Detections Were Found.

Client Sample ID: MJ-OUT-1-012615

Lab ID#: 1501344-07A

No Detections Were Found.

Client Sample ID: MJ-OUT-1-012615

Lab ID#: 1501344-07B

No Detections Were Found.

Client Sample ID: MK-AMB-1-012615

Lab ID#: 1501344-08A

No Detections Were Found.

Client Sample ID: MK-AMB-1-012615

Lab ID#: 1501344-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

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

Client Sample ID: MK-AMB-1-012615

Lab ID#: 1501344-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.031	0.082	0.17	0.44

Client Sample ID: ML-AMB-2-012615

Lab ID#: 1501344-09A

No Detections Were Found.

Client Sample ID: ML-AMB-2-012615

Lab ID#: 1501344-09B

No Detections Were Found.

Client Sample ID: ML-AMB-2D-012615

Lab ID#: 1501344-10A

No Detections Were Found.

Client Sample ID: ML-AMB-2D-012615

Lab ID#: 1501344-10B

No Detections Were Found.

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Client Sample ID: MG-AMB-ID-012615

Lab ID#: 1501344-01A

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

File Name:	**e020312**	**Date of Collection: 1/26/15 3:03:00 PM**	
Dil. Factor:	**1.63**	**Date of Analysis: 2/3/15 01:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: MG-AMB-ID-012615

Lab ID#: 1501344-01B

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

File Name:	**e020312sim**	**Date of Collection:**	**1/26/15 3:03:00 PM**
Dil. Factor:	**1.63**	**Date of Analysis:**	**2/3/15 01:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
1,1-Dichloroethane	0.033	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.033	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Trichloroethene	0.033	0.081	0.18	0.43
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	109	70-130

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Client Sample ID: MH-AMB-1-012615

Lab ID#: 1501344-02A

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

File Name:	**e020313**	**Date of Collection: 1/26/15 3:00:00 PM**	
Dil. Factor:	**1.50**	**Date of Analysis: 2/3/15 02:38 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: MH-AMB-1-012615

Lab ID#: 1501344-02B

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

File Name:	**e020313sim**	**Date of Collection:**	**1/26/15 3:00:00 PM**
Dil. Factor:	**1.50**	**Date of Analysis:**	**2/3/15 02:38 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Trichloroethene	0.030	Not Detected	0.16	Not Detected
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: MI-AMB-1-012615

Lab ID#: 1501344-03A

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

File Name:	**e020314**	**Date of Collection: 1/26/15 2:59:00 PM**	
Dil. Factor:	**1.56**	**Date of Analysis: 2/3/15 03:21 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	111	70-130

eurofins | Air Toxics

Client Sample ID: MI-AMB-1-012615

Lab ID#: 1501344-03B

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

File Name:	**e020314sim**	**Date of Collection:**	**1/26/15 2:59:00 PM**
Dil. Factor:	**1.56**	**Date of Analysis:**	**2/3/15 03:21 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1-012615

Lab ID#: 1501344-04A

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

File Name:	**e020315**	**Date of Collection: 1/26/15 2:52:00 PM**	
Dil. Factor:	**1.54**	**Date of Analysis: 2/3/15 04:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	107	70-130

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1-012615

Lab ID#: 1501344-04B

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

File Name:	**e020315sim**	**Date of Collection:**	**1/26/15 2:52:00 PM**
Dil. Factor:	**1.54**	**Date of Analysis:**	**2/3/15 04:03 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.16	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1D-012615

Lab ID#: 1501344-05A

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

File Name:	**e020316**	**Date of Collection:**	**1/26/15 12:53:00 PM**
Dil. Factor:	**1.49**	**Date of Analysis:**	**2/3/15 04:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	104	70-130

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1D-012615

Lab ID#: 1501344-05B

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

File Name:	**e020316sim**	**Date of Collection:**	**1/26/15 12:53:00 PM**
Dil. Factor:	**1.49**	**Date of Analysis:**	**2/3/15 04:45 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.059	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.59	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Trichloroethene	0.030	0.041	0.16	0.22
Tetrachloroethene	0.030	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	108	70-130

eurofins | Air Toxics

Client Sample ID: MJ-PATH-1-012615

Lab ID#: 1501344-06A

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

File Name:	**v020416**	**Date of Collection: 1/26/15 2:52:00 PM**	
Dil. Factor:	**1.56**	**Date of Analysis: 2/4/15 04:01 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	90	70-130

eurofins | Air Toxics

Client Sample ID: MJ-PATH-1-012615

Lab ID#: 1501344-06B

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

File Name:	**v020416sim**	**Date of Collection:**	**1/26/15 2:52:00 PM**
Dil. Factor:	**1.56**	**Date of Analysis:**	**2/4/15 04:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.17	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

eurofins | Air Toxics

Client Sample ID: MJ-OUT-1-012615

Lab ID#: 1501344-07A

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

File Name:	**v020417**	**Date of Collection: 1/26/15 2:53:00 PM**	
Dil. Factor:	**1.60**	**Date of Analysis: 2/4/15 04:37 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130

eurofins | Air Toxics

Client Sample ID: MJ-OUT-1-012615

Lab ID#: 1501344-07B

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

File Name:	**v020417sim**	**Date of Collection:**	**1/26/15 2:53:00 PM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**2/4/15 04:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: MK-AMB-1-012615

Lab ID#: 1501344-08A

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

File Name:	**v020418**	**Date of Collection: 1/26/15 2:54:00 PM**	
Dil. Factor:	**1.57**	**Date of Analysis: 2/4/15 05:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	91	70-130

eurofins | Air Toxics

Client Sample ID: MK-AMB-1-012615

Lab ID#: 1501344-08B

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

File Name:	**v020418sim**	**Date of Collection:**	**1/26/15 2:54:00 PM**
Dil. Factor:	**1.57**	**Date of Analysis:**	**2/4/15 05:17 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.062	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.62	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	0.082	0.17	0.44
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: ML-AMB-2-012615

Lab ID#: 1501344-09A

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

File Name:	**v020419**	**Date of Collection: 1/26/15 2:55:00 PM**	
Dil. Factor:	**1.53**	**Date of Analysis: 2/4/15 05:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	95	70-130

eurofins | Air Toxics

Client Sample ID: ML-AMB-2-012615

Lab ID#: 1501344-09B

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

File Name:	**v020419sim**	**Date of Collection:**	**1/26/15 2:55:00 PM**
Dil. Factor:	**1.53**	**Date of Analysis:**	**2/4/15 05:56 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.061	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.61	Not Detected
1,1-Dichloroethane	0.031	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.031	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.031	Not Detected	0.17	Not Detected
Trichloroethene	0.031	Not Detected	0.16	Not Detected
Tetrachloroethene	0.031	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	100	70-130

eurofins | Air Toxics

Client Sample ID: ML-AMB-2D-012615

Lab ID#: 1501344-10A

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

File Name:	**v020420**	**Date of Collection: 1/26/15 2:55:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/4/15 06:42 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130

eurofins | Air Toxics

Client Sample ID: ML-AMB-2D-012615

Lab ID#: 1501344-10B

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

File Name:	**v020420sim**	**Date of Collection:**	**1/26/15 2:55:00 PM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**2/4/15 06:42 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501344-11A

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

File Name:	**e020306**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 09:32 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501344-11B

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

File Name:	**e020306sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 09:32 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	104	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501344-11C

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

File Name:	**v020405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 09:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1501344-11D

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

File Name:	**v020405sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 09:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1501344-12A

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

File Name:	**e020303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:17 AM**	

Compound	%Recovery
Freon 113	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	116	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1501344-12B

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

File Name:	**e020303sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:17 AM**	

Compound	%Recovery
1,1-Dichloroethene	82
trans-1,2-Dichloroethene	95
1,1-Dichloroethane	79
cis-1,2-Dichloroethene	80
1,1,1-Trichloroethane	115
Trichloroethene	87
Tetrachloroethene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	114	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1501344-12C

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

File Name:	**v020402**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 06:43 AM**	

Compound	%Recovery
Freon 113	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	95	70-130

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1501344-12D

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

File Name:	**v020402sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 06:43 AM**	

Compound	%Recovery
1,1-Dichloroethene	95
trans-1,2-Dichloroethene	100
1,1-Dichloroethane	101
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	99
Trichloroethene	94
Tetrachloroethene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1501344-13A

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

File Name:	**e020304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:59 AM**	

Compound	%Recovery	Method Limits
Freon 113	118	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	110	70-130

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1501344-13AA

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

File Name:	**e020305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 08:42 AM**	

Compound	%Recovery	Method Limits
Freon 113	122	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	111	70-130

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1501344-13B

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

File Name:	**e020304sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:59 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	112	70-130
trans-1,2-Dichloroethene	104	70-130
1,1-Dichloroethane	83	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	124	70-130
Trichloroethene	94	70-130
Tetrachloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	114	70-130

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Client Sample ID: LCSD

Lab ID#: 1501344-13BB

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

File Name:	**e020305sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 08:42 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	106	70-130
trans-1,2-Dichloroethene	87	70-130
1,1-Dichloroethane	82	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	122	70-130
Trichloroethene	93	70-130
Tetrachloroethene	102	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	114	70-130

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Client Sample ID: LCS

Lab ID#: 1501344-13C

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

File Name:	**v020403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 07:30 AM**	

Compound	%Recovery	Method Limits
Freon 113	93	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1501344-13CC

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

File Name:	**v020404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 08:11 AM**	

Compound	%Recovery	Method Limits
Freon 113	94	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCS

Lab ID#: 1501344-13D

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

File Name:	**v020403sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 07:30 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	90	70-130
trans-1,2-Dichloroethene	82	70-130
1,1-Dichloroethane	96	70-130
cis-1,2-Dichloroethene	104	70-130
1,1,1-Trichloroethane	93	70-130
Trichloroethene	90	70-130
Tetrachloroethene	90	70-130

Container Type: NA - Not Applicable

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

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Client Sample ID: LCSD

Lab ID#: 1501344-13DD

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

File Name:	**v020404sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/15 08:11 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	90	70-130
trans-1,2-Dichloroethene	82	70-130
1,1-Dichloroethane	96	70-130
cis-1,2-Dichloroethene	104	70-130
1,1,1-Trichloroethane	93	70-130
Trichloroethene	88	70-130
Tetrachloroethene	90	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	98	70-130

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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 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager J. W. HAWTHORNE

Collected by: (Print and Sign) Hawthorne / Hannabal lefevre@locustech.com

Company Locus Tech Email hawthorne@locustech.com

Address 299 Fairchild Dr City Mtn View State CA Zip 94043

Phone 415-799-9937 Fax

Project Info:
P.O. # 30-12752
Project # 27006-08-9018
Project Name TripleSite

Turn Around Time:
☑ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 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	ML-AMB-1-012615	35133	1/26/15	657-1457	TO-15-SIM	-30	-5.5		
02A	ML-OUT-1-012615	3726	1/26/15	658-1457		-30	-5.5		
03A	MB-AMB-1-012615	10793	1/26/15	632-1752		-29	-6.3		
04A	MB-PATH-1-012615	3475	1/26/15	557-1756		-30	-6.8		

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Nancy Hawthorne	1/27/2015 13:00	Ed Mycoff	FAT 1/28/15 0920
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 #
	UPS		NA	Good	Yes No (None)	1501345

Form 1293 rev.11

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2/9/2015
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006-08-9018
Workorder #: 1501345

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 1/28/2015 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 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

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WORK ORDER #: 1501345

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	01/28/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	02/05/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	ML-AMB-1-012615	Modified TO-15	4.9 "Hg	4.8 psi
01B	ML-AMB-1-012615	Modified TO-15	4.9 "Hg	4.8 psi
02A	ML-OUT-1-012615	Modified TO-15	4.5 "Hg	5.1 psi
02B	ML-OUT-1-012615	Modified TO-15	4.5 "Hg	5.1 psi
03A	MB-AMB-1-012615	Modified TO-15	5.1 "Hg	5 psi
03B	MB-AMB-1-012615	Modified TO-15	5.1 "Hg	5 psi
04A	MB-PATH-1-012615	Modified TO-15	4.1 "Hg	4.6 psi
04B	MB-PATH-1-012615	Modified TO-15	4.1 "Hg	4.6 psi
05A	BLANK-ML-012615	Modified TO-15	14.4 psi	14.4 psi
05B	BLANK-ML-012615	Modified TO-15	14.4 psi	14.4 psi
06A	Lab Blank	Modified TO-15	NA	NA
06B	Lab Blank	Modified TO-15	NA	NA
07A	CCV	Modified TO-15	NA	NA
07B	CCV	Modified TO-15	NA	NA
08A	LCS	Modified TO-15	NA	NA
08AA	LCSD	Modified TO-15	NA	NA
08B	LCS	Modified TO-15	NA	NA
08BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:  DATE: 02/05/15

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

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

LABORATORY NARRATIVE
Modified TO-15 Full Scan/SIM
Locus Technologies
Workorder# 1501345

Five 6 Liter Summa Canister (SIM Certified) samples were received on January 28, 2015. 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

The number of samples received did not match the information on the Chain of Custody (COC). Sample BLANK-ML-012615 was added to the analytical request.

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.

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.

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

Client Sample ID: ML-AMB-1-012615

Lab ID#: 1501345-01A

No Detections Were Found.

Client Sample ID: ML-AMB-1-012615

Lab ID#: 1501345-01B

No Detections Were Found.

Client Sample ID: ML-OUT-1-012615

Lab ID#: 1501345-02A

No Detections Were Found.

Client Sample ID: ML-OUT-1-012615

Lab ID#: 1501345-02B

No Detections Were Found.

Client Sample ID: MB-AMB-1-012615

Lab ID#: 1501345-03A

No Detections Were Found.

Client Sample ID: MB-AMB-1-012615

Lab ID#: 1501345-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.032	0.068	0.17	0.36

Client Sample ID: MB-PATH-1-012615

Lab ID#: 1501345-04A

No Detections Were Found.

Client Sample ID: MB-PATH-1-012615

Lab ID#: 1501345-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)

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

Client Sample ID: MB-PATH-1-012615

Lab ID#: 1501345-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.030	0.25	0.16	1.3

Client Sample ID: BLANK-ML-012615

Lab ID#: 1501345-05A

No Detections Were Found.

Client Sample ID: BLANK-ML-012615

Lab ID#: 1501345-05B

No Detections Were Found.

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Client Sample ID: ML-AMB-1-012615

Lab ID#: 1501345-01A

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

File Name:	**e020307**	**Date of Collection: 1/26/15 2:57:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/3/15 10:23 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	116	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: ML-AMB-1-012615

Lab ID#: 1501345-01B

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

File Name:	**e020307sim**	**Date of Collection:**	**1/26/15 2:57:00 PM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**2/3/15 10:23 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: ML-OUT-1-012615

Lab ID#: 1501345-02A

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

File Name:	**e020308**	**Date of Collection: 1/26/15 2:57:00 PM**	
Dil. Factor:	**1.58**	**Date of Analysis: 2/3/15 11:07 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	122	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: ML-OUT-1-012615

Lab ID#: 1501345-02B

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

File Name:	**e020308sim**	**Date of Collection:**	**1/26/15 2:57:00 PM**
Dil. Factor:	**1.58**	**Date of Analysis:**	**2/3/15 11:07 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.063	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.17	Not Detected
Trichloroethene	0.032	Not Detected	0.17	Not Detected
Tetrachloroethene	0.032	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: MB-AMB-1-012615

Lab ID#: 1501345-03A

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

File Name:	**e020309**	**Date of Collection: 1/26/15 5:52:00 PM**	
Dil. Factor:	**1.61**	**Date of Analysis: 2/3/15 11:50 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	120	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	109	70-130

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Client Sample ID: MB-AMB-1-012615

Lab ID#: 1501345-03B

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

File Name:	**e020309sim**	**Date of Collection:**	**1/26/15 5:52:00 PM**
Dil. Factor:	**1.61**	**Date of Analysis:**	**2/3/15 11:50 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.016	Not Detected	0.064	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.64	Not Detected
1,1-Dichloroethane	0.032	Not Detected	0.13	Not Detected
cis-1,2-Dichloroethene	0.032	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.032	Not Detected	0.18	Not Detected
Trichloroethene	0.032	0.068	0.17	0.36
Tetrachloroethene	0.032	Not Detected	0.22	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	112	70-130

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Client Sample ID: MB-PATH-1-012615

Lab ID#: 1501345-04A

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

File Name:	**e020310**	**Date of Collection:**	**1/26/15 5:56:00 PM**
Dil. Factor:	**1.52**	**Date of Analysis:**	**2/3/15 12:32 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.15	Not Detected	1.2	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	117	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: MB-PATH-1-012615

Lab ID#: 1501345-04B

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

File Name:	**e020310sim**	**Date of Collection:**	**1/26/15 5:56:00 PM**
Dil. Factor:	**1.52**	**Date of Analysis:**	**2/3/15 12:32 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.015	Not Detected	0.060	Not Detected
trans-1,2-Dichloroethene	0.15	Not Detected	0.60	Not Detected
1,1-Dichloroethane	0.030	Not Detected	0.12	Not Detected
cis-1,2-Dichloroethene	0.030	Not Detected	0.12	Not Detected
1,1,1-Trichloroethane	0.030	Not Detected	0.16	Not Detected
Trichloroethene	0.030	0.25	0.16	1.3
Tetrachloroethene	0.030	Not Detected	0.21	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	92	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: BLANK-ML-012615

Lab ID#: 1501345-05A

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

File Name:	**e020311**	**Date of Collection: 1/26/15**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 01:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	112	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

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Client Sample ID: BLANK-ML-012615

Lab ID#: 1501345-05B

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

File Name:	**e020311sim**	**Date of Collection: 1/26/15**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 01:14 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	115	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1501345-06A

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

File Name:	**e020306**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 09:32 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	113	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1501345-06B

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

File Name:	**e020306sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 09:32 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	118	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: CCV

Lab ID#: 1501345-07A

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

File Name:	**e020303**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:17 AM**	

Compound	%Recovery
Freon 113	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	94	70-130
4-Bromofluorobenzene	116	70-130

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Client Sample ID: CCV

Lab ID#: 1501345-07B

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

File Name:	**e020303sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:17 AM**	

Compound	%Recovery
1,1-Dichloroethene	82
trans-1,2-Dichloroethene	95
1,1-Dichloroethane	79
cis-1,2-Dichloroethene	80
1,1,1-Trichloroethane	115
Trichloroethene	87
Tetrachloroethene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	114	70-130

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Client Sample ID: LCS

Lab ID#: 1501345-08A

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

File Name:	**e020304**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:59 AM**	

Compound	%Recovery	Method Limits
Freon 113	118	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	93	70-130
4-Bromofluorobenzene	110	70-130

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Client Sample ID: LCSD

Lab ID#: 1501345-08AA

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

File Name:	**e020305**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 08:42 AM**	

Compound	%Recovery	Method Limits
Freon 113	122	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	95	70-130
4-Bromofluorobenzene	111	70-130

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Client Sample ID: LCS

Lab ID#: 1501345-08B

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

File Name:	**e020304sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 07:59 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	112	70-130
trans-1,2-Dichloroethene	104	70-130
1,1-Dichloroethane	83	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	124	70-130
Trichloroethene	94	70-130
Tetrachloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	124	70-130
Toluene-d8	91	70-130
4-Bromofluorobenzene	114	70-130

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Client Sample ID: LCSD

Lab ID#: 1501345-08BB

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

File Name:	**e020305sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/3/15 08:42 AM**	

Compound	%Recovery	Method Limits
1,1-Dichloroethene	106	70-130
trans-1,2-Dichloroethene	87	70-130
1,1-Dichloroethane	82	70-130
cis-1,2-Dichloroethene	92	70-130
1,1,1-Trichloroethane	122	70-130
Trichloroethene	93	70-130
Tetrachloroethene	102	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	119	70-130
Toluene-d8	90	70-130
4-Bromofluorobenzene	114	70-130

PASSIVE SAMPLE COLLECTION

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

Project Manager J. W. Hawthorne

Collected by: (Print and Sign) Victor Huaracha

Company LOCUS TECHNOLOGIES Email hawthornej@locustec.com

Address 299 FAIRCHILD DR. City MOUNTAIN VIEW State CA Zip 94043

Phone _____ Fax _____

Project Info:
P.O. # _____
Project # 2700608 9018
Project Name TRIPLE SITE

Turn Around Time: ☒ Normal ☐ Rush _____ specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	MA-AMB-1-041415	577NA	04/14/15	11:07	04/15/15	11:33		☒	☐	☐	☐
02A	MA-AMB-1D-041415	578NA	04/14/15	11:07	04/15/15	11:34		☒	☐	☐	☐
03A	ME-PATH-1-041415	988HZ	4/14/15	11:11	04/15/15	11:37		☒	☐	☐	☐
04A	ME-AMB-1-041415	989HZ	04/14/15	11:15	04/15/15	11:39		☒	☐	☐	☐
05A	MC-PATH-1-041415	991HZ	04/14/15	11:18	04/15/15	11:46		☒	☐	☐	☐
06A	MC-AMB-1-041415	992HZ	04/14/15	11:20	04/15/15	11:48		☒	☐	☐	☐
07A	MD-AMB-1-041415	993HZ	04/14/15	11:23	04/15/15	11:50		☒	☐	☐	☐
08A	MG-AMB-1-041415	994HZ	04/14/15	11:26	04/15/15	11:42		☒	☐	☐	☐
09A	MG-AMB-1D-041415	995HZ	04/14/15	11:26	04/15/15	11:42		☒	☐	☐	☐
10A	ME-OUT-1-041415	996HZ	04/14/15	11:28	04/15/15	11:52		☐	☒	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
	04/15/2015		4.16.15 1145
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Sample Site Air Temperature:

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS		4.8°C	Good	Yes No (None)	1504265

PASSIVE SAMPLE COLLECTION

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

Project Manager J. W. Hawthorne

Collected by: (Print and Sign) Victor Hannibal

Company Locus Technologies Email hawthornej@locustec.com

Address 299 Fairchild Dr. City Mountain View State CA Zip 94043

Phone _____ Fax _____

Project Info:
P.O. # _____
Project # 2700608918
Project Name Triple Site

Turn Around Time: ☑ Normal ☐ Rush _____ specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
11A	MF-AMB-1-041415	997 HZ	04/14/15	11:31	04/15/15	11:54		☑	☐	☐	☐
12A	MH-AMB-1-041415	998 HZ	04/14/15	11:33	04/15/15	11:56		☑	☐	☐	☐
13A	MI-AMB-1-041415	999 HZ	04/14/15	11:36	04/15/15	11:58		☑	☐	☐	☐
14A	MJ-OUT-1-041415	001 HX	04/14/15	11:38	04/15/15	12:00		☐	☑	☐	☐
15A	MJ-AMB-1-041415	002 HX	04/14/15	11:41	04/15/15	12:01		☑	☐	☐	☐
16A	MJ-AMB-1D-041415	003 HX	04/14/15	11:41	04/15/15	12:01		☑	☐	☐	☐
17A	MJ-PATH-1-041415	004 HX	04/14/15	11:41	04/15/15	12:03		☑	☐	☐	☐
18A	MK-AMB-1-041415	005 HX	04/14/15	11:47	04/15/15	12:06		☑	☐	☐	☐
19A	ML-AMB-2-041415	006 HX	04/14/15	11:50	04/15/15	12:09		☑	☐	☐	☐
20A	ML-AMB-2D-041415	007 HX	04/14/15	11:50	04/15/15	12:09		☑	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Sample Site Air Temperature:
	04/15/2015		4-16-15 1146	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Notes:
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	VRV		4.8 C	Good	Yes No (None)	1504265

PASSIVE SAMPLE COLLECTION

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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Project Manager J. W. Hawthorne

Collected by: (Print and Sign) Victor Huanambal

Company Locus Technologies Email hawthorne@locustec.com

Address 299 Fairchild Dr. City Mountain View State CA Zip 94043

Phone _____ Fax _____

Project Info:

P.O. # _____

Project # 270060890 18

Project Name Triple site

Turn Around Time:
☑ Normal
☐ Rush
_____ specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr : min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr : min)	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
21A	ML-OUT-1-041415	008 HX	04/14/15	11:54	04/15/15	12:12		☐	☑	☐	☐
22A	ML-AMB-1-041415	009 HX	04/14/15	11:57	04/15/15	12:16		☑	☐	☐	☐
23A	ML-999-1-041415	~~009 HX~~ 824 MS	04/14/15	11:57	04/15/15	12:16		☑	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
[signature]	04/15/2015	[signature]	SATZ 4-16-15 1142
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Sample Site Air Temperature:

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS		4.8°C	Good	Yes No None	15041265

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5/11/2015
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #: 27006089018
Workorder #: 1504265

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 4/16/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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

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WORK ORDER #: 1504265

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006089018 TRIPLE SITE
DATE RECEIVED:	04/16/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	04/28/2015		

FRACTION #	NAME	TEST
01A	MA-AMB-1--041415	Passive RAD 145 (TD)
02A	MA-AMB-1D-041415	Passive RAD 145 (TD)
03A	ME-PATH-1-041415	Passive RAD 145 (TD)
04A	ME-AMB-1-041415	Passive RAD 145 (TD)
05A	MC-PATH-1-041415	Passive RAD 145 (TD)
06A	MC-AMB-1-041415	Passive RAD 145 (TD)
07A	MD-AMB-1-041415	Passive RAD 145 (TD)
08A	MG-AMB-1-041415	Passive RAD 145 (TD)
09A	MG-AMB-1D-041415	Passive RAD 145 (TD)
10A	ME-OUT-1-041415	Passive RAD 145 (TD)
11A	MF-AMB-1-041415	Passive RAD 145 (TD)
12A	MH-AMB-1-041415	Passive RAD 145 (TD)
13A	MI-AMB-1-041415	Passive RAD 145 (TD)
14A	MJ-OUT-1-041415	Passive RAD 145 (TD)
15A	MJ-AMB-1-041415	Passive RAD 145 (TD)
16A	MJ-AMB-1D-041415	Passive RAD 145 (TD)
17A	MJ-PATH-1-041415	Passive RAD 145 (TD)
18A	MK-AMB-1-041415	Passive RAD 145 (TD)
19A	ML-AMB-2-041415	Passive RAD 145 (TD)
20A	ML-AMB-2D-041415	Passive RAD 145 (TD)
21A	ML-OUT-1-041415	Passive RAD 145 (TD)
22A	ML-AMB-1-041415	Passive RAD 145 (TD)
23A	ML-999-1-041415	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1504265

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006089018 TRIPLE SITE
DATE RECEIVED:	04/16/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	04/28/2015		

FRACTION #	NAME	TEST
24A	Lab Blank	Passive RAD 145 (TD)
24B	Lab Blank	Passive RAD 145 (TD)
25A	CCV	Passive RAD 145 (TD)
25B	CCV	Passive RAD 145 (TD)
26A	LCS	Passive RAD 145 (TD)
26AA	LCSD	Passive RAD 145 (TD)
26B	LCS	Passive RAD 145 (TD)
26BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY:  DATE: 05/11/15

Technical Director

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

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1504265

Twenty-three Radiello 145 (VOC TD) samples were received on April 16, 2015. The laboratory transferred the sample sorbent bed to thermal desorption tubes. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

The Chain of Custody was missing method information. EATL proceeded with the analysis as per the original contract or verbal agreement.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank a sampling duration of 1,468 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the effective geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using an estimated rates are qualified with a "C" flag.

All Quality Control Limit exceedences 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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MA-AMB-1--041415

Lab ID#: 1504265-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	18 C	0.42 C

Client Sample ID: MA-AMB-1D-041415

Lab ID#: 1504265-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	17 C	0.41 C

Client Sample ID: ME-PATH-1-041415

Lab ID#: 1504265-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.096	21 C	0.53 C

Client Sample ID: ME-AMB-1-041415

Lab ID#: 1504265-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	17 J0	0.58 J0
Trichloroethene	2.7	0.068	2.9	0.073
Freon 113	3.8	0.091	17 C	0.40 C

Client Sample ID: MC-PATH-1-041415

Lab ID#: 1504265-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	20 C	0.48 C

Client Sample ID: MC-AMB-1-041415

Lab ID#: 1504265-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-AMB-1-041415

Lab ID#: 1504265-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.068	28	0.71
Freon 113	3.8	0.091	19 C	0.45 C

Client Sample ID: MD-AMB-1-041415

Lab ID#: 1504265-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.068	6.1	0.15
Freon 113	3.8	0.091	18 C	0.43 C

Client Sample ID: MG-AMB-1-041415

Lab ID#: 1504265-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.068	39	0.99
Freon 113	3.8	0.092	20 C	0.48 C

Client Sample ID: MG-AMB-1D-041415

Lab ID#: 1504265-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.068	32	0.80
Freon 113	3.8	0.092	18 C	0.42 C

Client Sample ID: ME-OUT-1-041415

Lab ID#: 1504265-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.096	24 C	0.60 C

Client Sample ID: MF-AMB-1-041415

Lab ID#: 1504265-11A

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MF-AMB-1-041415

Lab ID#: 1504265-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	18 C	0.44 C

Client Sample ID: MH-AMB-1-041415

Lab ID#: 1504265-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	20 C	0.47 C

Client Sample ID: MI-AMB-1-041415

Lab ID#: 1504265-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	18 C	0.43 C

Client Sample ID: MJ-OUT-1-041415

Lab ID#: 1504265-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.096	22 C	0.57 C

Client Sample ID: MJ-AMB-1-041415

Lab ID#: 1504265-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	17 C	0.42 C

Client Sample ID: MJ-AMB-1D-041415

Lab ID#: 1504265-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	18 C	0.43 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-PATH-1-041415

Lab ID#: 1504265-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	19 C	0.46 C

Client Sample ID: MK-AMB-1-041415

Lab ID#: 1504265-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.068	2.7	0.068
Freon 113	3.8	0.091	20 C	0.48 C

Client Sample ID: ML-AMB-2-041415

Lab ID#: 1504265-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	18 C	0.42 C

Client Sample ID: ML-AMB-2D-041415

Lab ID#: 1504265-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	16 C	0.39 C

Client Sample ID: ML-OUT-1-041415

Lab ID#: 1504265-21A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.097	20 C	0.51 C

Client Sample ID: ML-AMB-1-041415

Lab ID#: 1504265-22A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.091	19 C	0.47 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML-999-1-041415

Lab ID#: 1504265-23A

No Detections Were Found.

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Client Sample ID: MA-AMB-1--041415

Lab ID#: 1504265-01A

PASSIVE RAD 145 (TD)

File Name:	**6042608**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:33:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 04:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1466 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MA-AMB-1D-041415

Lab ID#: 1504265-02A

PASSIVE RAD 145 (TD)

File Name:	**6042609**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:34:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 04:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	17 C	0.41 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1467 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-PATH-1-041415

Lab ID#: 1504265-03A

PASSIVE RAD 145 (TD)

File Name:	**6042610**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:37:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 05:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	21 C	0.53 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.0F , duration time = 1466 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-AMB-1-041415

Lab ID#: 1504265-04A

PASSIVE RAD 145 (TD)

File Name:	**6042611**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:38:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 06:03 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	17 J0	0.58 J0
Trichloroethene	2.7	0.068	2.9	0.073
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	17 C	0.40 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

J0 = Estimated value due to bias in the CCV.
C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1464 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-1-041415

Lab ID#: 1504265-05A

PASSIVE RAD 145 (TD)

File Name:	**6042612**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:46:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 06:39 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	20 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1468 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-041415

Lab ID#: 1504265-06A

PASSIVE RAD 145 (TD)

File Name:	**6042613**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 07:16 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	28	0.71
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	19 C	0.45 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1468 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-1-041415

Lab ID#: 1504265-07A

PASSIVE RAD 145 (TD)

File Name:	**6042614**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:50:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 07:53 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	6.1	0.15
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1467 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-041415

Lab ID#: 1504265-08A

PASSIVE RAD 145 (TD)

File Name:	**6042615**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 08:30 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	39	0.99
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	20 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1456 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1D-041415

Lab ID#: 1504265-09A

PASSIVE RAD 145 (TD)

File Name:	**6042616**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 09:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	32	0.80
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	18 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1456 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-041415

Lab ID#: 1504265-10A

PASSIVE RAD 145 (TD)

File Name:	**6042617**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:52:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 09:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	24 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.0F , duration time = 1464 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-1-041415

Lab ID#: 1504265-11A

PASSIVE RAD 145 (TD)

File Name:	**6042618**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:54:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 10:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.44 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1463 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-1-041415

Lab ID#: 1504265-12A

PASSIVE RAD 145 (TD)

File Name:	**6042619**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:56:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 10:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	20 C	0.47 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1463 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-1-041415

Lab ID#: 1504265-13A

PASSIVE RAD 145 (TD)

File Name:	**6042620**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 11:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 11:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-OUT-1-041415

Lab ID#: 1504265-14A

PASSIVE RAD 145 (TD)

File Name:	**6042621**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:00:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 12:11 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	22 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.0F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1-041415

Lab ID#: 1504265-15A

PASSIVE RAD 145 (TD)

File Name:	**6042622**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:01:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 12:47 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	17 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MJ-AMB-1D-041415

Lab ID#: 1504265-16A

PASSIVE RAD 145 (TD)

File Name:	**6042623**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:01:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 01:24 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-1-041415

Lab ID#: 1504265-17A

PASSIVE RAD 145 (TD)

File Name:	**6042624**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:03:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 02:01 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	19 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-1-041415

Lab ID#: 1504265-18A

PASSIVE RAD 145 (TD)

File Name:	**6042625**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:06:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 02:38 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	2.7	0.068
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	20 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2-041415

Lab ID#: 1504265-19A

PASSIVE RAD 145 (TD)

File Name:	**6042626**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:09:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 03:14 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2D-041415

Lab ID#: 1504265-20A

PASSIVE RAD 145 (TD)

File Name:	**6042627**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:09:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 03:51 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	16 C	0.39 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-OUT-1-041415

Lab ID#: 1504265-21A

PASSIVE RAD 145 (TD)

File Name:	**6042706**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:12:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 01:21 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.0F , duration time = 1458 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-1-041415

Lab ID#: 1504265-22A

PASSIVE RAD 145 (TD)

File Name:	**6042707**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 01:58 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	19 C	0.47 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-999-1-041415

Lab ID#: 1504265-23A

PASSIVE RAD 145 (TD)

File Name:	**6042708**	**Date of Extraction: NA**	**Date of Collection: 4/15/15 12:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 02:35 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.092	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1504265-24A

PASSIVE RAD 145 (TD)

File Name:	**6042607**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 03:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1468 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1504265-24B

PASSIVE RAD 145 (TD)

File Name:	**6042705**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 11:37 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1468 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV

Lab ID#: 1504265-25A

PASSIVE RAD 145 (TD)

File Name:	**6042603**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 12:30 PM**

Compound	%Recovery
1,1,1-Trichloroethane	141 Q
Trichloroethene	89
Tetrachloroethene	115
1,1-Dichloroethane	109
1,1-Dichloroethene	101
cis-1,2-Dichloroethene	101
Freon 113	109
trans-1,2-Dichloroethene	98

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1504265-25B

PASSIVE RAD 145 (TD)

File Name:	**6042702**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 09:58 AM**

Compound	%Recovery
1,1,1-Trichloroethane	137 Q
Trichloroethene	84
Tetrachloroethene	114
1,1-Dichloroethane	88
1,1-Dichloroethene	75
cis-1,2-Dichloroethene	81
Freon 113	88
trans-1,2-Dichloroethene	80

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1504265-26A

PASSIVE RAD 145 (TD)

File Name:	**6042604**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 01:07 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	139 Q	70-130
Trichloroethene	102	70-130
Tetrachloroethene	120	70-130
1,1-Dichloroethane	98	70-130
1,1-Dichloroethene	98	70-130
cis-1,2-Dichloroethene	100	70-130
Freon 113	106	70-130
trans-1,2-Dichloroethene	95	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1504265-26AA
PASSIVE RAD 145 (TD)

File Name:	**6042605**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/26/15 01:37 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	129	70-130
Trichloroethene	112	70-130
Tetrachloroethene	132 Q	70-130
1,1-Dichloroethane	99	70-130
1,1-Dichloroethene	104	70-130
cis-1,2-Dichloroethene	104	70-130
Freon 113	106	70-130
trans-1,2-Dichloroethene	100	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1504265-26B

PASSIVE RAD 145 (TD)

File Name:	**6042703**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 10:35 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	95	70-130
Trichloroethene	111	70-130
Tetrachloroethene	112	70-130
1,1-Dichloroethane	76	70-130
1,1-Dichloroethene	99	70-130
cis-1,2-Dichloroethene	91	70-130
Freon 113	93	70-130
trans-1,2-Dichloroethene	88	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1504265-26BB
PASSIVE RAD 145 (TD)

File Name:	**6042704**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/27/15 11:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	90	70-130
Trichloroethene	117	70-130
Tetrachloroethene	119	70-130
1,1-Dichloroethane	77	70-130
1,1-Dichloroethene	105	70-130
cis-1,2-Dichloroethene	94	70-130
Freon 113	96	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

PASSIVE 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: Jwoley Hawthorne

Collected by: (Print and Sign) Hawthorne / Liang

Company: LOCUS Email: hawthornj@locustec.com

Address: 299 Fairchild Dr City: Mtn View State: CA Zip: 94043

Phone: 415-799-9937 Fax:

Project Info:
P.O. # 30-12752
Project # 27006-08-9018
Project Name: Triple Site

Turn Around Time: ☒ Normal ☐ Rush (specify)

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	MB-PAT1-1-050215	511MP	050215	18:14	05/03/15	18:08	TO-17	☐	☐	☐	☐
02A	MB-AMB1-050215	512MP	050215	18:17	05/03/15	18:10	TO-17	☐	☐	☐	☐
03A	ME-OUT-1-050215	513MP	050215	18:21	05/03/15	18:13	TO-17	☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐
								☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Victor Huaranca	05/04/15 12:20 PM	[signature] FAR	5/5/15 1000
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Sample Site Air Temperature:

Notes: Please generate separate report from other COCs in this shipment.

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS		4.6°C	Cool	Yes No (None)	1505059

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5/19/2015
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006-08-9018
Workorder #: 1505059B

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 5/5/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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

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WORK ORDER #: 1505059B

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12752
FAX:		**PROJECT #**	27006-08-9018 Triple Site
DATE RECEIVED:	05/05/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	05/19/2015		

FRACTION #	NAME	TEST
01A	MB-PATH-1-050215	Passive RAD 145 (TD)
02A	MB-AMB-1-050215	Passive RAD 145 (TD)
03A	ME-OUT-1-050215	Passive RAD 145 (TD)
04A	Lab Blank	Passive RAD 145 (TD)
05A	CCV	Passive RAD 145 (TD)
06A	LCS	Passive RAD 145 (TD)
06AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 05/19/15

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

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1505059B

Three Radiello 145 (VOC TD) samples were received on May 05, 2015. The laboratory transferred the sample sorbent bed to thermal desorption tubes. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

Sample collection date was incomplete on the Chain of Custody for samples S-PATH-2-050215 through L-AMB-9-050215. The year of collection was assumed to be 2015.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks a sampling duration of 1,434 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the effective geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using an estimated rates are qualified with a "C" flag.

All Quality Control Limit exceedences 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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MB-PATH-1-050215

Lab ID#: 1505059B-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	27	0.72
Freon 113	3.8	0.097	18 C	0.46 C

Client Sample ID: MB-AMB-1-050215

Lab ID#: 1505059B-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.070	23	0.59
Freon 113	3.8	0.093	17 C	0.41 C

Client Sample ID: ME-OUT-1-050215

Lab ID#: 1505059B-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.097	18 C	0.46 C

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Client Sample ID: MB-PATH-1-050215

Lab ID#: 1505059B-01A

PASSIVE RAD 145 (TD)

File Name:	**6050608**	**Date of Extraction: NA**	**Date of Collection: 5/3/15 6:08:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 06:27 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	27	0.72
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	18 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 63.0F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MB-AMB-1-050215

Lab ID#: 1505059B-02A

PASSIVE RAD 145 (TD)

File Name:	**6050609**	**Date of Extraction: NA**	**Date of Collection: 5/3/15 6:10:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 07:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.070	23	0.59
Tetrachloroethene	3.4	0.093	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.085	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.093	17 C	0.41 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1433 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-050215

Lab ID#: 1505059B-03A

PASSIVE RAD 145 (TD)

File Name:	**6050610**	**Date of Extraction: NA**	**Date of Collection: 5/3/15 6:13:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 07:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	18 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 63.0F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1505059B-04A

PASSIVE RAD 145 (TD)

File Name:	**6050607**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 02:02 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.069	Not Detected	Not Detected
Tetrachloroethene	3.4	0.093	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.085	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.093	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1505059B-05A
PASSIVE RAD 145 (TD)

File Name:	**6050603**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 11:31 AM**

Compound	%Recovery
1,1,1-Trichloroethane	82
Trichloroethene	121
Tetrachloroethene	92
1,1-Dichloroethane	92
1,1-Dichloroethene	95
cis-1,2-Dichloroethene	95
Freon 113	102
trans-1,2-Dichloroethene	90

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1505059B-06A
PASSIVE RAD 145 (TD)

File Name:	**6050604**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 12:08 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	70	70-130
Trichloroethene	128	70-130
Tetrachloroethene	93	70-130
1,1-Dichloroethane	80	70-130
1,1-Dichloroethene	104	70-130
cis-1,2-Dichloroethene	98	70-130
Freon 113	99	70-130
trans-1,2-Dichloroethene	92	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1505059B-06AA
PASSIVE RAD 145 (TD)

File Name:	**6050605**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/6/15 12:38 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	61 Q	70-130
Trichloroethene	130	70-130
Tetrachloroethene	95	70-130
1,1-Dichloroethane	82	70-130
1,1-Dichloroethene	112	70-130
cis-1,2-Dichloroethene	103	70-130
Freon 113	94	70-130
trans-1,2-Dichloroethene	93	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

PASSIVE SAMPLE COLLECTION

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

Project Manager J. Wesley Hawthorne

Collected by: (Print and Sign) Linda Ocampo

Company Locus Technologies Email locampo@locustech.com

Address 299 Fairchild Dr City Mtn Vw State Ca Zip 9043

Phone 415-799-9964 Fax

Project Info:
P.O. # 30-12792
Project # 2700609.9018
Project Name Triple Site

Turn Around Time: ☒ Normal ☐ Rush (specify)

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr : min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr : min)	Analysis Requested	Temp °C	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	MH-AMB-1-121615	104554:1	12/16/15	6:03	12/17/15	5:51	TO-17	21.0	☐	☐	☐	☐
02A	MF-AMB-1-121615	104554:2		6:06		5:58		21.0	☐	☐	☐	☐
03A	MJ-AMB-1-121615	104554:3		6:09		6:01		21.0	☐	☐	☐	☐
04A	MJ-AMB-1D-121615	104554:4		6:09		6:01		21.0	☐	☐	☐	☐
05A	MJ-BATH-1-121615	104554:5		6:09		6:02		21.0	☐	☐	☐	☐
06A	MK-AMB-1-121615	104554:6		6:13		6:04		21.0	☐	☐	☐	☐
07A	ML-AMB-2-121615	104554:7		6:16		6:06		21.0	☐	☐	☐	☐
08A	ML-AMB-2D-121615	104554:8		6:16		6:06		21.0	☐	☐	☐	☐
09A	ML-AMB-1-121615	104554:9		6:19		6:08		21.0	☐	☐	☐	☐
10A	MF-AMB-1-121615	104554:10		6:23		6:11		21.0	☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
LOcampo	12/17/15 11:50	Candice Courtney BAT	12/18/15 1125
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Sample Site Air Temperature:

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	~~FedEx~~ UPS		1.4°C	Good	Yes No (None)	1512360
	12/18/15 case					

PASSIVE SAMPLE COLLECTION

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

Project Manager J. Wesley Hawthorne

Collected by: (Print and Sign) Linda Ocampo

Company Locus Technologies Email Ocampo@locustec...

Address 249 Fairchild Dr City Mt. View State CA Zip 94043

Phone _____ Fax _____

Project Info:
P.O. # 30-12798
Project # 270000897018
Project Name Triple Site

Turn Around Time: ☒ Normal ☐ Rush _____ specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Temp °C	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
11A	MG-AMB-1-121615	104554:16	12/16/15	6:25	12/17/15	6:14	TO-17	21.0	☐	☐	☐	☐
12A	MG-AMB-1D-121615	104554:17		6:25		6:14			☐	☐	☐	☐
13A	MD-AMB-1-121615	104554:18		6:29		6:17			☐	☐	☐	☐
14A	MC-AMB-1-121615	104554:19		6:31		6:18			☐	☐	☐	☐
15A	ME-AMB-1-121615	104554:20		6:34		6:20			☐	☐	☐	☐
16A	MA-AMB-1-121615	104554:11		6:37		6:22			☐	☐	☐	☐
17A	MA-AMB-1D-121615	104554:12		6:37		6:22			☐	☐	☐	☐
18A	MB-AMB-1-121615	104554:13		6:40		6:25			☐	☐	☐	☐
19A	MB-PATH-1-121615	104554:14		6:43		6:28		12.0	☐	☐	☐	☐
20A	ME-PATH-1-121615	104554:15		6:49		6:33		4.6	☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Linda Ocampo	12/17/15 11:50	[signature] Courtney Barr	12/18/15 1125
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Sample Site Air Temperature:

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS		1.4°C	Good	Yes No (None)	1512360

PASSIVE SAMPLE COLLECTION

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CHAIN-OF-CUSTODY RECORD

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

Project Manager J Wesley Hawthorne

Collected by: (Print and Sign) Linda Ocampo

Company Locus Technologies Email ocampol@locustech.com

Address 299 Fairchild Dr City Mtn View State CA Zip 94043

Phone 415-799-9964 Fax

Project Info:
P.O. #3012-798
Project # 270046089018
Project Name Triple Date

Turn Around Time:
☒ Normal
☐ Rush
specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	TEMP °C	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
21A	MC-PATH-1-121615	104554:21	12/16/15	6:53	12/17/15	6:35	TO-17	21.0	☐	☐	☐	☐
22A	ME-OUT-1-121615	104554:22	↓	6:55	↓	6:36	↓	4.6	☐	☐	☐	☐
23A	MJ-OUT-1-121615	104554:23		6:57		6:40		4.6	☐	☐	☐	☐
24A	ML-OUT-1-121615	104554:24		7:00		6:41		4.6	☐	☐	☐	☐
25A	ML-999-121615	104554:25		7:00		7:20		21.0	☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

CHK 12/18/15

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Sample Site Air Temperature:
[signature]	12/17/15 11:50	[signature]	12/18/15 1125	
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	Notes:
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time	

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	UPS		1.4°C	Good	Yes No (None)	1512360

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1/5/2016
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #: 27006089018
Workorder #: 1512360

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 12/18/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 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

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WORK ORDER #: 1512360

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12792
FAX:		**PROJECT #**	27006089018 TRIPLE SITE
DATE RECEIVED:	12/18/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	01/05/2016		

FRACTION #	NAME	TEST
01A	MH-AMB-1-121615	Passive RAD 145 (TD)
02A	MI-AMB-1-121615	Passive RAD 145 (TD)
03A	MJ-AMB-1-121615	Passive RAD 145 (TD)
04A	MJ-AMB-1D-121615	Passive RAD 145 (TD)
05A	MJ-PATH-1-121615	Passive RAD 145 (TD)
06A	MK-AMB-1-121615	Passive RAD 145 (TD)
07A	ML-AMB-2-121615	Passive RAD 145 (TD)
08A	ML-AMB-2D-121615	Passive RAD 145 (TD)
09A	ML-AMB-1-121615	Passive RAD 145 (TD)
10A	MF-AMB-1-121615	Passive RAD 145 (TD)
11A	MG-AMB-1-121615	Passive RAD 145 (TD)
12A	MG-AMB-1D-121615	Passive RAD 145 (TD)
13A	MD-AMB-1-121615	Passive RAD 145 (TD)
14A	MC-AMB-1-121615	Passive RAD 145 (TD)
15A	ME-AMB-1-121615	Passive RAD 145 (TD)
16A	MA-AMB-1-121615	Passive RAD 145 (TD)
17A	MA-AMB-1D-121615	Passive RAD 145 (TD)
18A	MB-AMB-1-121615	Passive RAD 145 (TD)
19A	MB-PATH-1-121615	Passive RAD 145 (TD)
20A	ME-PATH-1-121615	Passive RAD 145 (TD)
21A	MC-PATH-1-121615	Passive RAD 145 (TD)
22A	ME-OUT-1-121615	Passive RAD 145 (TD)
23A	MJ-OUT-1-121615	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1512360

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12792
FAX:		**PROJECT #**	27006089018 TRIPLE SITE
DATE RECEIVED:	12/18/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	01/05/2016		

FRACTION #	NAME	TEST
24A	MC-OUT-1-121615	Passive RAD 145 (TD)
25A	ML-999-121615	Passive RAD 145 (TD)
26A	Lab Blank	Passive RAD 145 (TD)
26B	Lab Blank	Passive RAD 145 (TD)
27A	CCV	Passive RAD 145 (TD)
27B	CCV	Passive RAD 145 (TD)
28A	LCS	Passive RAD 145 (TD)
28AA	LCSD	Passive RAD 145 (TD)
28B	LCS	Passive RAD 145 (TD)
28BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 01/05/16

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

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1512360

Twenty-five Radiello 145 (VOC TD) samples were received on December 18, 2015. The laboratory transferred the sample sorbent bed to thermal desorption tubes. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

According to the Chain of Custody (COC), sample MJ-AMB-1D-121615 was collected on 12/17/15. However, the date on the sample tag reflects a collection date of 12/7. Therefore the date on the COC was used to calculate the sample holding time.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks a sampling duration of 1,440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the effective geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using an estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MH-AMB-1-121615

Lab ID#: 1512360-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	4.5	0.12
Freon 113	3.8	0.095	21 C	0.52 C

Client Sample ID: MI-AMB-1-121615

Lab ID#: 1512360-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	5.6	0.15
Freon 113	3.8	0.095	22 C	0.54 C

Client Sample ID: MJ-AMB-1-121615

Lab ID#: 1512360-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	5.2	0.14
Freon 113	3.8	0.095	22 C	0.56 C

Client Sample ID: MJ-AMB-1D-121615

Lab ID#: 1512360-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	5.1	0.13
Freon 113	3.8	0.095	23 C	0.58 C

Client Sample ID: MJ-PATH-1-121615

Lab ID#: 1512360-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	4.7	0.12
Freon 113	3.8	0.095	20 C	0.50 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MK-AMB-1-121615

Lab ID#: 1512360-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	13	0.33
Freon 113	3.8	0.095	24 C	0.61 C

Client Sample ID: ML-AMB-2-121615

Lab ID#: 1512360-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	6.5	0.17
Freon 113	3.8	0.095	21 C	0.52 C

Client Sample ID: ML-AMB-2D-121615

Lab ID#: 1512360-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	6.5	0.17
Freon 113	3.8	0.095	22 C	0.56 C

Client Sample ID: ML-AMB-1-121615

Lab ID#: 1512360-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	8.0	0.21
Freon 113	3.8	0.095	23 C	0.57 C

Client Sample ID: MF-AMB-1-121615

Lab ID#: 1512360-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	6.0	0.16
Tetrachloroethene	3.4	0.096	6.6	0.18
Freon 113	3.8	0.095	21 C	0.52 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-1-121615

Lab ID#: 1512360-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	36	0.95
Tetrachloroethene	3.4	0.096	4.7	0.13
Freon 113	3.8	0.095	23 C	0.59 C

Client Sample ID: MG-AMB-1D-121615

Lab ID#: 1512360-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	36	0.94
Tetrachloroethene	3.4	0.096	5.0	0.14
Freon 113	3.8	0.095	23 C	0.57 C

Client Sample ID: MD-AMB-1-121615

Lab ID#: 1512360-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	12	0.32
Tetrachloroethene	3.4	0.096	4.7	0.13
Freon 113	3.8	0.095	22 C	0.55 C

Client Sample ID: MC-AMB-1-121615

Lab ID#: 1512360-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	54	1.4
Tetrachloroethene	3.4	0.096	3.6	0.10
Freon 113	3.8	0.095	23 C	0.57 C

Client Sample ID: ME-AMB-1-121615

Lab ID#: 1512360-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ME-AMB-1-121615

Lab ID#: 1512360-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	7.2	0.26
Trichloroethene	2.7	0.071	5.2	0.14
Tetrachloroethene	3.4	0.096	3.4	0.096
Freon 113	3.8	0.095	21 C	0.52 C

Client Sample ID: MA-AMB-1-121615

Lab ID#: 1512360-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	2.7	0.071
Freon 113	3.8	0.095	21 C	0.53 C

Client Sample ID: MA-AMB-1D-121615

Lab ID#: 1512360-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	3.0	0.079
Tetrachloroethene	3.4	0.096	3.6	0.10
Freon 113	3.8	0.095	21 C	0.52 C

Client Sample ID: MB-AMB-1-121615

Lab ID#: 1512360-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	15	0.39
Freon 113	3.8	0.095	19 C	0.48 C

Client Sample ID: MB-PATH-1-121615

Lab ID#: 1512360-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.075	42	1.2

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MB-PATH-1-121615

Lab ID#: 1512360-19A

Tetrachloroethene	3.4	0.10	3.4	0.10
Freon 113	3.8	0.10	24 C	0.64 C

Client Sample ID: ME-PATH-1-121615

Lab ID#: 1512360-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.078	8.6	0.25
Tetrachloroethene	3.4	0.10	3.5	0.11
Freon 113	3.8	0.10	22 C	0.60 C

Client Sample ID: MC-PATH-1-121615

Lab ID#: 1512360-21A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	8.2	0.22
Freon 113	3.8	0.096	20 C	0.51 C

Client Sample ID: ME-OUT-1-121615

Lab ID#: 1512360-22A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.078	6.8	0.20
Freon 113	3.8	0.10	22 C	0.60 C

Client Sample ID: MJ-OUT-1-121615

Lab ID#: 1512360-23A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.078	5.7	0.16
Tetrachloroethene	3.4	0.10	3.6	0.11
Freon 113	3.8	0.10	22 C	0.61 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-OUT-1-121615

Lab ID#: 1512360-24A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.078	6.7	0.19
Freon 113	3.8	0.10	21 C	0.59 C

Client Sample ID: ML-999-121615

Lab ID#: 1512360-25A

No Detections Were Found.

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Client Sample ID: MH-AMB-1-121615

Lab ID#: 1512360-01A

PASSIVE RAD 145 (TD)

File Name:	**6121806**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 5:51:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 05:31 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	4.5	0.12
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-1-121615

Lab ID#: 1512360-02A

PASSIVE RAD 145 (TD)

File Name:	**6121807**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 5:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 06:07 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	5.6	0.15
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	22 C	0.54 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-1-121615

Lab ID#: 1512360-03A

PASSIVE RAD 145 (TD)

File Name:	**6121808**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:01:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 06:44 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	5.2	0.14
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-1D-121615

Lab ID#: 1512360-04A

PASSIVE RAD 145 (TD)

File Name:	**6121809**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:01:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 07:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	5.1	0.13
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-1-121615

Lab ID#: 1512360-05A

PASSIVE RAD 145 (TD)

File Name:	**6121810**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:02:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 07:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	4.7	0.12
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	20 C	0.50 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1433 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-1-121615

Lab ID#: 1512360-06A

PASSIVE RAD 145 (TD)

File Name:	**6121811**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:04:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 08:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	13	0.33
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	24 C	0.61 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2-121615

Lab ID#: 1512360-07A

PASSIVE RAD 145 (TD)

File Name:	**6121812**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:06:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 09:10 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	6.5	0.17
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2D-121615

Lab ID#: 1512360-08A

PASSIVE RAD 145 (TD)

File Name:	**6121813**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:06:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 09:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	6.5	0.17
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-1-121615

Lab ID#: 1512360-09A

PASSIVE RAD 145 (TD)

File Name:	**6121814**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:08:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 10:24 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	8.0	0.21
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-1-121615

Lab ID#: 1512360-10A

PASSIVE RAD 145 (TD)

File Name:	**6121815**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:11:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 11:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	6.0	0.16
Tetrachloroethene	3.4	0.096	6.6	0.18
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-121615

Lab ID#: 1512360-11A

PASSIVE RAD 145 (TD)

File Name:	**6121816**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:14:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 11:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	36	0.95
Tetrachloroethene	3.4	0.096	4.7	0.13
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.59 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1D-121615

Lab ID#: 1512360-12A

PASSIVE RAD 145 (TD)

File Name:	**6121817**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:14:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 12:14 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	36	0.94
Tetrachloroethene	3.4	0.096	5.0	0.14
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-1-121615

Lab ID#: 1512360-13A

PASSIVE RAD 145 (TD)

File Name:	**6121818**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:17:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 12:51 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	12	0.32
Tetrachloroethene	3.4	0.096	4.7	0.13
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	22 C	0.55 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-121615

Lab ID#: 1512360-14A

PASSIVE RAD 145 (TD)

File Name:	**6121819**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:18:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 01:27 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	54	1.4
Tetrachloroethene	3.4	0.096	3.6	0.10
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-AMB-1-121615

Lab ID#: 1512360-15A

PASSIVE RAD 145 (TD)

File Name:	**6121820**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 02:04 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	7.2	0.26
Trichloroethene	2.7	0.071	5.2	0.14
Tetrachloroethene	3.4	0.096	3.4	0.096
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MA-AMB-1-121615

Lab ID#: 1512360-16A

PASSIVE RAD 145 (TD)

File Name:	**6121821**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:22:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 02:40 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	2.7	0.071
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.53 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MA-AMB-1D-121615

Lab ID#: 1512360-17A

PASSIVE RAD 145 (TD)

File Name:	**6121822**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:22:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 03:17 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	3.0	0.079
Tetrachloroethene	3.4	0.096	3.6	0.10
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	21 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MB-AMB-1-121615

Lab ID#: 1512360-18A

PASSIVE RAD 145 (TD)

File Name:	**6121823**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:25:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 03:53 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	15	0.39
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	19 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MB-PATH-1-121615

Lab ID#: 1512360-19A

PASSIVE RAD 145 (TD)

File Name:	**6121824**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:28:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 04:30 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.075	42	1.2
Tetrachloroethene	3.4	0.10	3.4	0.10
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	24 C	0.64 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-PATH-1-121615

Lab ID#: 1512360-20A

PASSIVE RAD 145 (TD)

File Name:	**6121825**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:33:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/15 05:07 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.078	8.6	0.25
Tetrachloroethene	3.4	0.10	3.5	0.11
1,1-Dichloroethane	4.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.095	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	22 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 41.0F , duration time = 1424 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-1-121615

Lab ID#: 1512360-21A

PASSIVE RAD 145 (TD)

File Name:	**6122107**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:35:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 03:10 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	8.2	0.22
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-121615

Lab ID#: 1512360-22A

PASSIVE RAD 145 (TD)

File Name:	**6122108**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 03:46 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.078	6.8	0.20
Tetrachloroethene	3.4	0.10	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.095	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	22 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 41.0F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-OUT-1-121615

Lab ID#: 1512360-23A

PASSIVE RAD 145 (TD)

File Name:	**6122109**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 04:23 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.078	5.7	0.16
Tetrachloroethene	3.4	0.10	3.6	0.11
1,1-Dichloroethane	4.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.095	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	22 C	0.61 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 41.0F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-OUT-1-121615

Lab ID#: 1512360-24A

PASSIVE RAD 145 (TD)

File Name:	**6122110**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 6:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 05:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.078	6.7	0.19
Tetrachloroethene	3.4	0.10	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.095	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	21 C	0.59 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 41.0F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-999-121615

Lab ID#: 1512360-25A

PASSIVE RAD 145 (TD)

File Name:	**6122111**	**Date of Extraction: NA**	**Date of Collection: 12/17/15 7:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 05:36 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1512360-26A

PASSIVE RAD 145 (TD)

File Name:	**6121805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 03:59 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1512360-26B

PASSIVE RAD 145 (TD)

File Name:	**6122106**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 01:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1512360-27A
PASSIVE RAD 145 (TD)

File Name:	**6121802**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 02:17 PM**

Compound	%Recovery
1,1,1-Trichloroethane	105
Trichloroethene	83
Tetrachloroethene	86
1,1-Dichloroethane	92
1,1-Dichloroethene	86
cis-1,2-Dichloroethene	89
Freon 113	86
trans-1,2-Dichloroethene	87

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1512360-27B
PASSIVE RAD 145 (TD)

File Name:	**6122103**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 11:53 AM**

Compound	%Recovery
1,1,1-Trichloroethane	116
Trichloroethene	85
Tetrachloroethene	95
1,1-Dichloroethane	98
1,1-Dichloroethene	87
cis-1,2-Dichloroethene	90
Freon 113	90
trans-1,2-Dichloroethene	89

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1512360-28A
PASSIVE RAD 145 (TD)

File Name:	**6121803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 02:54 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	138 Q	70-130
Trichloroethene	85	70-130
Tetrachloroethene	128	70-130
1,1-Dichloroethane	114	70-130
1,1-Dichloroethene	92	70-130
cis-1,2-Dichloroethene	109	70-130
Freon 113	102	70-130
trans-1,2-Dichloroethene	88	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1512360-28AA
PASSIVE RAD 145 (TD)

File Name:	**6121804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/15 03:25 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	147 Q	70-130
Trichloroethene	87	70-130
Tetrachloroethene	117	70-130
1,1-Dichloroethane	114	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	113	70-130
Freon 113	106	70-130
trans-1,2-Dichloroethene	91	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1512360-28B
PASSIVE RAD 145 (TD)

File Name:	**6122104**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 12:30 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	149 Q	70-130
Trichloroethene	84	70-130
Tetrachloroethene	125	70-130
1,1-Dichloroethane	118	70-130
1,1-Dichloroethene	91	70-130
cis-1,2-Dichloroethene	110	70-130
Freon 113	104	70-130
trans-1,2-Dichloroethene	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1512360-28BB
PASSIVE RAD 145 (TD)

File Name:	**6122105**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/21/15 01:01 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	150 Q	70-130
Trichloroethene	84	70-130
Tetrachloroethene	105	70-130
1,1-Dichloroethane	115	70-130
1,1-Dichloroethene	92	70-130
cis-1,2-Dichloroethene	112	70-130
Freon 113	102	70-130
trans-1,2-Dichloroethene	89	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

PASSIVE SAMPLE COLLECTION

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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice
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Project Info:
P.O. #: 3012866
Project #: 27006-08-9018
Project Name: Triple A

Turn Around Time: ☑ Normal ☐ Rush (specify)

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Air Temperature	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other ( )
01A	RES189-AMB-1-110117	111976-31	11/1/17	10:58	11/2/17	10:57	17.7	TO-17	☐	☐	☐	☐
02A	RES189-PATH-1-110917	111478-33		11:00		10:58	17.6		☐	☐	☐	☐
03A	RES195-AMB-1-110117	111476-35		11:05		11:00	21.2		☐	☐	☐	☐
04A	RES195-PATH-1-110117	112214-66		11:08		11:01	15.3		☐	☐	☐	☐
05A	RES190-AMB-1-110117	112214-67		11:14		11:05	20.5		☐	☐	☐	☐
06A	RES190-PATH-1-110117	112214-68		11:17		11:08	15.2		☐	☐	☐	☐
07A	MW2-AMB-1-110117	112214-22		1727		17:10	21.2		☐	☐	☐	☐
08A	MW2-PATH-1-110117	112214-24		1735		17:14	16.7		☐	☐	☐	☐
09A	MW1-PATH-1-110117	112214-26		1740		17:18	18.7		☐	☐	☐	☐
10A	MW1-AMB-1-110117	112214-28		1745		17:22	20.6		☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Min Jiang	11/06/17 14:00pm	[signature]	11/8/17 11:25
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 #
	UPS		N/A ~~13.4°C~~ 11/8/17	~~SDF~~ good 11/8/17	Yes No (None)	1711130

PASSIVE SAMPLE COLLECTION

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Project Manager: Nancy-Joanne Lafaye
Collected by: (Print and Sign) Linda-D/Min Jiang
Company: Locus Technologies Email: jiangm@locustec.com
Address: 299 Fairchild Dr City: Mountain View State: Zip: 94043
Phone: 415-799-9964 Fax:

Project Info:
P.O. #: 30 12866
Project #: 27006-UA-9018
Project Name: Triple A

Turn Around Time: ☑ Normal ☐ Rush _____ specify

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

Lab I.D.	Field Sample I.D. (Location)	Sampler #	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Air Temperature	Analysis Requested	Indoor Air	Outdoor Air	Workplace Monitoring	Other (
11A	MK2-AMB-1-110117	112214-30	11/1/17	17:47	11/2/17	17:24	21.1	TO-17	☐	☐	☐	☐
12A	MK2-PATH-1-110117	112214-31	↓	17:51	↓	17:26	17.4	↓	☐	☐	☐	☐
13A	ML1-AMB-1-110117	112214-33		17:55		17:13	23.2		☐	☐	☐	☐
14A	ML1-OUT-1-110117	112214-32		17:58		17:17	16.9		☐	☐	☐	☐
15A	ML1-999-110117	112214-34		17:58		17:58	16.9		☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐
									☐	☐	☐	☐

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Min Jiang	11/06/17 14:00pm	[signature]	11/6/17 11:25
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 #
	UPS	N/A	~~13.4°~~ 4.4 11/8/17	~~SO~~ Good	Yes No (None)	1711130

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11/16/2017
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple A
Project #: 27006-08-9018
Workorder #: 1711130

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 11/8/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1711130

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12866
FAX:		**PROJECT #**	27006-08-9018 Triple A
DATE RECEIVED:	11/08/2017	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	11/16/2017		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	RES189-AMB-1-110117	Passive RAD 145 (TD)		
02A	RES189-PATH-1-110117	Passive RAD 145 (TD)		
03A	RES195-AMB-1-110117	Passive RAD 145 (TD)		
04A	RES195-PATH-1-110117	Passive RAD 145 (TD)		
05A	RES190-AMB-1-110117	Passive RAD 145 (TD)		
06A	RES190-PATH-1-110117	Passive RAD 145 (TD)		
07A	ML2-AMB-1-110117	Passive RAD 145 (TD)		
08A	ML2-PATH-1-110117	Passive RAD 145 (TD)		
09A	ML1-PATH-1-110117	Passive RAD 145 (TD)		
10A	MK1-AMB-1-110117	Passive RAD 145 (TD)		
11A	MK1-AMB-2-110117	Passive RAD 145 (TD)		
12A	MK1-PATH-1-110117	Passive RAD 145 (TD)		
13A	ML1-AMB-1-110117	Passive RAD 145 (TD)		
14A	ML1-OUT-1-110117	Passive RAD 145 (TD)		
15A	ML1-999-110117	Passive RAD 145 (TD)		
16A	Lab Blank	Passive RAD 145 (TD)	NA	NA
16B	Lab Blank	Passive RAD 145 (TD)	NA	NA
17A	CCV	Passive RAD 145 (TD)	NA	NA
17B	CCV	Passive RAD 145 (TD)	NA	NA
18A	LCS	Passive RAD 145 (TD)	NA	NA
18AA	LCSD	Passive RAD 145 (TD)	NA	NA
18B	LCS	Passive RAD 145 (TD)	NA	NA
18BB	LCSD	Passive RAD 145 (TD)	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 11/16/17

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1711130

Fifteen Radiello 145 (VOC TD) samples were received on November 08, 2017. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: RES189-AMB-1-110117

Lab ID#: 1711130-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	17	0.45
Tetrachloroethene	3.4	0.096	5.9	0.17
Freon 113	3.8	0.096	18 C	0.45 C

Client Sample ID: RES189-PATH-1-110117

Lab ID#: 1711130-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	17	0.45
Freon 113	3.8	0.096	26 C	0.65 C

Client Sample ID: RES195-AMB-1-110117

Lab ID#: 1711130-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	13	0.34
Tetrachloroethene	3.4	0.095	4.2	0.12
Freon 113	3.8	0.095	16 C	0.39 C

Client Sample ID: RES195-PATH-1-110117

Lab ID#: 1711130-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.073	20	0.54
Tetrachloroethene	3.4	0.098	3.5	0.10
Freon 113	3.8	0.098	20 C	0.51 C

Client Sample ID: RES190-AMB-1-110117

Lab ID#: 1711130-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	13	0.35

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES190-AMB-1-110117

Lab ID#: 1711130-05A

Tetrachloroethene	3.4	0.096	3.8	0.11
Freon 113	3.8	0.096	16 C	0.41 C

Client Sample ID: RES190-PATH-1-110117

Lab ID#: 1711130-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.073	19	0.52
Tetrachloroethene	3.4	0.098	3.5	0.10
Freon 113	3.8	0.098	23 C	0.58 C

Client Sample ID: ML2-AMB-1-110117

Lab ID#: 1711130-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	8.6	0.23
Freon 113	3.8	0.096	16 C	0.40 C

Client Sample ID: ML2-PATH-1-110117

Lab ID#: 1711130-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.073	20	0.53
Tetrachloroethene	3.4	0.098	3.9	0.11
Freon 113	3.8	0.098	21 C	0.54 C

Client Sample ID: ML1-PATH-1-110117

Lab ID#: 1711130-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	20	0.53
Freon 113	3.8	0.097	22 C	0.56 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MK1-AMB-1-110117

Lab ID#: 1711130-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	8.5	0.22
Freon 113	3.8	0.096	16 C	0.39 C

Client Sample ID: MK1-AMB-2-110117

Lab ID#: 1711130-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	10	0.28
Freon 113	3.8	0.096	18 C	0.46 C

Client Sample ID: MK1-PATH-1-110117

Lab ID#: 1711130-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.073	22	0.60
Freon 113	3.8	0.098	23 C	0.60 C

Client Sample ID: ML1-AMB-1-110117

Lab ID#: 1711130-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	8.4	0.22
Tetrachloroethene	3.4	0.097	3.6	0.10
Freon 113	3.8	0.096	14 C	0.34 C

Client Sample ID: ML1-OUT-1-110117

Lab ID#: 1711130-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	3.8	0.099	23 C	0.59 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML1-999-110117

Lab ID#: 1711130-15A

No Detections Were Found.

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Client Sample ID: RES189-AMB-1-110117

Lab ID#: 1711130-01A

PASSIVE RAD 145 (TD)

File Name:	**6111419**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 10:57:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 08:34 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	17	0.45
Tetrachloroethene	3.4	0.096	5.9	0.17
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	18 C	0.45 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES189-PATH-1-110117

Lab ID#: 1711130-02A

PASSIVE RAD 145 (TD)

File Name:	**6111420**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 10:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 09:11 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	17	0.45
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	26 C	0.65 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES195-AMB-1-110117

Lab ID#: 1711130-03A

PASSIVE RAD 145 (TD)

File Name:	**6111421**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 11:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 09:48 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	13	0.34
Tetrachloroethene	3.4	0.095	4.2	0.12
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	16 C	0.39 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1435 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES195-PATH-1-110117

Lab ID#: 1711130-04A

PASSIVE RAD 145 (TD)

File Name:	**6111422**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 11:01:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 10:24 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	20	0.54
Tetrachloroethene	3.4	0.098	3.5	0.10
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1433 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES190-AMB-1-110117

Lab ID#: 1711130-05A

PASSIVE RAD 145 (TD)

File Name:	**6111509**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 11:05:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 12:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	13	0.35
Tetrachloroethene	3.4	0.096	3.8	0.11
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	16 C	0.41 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES190-PATH-1-110117

Lab ID#: 1711130-06A

PASSIVE RAD 145 (TD)

File Name:	**6111427**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 11:08:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 01:25 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	19	0.52
Tetrachloroethene	3.4	0.098	3.5	0.10
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	23 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-AMB-1-110117

Lab ID#: 1711130-07A

PASSIVE RAD 145 (TD)

File Name:	**6111510**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:10:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 12:59 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	8.6	0.23
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	16 C	0.40 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-PATH-1-110117

Lab ID#: 1711130-08A

PASSIVE RAD 145 (TD)

File Name:	**6111511**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:14:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 01:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	20	0.53
Tetrachloroethene	3.4	0.098	3.9	0.11
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	21 C	0.54 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-PATH-1-110117

Lab ID#: 1711130-09A

PASSIVE RAD 145 (TD)

File Name:	**6111512**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:18:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 02:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	20	0.53
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-1-110117

Lab ID#: 1711130-10A

PASSIVE RAD 145 (TD)

File Name:	**6111513**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:22:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 02:39 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	8.5	0.22
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	16 C	0.39 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1417 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-2-110117

Lab ID#: 1711130-11A

PASSIVE RAD 145 (TD)

File Name:	**6111514**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:24:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 03:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	10	0.28
Tetrachloroethene	3.4	0.096	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	18 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1417 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-PATH-1-110117

Lab ID#: 1711130-12A

PASSIVE RAD 145 (TD)

File Name:	**6111515**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:26:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 03:46 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	22	0.60
Tetrachloroethene	3.4	0.098	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1415 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-AMB-1-110117

Lab ID#: 1711130-13A

PASSIVE RAD 145 (TD)

File Name:	**6111516**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:13:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 04:19 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	8.4	0.22
Tetrachloroethene	3.4	0.097	3.6	0.10
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	14 C	0.34 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1398 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-OUT-1-110117

Lab ID#: 1711130-14A

PASSIVE RAD 145 (TD)

File Name:	**6111517**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:17:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 04:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	Not Detected	Not Detected
Tetrachloroethene	3.4	0.10	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	23 C	0.59 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1399 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-999-110117

Lab ID#: 1711130-15A

PASSIVE RAD 145 (TD)

File Name:	**6111418**	**Date of Extraction: NA**	**Date of Collection: 11/2/17 5:58:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 07:56 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1711130-16A

PASSIVE RAD 145 (TD)

File Name:	**6111417**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 05:56 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.070	Not Detected	Not Detected
Tetrachloroethene	3.4	0.094	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.085	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1711130-16B

PASSIVE RAD 145 (TD)

File Name:	**6111508**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 11:29 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.070	Not Detected	Not Detected
Tetrachloroethene	3.4	0.094	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.085	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV

Lab ID#: 1711130-17A

PASSIVE RAD 145 (TD)

File Name:	**6111407a**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 12:20 AM**

Compound	%Recovery
1,1,1-Trichloroethane	104
Trichloroethene	102
Tetrachloroethene	107
1,1-Dichloroethane	100
1,1-Dichloroethene	107
cis-1,2-Dichloroethene	107
Freon 113	112
trans-1,2-Dichloroethene	109

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1711130-17B

PASSIVE RAD 145 (TD)

File Name:	**6111507**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 10:55 AM**

Compound	%Recovery
1,1,1-Trichloroethane	131 Q
Trichloroethene	100
Tetrachloroethene	112
1,1-Dichloroethane	122
1,1-Dichloroethene	103
cis-1,2-Dichloroethene	112
Freon 113	115
trans-1,2-Dichloroethene	113

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1711130-18A

PASSIVE RAD 145 (TD)

File Name:	**6111414**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 04:18 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	113	70-130
Trichloroethene	115	70-130
Tetrachloroethene	103	70-130
1,1-Dichloroethane	112	70-130
1,1-Dichloroethene	110	70-130
cis-1,2-Dichloroethene	116	70-130
Freon 113	108	70-130
trans-1,2-Dichloroethene	93	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1711130-18AA
PASSIVE RAD 145 (TD)

File Name:	**6111415**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/17 04:49 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	110	70-130
Trichloroethene	119	70-130
Tetrachloroethene	102	70-130
1,1-Dichloroethane	112	70-130
1,1-Dichloroethene	116	70-130
cis-1,2-Dichloroethene	118	70-130
Freon 113	109	70-130
trans-1,2-Dichloroethene	96	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1711130-18B

PASSIVE RAD 145 (TD)

File Name:	**6111503**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 08:42 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	122	70-130
Trichloroethene	112	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	116	70-130
1,1-Dichloroethene	104	70-130
cis-1,2-Dichloroethene	119	70-130
Freon 113	110	70-130
trans-1,2-Dichloroethene	95	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1711130-18BB
PASSIVE RAD 145 (TD)

File Name:	**6111504**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/15/17 09:13 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	120	70-130
Trichloroethene	117	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	117	70-130
1,1-Dichloroethene	110	70-130
cis-1,2-Dichloroethene	122	70-130
Freon 113	113	70-130
trans-1,2-Dichloroethene	96	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#: 1712302

Case Seal #:

Company: Locus Technologies Project #: 27000-08-908 P.O.# 30-12875

Project Manager: Nancy Jeanne Lefevre Project Name: Triple Site

Contact phone/email: Collected by: LINDA O / MIKE J

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments: TEMP °C
01A	RES184-AMB-1-120417	122214-21	12/4/17	8:31	8:34	12/5/17					TO-17	17.1
02A	RES184-AMB-ID-120417	122214-14		8:31	8:34							17.1
03A	RES184-PATH-1-120417	122214-16		8:45	8:37							15.7
04A	RES115-AMB-1-120417	122214-23		9:02	8:44							15.2
05A	RES115-PATH-1-120417	122214-25		9:07	8:46							13.7
06A	RES187-AMB-1-120417	122214-29		9:44	9:34							18.5
07A	RES187-PATH-1-120417	122214-27		9:48	9:40							12.6
08A	RES187-OUT-1-120417	FW704		9:53	9:39							21.4
09A	RES218-AMB-1-120417	FW705		14:32	14:30							20.8
10A	RES084-AMB-1-120417	FW697		15:35	17:22							15.0
11A	RES084-PATH-1-120417	FW698		15:37	17:23							14.8
12A	RES084-PATH-1-120417	FW699		15:40	15:45							16.1
13A	RES085-AMB-1-120417	FW701		15:44	15:40							21.2
14A	RES085-PATH-1-120417	FW700		15:49	15:46							13.9

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: Normal; Rush (Specify)

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	12/4/17	14:00	[signature] EMC	12/5/17	10:25	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:

Air bill #: UPS

Custody Seals Intact? Yes No (None)

Temperature (°C): 3.2°C

Sample Condition Upon Receipt: (circle) (Good) SDR

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Passive Sorbent Chain of Custody

WO#: 1712302

Case Seal #:

Company: LOCUS TECHNOLOGIES Project #: 27006-08-008 P.O.# 1712315

Project Manager: JANET JENNE LEGLER Project Name: TRIPLE SITE

Contact phone/email: Collected by:

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
15A	UB-AMB-1-120417	EB448	12/4/17	16:25	12/5/17	16:08	✓				TO-17	24.3
16A	NB-PATH-1-120417	EB449		16:30		16:10	✓					14.8
17A	ML2-AMB-1-120417	EB450		16:45		16:26	✓					22.0
18A	ML2-PATH-2-120417	EK418		16:49		16:29	✓					16.4
19A	ML1-AMB-1-120417	EK419		16:55		16:47	✓					21.0
20A	ML1-PATH-2-120417	EK420		17:00		16:36	✓					14.2
21A	NK1-AMB-3-120417	EB446		17:04		16:40	✓					19.1
22A	NK1-AMB-4-120417	EB467		17:17		16:45	✓					16.7
	~~NK1-PATH-2-120417~~	~~EB468~~		~~17:50~~								~~16.8~~
23A	NK1-OUT-1-120417	EK400	↓	17:37		17:13	✓					12.5
24A	NK1-???-120417	EK401		17:37		17:37	↓				↓	12.5
25A	MK1-PATH-2	EK402	12/7/17	17:09		17:35	✓					14.4

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: ☒ Normal ☐ Rush (Specify)

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	12/4/17	14:00	[signature]	12/15/17	10:25	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #: UPS	Temperature (°C)	3.2°C					

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12/22/2017
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #: 37006-08-9018
Workorder #: 1712302

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 12/15/2017 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1712302

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12875
FAX:		**PROJECT #**	37006-08-9018 TRIPLE SITE
DATE RECEIVED:	12/15/2017	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	12/20/2017		

FRACTION #	NAME	TEST
01A	RES184-AMB-1-120417	Passive RAD 145 (TD)
02A	RES184-AMB-1D-120417	Passive RAD 145 (TD)
03A	RES184-PATH-1-120417	Passive RAD 145 (TD)
04A	RES115-AMB-1-120417	Passive RAD 145 (TD)
05A	RES115-PATH-1-120417	Passive RAD 145 (TD)
06A	RES187-AMB-1-120417	Passive RAD 145 (TD)
07A	RES187-PATH-1-120417	Passive RAD 145 (TD)
08A	RES187-OUT-1-120417	Passive RAD 145 (TD)
09A	RES218-AMB-1-120417	Passive RAD 145 (TD)
10A	RES084-AMB-1-120417	Passive RAD 145 (TD)
11A	RES084-PATH-2-120417	Passive RAD 145 (TD)
12A	RES084-PATH-1-120417	Passive RAD 145 (TD)
13A	RES085-AMB-1-120417	Passive RAD 145 (TD)
14A	RES085-PATH-1-120417	Passive RAD 145 (TD)
15A	MB-AMB-1-120417	Passive RAD 145 (TD)
16A	MB-PATH-1-120417	Passive RAD 145 (TD)
17A	ML2-AMB-1-120417	Passive RAD 145 (TD)
18A	ML2-PATH-2-120417	Passive RAD 145 (TD)
19A	ML1-AMB-1-120417	Passive RAD 145 (TD)
20A	ML1-PATH-2-120417	Passive RAD 145 (TD)
21A	MK1-AMB-3-120417	Passive RAD 145 (TD)
22A	MK1-AMB4-120417	Passive RAD 145 (TD)
23A	MK1-OUT-1-120417	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1712302

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12875
FAX:		**PROJECT #**	37006-08-9018 TRIPLE SITE
DATE RECEIVED:	12/15/2017	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	12/20/2017		

FRACTION #	NAME	TEST
24A	MK1-999-120417	Passive RAD 145 (TD)
25A	MK1-PATH-2	Passive RAD 145 (TD)
26A	Lab Blank	Passive RAD 145 (TD)
26B	Lab Blank	Passive RAD 145 (TD)
27A	CCV	Passive RAD 145 (TD)
27B	CCV	Passive RAD 145 (TD)
28A	LCS	Passive RAD 145 (TD)
28AA	LCSD	Passive RAD 145 (TD)
28B	LCS	Passive RAD 145 (TD)
28BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Rayos DATE: 12/22/17

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1712302

Twenty-five Radiello 145 (VOC TD) samples were received on December 15, 2017. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

The cartridge casing for sample MB-AMB-1-120417 was received leaking with the sample sorbent still contained in the outer glass storage vial. The sample preparation and analysis proceeded.

Sample identification was revised from RES218-AMB-11-120417 to RES218-AMB-1-120417 per client request provided via E-mail on 12/21/17.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1547 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.

C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: RES184-AMB-1-120417

Lab ID#: 1712302-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	7.2	0.19
Tetrachloroethene	3.4	0.097	7.8	0.22
Freon 113	3.8	0.096	15 C	0.38 C

Client Sample ID: RES184-AMB-1D-120417

Lab ID#: 1712302-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	6.5	0.17
Tetrachloroethene	3.4	0.097	7.6	0.22
Freon 113	3.8	0.096	14 C	0.35 C

Client Sample ID: RES184-PATH-1-120417

Lab ID#: 1712302-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.073	12	0.33
Tetrachloroethene	3.4	0.098	4.7	0.14
Freon 113	3.8	0.097	22 C	0.56 C

Client Sample ID: RES115-AMB-1-120417

Lab ID#: 1712302-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.074	3.8	0.10
Tetrachloroethene	3.4	0.099	6.9	0.20
Freon 113	3.8	0.099	17 C	0.43 C

Client Sample ID: RES115-PATH-1-120417

Lab ID#: 1712302-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES115-PATH-1-120417

Lab ID#: 1712302-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.074	6.8	0.19
Tetrachloroethene	3.4	0.10	5.8	0.17
Freon 113	3.8	0.099	23 C	0.60 C

Client Sample ID: RES187-AMB-1-120417

Lab ID#: 1712302-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.097	100	3.0
Freon 113	3.8	0.096	16 C	0.41 C

Client Sample ID: RES187-PATH-1-120417

Lab ID#: 1712302-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.074	7.1	0.19
Tetrachloroethene	3.4	0.099	5.5	0.16
Freon 113	3.8	0.099	19 C	0.50 C

Client Sample ID: RES187-OUT-1-120417

Lab ID#: 1712302-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.096	5.5	0.15
Freon 113	3.8	0.095	23 C	0.58 C

Client Sample ID: RES218-AMB-1-120417

Lab ID#: 1712302-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.095	7.0	0.20
Freon 113	3.8	0.095	18 C	0.45 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES084-AMB-1-120417

Lab ID#: 1712302-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.091	6.7	0.18
Freon 113	3.8	0.091	21 C	0.50 C

Client Sample ID: RES084-PATH-2-120417

Lab ID#: 1712302-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.091	6.5	0.17
Freon 113	3.8	0.091	22 C	0.52 C

Client Sample ID: RES084-PATH-1-120417

Lab ID#: 1712302-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.097	5.7	0.16
Freon 113	3.8	0.097	20 C	0.51 C

Client Sample ID: RES085-AMB-1-120417

Lab ID#: 1712302-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.095	7.1	0.20
Freon 113	3.8	0.095	16 C	0.41 C

Client Sample ID: RES085-PATH-1-120417

Lab ID#: 1712302-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.098	6.4	0.18
Freon 113	3.8	0.098	21 C	0.54 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MB-AMB-1-120417

Lab ID#: 1712302-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.094	7.4	0.20
Freon 113	3.8	0.094	14 C	0.35 C

Client Sample ID: MB-PATH-1-120417

Lab ID#: 1712302-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.099	6.5	0.19
Freon 113	3.8	0.099	21 C	0.55 C

Client Sample ID: ML2-AMB-1-120417

Lab ID#: 1712302-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.071	3.3	0.087
Tetrachloroethene	3.4	0.096	6.5	0.18
Freon 113	3.8	0.095	17 C	0.43 C

Client Sample ID: ML2-PATH-2-120417

Lab ID#: 1712302-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.099	5.6	0.16
Freon 113	3.8	0.098	20 C	0.52 C

Client Sample ID: ML1-AMB-1-120417

Lab ID#: 1712302-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.095	7.5	0.21
Freon 113	3.8	0.095	16 C	0.40 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML1-PATH-2-120417

Lab ID#: 1712302-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.10	5.1	0.15
Freon 113	3.8	0.10	20 C	0.53 C

Client Sample ID: MK1-AMB-3-120417

Lab ID#: 1712302-21A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.098	5.4	0.16
Freon 113	3.8	0.097	17 C	0.45 C

Client Sample ID: MK1-AMB4-120417

Lab ID#: 1712302-22A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.099	6.3	0.18
Freon 113	3.8	0.099	18 C	0.48 C

Client Sample ID: MK1-OUT-1-120417

Lab ID#: 1712302-23A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	3.4	0.10	5.7	0.17
Freon 113	3.8	0.10	22 C	0.59 C

Client Sample ID: MK1-999-120417

Lab ID#: 1712302-24A

No Detections Were Found.

Client Sample ID: MK1-PATH-2

Lab ID#: 1712302-25A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MK1-PATH-2

Lab ID#: 1712302-25A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	2.7	0.072	18	0.49
Tetrachloroethene	3.4	0.097	3.8	0.11
Freon 113	3.8	0.096	22 C	0.56 C

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Client Sample ID: RES184-AMB-1-120417

Lab ID#: 1712302-01A

PASSIVE RAD 145 (TD)

File Name:	**6121808**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 8:34:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 12:17 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	7.2	0.19
Tetrachloroethene	3.4	0.097	7.8	0.22
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	15 C	0.38 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES184-AMB-1D-120417

Lab ID#: 1712302-02A

PASSIVE RAD 145 (TD)

File Name:	**6121809**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 8:34:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 12:53 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	6.5	0.17
Tetrachloroethene	3.4	0.097	7.6	0.22
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	14 C	0.35 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES184-PATH-1-120417

Lab ID#: 1712302-03A

PASSIVE RAD 145 (TD)

File Name:	**6121810**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 8:37:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 01:30 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	12	0.33
Tetrachloroethene	3.4	0.098	4.7	0.14
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES115-AMB-1-120417

Lab ID#: 1712302-04A

PASSIVE RAD 145 (TD)

File Name:	**6121811**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 8:44:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 02:07 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	3.8	0.10
Tetrachloroethene	3.4	0.099	6.9	0.20
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	17 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES115-PATH-1-120417

Lab ID#: 1712302-05A

PASSIVE RAD 145 (TD)

File Name:	**6121812**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 8:46:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 02:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	6.8	0.19
Tetrachloroethene	3.4	0.10	5.8	0.17
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES187-AMB-1-120417

Lab ID#: 1712302-06A

PASSIVE RAD 145 (TD)

File Name:	**6121813**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 9:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 03:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	100	3.0
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	16 C	0.41 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES187-PATH-1-120417

Lab ID#: 1712302-07A

PASSIVE RAD 145 (TD)

File Name:	**6121814**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 9:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 03:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	7.1	0.19
Tetrachloroethene	3.4	0.099	5.5	0.16
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	19 C	0.50 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES187-OUT-1-120417

Lab ID#: 1712302-08A

PASSIVE RAD 145 (TD)

File Name:	**6121815**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 9:39:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 04:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.096	5.5	0.15
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	23 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES218-AMB-1-120417

Lab ID#: 1712302-09A

PASSIVE RAD 145 (TD)

File Name:	**6121816**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 2:30:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 05:11 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	7.0	0.20
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	18 C	0.45 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES084-AMB-1-120417

Lab ID#: 1712302-10A

PASSIVE RAD 145 (TD)

File Name:	**6121817**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 5:22:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 05:48 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	6.7	0.18
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	21 C	0.50 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1547 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES084-PATH-2-120417

Lab ID#: 1712302-11A

PASSIVE RAD 145 (TD)

File Name:	**6121818**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 5:23:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 06:25 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.068	Not Detected	Not Detected
Tetrachloroethene	3.4	0.091	6.5	0.17
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	22 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1546 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES084-PATH-1-120417

Lab ID#: 1712302-12A

PASSIVE RAD 145 (TD)

File Name:	**6121819**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 3:45:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 07:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	Not Detected	Not Detected
Tetrachloroethene	3.4	0.097	5.7	0.16
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1445 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES085-AMB-1-120417

Lab ID#: 1712302-13A

PASSIVE RAD 145 (TD)

File Name:	**6121820**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 3:40:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 07:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	7.1	0.20
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	16 C	0.41 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1436 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES085-PATH-1-120417

Lab ID#: 1712302-14A

PASSIVE RAD 145 (TD)

File Name:	**6121821**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 3:46:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 08:15 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	Not Detected	Not Detected
Tetrachloroethene	3.4	0.098	6.4	0.18
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	21 C	0.54 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MB-AMB-1-120417

Lab ID#: 1712302-15A

PASSIVE RAD 145 (TD)

File Name:	**6121822**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:08:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 08:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	2.7	0.070	Not Detected	Not Detected
Tetrachloroethene	3.4	0.094	7.4	0.20
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	14 C	0.35 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MB-PATH-1-120417

Lab ID#: 1712302-16A

PASSIVE RAD 145 (TD)

File Name:	**6121823**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:10:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 09:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	Not Detected	Not Detected
Tetrachloroethene	3.4	0.099	6.5	0.19
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	21 C	0.55 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-AMB-1-120417

Lab ID#: 1712302-17A

PASSIVE RAD 145 (TD)

File Name:	**6121824**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:26:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 10:05 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	3.3	0.087
Tetrachloroethene	3.4	0.096	6.5	0.18
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	17 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-PATH-2-120417

Lab ID#: 1712302-18A

PASSIVE RAD 145 (TD)

File Name:	**6121825**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:29:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 10:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	Not Detected	Not Detected
Tetrachloroethene	3.4	0.099	5.6	0.16
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	20 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-AMB-1-120417

Lab ID#: 1712302-19A

PASSIVE RAD 145 (TD)

File Name:	**6121826**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 11:18 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.071	Not Detected	Not Detected
Tetrachloroethene	3.4	0.095	7.5	0.21
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	16 C	0.40 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-PATH-2-120417

Lab ID#: 1712302-20A

PASSIVE RAD 145 (TD)

File Name:	**6121906**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:36:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 11:22 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	Not Detected	Not Detected
Tetrachloroethene	3.4	0.10	5.1	0.15
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	20 C	0.53 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-3-120417

Lab ID#: 1712302-21A

PASSIVE RAD 145 (TD)

File Name:	**6121907**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:40:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 11:59 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.073	Not Detected	Not Detected
Tetrachloroethene	3.4	0.098	5.4	0.16
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	17 C	0.45 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1411 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB4-120417

Lab ID#: 1712302-22A

PASSIVE RAD 145 (TD)

File Name:	**6121908**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 4:45:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 12:36 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	Not Detected	Not Detected
Tetrachloroethene	3.4	0.099	6.3	0.18
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	18 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-OUT-1-120417

Lab ID#: 1712302-23A

PASSIVE RAD 145 (TD)

File Name:	**6121909**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 5:13:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 01:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	2.7	0.075	Not Detected	Not Detected
Tetrachloroethene	3.4	0.10	5.7	0.17
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.092	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	22 C	0.59 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-999-120417

Lab ID#: 1712302-24A

PASSIVE RAD 145 (TD)

File Name:	**6121807**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 5:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 11:40 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.074	Not Detected	Not Detected
Tetrachloroethene	3.4	0.099	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-PATH-2

Lab ID#: 1712302-25A

PASSIVE RAD 145 (TD)

File Name:	**6121910**	**Date of Extraction: NA**	**Date of Collection: 12/5/17 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 01:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	2.7	0.072	18	0.49
Tetrachloroethene	3.4	0.097	3.8	0.11
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1466 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1712302-26A

PASSIVE RAD 145 (TD)

File Name:	**6121806**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 10:33 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.18	Not Detected	Not Detected
Trichloroethene	2.7	0.065	Not Detected	Not Detected
Tetrachloroethene	3.4	0.087	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.096	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.079	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.097	Not Detected C	Not Detected C
Freon 113	3.8	0.087	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1547 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1712302-26B

PASSIVE RAD 145 (TD)

File Name:	**6121905**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 09:52 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.18	Not Detected	Not Detected
Trichloroethene	2.7	0.065	Not Detected	Not Detected
Tetrachloroethene	3.4	0.087	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.096	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.079	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.097	Not Detected C	Not Detected C
Freon 113	3.8	0.087	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1547 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1712302-27A
PASSIVE RAD 145 (TD)

File Name:	**6121803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 08:50 AM**

Compound	%Recovery
1,1,1-Trichloroethane	134 Q
Trichloroethene	98
Tetrachloroethene	110
1,1-Dichloroethane	135 Q
1,1-Dichloroethene	118
cis-1,2-Dichloroethene	110
Freon 113	109
trans-1,2-Dichloroethene	113

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1712302-27B

PASSIVE RAD 145 (TD)

File Name:	**6121902**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 08:10 AM**

Compound	%Recovery
1,1,1-Trichloroethane	136 Q
Trichloroethene	92
Tetrachloroethene	114
1,1-Dichloroethane	134 Q
1,1-Dichloroethene	117
cis-1,2-Dichloroethene	109
Freon 113	106
trans-1,2-Dichloroethene	115

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1712302-28A

PASSIVE RAD 145 (TD)

File Name:	**6121804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 09:27 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	138 Q	70-130
Trichloroethene	98	70-130
Tetrachloroethene	107	70-130
1,1-Dichloroethane	137 Q	70-130
1,1-Dichloroethene	117	70-130
cis-1,2-Dichloroethene	126	70-130
Freon 113	108	70-130
trans-1,2-Dichloroethene	100	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1712302-28AA
PASSIVE RAD 145 (TD)

File Name:	**6121805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/18/17 09:59 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	141 Q	70-130
Trichloroethene	103	70-130
Tetrachloroethene	106	70-130
1,1-Dichloroethane	142 Q	70-130
1,1-Dichloroethene	126	70-130
cis-1,2-Dichloroethene	135 Q	70-130
Freon 113	114	70-130
trans-1,2-Dichloroethene	108	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1712302-28B

PASSIVE RAD 145 (TD)

File Name:	**6121903**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 08:47 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	142 Q	70-130
Trichloroethene	87	70-130
Tetrachloroethene	112	70-130
1,1-Dichloroethane	140 Q	70-130
1,1-Dichloroethene	114	70-130
cis-1,2-Dichloroethene	122	70-130
Freon 113	107	70-130
trans-1,2-Dichloroethene	100	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1712302-28BB
PASSIVE RAD 145 (TD)

File Name:	**6121904**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/19/17 09:18 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	149 Q	70-130
Trichloroethene	94	70-130
Tetrachloroethene	114	70-130
1,1-Dichloroethane	147 Q	70-130
1,1-Dichloroethene	120	70-130
cis-1,2-Dichloroethene	132 Q	70-130
Freon 113	114	70-130
trans-1,2-Dichloroethene	104	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#:

Case Seal #:

Company: Locus Technologies Project #: 27006-08-7018 P.O.# 302878

Project Manager: Jang-Jeanne LeFevre Project Name: Triple Site

Contact phone/email: 415-799-9764 Collected by: Linda O / Rick K

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 | ppmv mg/m3 | ug ng

Turn Around Time: Normal | Rush | Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments: Temp °C
+ 01A	MF-AMB-2	LU315	1/29/18	7:22	1/30/18	7:02	X				TO-17	30.2 °C
+ 02A	MF-PATH-1	LU316		7:27		7:02						30.2 °C
+ 03A	MC-AMB-1	LU317		7:28		7:11						30.1 °C
+ 04A	MC-PATH-2	LU319		7:29		7:12						15.3 °C
+ 05A	MC-AM-2	LU318		7:31		7:10						28.7 °C
+ 06A	MC-PATH-3	LU320		7:33		7:09						25.0 °C
+ 07A	MD-AMB-2	LU321		7:36		7:14						28.8 °C
+ 08A	MD-PATH-1	LU322		7:38		7:13						24.3 °C
+ 09A	MD-PATH-2	LU323		7:40		7:16						14.2 °C
+ 10A	MG-AMB-1	LU324		7:43		7:18						21.9 °C
+ 11A	MG-PATH-1	LU325		7:45		7:19						18.6 °C
+ 12A	MG-PATH-2	LU326		7:49		7:21						22.7 °C
+ 13A	MG-AMB-2	LU327		7:52		7:23						25.6 °C
+ 14A	MG-PATH-3	LU328		7:55		7:25						17.3 °C

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	1/31/18	1306	[signature]	2/1/18	11:25	+SEE NOTE ON SEPARATE SHEET
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #: UPS	Temperature (°C)	N/A					

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Passive Sorbent Chain of Custody

WO#:

Case Seal #:

Company: Locus Technologies Project #: 270608901R P.O.# 3012878

Project Manager: Nancy-Jeanne L Project Name: TRIPLE SITE

Contact phone/email: 415 799 7964 Collected by: Linda O / Ricky K

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
+ 15A	MI-AMB-2	LU329	1/29/18	7:58	1/30/18	7:24	X				24.1°C →	
+ 16A	MI-PATH-1	LU330		8:00		7:26					17.1°C →	
+ 17A	MI-PATH-2	LU331		8:01		7:29						32.2°C
+ 18A	MH-AMB-2	LU332		8:03		7:31						23.4°C
+ 19A	MH-PATH-1	LU333		8:07		7:33						19.5°C
+ 20A	MJ-AMB-2	LU334		8:10		7:37						20.0°C
+ 21A	MJ-PATH-2	LU335		8:11		7:34						15.1°C
+ 22A	MK-AMB-2	LU336		8:13		7:41						19.2°C
+ 23A	MK-PATH-1	LU337		8:16		7:42						21.0°C
+ 24A	ML-AMB-3	LU338		8:21		7:45						33.3°C
+ 25A	ML-PATH-1	LU339		8:22		7:47						18.9°C
+ 26A	ML-OUT-1	LU340		8:25		7:48						12.1°C
+ 27A	ML-AMB-3D	LU341		8:21		7:45						33.3°C
+ 28A	MJ-AMB-2D	LU342	↓	8:10	↓	7:37	↓					20.0°C

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush (Specify)

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	1/31/18	1306	[signature]	2/1/18	11:25	+ SEE NOTE ON SEPARATE SHEET
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #: UPS	Temperature (°C)		N/A				

1802013

1802013

NOTES TO LAB

PLEASE LOG THE INPUAN IDS AS FOLLOWS:

+ | APPEND TO END OF SAMPLE ID "_012918"
i.e. MF-AMB-2-012918

0 | APPEND TO END OF SAMPLE ID "_013018"
i.e. RE155-AMB-1-013018

THANK YOU!

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2/19/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #:
Workorder #: 1802013R1

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 2/1/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1802013R1

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012878
FAX:		**PROJECT #**	TRIPLE SITE
DATE RECEIVED:	02/01/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	02/12/2018		
DATE REISSUED:	02/19/2018		

FRACTION #	NAME	TEST
01A	MF-AMB-2-012918	Passive RAD 145 (TD)
02A	MF-PATH-1-012918	Passive RAD 145 (TD)
03A	MC-AMB-1-012918	Passive RAD 145 (TD)
04A	MC-PATH-2-012918	Passive RAD 145 (TD)
05A	MC-AMB-2-012918	Passive RAD 145 (TD)
06A	MC-PATH-3-012918	Passive RAD 145 (TD)
07A	MD-AMB-2-012918	Passive RAD 145 (TD)
08A	MD-PATH-1-012918	Passive RAD 145 (TD)
09A	MD-PATH-2-012918	Passive RAD 145 (TD)
10A	MG-AMB-1-012918	Passive RAD 145 (TD)
11A	MG-PATH-1-012918	Passive RAD 145 (TD)
12A	MG-PATH-2-012918	Passive RAD 145 (TD)
13A	MG-AMB-2-012918	Passive RAD 145 (TD)
14A	MG-PATH-3-012918	Passive RAD 145 (TD)
15A	MI-AMB-2-012918	Passive RAD 145 (TD)
16A	MI-PATH-1-012918	Passive RAD 145 (TD)
17A	MI-PATH-2-012918	Passive RAD 145 (TD)
18A	MH-AMB-2-012918	Passive RAD 145 (TD)
19A	MH-PATH-1-012918	Passive RAD 145 (TD)
20A	MJ-AMB-2-012918	Passive RAD 145 (TD)
21A	MJ-PATH-2-012918	Passive RAD 145 (TD)
22A	MK-AMB-2-012918	Passive RAD 145 (TD)
23A	MK-PATH-1-012918	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1802013R1

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012878
FAX:		**PROJECT #**	TRIPLE SITE
DATE RECEIVED:	02/01/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	02/12/2018		
DATE REISSUED:	02/19/2018		

FRACTION #	NAME	TEST
24A	ML-AMB-3-012918	Passive RAD 145 (TD)
25A	ML-PATH-1-012918	Passive RAD 145 (TD)
26A	ML-OUT-1-012918	Passive RAD 145 (TD)
27A	ML-AMB-3D-012918	Passive RAD 145 (TD)
28A	MJ-AMB-2D-012918	Passive RAD 145 (TD)
29A	Lab Blank	Passive RAD 145 (TD)
29B	Lab Blank	Passive RAD 145 (TD)
30A	CCV	Passive RAD 145 (TD)
30B	CCV	Passive RAD 145 (TD)
31A	LCS	Passive RAD 145 (TD)
31AA	LCSD	Passive RAD 145 (TD)
31B	LCS	Passive RAD 145 (TD)
31BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Rayos DATE: 02/19/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1802013R1

Twenty-eight Radiello 145 (VOC TD) samples were received on February 01, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

Per a note provided by the client, the sample IDs were amended to include the date of collection. The Chain of Custody (COC) therefore does not reflect the amended sample IDs.

The Sample identification was revised from MC-AM-2-012918 to MC-AMB-2-012918 per client request provided via E-mail on 02/01/18.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1423 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

Due to laboratory error, the workorder was reissued on 2/19/18 to correctly report as 'Not Detected' Tetrachloroethene in samples MF-AMB-2-012918, MF-PATH-1-012918, MC-AMB-1-012918, MC-PATH-2-012918, MC-AMB-2-012918, MD-AMB-2-012918, MD-PATH-1-012918, MG-PATH-1-012918, MG-PATH-2-012918, MG-AMB-2-012918, MG-PATH-3-012918, MI-AMB-2-012918, MI-PATH-1-012918, MI-PATH-2-012918, MH-AMB-2-012918, MH-PATH-1-012918, MJ-PATH-2-012918, MK-AMB-2-012918, MK-PATH-1-012918, ML-OUT-1-012918 and MJ-AMB-2D-012918 in the final report.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MF-AMB-2-012918

Lab ID#: 1802013R1-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.29
Freon 113	3.8	0.092	19 C	0.45 C

Client Sample ID: MF-PATH-1-012918

Lab ID#: 1802013R1-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.30
Freon 113	3.8	0.092	20 C	0.47 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.11 C

Client Sample ID: MC-AMB-1-012918

Lab ID#: 1802013R1-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	28	0.70
Freon 113	3.8	0.091	20 C	0.47 C

Client Sample ID: MC-PATH-2-012918

Lab ID#: 1802013R1-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	25	0.68
Freon 113	3.8	0.099	19 C	0.49 C

Client Sample ID: MC-AMB-2-012918

Lab ID#: 1802013R1-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	27	0.68
Freon 113	3.8	0.092	19 C	0.46 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-PATH-3-012918

Lab ID#: 1802013R1-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	23	0.60
Freon 113	3.8	0.094	19 C	0.46 C

Client Sample ID: MD-AMB-2-012918

Lab ID#: 1802013R1-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	33	0.83
Freon 113	3.8	0.092	20 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.11 C

Client Sample ID: MD-PATH-1-012918

Lab ID#: 1802013R1-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	30	0.77
Freon 113	3.8	0.095	19 C	0.46 C

Client Sample ID: MD-PATH-2-012918

Lab ID#: 1802013R1-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	19	0.52
Freon 113	3.8	0.10	21 C	0.55 C
trans-1,2-Dichloroethene	4.0	0.12	4.5 C	0.13 C

Client Sample ID: MG-AMB-1-012918

Lab ID#: 1802013R1-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	14	0.37
Freon 113	3.8	0.096	23 C	0.58 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-PATH-1-012918

Lab ID#: 1802013R1-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	46	1.2
Freon 113	3.8	0.097	18 C	0.46 C

Client Sample ID: MG-PATH-2-012918

Lab ID#: 1802013R1-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	36	0.94
Freon 113	3.8	0.095	18 C	0.44 C

Client Sample ID: MG-AMB-2-012918

Lab ID#: 1802013R1-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	20	0.53
Freon 113	3.8	0.094	18 C	0.44 C

Client Sample ID: MG-PATH-3-012918

Lab ID#: 1802013R1-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	25	0.68
Freon 113	3.8	0.099	18 C	0.48 C

Client Sample ID: MI-AMB-2-012918

Lab ID#: 1802013R1-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	24	0.62
Freon 113	3.8	0.095	20 C	0.50 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MI-PATH-1-012918

Lab ID#: 1802013R1-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	23	0.64
Freon 113	3.8	0.099	22 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.12 C

Client Sample ID: MI-PATH-2-012918

Lab ID#: 1802013R1-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	16	0.40
Freon 113	3.8	0.091	20 C	0.49 C

Client Sample ID: MH-AMB-2-012918

Lab ID#: 1802013R1-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Freon 113	3.8	0.096	17 C	0.43 C

Client Sample ID: MH-PATH-1-012918

Lab ID#: 1802013R1-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	3.8	0.097	17 C	0.44 C
trans-1,2-Dichloroethene	4.0	0.11	4.0 C	0.11 C

Client Sample ID: MJ-AMB-2-012918

Lab ID#: 1802013R1-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	9.0	0.24
Freon 113	3.8	0.097	22 C	0.55 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-AMB-2-012918

Lab ID#: 1802013R1-20A

trans-1,2-Dichloroethene	4.0	0.11	4.1 C	0.12 C

Client Sample ID: MJ-PATH-2-012918

Lab ID#: 1802013R1-21A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	9.3	0.26
Freon 113	3.8	0.10	18 C	0.49 C
trans-1,2-Dichloroethene	4.0	0.12	4.2 C	0.12 C

Client Sample ID: MK-AMB-2-012918

Lab ID#: 1802013R1-22A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	18	0.48
Freon 113	3.8	0.098	23 C	0.60 C

Client Sample ID: MK-PATH-1-012918

Lab ID#: 1802013R1-23A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	20	0.53
Freon 113	3.8	0.097	22 C	0.56 C

Client Sample ID: ML-AMB-3-012918

Lab ID#: 1802013R1-24A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.13	6.4	0.17
Freon 113	3.8	0.091	17 C	0.42 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML-PATH-1-012918

Lab ID#: 1802013R1-25A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	12	0.32
Freon 113	3.8	0.098	19 C	0.50 C

Client Sample ID: ML-OUT-1-012918

Lab ID#: 1802013R1-26A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	16	0.46
Freon 113	3.8	0.10	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	5.7 C	0.17 C

Client Sample ID: ML-AMB-3D-012918

Lab ID#: 1802013R1-27A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Freon 113	3.8	0.091	18 C	0.42 C

Client Sample ID: MJ-AMB-2D-012918

Lab ID#: 1802013R1-28A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	8.8	0.24
Freon 113	3.8	0.097	20 C	0.52 C

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Client Sample ID: MF-AMB-2-012918

Lab ID#: 1802013R1-01A

PASSIVE RAD 145 (TD)

File Name:	**6020218R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:02:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 06:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.29
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	19 C	0.45 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 86.0F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-PATH-1-012918

Lab ID#: 1802013R1-02A

PASSIVE RAD 145 (TD)

File Name:	**6020219R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:02:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 07:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	20 C	0.47 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.11 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 86.0F , duration time = 1415 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-012918

Lab ID#: 1802013R1-03A

PASSIVE RAD 145 (TD)

File Name:	**6020220R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:11:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 08:02 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	28	0.70
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	20 C	0.47 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 86.0F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-2-012918

Lab ID#: 1802013R1-04A

PASSIVE RAD 145 (TD)

File Name:	**6020221R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:12:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 08:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	25	0.68
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	19 C	0.49 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-2-012918

Lab ID#: 1802013R1-05A

PASSIVE RAD 145 (TD)

File Name:	**6020222R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:10:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 09:17 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	27	0.68
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	19 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 84.2F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-3-012918

Lab ID#: 1802013R1-06A

PASSIVE RAD 145 (TD)

File Name:	**6020223**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:09:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 09:54 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	23	0.60
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	19 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-2-012918

Lab ID#: 1802013R1-07A

PASSIVE RAD 145 (TD)

File Name:	**6020224R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:14:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 10:31 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	33	0.83
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.092	20 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.11 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 84.2F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-1-012918

Lab ID#: 1802013R1-08A

PASSIVE RAD 145 (TD)

File Name:	**6020225R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:13:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	30	0.77
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.095	19 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1415 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-2-012918

Lab ID#: 1802013R1-09A

PASSIVE RAD 145 (TD)

File Name:	**6020226**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:16:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:44 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	19	0.52
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	21 C	0.55 C
trans-1,2-Dichloroethene	4.0	0.12	4.5 C	0.13 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-012918

Lab ID#: 1802013R1-10A

PASSIVE RAD 145 (TD)

File Name:	**6020227**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:18:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/3/18 12:21 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	14	0.37
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	23 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1415 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-012918

Lab ID#: 1802013R1-11A

PASSIVE RAD 145 (TD)

File Name:	**6020607R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:19:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 12:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	46	1.2
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	18 C	0.46 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1414 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-2-012918

Lab ID#: 1802013R1-12A

PASSIVE RAD 145 (TD)

File Name:	**6020608R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:21:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 01:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	36	0.94
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	18 C	0.44 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1412 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-012918

Lab ID#: 1802013R1-13A

PASSIVE RAD 145 (TD)

File Name:	**6020609R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:23:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 01:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	20	0.53
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.086	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.094	18 C	0.44 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 78.8F , duration time = 1411 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-3-012918

Lab ID#: 1802013R1-14A

PASSIVE RAD 145 (TD)

File Name:	**6020610R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:23:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 02:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	25	0.68
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	18 C	0.48 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-2-012918

Lab ID#: 1802013R1-15A

PASSIVE RAD 145 (TD)

File Name:	**6020611R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:26:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 03:16 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	24	0.62
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.095	20 C	0.50 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-1-012918

Lab ID#: 1802013R1-16A

PASSIVE RAD 145 (TD)

File Name:	**6020612R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:26:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 03:53 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	23	0.64
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	22 C	0.57 C
trans-1,2-Dichloroethene	4.0	0.11	4.2 C	0.12 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1406 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-2-012918

Lab ID#: 1802013R1-17A

PASSIVE RAD 145 (TD)

File Name:	**6020613R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:29:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 04:30 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	16	0.40
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	20 C	0.49 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 89.6F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-2-012918

Lab ID#: 1802013R1-18A

PASSIVE RAD 145 (TD)

File Name:	**6020614R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:31:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 05:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	17 C	0.43 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-PATH-1-012918

Lab ID#: 1802013R1-19A

PASSIVE RAD 145 (TD)

File Name:	**6020615R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:33:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 05:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	17 C	0.44 C
trans-1,2-Dichloroethene	4.0	0.11	4.0 C	0.11 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1406 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-2-012918

Lab ID#: 1802013R1-20A

PASSIVE RAD 145 (TD)

File Name:	**6020616**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:37:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 06:21 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	9.0	0.24
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	22 C	0.55 C
trans-1,2-Dichloroethene	4.0	0.11	4.1 C	0.12 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1407 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-2-012918

Lab ID#: 1802013R1-21A

PASSIVE RAD 145 (TD)

File Name:	**6020617R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 06:58 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	5.0	0.14	9.3	0.26
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	18 C	0.49 C
trans-1,2-Dichloroethene	4.0	0.12	4.2 C	0.12 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1405 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-2-012918

Lab ID#: 1802013R1-22A

PASSIVE RAD 145 (TD)

File Name:	**6020618R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 07:35 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	18	0.48
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1408 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-PATH-1-012918

Lab ID#: 1802013R1-23A

PASSIVE RAD 145 (TD)

File Name:	**6020619R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 08:11 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	20	0.53
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.088	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	22 C	0.56 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1406 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-3-012918

Lab ID#: 1802013R1-24A

PASSIVE RAD 145 (TD)

File Name:	**6020620**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 08:48 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.13	6.4	0.17
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	17 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 91.4F , duration time = 1404 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-PATH-1-012918

Lab ID#: 1802013R1-25A

PASSIVE RAD 145 (TD)

File Name:	**6020621**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:47:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 09:25 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	12	0.32
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	19 C	0.50 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1405 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-OUT-1-012918

Lab ID#: 1802013R1-26A

PASSIVE RAD 145 (TD)

File Name:	**6020622R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 10:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	5.0	0.14	16	0.46
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.093	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	5.7 C	0.17 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1403 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-3D-012918

Lab ID#: 1802013R1-27A

PASSIVE RAD 145 (TD)

File Name:	**6020623**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 10:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.083	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.091	18 C	0.42 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 91.4F , duration time = 1404 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-2D-012918

Lab ID#: 1802013R1-28A

PASSIVE RAD 145 (TD)

File Name:	**6020624R1**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:37:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 11:15 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	8.8	0.24
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.097	20 C	0.52 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1407 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1802013R1-29A

PASSIVE RAD 145 (TD)

File Name:	**6020207**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:34 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.18	Not Detected	Not Detected
Trichloroethene	5.0	0.12	Not Detected	Not Detected
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.082	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.090	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 91.4F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1802013R1-29B

PASSIVE RAD 145 (TD)

File Name:	**6020606**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 11:33 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.18	Not Detected	Not Detected
Trichloroethene	5.0	0.12	Not Detected	Not Detected
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.082	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.090	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 91.4F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1802013R1-30A
PASSIVE RAD 145 (TD)

File Name:	**6020204**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 09:33 AM**

Compound	%Recovery
1,1,1-Trichloroethane	145 Q
Trichloroethene	99
Tetrachloroethene	122
1,1-Dichloroethane	125
1,1-Dichloroethene	91
cis-1,2-Dichloroethene	114
Freon 113	117
trans-1,2-Dichloroethene	110

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1802013R1-30B
PASSIVE RAD 145 (TD)

File Name:	**6020603**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 09:52 AM**

Compound	%Recovery
1,1,1-Trichloroethane	141 Q
Trichloroethene	97
Tetrachloroethene	116
1,1-Dichloroethane	125
1,1-Dichloroethene	89
cis-1,2-Dichloroethene	112
Freon 113	114
trans-1,2-Dichloroethene	112

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1802013R1-31A
PASSIVE RAD 145 (TD)

File Name:	**6020205**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 10:31 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	138 Q	70-130
Trichloroethene	82	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	114	70-130
1,1-Dichloroethene	75	70-130
cis-1,2-Dichloroethene	112	70-130
Freon 113	104	70-130
trans-1,2-Dichloroethene	87	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1802013R1-31AA

PASSIVE RAD 145 (TD)

File Name:	**6020206**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:02 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	147 Q	70-130
Trichloroethene	86	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	125	70-130
1,1-Dichloroethene	81	70-130
cis-1,2-Dichloroethene	126	70-130
Freon 113	115	70-130
trans-1,2-Dichloroethene	98	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1802013R1-31B
PASSIVE RAD 145 (TD)

File Name:	**6020604**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 10:29 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	137 Q	70-130
Trichloroethene	92	70-130
Tetrachloroethene	105	70-130
1,1-Dichloroethane	119	70-130
1,1-Dichloroethene	79	70-130
cis-1,2-Dichloroethene	115	70-130
Freon 113	104	70-130
trans-1,2-Dichloroethene	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1802013R1-31BB

PASSIVE RAD 145 (TD)

File Name:	**6020605**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/6/18 11:00 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	140 Q	70-130
Trichloroethene	95	70-130
Tetrachloroethene	104	70-130
1,1-Dichloroethane	122	70-130
1,1-Dichloroethene	82	70-130
cis-1,2-Dichloroethene	124	70-130
Freon 113	112	70-130
trans-1,2-Dichloroethene	97	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#:

Case Seal #:

Company: Lows Technologies Project #: 27606.089016 P.O.# 3012878

Project Manager: Jacqueline L Project Name: TRIPLE SITE

Contact phone/email: 415 799 9966 Collected by: Linda O/Rick K

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush (Specify)

	Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
+	01A	MJ-OUT-1	LU343	1/29/18	8:32	1/30/18	7:55	X				TO-17	9.3°C
+	02A	ME-OUT-1	LU344		8:36		7:58						7.9°C
+	03A	RES165-AMB1	LU345		9:55		9:54						14.7°C
+	04A	RES165-PATH-1	LU346		10:00		9:57						11.8
+	05A	RES114-AMB-1	LU347		10:20		11:04						13.2°C
o	06A	RES155-AMB-1	LU348	1/30/18	9:03	1/31/18	9:00						19.0°C
o	07A	RES155-AMB-1D	515JT		9:03		9:00						19.0°C
o	08A	RES155-OUT-1	516JT		9:08		9:05						10.8°C
✱	09A	RES114-999-012918	529 JT	1/29/18	9:03	1/30/18	7:00						13.2
✱	10A	RES155-999-013018	530 JT	1/30/18	9:08	1/31/18	9:05	✓				✓	18.8

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	1/31/18	1306	[signature]	2/1/18	11:25	+/o - SEE NOTE ON SEPARATE SHEET
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name:	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #: UPS	Temperature (°C)		N/A				

NOTES TO LAB

PLEASE LOG THE SAMPLING IDS AS FOLLOWS

+ | APPEND TO END OF SAMPLE ID "_012918"
i.e. MF-AMB-2-012918

○ | APPEND TO END OF SAMPLE ID "_013018"
i.e. RESIS-AMB-1-013018

THANK YOU!

1802014

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2/19/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #:
Workorder #: 1802014R2

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 2/1/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1802014R2

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012878
FAX:		**PROJECT #**	TRIPLE SITE
DATE RECEIVED:	02/01/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	02/12/2018		
DATE REISSUED:	02/19/2018		

FRACTION #	NAME	TEST
01A	MJ-OUT-1-012918	Passive RAD 145 (TD)
02A	ME-OUT-1-012918	Passive RAD 145 (TD)
03A	RES165-AMB-1-012918	Passive RAD 145 (TD)
04A	RES165-PATH-1-012918	Passive RAD 145 (TD)
05A	RES114-AMB-1-012918	Passive RAD 145 (TD)
06A	RES155-AMB-1-013018	Passive RAD 145 (TD)
07A	RES155-AMB-1D-013018	Passive RAD 145 (TD)
08A	RES155-OUT-1-013018	Passive RAD 145 (TD)
09A	RES114-999-012918	Passive RAD 145 (TD)
10A	RES155-999-013018	Passive RAD 145 (TD)
11A	Lab Blank	Passive RAD 145 (TD)
12A	CCV	Passive RAD 145 (TD)
13A	LCS	Passive RAD 145 (TD)
13AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Mayo DATE: 02/19/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1802014R2

Ten Radiello 145 (VOC TD) samples were received on February 01, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

Per a note provided by the client, the sample IDs were amended to include the date of collection. The Chain of Custody (COC) therefore does not reflect the amended sample IDs.

The workorder was reissued on 2/13/18 to correct sample collection date due to laboratory transcription error.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1484 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

Due to laboratory error, the workorder was reissued on 2/19/18 to correctly report as 'Not Detected' Tetrachloroethene in samples MJ-OUT-1-012918, ME-OUT-1-012918, RES165-AMB-1-012918, RES165-PATH-1-012918, RES114-AMB-1-012918 and RES155-OUT-1-013018 in the final report.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-OUT-1-012918

Lab ID#: 1802014R2-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	14	0.40
Freon 113	3.8	0.10	21 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.12	6.7 C	0.20 C

Client Sample ID: ME-OUT-1-012918

Lab ID#: 1802014R2-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	15	0.42
Freon 113	3.8	0.10	25 C	0.68 C
trans-1,2-Dichloroethene	4.0	0.12	6.2 C	0.19 C

Client Sample ID: RES165-AMB-1-012918

Lab ID#: 1802014R2-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	15	0.41
Freon 113	3.8	0.098	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	4.4 C	0.12 C

Client Sample ID: RES165-PATH-1-012918

Lab ID#: 1802014R2-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	18	0.50
Freon 113	3.8	0.099	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	5.0 C	0.14 C

Client Sample ID: RES114-AMB-1-012918

Lab ID#: 1802014R2-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES114-AMB-1-012918

Lab ID#: 1802014R2-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	18	0.48
Freon 113	3.8	0.096	20 C	0.49 C

Client Sample ID: RES155-AMB-1-013018

Lab ID#: 1802014R2-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	98	2.6
Tetrachloroethene	5.0	0.14	5.3	0.15
Freon 113	3.8	0.096	33 C	0.82 C

Client Sample ID: RES155-AMB-1D-013018

Lab ID#: 1802014R2-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	100	2.7
Tetrachloroethene	5.0	0.14	5.6	0.16
Freon 113	3.8	0.096	33 C	0.84 C

Client Sample ID: RES155-OUT-1-013018

Lab ID#: 1802014R2-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	57	1.6
Freon 113	3.8	0.10	25 C	0.67 C

Client Sample ID: RES114-999-012918

Lab ID#: 1802014R2-09A

No Detections Were Found.

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES155-999-013018

Lab ID#: 1802014R2-10A

No Detections Were Found.

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Client Sample ID: MJ-OUT-1-012918

Lab ID#: 1802014R2-01A

PASSIVE RAD 145 (TD)

File Name:	**6020210R2**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 01:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	5.0	0.14	14	0.40
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.094	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	21 C	0.58 C
trans-1,2-Dichloroethene	4.0	0.12	6.7 C	0.20 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1403 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-012918

Lab ID#: 1802014R2-02A

PASSIVE RAD 145 (TD)

File Name:	**6020211R2**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 7:58:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 02:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.21	Not Detected	Not Detected
Trichloroethene	5.0	0.14	15	0.42
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.095	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C
Freon 113	3.8	0.10	25 C	0.68 C
trans-1,2-Dichloroethene	4.0	0.12	6.2 C	0.19 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 46.4F , duration time = 1402 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES165-AMB-1-012918

Lab ID#: 1802014R2-03A

PASSIVE RAD 145 (TD)

File Name:	**6020212R2**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 9:54:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 03:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	15	0.41
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.089	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.098	20 C	0.51 C
trans-1,2-Dichloroethene	4.0	0.11	4.4 C	0.12 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES165-PATH-1-012918

Lab ID#: 1802014R2-04A

PASSIVE RAD 145 (TD)

File Name:	**6020213R2**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 9:57:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 03:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	18	0.50
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	23 C	0.60 C
trans-1,2-Dichloroethene	4.0	0.12	5.0 C	0.14 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES114-AMB-1-012918

Lab ID#: 1802014R2-05A

PASSIVE RAD 145 (TD)

File Name:	**6020214R2**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 11:04:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 04:21 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	18	0.48
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	20 C	0.49 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1484 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES155-AMB-1-013018

Lab ID#: 1802014R2-06A

PASSIVE RAD 145 (TD)

File Name:	**6020215**	**Date of Extraction: NA**	**Date of Collection: 1/31/18 9:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 04:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	98	2.6
Tetrachloroethene	5.0	0.14	5.3	0.15
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	33 C	0.82 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES155-AMB-1D-013018

Lab ID#: 1802014R2-07A

PASSIVE RAD 145 (TD)

File Name:	**6020216**	**Date of Extraction: NA**	**Date of Collection: 1/31/18 9:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 05:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.13	100	2.7
Tetrachloroethene	5.0	0.14	5.6	0.16
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.087	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.096	33 C	0.84 C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES155-OUT-1-013018

Lab ID#: 1802014R2-08A

PASSIVE RAD 145 (TD)

File Name:	**6020217R2**	**Date of Extraction: NA**	**Date of Collection: 1/31/18 9:05:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 06:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	57	1.6
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	25 C	0.67 C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES114-999-012918

Lab ID#: 1802014R2-09A

PASSIVE RAD 145 (TD)

File Name:	**6020208**	**Date of Extraction: NA**	**Date of Collection: 1/30/18 9:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 12:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.090	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.099	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES155-999-013018

Lab ID#: 1802014R2-10A

PASSIVE RAD 145 (TD)

File Name:	**6020209**	**Date of Extraction: NA**	**Date of Collection: 1/31/18 9:05:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 01:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.20	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.11	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.091	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C
Freon 113	3.8	0.10	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.12	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1802014R2-11A

PASSIVE RAD 145 (TD)

File Name:	**6020207**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:34 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	5.5	0.19	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	4.0	0.10	Not Detected C	Not Detected C
1,1-Dichloroethene	4.0	0.084	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	4.0	0.10	Not Detected C	Not Detected C
Freon 113	3.8	0.093	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	4.0	0.11	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1484 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1802014R2-12A
PASSIVE RAD 145 (TD)

File Name:	**6020204**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 09:33 AM**

Compound	%Recovery
1,1,1-Trichloroethane	145 Q
Trichloroethene	99
Tetrachloroethene	122
1,1-Dichloroethane	125
1,1-Dichloroethene	91
cis-1,2-Dichloroethene	114
Freon 113	117
trans-1,2-Dichloroethene	110

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1802014R2-13A
PASSIVE RAD 145 (TD)

File Name:	**6020205**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 10:31 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	138 Q	70-130
Trichloroethene	82	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	114	70-130
1,1-Dichloroethene	75	70-130
cis-1,2-Dichloroethene	112	70-130
Freon 113	104	70-130
trans-1,2-Dichloroethene	87	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD

Lab ID#: 1802014R2-13AA

PASSIVE RAD 145 (TD)

File Name:	**6020206**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/2/18 11:02 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	147 Q	70-130
Trichloroethene	86	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	125	70-130
1,1-Dichloroethene	81	70-130
cis-1,2-Dichloroethene	126	70-130
Freon 113	115	70-130
trans-1,2-Dichloroethene	98	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#: 1802540

Case Seal #: _____

Company: Locus Technologies Project #: ZT00604901.8 P.O.# 30128R2

Project Manager: Nancy Jeanne LeFevre Project Name: Triple Site

Contact phone/email: Collected by: Richey / Min J

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush — Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Sample Comments:
01A	MF-PATH-1-022218	A436R	2/22/18	7:41	2/23/18	7:41	TO-17	14.4°
02A	MF-AMB-2-022218	A437R		7:43		7:42		17.3°
03A	MH-AMB-2-022218	A439R		7:47		7:45		14.5°
04A	MH-AMB-2D-022218	A438R		7:47		7:45		
05A	MH-PATH-1-022218	A440R		7:52		7:49		15.7°
06A	MJ-AMB-2-022218	A441R		7:57		7:52		14.2°
07A	MJ-PATH-2-022218	A444R		7:59		7:53		13.4°
08A	MK-PATH-1-022218	A443R		8:03		7:55		17.2°
09A	MK-AMB-2-022218	A442R		8:05		7:55		17.8°
10A	ML-AMB-3-022218	A445R		8:09		7:56		15.0°
11A	ML-PATH-1-022218	A448R		8:11		7:57		14.6°
12A	ML-OUT-1-022218	A451R		8:13		8:00		9.4°
13A	MJ-OUT-1-022218	A446R		8:15		8:02		8.7°
14A	MI-PATH-2-022218	A447R		8:19		8:04		15.5°

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
Min Jiang	02/26/2018	14:15	Andrea Augustin EAT	2/27/18	1025	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)	NA					

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3/7/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006089018
Workorder #: 1802540

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 2/27/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1802540

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012882/
FAX:		**PROJECT #**	27006089018 Triple Site
DATE RECEIVED:	02/27/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	03/07/2018		

FRACTION #	NAME	TEST
01A	MF-PATH-1-022218	Passive RAD 145 (TD)
02A	MF-AMB-2-022218	Passive RAD 145 (TD)
03A	MH-AMB-2-022218	Passive RAD 145 (TD)
04A	MH-AMB-2D-022218	Passive RAD 145 (TD)
05A	MH-PATH-1-022218	Passive RAD 145 (TD)
06A	MJ-AMB-2-022218	Passive RAD 145 (TD)
07A	MJ-PATH-2-022218	Passive RAD 145 (TD)
08A	MK-PATH-1-022218	Passive RAD 145 (TD)
09A	ML-AMB-2-022218	Passive RAD 145 (TD)
10A	ML-AMB-3-022218	Passive RAD 145 (TD)
11A	ML-PATH-1-022218	Passive RAD 145 (TD)
12A	ML-OUT-1-022218	Passive RAD 145 (TD)
13A	MJ-OUT-1-022218	Passive RAD 145 (TD)
14A	MI-PATH-2-022218	Passive RAD 145 (TD)
15A	Lab Blank	Passive RAD 145 (TD)
16A	CCV	Passive RAD 145 (TD)
17A	LCS	Passive RAD 145 (TD)
17AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 03/07/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1802540

Fourteen Radiello 145 (VOC TD) samples were received on February 27, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MF-PATH-1-022218

Lab ID#: 1802540-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	23 C	0.59 C

Client Sample ID: MF-AMB-2-022218

Lab ID#: 1802540-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.52 C

Client Sample ID: MH-AMB-2-022218

Lab ID#: 1802540-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	24 C	0.62 C

Client Sample ID: MH-AMB-2D-022218

Lab ID#: 1802540-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	24 C	0.63 C

Client Sample ID: MH-PATH-1-022218

Lab ID#: 1802540-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MJ-AMB-2-022218

Lab ID#: 1802540-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	23 C	0.58 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-PATH-2-022218

Lab ID#: 1802540-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	23 C	0.61 C

Client Sample ID: MK-PATH-1-022218

Lab ID#: 1802540-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.29
Freon 113	5.0	0.13	26 C	0.67 C

Client Sample ID: ML-AMB-2-022218

Lab ID#: 1802540-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.1	0.14
Freon 113	5.0	0.13	23 C	0.59 C

Client Sample ID: ML-AMB-3-022218

Lab ID#: 1802540-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.53 C

Client Sample ID: ML-PATH-1-022218

Lab ID#: 1802540-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: ML-OUT-1-022218

Lab ID#: 1802540-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML-OUT-1-022218

Lab ID#: 1802540-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	24 C	0.63 C

Client Sample ID: MJ-OUT-1-022218

Lab ID#: 1802540-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	22 C	0.58 C

Client Sample ID: MI-PATH-2-022218

Lab ID#: 1802540-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	5.5	0.15
Freon 113	5.0	0.13	23 C	0.59 C

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Client Sample ID: MF-PATH-1-022218

Lab ID#: 1802540-01A

PASSIVE RAD 145 (TD)

File Name:	**6030106**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 11:09 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	23 C	0.59 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-2-022218

Lab ID#: 1802540-02A

PASSIVE RAD 145 (TD)

File Name:	**6030107**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 11:46 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-2-022218

Lab ID#: 1802540-03A

PASSIVE RAD 145 (TD)

File Name:	**6030108**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 12:24 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	24 C	0.62 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-2D-022218

Lab ID#: 1802540-04A

PASSIVE RAD 145 (TD)

File Name:	**6030109**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 01:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	24 C	0.63 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-PATH-1-022218

Lab ID#: 1802540-05A

PASSIVE RAD 145 (TD)

File Name:	**6030110**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:49:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 01:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-2-022218

Lab ID#: 1802540-06A

PASSIVE RAD 145 (TD)

File Name:	**6030111**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:52:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 02:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	23 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1435 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-2-022218

Lab ID#: 1802540-07A

PASSIVE RAD 145 (TD)

File Name:	**6030112**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:53:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 02:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	23 C	0.61 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-PATH-1-022218

Lab ID#: 1802540-08A

PASSIVE RAD 145 (TD)

File Name:	**6030113**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 03:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.29
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	26 C	0.67 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2-022218

Lab ID#: 1802540-09A

PASSIVE RAD 145 (TD)

File Name:	**6030114**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 04:05 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.1	0.14
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	23 C	0.59 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-3-022218

Lab ID#: 1802540-10A

PASSIVE RAD 145 (TD)

File Name:	**6030115**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:56:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 04:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-PATH-1-022218

Lab ID#: 1802540-11A

PASSIVE RAD 145 (TD)

File Name:	**6030116**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 7:57:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 05:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-OUT-1-022218

Lab ID#: 1802540-12A

PASSIVE RAD 145 (TD)

File Name:	**6030117**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 05:58 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	24 C	0.63 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-OUT-1-022218

Lab ID#: 1802540-13A

PASSIVE RAD 145 (TD)

File Name:	**6030118**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:02:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 06:35 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-2-022218

Lab ID#: 1802540-14A

PASSIVE RAD 145 (TD)

File Name:	**6030119**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:04:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 07:12 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	5.5	0.15
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	23 C	0.59 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1802540-15A

PASSIVE RAD 145 (TD)

File Name:	**6030105**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 09:40 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1802540-16A
PASSIVE RAD 145 (TD)

File Name:	**6030102**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 07:59 AM**

Compound	%Recovery
1,1,1-Trichloroethane	97
Trichloroethene	91
Tetrachloroethene	104
1,1-Dichloroethane	97
1,1-Dichloroethene	76
cis-1,2-Dichloroethene	94
Freon 113	93
trans-1,2-Dichloroethene	90

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1802540-17A
PASSIVE RAD 145 (TD)

File Name:	**6030103**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 08:35 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	129	70-130
Trichloroethene	96	70-130
Tetrachloroethene	115	70-130
1,1-Dichloroethane	111	70-130
1,1-Dichloroethene	76	70-130
cis-1,2-Dichloroethene	118	70-130
Freon 113	106	70-130
trans-1,2-Dichloroethene	84	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1802540-17AA
PASSIVE RAD 145 (TD)

File Name:	**6030104**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 09:06 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	129	70-130
Trichloroethene	97	70-130
Tetrachloroethene	115	70-130
1,1-Dichloroethane	112	70-130
1,1-Dichloroethene	78	70-130
cis-1,2-Dichloroethene	115	70-130
Freon 113	109	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#: T802541

Case Seal #: _____

Company: Locus Technologies Project #: 2700609018 P.O.# 3012PP2

Project Manager: Nancy-Joanne LoFaro Project Name: Triple Site

Contact phone/email: Collected by: Ricky / Min J

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng	Analysis Requested	Sample Comments:
01A	MI-AMB-2-022218	A449R	2/22/18	8:27	2/23/18	8:06						TO-17	15.0°
02A	MI-PATH-1-022218	A452R	2/22/18	8:29		8:06							14.6°
03A	MG-AMB-2-022218	A450R		8:30		8:09							14.0°
04A	MG-PATH-3-022218	A453R		8:31		8:10							13.7°
05A	MG-PATH-2-022218	HA839		8:35		8:12							14.9°
06A	MG-AMB-1-022218	HA838		8:37		8:14							15.2°
07A	MG-PATH-1-022218	MN715		8:38		8:14							14.2°
08A	ME-OUT-1-022218	MN716		8:40		8:16							9.4°
09A	MD-PATH-2-022218	HA835		8:43		8:18							10.4°
10A	MD-AMB-2-022218	HA832		8:47		8:20							12.9°
11A	MD-AMB-2D-022218	HA834		8:47		8:20							
12A	MD-PATH-1-022218	HA833		8:49		8:22							13.4°
13A	MC-AMB-2-022218	HA837		8:52		8:24							13.4°
14A	MC-PATH-3-022218	HA836		8:53		8:25							14.4°

Turn Around Time: Normal / Rush (Specify)

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
Min Jiang	02/26/2018	14:15	Andrea Augustine EATL	2/27/18	1015	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS
Air bill #:

Custody Seals Intact? Yes No (None)

Temperature (°C): NA

Sample Condition Upon Receipt (circle): (Good) SDR

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Passive Sorbent Chain of Custody

WO#: 1802541

Case Seal #: _____

Company: Locus Technologies Project #: 2700bdf9018 P.O.# 3012882

Project Manager: Nancy-Jeanne LeFor Project Name: Trinity Site

Contact phone/email: _____ Collected by: Ricky / Min J

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
15A	MC-AMB-1-022218	GS398	2/22/18	8:56	2/23/18	8:27					TO-17	13.7°
16A	MC-PATH-2-022218	GS397		8:58	↓	8:29					↓	13.6°
17A	MC-999-022218	HA896	2/22/18	8:58	↓	8:29					↓	

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
Jun Tiang	02/26/2018	14:15	Andrea Augustin FAEL	2/27/18	1025	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)	NA					

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3/7/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 27006089018
Workorder #: 1802541

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 2/27/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1802541

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012882/
FAX:		**PROJECT #**	27006089018 Triple Site
DATE RECEIVED:	02/27/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	03/07/2018		

FRACTION #	NAME	TEST
01A	MI-AMB-2-022218	Passive RAD 145 (TD)
02A	MI-PATH-1-022218	Passive RAD 145 (TD)
03A	MG-AMB-2-022218	Passive RAD 145 (TD)
04A	MG-PATH-3-022218	Passive RAD 145 (TD)
05A	MG-PATH-2-022218	Passive RAD 145 (TD)
06A	MG-AMB-1-022218	Passive RAD 145 (TD)
07A	MG-PATH-1-022218	Passive RAD 145 (TD)
08A	ME-OUT-1-022218	Passive RAD 145 (TD)
09A	MD-PATH-2-022218	Passive RAD 145 (TD)
10A	MD-AMB-2-022218	Passive RAD 145 (TD)
11A	MD-AMB-2D-022218	Passive RAD 145 (TD)
12A	MD-PATH-1-022218	Passive RAD 145 (TD)
13A	MC-AMB-2-022218	Passive RAD 145 (TD)
14A	MC-PATH-3-022218	Passive RAD 145 (TD)
15A	MC-AMB-1-022218	Passive RAD 145 (TD)
16A	MC-PATH-2-022218	Passive RAD 145 (TD)
17A	MC-999-022218	Passive RAD 145 (TD)
18A	Lab Blank	Passive RAD 145 (TD)
19A	CCV	Passive RAD 145 (TD)
20A	LCS	Passive RAD 145 (TD)
20AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 03/07/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1802541

Seventeen Radiello 145 (VOC TD) samples were received on February 27, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1419 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MI-AMB-2-022218

Lab ID#: 1802541-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	26	0.72
Freon 113	5.0	0.13	26 C	0.67 C

Client Sample ID: MI-PATH-1-022218

Lab ID#: 1802541-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	24	0.66
Freon 113	5.0	0.13	24 C	0.62 C

Client Sample ID: MG-AMB-2-022218

Lab ID#: 1802541-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	16	0.45
Freon 113	5.0	0.13	21 C	0.54 C

Client Sample ID: MG-PATH-3-022218

Lab ID#: 1802541-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	18	0.48
Freon 113	5.0	0.13	21 C	0.55 C

Client Sample ID: MG-PATH-2-022218

Lab ID#: 1802541-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	34	0.94
Freon 113	5.0	0.13	20 C	0.53 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-1-022218

Lab ID#: 1802541-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	79	2.2
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MG-PATH-1-022218

Lab ID#: 1802541-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	41	1.1
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: ME-OUT-1-022218

Lab ID#: 1802541-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.58 C

Client Sample ID: MD-PATH-2-022218

Lab ID#: 1802541-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.55 C

Client Sample ID: MD-AMB-2-022218

Lab ID#: 1802541-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	22	0.60
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MD-AMB-2D-022218

Lab ID#: 1802541-11A

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MD-AMB-2D-022218

Lab ID#: 1802541-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	22	0.61
Freon 113	5.0	0.13	21 C	0.55 C

Client Sample ID: MD-PATH-1-022218

Lab ID#: 1802541-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	22	0.62
Freon 113	5.0	0.13	22 C	0.57 C

Client Sample ID: MC-AMB-2-022218

Lab ID#: 1802541-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	60	1.7
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MC-PATH-3-022218

Lab ID#: 1802541-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	43	1.2
Freon 113	5.0	0.13	22 C	0.58 C

Client Sample ID: MC-AMB-1-022218

Lab ID#: 1802541-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	44	1.2
Freon 113	5.0	0.13	20 C	0.54 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-PATH-2-022218

Lab ID#: 1802541-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	42	1.2
Freon 113	5.0	0.13	21 C	0.56 C

Client Sample ID: MC-999-022218

Lab ID#: 1802541-17A

No Detections Were Found.

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Client Sample ID: MI-AMB-2-022218

Lab ID#: 1802541-01A

PASSIVE RAD 145 (TD)

File Name:	**6022828**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:06:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 09:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	26	0.72
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	26 C	0.67 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-1-022218

Lab ID#: 1802541-02A

PASSIVE RAD 145 (TD)

File Name:	**6022829**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:06:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 09:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	24	0.66
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	24 C	0.62 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1417 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-022218

Lab ID#: 1802541-03A

PASSIVE RAD 145 (TD)

File Name:	**6022830**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:09:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 10:17 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	16	0.45
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-3-022218

Lab ID#: 1802541-04A

PASSIVE RAD 145 (TD)

File Name:	**6022831**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:10:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 10:54 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	18	0.48
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-2-022218

Lab ID#: 1802541-05A

PASSIVE RAD 145 (TD)

File Name:	**6022832**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:12:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 11:31 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	34	0.94
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1417 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-022218

Lab ID#: 1802541-06A

PASSIVE RAD 145 (TD)

File Name:	**6022833**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:14:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 12:08 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	79	2.2
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1417 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-022218

Lab ID#: 1802541-07A

PASSIVE RAD 145 (TD)

File Name:	**6022834**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:14:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 12:45 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	41	1.1
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-022218

Lab ID#: 1802541-08A

PASSIVE RAD 145 (TD)

File Name:	**6022835**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:16:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 01:22 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1416 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MD-PATH-2-022218

Lab ID#: 1802541-09A

PASSIVE RAD 145 (TD)

File Name:	**6022836**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:18:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 01:59 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1415 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-2-022218

Lab ID#: 1802541-10A

PASSIVE RAD 145 (TD)

File Name:	**6022837**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 02:36 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	22	0.60
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1413 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-2D-022218

Lab ID#: 1802541-11A

PASSIVE RAD 145 (TD)

File Name:	**6022838**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 03:13 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	22	0.61
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1413 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-1-022218

Lab ID#: 1802541-12A

PASSIVE RAD 145 (TD)

File Name:	**6022839**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:22:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 03:50 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	22	0.62
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.57 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1413 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-2-022218

Lab ID#: 1802541-13A

PASSIVE RAD 145 (TD)

File Name:	**6022840**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:24:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 04:27 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	60	1.7
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1412 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-3-022218

Lab ID#: 1802541-14A

PASSIVE RAD 145 (TD)

File Name:	**6022841**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:25:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 05:04 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	43	1.2
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1412 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-022218

Lab ID#: 1802541-15A

PASSIVE RAD 145 (TD)

File Name:	**6022842**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:27:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 05:41 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	44	1.2
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1411 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-2-022218

Lab ID#: 1802541-16A

PASSIVE RAD 145 (TD)

File Name:	**6022843**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:29:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/18 06:18 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	42	1.2
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.56 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1411 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-999-022218

Lab ID#: 1802541-17A

PASSIVE RAD 145 (TD)

File Name:	**6022827**	**Date of Extraction: NA**	**Date of Collection: 2/23/18 8:29:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 08:27 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1411 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1802541-18A

PASSIVE RAD 145 (TD)

File Name:	**6022822**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 05:03 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1802541-19A
PASSIVE RAD 145 (TD)

File Name:	**6022819**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 03:21 PM**

Compound	%Recovery
1,1,1-Trichloroethane	114
Trichloroethene	91
Tetrachloroethene	102
1,1-Dichloroethane	103
1,1-Dichloroethene	76
cis-1,2-Dichloroethene	98
Freon 113	100
trans-1,2-Dichloroethene	98

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1802541-20A

PASSIVE RAD 145 (TD)

File Name:	**6022820**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 03:58 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	123	70-130
Trichloroethene	94	70-130
Tetrachloroethene	111	70-130
1,1-Dichloroethane	108	70-130
1,1-Dichloroethene	77	70-130
cis-1,2-Dichloroethene	111	70-130
Freon 113	106	70-130
trans-1,2-Dichloroethene	85	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1802541-20AA
PASSIVE RAD 145 (TD)

File Name:	**6022821**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/18 04:29 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	129	70-130
Trichloroethene	98	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	112	70-130
1,1-Dichloroethene	81	70-130
cis-1,2-Dichloroethene	118	70-130
Freon 113	111	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___of___

WO#: 1803364

Case Seal #: _____

Company: Locus Project #: 27006[illegible]8-9018 P.O.# 12886

Project Manager: Nancy-Jeanne LeFevre Project Name: Triple Site

Contact phone/email: Collected by: Vlad P. / Linda O.

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush (Specify)

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MG-AMB-1-031815	MN700	03/18/18	7:30	03/19/18	7:40	X				TO-17	16.4 °C
02A	MG-AMB-1D-031815	MN701		7:30		7:40						16.4 °C
03A	MG-PATH-1-031815	MN702		7:31		7:41						15.9 °C
04A	MG-PATH-4-031815	MN709		7:45		7:42						17.4 °C
05A	MG-PATH-5-031815	B9137V		7:52		7:45						~~4.2 °C~~ 15.5 °C
06A	ME-04T-1-031815	B9132V		7:55		7:47						4.2 °C
07A	ME-04T999-031815	B9133V		7:55		7:55						4.2 °C

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
Vladimir Pavlushkin	03/19/18	12:53	Andrea Augusti EATL	3/20/18	1015	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS

Air bill #:

Custody Seals Intact? Yes No (None)

Temperature (°C): NA

Sample Condition Upon Receipt: (circle) (Good) SDR

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3/22/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 2700608-9018
Workorder #: 1803364

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 3/20/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Rachel Selenis at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Rachel Selenis

Project Manager

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WORK ORDER #: 1803364

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12886
FAX:		**PROJECT #**	2700608-9018 Triple Site
DATE RECEIVED:	03/20/2018	**CONTACT:**	Rachel Selenis
DATE COMPLETED:	03/22/2018		

FRACTION #	NAME	TEST
01A	MG-AMB-1-031818	Passive RAD 145 (TD)
02A	MG-AMB-1D-031818	Passive RAD 145 (TD)
03A	MG-PATH-1-031818	Passive RAD 145 (TD)
04A	MG-PATH-4-031818	Passive RAD 145 (TD)
05A	MG-PATH-5-031818	Passive RAD 145 (TD)
06A	ME-OUT-1-031818	Passive RAD 145 (TD)
07A	ME-999-031818	Passive RAD 145 (TD)
08A	Lab Blank	Passive RAD 145 (TD)
09A	CCV	Passive RAD 145 (TD)
10A	LCS	Passive RAD 145 (TD)
10AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY:  DATE: 03/22/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1803364

Seven Radiello 145 (VOC TD) samples were received on March 20, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1450 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

The recovery of internal standard Chlorobenzene-d5 in samples MG-PATH-4-031818 and MG-PATH-5-031818 was outside control limits. Reanalysis of a back-up tube sample confirmed results. Tetrachloroethene was quantified using this internal standard and was qualified as an estimated value.

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.

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
CN - See case narrative explanation.

C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-1-031818

Lab ID#: 1803364-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	65	1.7
Freon 113	5.0	0.13	20 C	0.50 C

Client Sample ID: MG-AMB-1D-031818

Lab ID#: 1803364-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	68	1.8
Freon 113	5.0	0.13	19 C	0.48 C

Client Sample ID: MG-PATH-1-031818

Lab ID#: 1803364-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	45	1.2
Freon 113	5.0	0.13	22 C	0.55 C

Client Sample ID: MG-PATH-4-031818

Lab ID#: 1803364-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	78	2.1
Freon 113	5.0	0.13	22 C	0.55 C

Client Sample ID: MG-PATH-5-031818

Lab ID#: 1803364-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	15	0.41
Freon 113	5.0	0.13	21 C	0.53 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ME-OUT-1-031818

Lab ID#: 1803364-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.14	24 C	0.65 C

Client Sample ID: ME-999-031818

Lab ID#: 1803364-07A

No Detections Were Found.

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Client Sample ID: MG-AMB-1-031818

Lab ID#: 1803364-01A

PASSIVE RAD 145 (TD)

File Name:	**6032209**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 11:54 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	65	1.7
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1450 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1D-031818

Lab ID#: 1803364-02A

PASSIVE RAD 145 (TD)

File Name:	**6032210**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 12:31 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	68	1.8
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1450 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-031818

Lab ID#: 1803364-03A

PASSIVE RAD 145 (TD)

File Name:	**6032211**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 01:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	45	1.2
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1450 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-4-031818

Lab ID#: 1803364-04A

PASSIVE RAD 145 (TD)

File Name:	**6032212**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 01:45 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	78	2.1
Tetrachloroethene	5.0	0.14	Not Detected Q	Not Detected Q
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

Q = The internal standard associated with the analyte exceeded acceptance limits.

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-5-031818

Lab ID#: 1803364-05A

PASSIVE RAD 145 (TD)

File Name:	**6032213**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 02:22 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	15	0.41
Tetrachloroethene	5.0	0.14	Not Detected Q	Not Detected Q
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

Q = The internal standard associated with the analyte exceeded acceptance limits.

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1433 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-031818

Lab ID#: 1803364-06A

PASSIVE RAD 145 (TD)

File Name:	**6032214**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:47:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 02:59 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	24 C	0.65 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 39.2F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-999-031818

Lab ID#: 1803364-07A

PASSIVE RAD 145 (TD)

File Name:	**6032208**	**Date of Extraction: NA**	**Date of Collection: 3/19/18 7:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 11:17 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 39.2F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1803364-08A

PASSIVE RAD 145 (TD)

File Name:	**6032207**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 10:12 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1450 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV

Lab ID#: 1803364-09A

PASSIVE RAD 145 (TD)

File Name:	**6032206**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 09:39 AM**

Compound	%Recovery
1,1,1-Trichloroethane	131 Q
Trichloroethene	86
Tetrachloroethene	114
1,1-Dichloroethane	119
1,1-Dichloroethene	76
cis-1,2-Dichloroethene	104
Freon 113	97
trans-1,2-Dichloroethene	100

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1803364-10A

PASSIVE RAD 145 (TD)

File Name:	**6032203**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 07:39 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	116	70-130
Trichloroethene	89	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	118	70-130
1,1-Dichloroethene	84	70-130
cis-1,2-Dichloroethene	112	70-130
Freon 113	98	70-130
trans-1,2-Dichloroethene	85	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1803364-10AA
PASSIVE RAD 145 (TD)

File Name:	**6032205**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/22/18 08:57 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	122	70-130
Trichloroethene	88	70-130
Tetrachloroethene	108	70-130
1,1-Dichloroethane	123	70-130
1,1-Dichloroethene	90	70-130
cis-1,2-Dichloroethene	125	70-130
Freon 113	107	70-130
trans-1,2-Dichloroethene	91	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Case Seal #: _____ WO#: 1804048

Company: LOCUS TECHNOLOGIES Project #: 27006.08 9018 P.O.# 3012882

Project Manager: NANCY-JEANNE LEFEVRE Project Name: DOD-TRIPLE SITE

Contact phone/email: KAZAKOFFR@LOCUSTEC.COM 650 430 2154 Collected by: RICKY K. MIN J. LINDA O.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other( )	Analysis Requested	Sample Comments:
01A	RES092-AMB-1-032818	EK312	03/28/18	10:28	03/29/18	10:34					TO-17	19.8°
02A	RES092-PATH-2-032818	EK300		10:32		10:36						19.1°
03A	RES092-AMB-2-032818	EK301		10:35		10:40						18.4°
04A	RES092-AMB-3-032818	EK302		10:38		10:36						17.4°
05A	RES092-PATH-1-032818	EK303		10:43		10:42						16.7°
06A	RES093-AMB-1-032818	312JY		10:51		10:47						18.9°
07A	RES093-PATH-2-032818	305JY		10:54		10:48						16.8°
08A	RES093-AMB-2-032818	306JY		10:57		10:48						17.6°
09A	RES093-AMB-3-032818	308JY		11:03		10:48						18.4°
10A	RES093-AMB-3D-032818	309JY		11:03		10:48						18.4°
11A	RES093-PATH-1-032818	EK306		11:13		10:51						15.4°
12A	RES093-OUT-1-032818	EK309		11:23		10:44						24.9°
13A	MK1-PATH-1-032818	EK305		18:11		18:31						17.4°
14A	MK1-AMB-2-032818	EK304	↓	18:17	↓	18:36					↓	21.1°

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: ☐ Normal ☐ Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	4/2/18	13:00	Andrea Augustin FATE	4/3/18	1400	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS
Air bill #:

Custody Seals Intact? Yes No None

Temperature (°C) N/A

Sample Condition Upon Receipt: (circle) Good SDR

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Passive Sorbent Chain of Custody

WO#: 1804048

Case Seal #:

Company: LOCUS TECHNOLOGIES Project #: 27006 18 9018 P.O.# 3012282

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU-TRIPLE SITE

Contact phone/email: KAZAKOFFR@LOCUSTEC.COM 530 430 2154 Collected by: RICKY K MINJ. LINDA O.

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: ☐ Normal ☐ Rush (Specify)

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Analysis Requested	Sample Comments:
15A	MK1-AMB-1-032818	EK307	3/28/18	18:23	3/29/18	18:39	TO-17	21.4°
16A	ML1-PATH-1-032818	EK308	↓	18:43	↓	18:44	↓	14.8°
17A	ML1-AMB-1-032818	GS400		18:47		18:47		25.5°
18A	ML2-PATH-1-032818	GS402		18:50		18:56		15.0°
19A	ML2-AMB-1-032818	GS401		18:56		19:00		23.9°
20A	ML2-AMB-1D-032818	GS417		18:56		19:00		23.9°
21A	ML2-PM-032818	B294X	↓	18:56	↓	18:56	↓	23.9

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	4/2/18	13:00	Andrea Augustin EATL	4/3/18	1400	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)	N/A					

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4/16/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1804048

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 4/3/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1804048

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012882
FAX:		**PROJECT #**	27006 08 9018 TRIPLE SITE
DATE RECEIVED:	04/03/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	04/16/2018		

FRACTION #	NAME	TEST
01A	RES092-AMB-1-032818	Passive RAD 145 (TD)
02A	RES092-PATH-2-032818	Passive RAD 145 (TD)
03A	RES092-AMB-2-032818	Passive RAD 145 (TD)
04A	RES092-AMB-3-032818	Passive RAD 145 (TD)
05A	RES092-PATH-1-032818	Passive RAD 145 (TD)
06A	RES093-AMB-1-032818	Passive RAD 145 (TD)
07A	RES093-PATH-2-032818	Passive RAD 145 (TD)
08A	RES093-AMB-2-032818	Passive RAD 145 (TD)
09A	RES093-AMB-3-032818	Passive RAD 145 (TD)
10A	RES093-AMB-3D-032818	Passive RAD 145 (TD)
11A	RES093-PATH-1-032818	Passive RAD 145 (TD)
12A	RES093-OUT-1-032818	Passive RAD 145 (TD)
13A	MK1-PATH-1-032818	Passive RAD 145 (TD)
14A	MK1-AMB-2-032818	Passive RAD 145 (TD)
15A	MK1-AMB-1-032818	Passive RAD 145 (TD)
16A	ML1-PATH-1-032818	Passive RAD 145 (TD)
17A	ML1-AMB-1-032818	Passive RAD 145 (TD)
18A	ML2-PATH-1-032818	Passive RAD 145 (TD)
19A	ML2-AMB-1-032818	Passive RAD 145 (TD)
20A	ML2-AMB-1D-032818	Passive RAD 145 (TD)
21A	ML2-999-032818	Passive RAD 145 (TD)
22A	Lab Blank	Passive RAD 145 (TD)
22B	Lab Blank	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1804048

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	3012882
FAX:		**PROJECT #**	27006 08 9018 TRIPLE SITE
DATE RECEIVED:	04/03/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	04/16/2018		

FRACTION #	NAME	TEST
22C	Lab Blank	Passive RAD 145 (TD)
23A	CCV	Passive RAD 145 (TD)
23B	CCV	Passive RAD 145 (TD)
23C	CCV	Passive RAD 145 (TD)
24A	LCS	Passive RAD 145 (TD)
24AA	LCSD	Passive RAD 145 (TD)
24B	LCS	Passive RAD 145 (TD)
24BB	LCSD	Passive RAD 145 (TD)
24C	LCS	Passive RAD 145 (TD)
24CC	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Rayes DATE: 04/16/18

Technical Director

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LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1804048

Twenty-one Radiello 145 (VOC TD) samples were received on April 03, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1460 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: RES092-AMB-1-032818

Lab ID#: 1804048-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	22	0.58
Freon 113	5.0	0.12	18 C	0.45 C

Client Sample ID: RES092-PATH-2-032818

Lab ID#: 1804048-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	38	1.0
Freon 113	5.0	0.12	16 C	0.40 C

Client Sample ID: RES092-AMB-2-032818

Lab ID#: 1804048-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	19	0.51
Freon 113	5.0	0.12	14 C	0.36 C

Client Sample ID: RES092-AMB-3-032818

Lab ID#: 1804048-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	22	0.59
Freon 113	5.0	0.13	14 C	0.36 C

Client Sample ID: RES092-PATH-1-032818

Lab ID#: 1804048-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	35	0.93
Freon 113	5.0	0.13	21 C	0.53 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES093-AMB-1-032818

Lab ID#: 1804048-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.29
Freon 113	5.0	0.12	15 C	0.37 C

Client Sample ID: RES093-PATH-2-032818

Lab ID#: 1804048-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	15	0.40
Tetrachloroethene	5.0	0.14	5.0	0.14
Freon 113	5.0	0.13	18 C	0.45 C

Client Sample ID: RES093-AMB-2-032818

Lab ID#: 1804048-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	9.8	0.26
Freon 113	5.0	0.13	14 C	0.35 C

Client Sample ID: RES093-AMB-3-032818

Lab ID#: 1804048-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	5.0	0.13	16 C	0.40 C

Client Sample ID: RES093-AMB-3D-032818

Lab ID#: 1804048-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	5.0	0.13	18 C	0.47 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES093-PATH-1-032818

Lab ID#: 1804048-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	16	0.44
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: RES093-OUT-1-032818

Lab ID#: 1804048-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	5.0	0.12	19 C	0.47 C

Client Sample ID: MK1-PATH-1-032818

Lab ID#: 1804048-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Freon 113	5.0	0.12	21 C	0.52 C

Client Sample ID: MK1-AMB-2-032818

Lab ID#: 1804048-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.8	0.15
Freon 113	5.0	0.12	19 C	0.46 C

Client Sample ID: MK1-AMB-1-032818

Lab ID#: 1804048-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.3	0.14
Freon 113	5.0	0.12	18 C	0.45 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML1-PATH-1-032818

Lab ID#: 1804048-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.33
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: ML1-AMB-1-032818

Lab ID#: 1804048-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.8	0.15
Freon 113	5.0	0.12	18 C	0.44 C

Client Sample ID: ML2-PATH-1-032818

Lab ID#: 1804048-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Freon 113	5.0	0.13	20 C	0.51 C

Client Sample ID: ML2-AMB-1-032818

Lab ID#: 1804048-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.6	0.14
Freon 113	5.0	0.12	12 C	0.30 C

Client Sample ID: ML2-AMB-1D-032818

Lab ID#: 1804048-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.6	0.14
Freon 113	5.0	0.12	15 C	0.36 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML2-999-032818

Lab ID#: 1804048-21A

No Detections Were Found.

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Client Sample ID: RES092-AMB-1-032818

Lab ID#: 1804048-01A

PASSIVE RAD 145 (TD)

File Name:	**6040413**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 04:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	22	0.58
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1448 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES092-PATH-2-032818

Lab ID#: 1804048-02A

PASSIVE RAD 145 (TD)

File Name:	**6040414**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 05:10 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	38	1.0
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES092-AMB-2-032818

Lab ID#: 1804048-03A

PASSIVE RAD 145 (TD)

File Name:	**6040415**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 05:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	19	0.51
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1445 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES092-AMB-3-032818

Lab ID#: 1804048-04A

PASSIVE RAD 145 (TD)

File Name:	**6040416**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 06:24 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	22	0.59
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	14 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES092-PATH-1-032818

Lab ID#: 1804048-05A

PASSIVE RAD 145 (TD)

File Name:	**6040417**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:42:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 07:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	35	0.93
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-AMB-1-032818

Lab ID#: 1804048-06A

PASSIVE RAD 145 (TD)

File Name:	**6040418**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:47:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 07:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.29
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.37 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1436 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-PATH-2-032818

Lab ID#: 1804048-07A

PASSIVE RAD 145 (TD)

File Name:	**6040419**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 08:15 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	15	0.40
Tetrachloroethene	5.0	0.14	5.0	0.14
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-AMB-2-032818

Lab ID#: 1804048-08A

PASSIVE RAD 145 (TD)

File Name:	**6040420**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 08:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	9.8	0.26
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	14 C	0.35 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-AMB-3-032818

Lab ID#: 1804048-09A

PASSIVE RAD 145 (TD)

File Name:	**6040421**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 09:29 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-AMB-3D-032818

Lab ID#: 1804048-10A

PASSIVE RAD 145 (TD)

File Name:	**6041006**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/10/18 08:00 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-PATH-1-032818

Lab ID#: 1804048-11A

PASSIVE RAD 145 (TD)

File Name:	**6040423**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:51:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 10:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	16	0.44
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES093-OUT-1-032818

Lab ID#: 1804048-12A

PASSIVE RAD 145 (TD)

File Name:	**6040424**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 10:44:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 11:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 1401 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-PATH-1-032818

Lab ID#: 1804048-13A

PASSIVE RAD 145 (TD)

File Name:	**6040425**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:31:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 11:56 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	21 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-2-032818

Lab ID#: 1804048-14A

PASSIVE RAD 145 (TD)

File Name:	**6040426**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:36:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 12:33 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.8	0.15
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1459 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-1-032818

Lab ID#: 1804048-15A

PASSIVE RAD 145 (TD)

File Name:	**6040427**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:39:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 01:10 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.3	0.14
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1456 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-PATH-1-032818

Lab ID#: 1804048-16A

PASSIVE RAD 145 (TD)

File Name:	**6040428**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:44:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 01:46 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.33
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-AMB-1-032818

Lab ID#: 1804048-17A

PASSIVE RAD 145 (TD)

File Name:	**6040429**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 02:23 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.8	0.15
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.44 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 78.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-PATH-1-032818

Lab ID#: 1804048-18A

PASSIVE RAD 145 (TD)

File Name:	**6040430**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:46:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 03:00 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.51 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1446 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-AMB-1-032818

Lab ID#: 1804048-19A

PASSIVE RAD 145 (TD)

File Name:	**6040431**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 7:00:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 03:37 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.6	0.14
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	12 C	0.30 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-AMB-1D-032818

Lab ID#: 1804048-20A

PASSIVE RAD 145 (TD)

File Name:	**6040432**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 7:00:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/5/18 04:13 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.6	0.14
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-999-032818

Lab ID#: 1804048-21A

PASSIVE RAD 145 (TD)

File Name:	**6040407**	**Date of Extraction: NA**	**Date of Collection: 3/29/18 6:56:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 12:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1804048-22A

PASSIVE RAD 145 (TD)

File Name:	**6040406**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 11:44 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.12	Not Detected	Not Detected
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 78.8F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1804048-22B

PASSIVE RAD 145 (TD)

File Name:	**6040412**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 03:32 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.12	Not Detected	Not Detected
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 78.8F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1804048-22C

PASSIVE RAD 145 (TD)

File Name:	**6041005**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/10/18 06:39 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.12	Not Detected	Not Detected
Tetrachloroethene	5.0	0.13	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.12	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 78.8F , duration time = 1460 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1804048-23A
PASSIVE RAD 145 (TD)

File Name:	**6040403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 10:03 AM**

Compound	%Recovery
1,1,1-Trichloroethane	124
Trichloroethene	97
Tetrachloroethene	119
1,1-Dichloroethane	112
1,1-Dichloroethene	80
cis-1,2-Dichloroethene	109
Freon 113	110
trans-1,2-Dichloroethene	95

Container Type: NA - Not Applicable

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Client Sample ID: CCV

Lab ID#: 1804048-23B

PASSIVE RAD 145 (TD)

File Name:	**6040409**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 01:49 PM**

Compound	%Recovery
1,1,1-Trichloroethane	126
Trichloroethene	89
Tetrachloroethene	113
1,1-Dichloroethane	113
1,1-Dichloroethene	79
cis-1,2-Dichloroethene	113
Freon 113	108
trans-1,2-Dichloroethene	94

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1804048-23C
PASSIVE RAD 145 (TD)

File Name:	**6041002**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/10/18 04:58 AM**

Compound	%Recovery
1,1,1-Trichloroethane	108
Trichloroethene	123
Tetrachloroethene	101
1,1-Dichloroethane	98
1,1-Dichloroethene	95
cis-1,2-Dichloroethene	106
Freon 113	117
trans-1,2-Dichloroethene	92

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1804048-24A

PASSIVE RAD 145 (TD)

File Name:	**6040404**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 10:40 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	70-130
Trichloroethene	90	70-130
Tetrachloroethene	104	70-130
1,1-Dichloroethane	92	70-130
1,1-Dichloroethene	72	70-130
cis-1,2-Dichloroethene	88	70-130
Freon 113	86	70-130
trans-1,2-Dichloroethene	84	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1804048-24AA
PASSIVE RAD 145 (TD)

File Name:	**6040405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 11:11 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	93	70-130
Trichloroethene	92	70-130
Tetrachloroethene	107	70-130
1,1-Dichloroethane	94	70-130
1,1-Dichloroethene	75	70-130
cis-1,2-Dichloroethene	93	70-130
Freon 113	90	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1804048-24B

PASSIVE RAD 145 (TD)

File Name:	**6040410**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 02:26 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	101	70-130
Trichloroethene	86	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	100	70-130
1,1-Dichloroethene	73	70-130
cis-1,2-Dichloroethene	91	70-130
Freon 113	92	70-130
trans-1,2-Dichloroethene	88	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1804048-24BB
PASSIVE RAD 145 (TD)

File Name:	**6040411**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/4/18 02:59 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	104	70-130
Trichloroethene	86	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	103	70-130
1,1-Dichloroethene	81	70-130
cis-1,2-Dichloroethene	101	70-130
Freon 113	97	70-130
trans-1,2-Dichloroethene	100	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1804048-24C

PASSIVE RAD 145 (TD)

File Name:	**6041003**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/10/18 05:35 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	112	70-130
Trichloroethene	95	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	98	70-130
1,1-Dichloroethene	78	70-130
cis-1,2-Dichloroethene	96	70-130
Freon 113	107	70-130
trans-1,2-Dichloroethene	93	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1804048-24CC
PASSIVE RAD 145 (TD)

File Name:	**6041004**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 4/10/18 06:06 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	113	70-130
Trichloroethene	95	70-130
Tetrachloroethene	103	70-130
1,1-Dichloroethane	100	70-130
1,1-Dichloroethene	84	70-130
cis-1,2-Dichloroethene	104	70-130
Freon 113	110	70-130
trans-1,2-Dichloroethene	94	70-130

Container Type: NA - Not Applicable

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Analysis Request /Canister Chain of Custody

For Laboratory Use Only

PID: _____ Workorder #: _____

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Click links below to view:
Canister Sampling Guide
Helium Shroud Video

Client: Locus PID:
Project Name: Triple Site
Project Manager: Nancy-Jeanne P.O.# 2700608-
Sampler: Vlad P / Ricky K. 9018
Site Name: 004

Special Instructions/Notes:
PO # does not exist for this order. Using project # instead.

Turnaround Time (Rush surcharges may apply)
Select TAT from drop down box: Standard

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Canister Vacuum/Pressure		Lab Use Only		Requested Analyses				
				Date	Time	Date	Time	Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas N_2 / He	Modified TO-15-LL (SIM) - Locus Technologies				
01A	MG-SUM-SOIL1-061318	6L1565	22438	6/13/18	9:40	6/13/18	10:07	26.5	5.0			X				
02A	MG-SUM-SOIL2-061318	6L0320	22438	↓	10:22	↓	11:20	26.5	5.0			X				
03A	MG-SUM-SOIL2D-061318	6L0759	22438	↓	10:22	↓	11:20	26.5	5.0			X				
04A	MG-SUM-OUT1-061318	6L0373	22438	↓	11:40	↓	12:10	26.5	5.0			X				

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
[signature]	06/14/18	13:00	[signature]	6/15/18	0758
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: Fed Ex | Custody Seals Intact? (Yes) No None | 1806317

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

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6/27/2018
Mr. Vladimir Pavlushkin
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: 2700608-9018
Workorder #: 1806317

Dear Mr. Vladimir Pavlushkin

The following report includes the data for the above referenced project for sample(s) received on 6/15/2018 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1806317

Work Order Summary

CLIENT:	Mr. Vladimir Pavlushkin Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	650-960-1640	**P.O. #**	2700608-9018
FAX:	650-960-0739	**PROJECT #**	2700608-9018 Triple Site
DATE RECEIVED:	06/15/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	06/27/2018		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	MG-SUM-SOIL1-061318	Modified TO-15	4.9 "Hg	5 psi
02A	MG-SUM-SOIL2-061318	Modified TO-15	4.5 "Hg	4.9 psi
03A	MG-SUM-SOIL2D-061318	Modified TO-15	4.7 "Hg	4.8 psi
04A	MG-SUM-OUT1-061318	Modified TO-15	4.9 "Hg	5 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 Hayes DATE: 06/27/18

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-16-11, UT NELAP CA0093332016-7, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2016, Expiration date: 10/17/2017.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
Modified TO-15
Locus Technologies
Workorder# 1806317

Four 6 Liter Summa Canister (100% Certified) samples were received on June 15, 2018. The laboratory performed analysis via modified 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.

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***
Initial Calibration	</=30% RSD with 2 compounds allowed out to < 40% RSD	</=30% RSD with 4 compounds allowed out to < 40% RSD
Blank and standards	Zero Air	UHP Nitrogen provides a higher purity gas matrix than zero air

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples MG-SUM-SOIL2-061318 and MG-SUM-SOIL2D-061318 due to the presence of high level target species.

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

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

Client Sample ID: MG-SUM-SOIL1-061318

Lab ID#: 1806317-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	0.35	1.2	2.7
1,1,1-Trichloroethane	0.16	0.43	0.87	2.4
Trichloroethene	0.16	36	0.86	200

Client Sample ID: MG-SUM-SOIL2-061318

Lab ID#: 1806317-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	2.6	3.0	20	23
Trichloroethene	2.6	640	14	3400

Client Sample ID: MG-SUM-SOIL2D-061318

Lab ID#: 1806317-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	2.6	2.8	20	22
Trichloroethene	2.6	620	14	3300

Client Sample ID: MG-SUM-OUT1-061318

Lab ID#: 1806317-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	0.16	0.29	0.86	1.6

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Client Sample ID: MG-SUM-SOIL1-061318

Lab ID#: 1806317-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062007**	**Date of Collection:**	**6/13/18 10:07:00 AM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**6/20/18 12:58 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	0.35	1.2	2.7
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.16	0.43	0.87	2.4
Trichloroethene	0.16	36	0.86	200
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: MG-SUM-SOIL2-061318

Lab ID#: 1806317-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062120**	**Date of Collection:**	**6/13/18 11:20:00 AM**
Dil. Factor:	**5.23**	**Date of Analysis:**	**6/21/18 11:47 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	2.6	3.0	20	23
1,1-Dichloroethene	2.6	Not Detected	10	Not Detected
1,1-Dichloroethane	2.6	Not Detected	10	Not Detected
cis-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
1,1,1-Trichloroethane	2.6	Not Detected	14	Not Detected
Trichloroethene	2.6	640	14	3400
trans-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
Tetrachloroethene	2.6	Not Detected	18	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: MG-SUM-SOIL2D-061318

Lab ID#: 1806317-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062121**	**Date of Collection:**	**6/13/18 11:20:00 AM**
Dil. Factor:	**5.24**	**Date of Analysis:**	**6/22/18 12:12 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	2.6	2.8	20	22
1,1-Dichloroethene	2.6	Not Detected	10	Not Detected
1,1-Dichloroethane	2.6	Not Detected	11	Not Detected
cis-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
1,1,1-Trichloroethane	2.6	Not Detected	14	Not Detected
Trichloroethene	2.6	620	14	3300
trans-1,2-Dichloroethene	2.6	Not Detected	10	Not Detected
Tetrachloroethene	2.6	Not Detected	18	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: MG-SUM-OUT1-061318

Lab ID#: 1806317-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062008**	**Date of Collection:**	**6/13/18 12:10:00 PM**
Dil. Factor:	**1.60**	**Date of Analysis:**	**6/20/18 01:50 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.16	Not Detected	1.2	Not Detected
1,1-Dichloroethene	0.16	Not Detected	0.63	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1-Dichloroethane	0.16	Not Detected	0.65	Not Detected
cis-1,2-Dichloroethene	0.16	Not Detected	0.63	Not Detected
1,1,1-Trichloroethane	0.16	Not Detected	0.87	Not Detected
Trichloroethene	0.16	0.29	0.86	1.6
Tetrachloroethene	0.16	Not Detected	1.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	106	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1806317-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062006**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/20/18 11:01 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	111	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1806317-05B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/21/18 12:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1806317-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062002**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/20/18 08:23 AM**	

Compound	%Recovery
Freon 113	105
1,1-Dichloroethene	93
trans-1,2-Dichloroethene	92
1,1-Dichloroethane	100
cis-1,2-Dichloroethene	97
1,1,1-Trichloroethane	108
Trichloroethene	85
Tetrachloroethene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 1806317-06B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/21/18 11:01 AM**	

Compound	%Recovery
Freon 113	102
1,1-Dichloroethene	97
1,1-Dichloroethane	98
cis-1,2-Dichloroethene	100
1,1,1-Trichloroethane	96
Trichloroethene	104
trans-1,2-Dichloroethene	98
Tetrachloroethene	106

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCS

Lab ID#: 1806317-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062003**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/20/18 08:58 AM**	

Compound	%Recovery	Method Limits
Freon 113	106	70-130
1,1-Dichloroethene	97	70-130
trans-1,2-Dichloroethene	109	70-130
1,1-Dichloroethane	102	70-130
cis-1,2-Dichloroethene	99	70-130
1,1,1-Trichloroethane	113	70-130
Trichloroethene	94	70-130
Tetrachloroethene	112	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130

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Client Sample ID: LCSD

Lab ID#: 1806317-07AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**v062004**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/20/18 09:34 AM**	

Compound	%Recovery	Method Limits
Freon 113	104	70-130
1,1-Dichloroethene	95	70-130
trans-1,2-Dichloroethene	109	70-130
1,1-Dichloroethane	99	70-130
cis-1,2-Dichloroethene	91	70-130
1,1,1-Trichloroethane	108	70-130
Trichloroethene	94	70-130
Tetrachloroethene	108	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: LCS

Lab ID#: 1806317-07B

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/21/18 11:25 AM**	

Compound	%Recovery	Method Limits
Freon 113	98	70-130
1,1-Dichloroethene	93	70-130
1,1-Dichloroethane	93	70-130
cis-1,2-Dichloroethene	89	70-130
1,1,1-Trichloroethane	94	70-130
Trichloroethene	101	70-130
trans-1,2-Dichloroethene	106	70-130
Tetrachloroethene	104	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	107	70-130

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Client Sample ID: LCSD

Lab ID#: 1806317-07BB

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a062104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/21/18 11:50 AM**	

Compound	%Recovery	Method Limits
Freon 113	98	70-130
1,1-Dichloroethene	95	70-130
1,1-Dichloroethane	94	70-130
cis-1,2-Dichloroethene	88	70-130
1,1,1-Trichloroethane	94	70-130
Trichloroethene	99	70-130
trans-1,2-Dichloroethene	106	70-130
Tetrachloroethene	102	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	107	70-130

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Passive Sorbent Chain of Custody

WO#: 1811183

Case Seal #: _____

Company: Louis Technologies Project #: 2700608 9018 P.O.#

Project Manager: Nancy Jeanne LeFevre Project Name: Triple Site

Contact phone/email: lefevren@louistec.com Collected by: VLAD P. / RICKY K.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MG-AMB-1-11062018	490ZK	11/6/18	14:30	11/7/18	14:33	X				TO-17	21.7°
02A	MG-AMB-1D-11062018	491ZK	↓	14:30	↓	14:33	↓				↓	21.7°
03A	MG-PATH-1-11062018	492ZK		14:33		14:36						19.8°
04A	MG-PATH-4-11062018	493ZK		14:35		14:37						21.3°
05A	MG-PATH-2-11062018	494ZK		14:39		14:42						20.7°
06A	MG-AMB-2-11062018	495ZK		14:47		14:48						22.3°
07A	MG-PATH-3-11062018	496ZK		14:49		14:49						20.7°
08A	MG-PATH-5-11062018	499ZK		14:50		14:51						21.2° / KIDS MAY HAVE TAMPERED SAMPLE
09A	MG-OUT-1-11062018	497ZK		14:53		14:53						27.3°
10A	MG-999-11062018	498ZK	↓	00:00	↓	00:00	↓					N/A
11A	AMD-SRC-1-11072018	447ZK	11/07/18	11:30	11/07/18	17:30	X				↓	23.0° 6 hour sample

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush _____ Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
VLP	11/08/18	14:30	EAL	11/9/18	0945	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS Air bill #:

Custody Seals Intact? Yes No None

Temperature (°C): 4.8

Sample Condition Upon Receipt (circle): Good SDR

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11/21/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Triple Site
Project #: Z700608 9018
Workorder #: 1811183

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 11/9/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1811183

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12891
FAX:		**PROJECT #**	Z700608 9018 Triple Site
DATE RECEIVED:	11/09/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	11/21/2018		

FRACTION #	NAME	TEST
01A	MG-AMB-1-11062018	Passive RAD 145 (TD)
02A	MG-AMB-1D-11062018	Passive RAD 145 (TD)
03A	MG-PATH-1-11062018	Passive RAD 145 (TD)
04A	MG-PATH-4-11062018	Passive RAD 145 (TD)
05A	MG-PATH-2-11062018	Passive RAD 145 (TD)
06A	MG-AMB-2-11062018	Passive RAD 145 (TD)
07A	MG-PATH-3-11062018	Passive RAD 145 (TD)
08A	MG-PATH-5-11062018	Passive RAD 145 (TD)
09A	MG-OUT-1-11062018	Passive RAD 145 (TD)
10A	MG-999-11062018	Passive RAD 145 (TD)
11A	AUD-SRC-1-11072018	Passive RAD 145 (TD)
12A	Lab Blank	Passive RAD 145 (TD)
13A	CCV	Passive RAD 145 (TD)
14A	LCS	Passive RAD 145 (TD)
14AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY:  DATE: 11/21/18

Technical Director

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1811183

Eleven Radiello 145 (VOC TD) samples were received on November 09, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1443 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-1-11062018

Lab ID#: 1811183-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	34	0.87
Freon 113	5.0	0.12	19 C	0.46 C

Client Sample ID: MG-AMB-1D-11062018

Lab ID#: 1811183-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	33	0.86
Freon 113	5.0	0.12	19 C	0.48 C

Client Sample ID: MG-PATH-1-11062018

Lab ID#: 1811183-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	52	1.4
Tetrachloroethene	5.0	0.14	5.5	0.15
Freon 113	5.0	0.12	20 C	0.49 C

Client Sample ID: MG-PATH-4-11062018

Lab ID#: 1811183-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	35	0.91
Freon 113	5.0	0.12	19 C	0.47 C

Client Sample ID: MG-PATH-2-11062018

Lab ID#: 1811183-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	50	1.3
Freon 113	5.0	0.12	20 C	0.50 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-2-11062018

Lab ID#: 1811183-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	21	0.55
Freon 113	5.0	0.12	17 C	0.42 C

Client Sample ID: MG-PATH-3-11062018

Lab ID#: 1811183-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	22	0.57
Freon 113	5.0	0.12	16 C	0.41 C

Client Sample ID: MG-PATH-5-11062018

Lab ID#: 1811183-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	52	1.4
Freon 113	5.0	0.12	22 C	0.56 C

Client Sample ID: MG-OUT-1-11062018

Lab ID#: 1811183-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	58	1.5
Tetrachloroethene	5.0	0.14	5.4	0.15
Freon 113	5.0	0.12	24 C	0.58 C

Client Sample ID: MG-999-11062018

Lab ID#: 1811183-10A

No Detections Were Found.

Client Sample ID: AUD-SRC-1-11072018

Lab ID#: 1811183-11A

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: AUD-SRC-1-11072018

Lab ID#: 1811183-11A

No Detections Were Found.

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Client Sample ID: MG-AMB-1-11062018

Lab ID#: 1811183-01A

PASSIVE RAD 145 (TD)

File Name:	**6111407**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:30:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 02:50 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	34	0.87
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1D-11062018

Lab ID#: 1811183-02A

PASSIVE RAD 145 (TD)

File Name:	**6111408**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:30:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 03:27 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	33	0.86
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-11062018

Lab ID#: 1811183-03A

PASSIVE RAD 145 (TD)

File Name:	**6111409**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:33:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 04:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	52	1.4
Tetrachloroethene	5.0	0.14	5.5	0.15
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-4-11062018

Lab ID#: 1811183-04A

PASSIVE RAD 145 (TD)

File Name:	**6111410**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 04:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	35	0.91
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1442 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-2-11062018

Lab ID#: 1811183-05A

PASSIVE RAD 145 (TD)

File Name:	**6111411**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:39:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 05:18 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	50	1.3
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-11062018

Lab ID#: 1811183-06A

PASSIVE RAD 145 (TD)

File Name:	**6111412**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 05:55 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	21	0.55
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	17 C	0.42 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-3-11062018

Lab ID#: 1811183-07A

PASSIVE RAD 145 (TD)

File Name:	**6111413**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:49:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 06:32 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	22	0.57
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.41 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-5-11062018

Lab ID#: 1811183-08A

PASSIVE RAD 145 (TD)

File Name:	**6111414**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:50:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 07:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	52	1.4
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	22 C	0.56 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-OUT-1-11062018

Lab ID#: 1811183-09A

PASSIVE RAD 145 (TD)

File Name:	**6111415**	**Date of Extraction: NA**	**Date of Collection: 11/6/18 2:53:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 07:45 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.13	58	1.5
Tetrachloroethene	5.0	0.14	5.4	0.15
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	24 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-999-11062018

Lab ID#: 1811183-10A

PASSIVE RAD 145 (TD)

File Name:	**6111406**	**Date of Extraction: NA**	**Date of Collection: 11/6/18**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 02:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-SRC-1-11072018

Lab ID#: 1811183-11A

PASSIVE RAD 145 (TD)

File Name:	**6111416**	**Date of Extraction: NA**	**Date of Collection: 11/7/18 11:30:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 08:23 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.4	Not Detected	Not Detected
Trichloroethene	5.0	0.52	Not Detected	Not Detected
Tetrachloroethene	5.0	0.55	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.52	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.43	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.52	Not Detected C	Not Detected C
Freon 113	5.0	0.49	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.54	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 360 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1811183-12A

PASSIVE RAD 145 (TD)

File Name:	**6111405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 01:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.34	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 80.6F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1811183-13A
PASSIVE RAD 145 (TD)

File Name:	**6111402**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 11:00 AM**

Compound	%Recovery
1,1,1-Trichloroethane	119
Trichloroethene	114
Tetrachloroethene	102
1,1-Dichloroethane	104
1,1-Dichloroethene	103
cis-1,2-Dichloroethene	104
Freon 113	116
trans-1,2-Dichloroethene	103

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1811183-14A
PASSIVE RAD 145 (TD)

File Name:	**6111403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 12:08 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	144 Q	70-130
Trichloroethene	86	70-130
Tetrachloroethene	97	70-130
1,1-Dichloroethane	107	70-130
1,1-Dichloroethene	78	70-130
cis-1,2-Dichloroethene	95	70-130
Freon 113	112	70-130
trans-1,2-Dichloroethene	112	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1811183-14AA
PASSIVE RAD 145 (TD)

File Name:	**6111404**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 11/14/18 12:39 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	152 Q	70-130
Trichloroethene	89	70-130
Tetrachloroethene	98	70-130
1,1-Dichloroethane	110	70-130
1,1-Dichloroethene	82	70-130
cis-1,2-Dichloroethene	99	70-130
Freon 113	118	70-130
trans-1,2-Dichloroethene	115	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___ of ___

Case Seal #: _____ WO#: 1812362

Company: Locus Technologies Project #: 27006.08 9018 P.O.#

Project Manager: Wes Hawthorne Project Name: OOU-TRIPLE SITE

Contact phone/email: lefervien@locustec.com Collected by: RICKY K. / VLAD P. / MIN J.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
E	RES100-AMB-1-12112018	DT199	12/11/18	13:45	12/12/18	14:09	X					20.0C
E	RES100-AMB-3-12112018	DT200	12/11/18	13:47	12/12/18	14:09						17.6C
E	RES100-PATH-2-12112018	DT202	12/11/18	13:49	12/12/18	14:10						
E	RES100-PATH-1-12112018	DT203	12/11/18	13:53	12/12/18	14:13						17.7C
E	RES100-AMB-2-12112018	DT204	12/11/18	13:55	12/12/18	14:11						
A	06A MK1-PATH-2-12112018	5002K	12/11/18	15:32		15:41						12.3°C
A	07A MK1-AMB-3-12112018	5012K		15:50		15:32						20.5°C
A	08A MK1-AMB-4-12112018	N570B		15:54		15:34						21.1°C
A	09A ML2-PATH-2-12112018	835JX		15:58		16:07						15.8°C
A	10A ML2-AMB-1-12112018	836JX		16:02		16:02						21.1°C
A	11A ML1-AMB-1-12112018	837JX		16:04		16:01						21.1°C
A	12A ML1-PATH-2-12112018	817JX		16:11		16:08						14.0°
A	13A MG-AMB-1-12112018	819JX		16:16		16:04						21.3°
A	14A MG-PATH-4-12112018	818JX		16:18		16:05						19.3°

Sample Matrix (check one)

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
[signature]	12/13/18	16:00	[signature] EAR	12/18/18	1015	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)		N/A				

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Passive Sorbent Chain of Custody

WO#: 1812362

Case Seal #: _____

Company: Lawes Technologies | Project #: 2700608 9018 P.O.#

Project Manager: Wes Hawthorne | Project Name: OOU - Triple Site

Contact phone/email: lefevren@lawestec.com | Collected by: VLAD P. / RICK K. / MIN J.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other( )	Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng	Analysis Requested	Turn Around Time: Normal / Rush (Specify)	Sample Comments:
B	RES230-PATH-1-121118	HA959	12/11/18	13:26	12/12/18	12:50	X					TO-17		21.8° C
B	RES230-PATH-2-121118	HA960	12/11/18	13:28		12:52								18.9°
B	RES230-PATH-3-121118	HA961	12/11/18	13:30		12:51								21°
E	RES105-AMB-1-121118	HA962	12/11/18	13:41		13:57								21.6°
E	RES105-AMB-2-121118	HA963	12/11/18	13:43		13:58								21.9°
E	RES105-PATH-1-121118	HA964	12/11/18	13:50		14:00								14.3°
A	MG-PATH-1-12112018	822JX		16:22		16:06								17.5°
A	MG-PATH-2-12112018	821JX		16:27		16:12								18.4°
A	MG-AMB-2-12112018	820JX		16:32		16:13								20.2°
A	MG-PATH-3-12112018	825JX		16:34		16:15								18.9°
A	MG-PATH-5-12112018	823JX		16:37		16:17								17.3°
A	MG-OUT-1-12112018	824JX		16:40		16:19								14.5°
A	MG-999-12112018	DT206	12/11/18	00:00	12/12/18	00:00								

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
	12/13/18	16:00	CAR	12/18/18	1015	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)		N/A				

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12/31/2018
Mr. John Hawthorne
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 2700608 9018
Workorder #: 1812362A

Dear Mr. John Hawthorne

The following report includes the data for the above referenced project for sample(s) received on 12/18/2018 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1812362A

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12916
FAX:		**PROJECT #**	2700608 9018 OOU-TRIPLE SITE
DATE RECEIVED:	12/18/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	12/31/2018		

FRACTION #	NAME	TEST
06A	MK1-PATH-2-12112018	Passive RAD 145 (TD)
07A	MK1-AMB-3-12112018	Passive RAD 145 (TD)
08A	MK1-AMB-4-12112018	Passive RAD 145 (TD)
09A	ML2-PATH-2-12112018	Passive RAD 145 (TD)
10A	ML2-AMB-1-12112018	Passive RAD 145 (TD)
11A	ML1-AMB-1-12112018	Passive RAD 145 (TD)
12A	ML1-PATH-2-12112018	Passive RAD 145 (TD)
13A	MG-AMB-1-12112018	Passive RAD 145 (TD)
14A	MG-PATH-4-12112018	Passive RAD 145 (TD)
49A	MG-PATH-1-12112018	Passive RAD 145 (TD)
50A	MG-PATH-2-12112018	Passive RAD 145 (TD)
51A	MG-AMB-2-12112018	Passive RAD 145 (TD)
52A	MG-PATH-3-12112018	Passive RAD 145 (TD)
53A	MG-PATH-5-12112018	Passive RAD 145 (TD)
54A	MG-OUT-1-12112018	Passive RAD 145 (TD)
55A	MG-999-12112018	Passive RAD 145 (TD)
56A	Lab Blank	Passive RAD 145 (TD)
56B	Lab Blank	Passive RAD 145 (TD)
57A	CCV	Passive RAD 145 (TD)
57B	CCV	Passive RAD 145 (TD)
58A	LCS	Passive RAD 145 (TD)
58AA	LCSD	Passive RAD 145 (TD)
58B	LCS	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1812362A

Work Order Summary

CLIENT:	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Mr. John Hawthorne Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-799-9937	**P.O. #**	30-12916
FAX:		**PROJECT #**	2700608 9018 OOU-TRIPLE SITE
DATE RECEIVED:	12/18/2018	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	12/31/2018		

FRACTION #	NAME	TEST
58BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 12/31/18

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1812362A

Sixteen Radiello 145 (VOC TD) samples were received on December 18, 2018. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

The Chain of Custody was not filled out with an ink pen. A pencil or other unapproved writing utensil was used.

The cartridge casing for sample MK1-AMB-4-12112018 was received leaking with the sample sorbent still contained in the outer glass storage vial. The sample preparation and analysis proceeded.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1449 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

The cartridge casing for sample MK1-AMB-4-12112018 was received leaking with the sample sorbent still contained in the outer glass storage vial. The sample preparation and analysis proceeded.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MK1-PATH-2-12112018

Lab ID#: 1812362A-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	16	0.43
Freon 113	5.0	0.13	21 C	0.54 C

Client Sample ID: MK1-AMB-3-12112018

Lab ID#: 1812362A-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	6.6	0.18
Freon 113	5.0	0.13	16 C	0.40 C

Client Sample ID: MK1-AMB-4-12112018

Lab ID#: 1812362A-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	7.9	0.21
Freon 113	5.0	0.13	18 C	0.47 C

Client Sample ID: ML2-PATH-2-12112018

Lab ID#: 1812362A-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	14	0.36
Freon 113	5.0	0.13	20 C	0.49 C

Client Sample ID: ML2-AMB-1-12112018

Lab ID#: 1812362A-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	6.4	0.17
Freon 113	5.0	0.12	19 C	0.46 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: ML1-AMB-1-12112018

Lab ID#: 1812362A-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	6.6	0.17
Freon 113	5.0	0.12	17 C	0.43 C

Client Sample ID: ML1-PATH-2-12112018

Lab ID#: 1812362A-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	13	0.34
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MG-AMB-1-12112018

Lab ID#: 1812362A-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	10	0.27
Freon 113	5.0	0.12	16 C	0.41 C

Client Sample ID: MG-PATH-4-12112018

Lab ID#: 1812362A-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	5.0	0.13	17 C	0.43 C

Client Sample ID: MG-PATH-1-12112018

Lab ID#: 1812362A-49A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.32
Freon 113	5.0	0.13	18 C	0.45 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-PATH-2-12112018

Lab ID#: 1812362A-50A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.34
Tetrachloroethene	5.0	0.14	13	0.37
Freon 113	5.0	0.13	16 C	0.42 C

Client Sample ID: MG-AMB-2-12112018

Lab ID#: 1812362A-51A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	8.0	0.21
Freon 113	5.0	0.13	16 C	0.40 C

Client Sample ID: MG-PATH-3-12112018

Lab ID#: 1812362A-52A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	8.0	0.21
Freon 113	5.0	0.13	16 C	0.40 C

Client Sample ID: MG-PATH-5-12112018

Lab ID#: 1812362A-53A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	13	0.35
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MG-OUT-1-12112018

Lab ID#: 1812362A-54A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	14	0.37
Freon 113	5.0	0.13	19 C	0.50 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-999-12112018

Lab ID#: 1812362A-55A

No Detections Were Found.

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Client Sample ID: MK1-PATH-2-12112018

Lab ID#: 1812362A-06A

PASSIVE RAD 145 (TD)

File Name:	**6122816**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 3:32:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 05:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	16	0.43
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-3-12112018

Lab ID#: 1812362A-07A

PASSIVE RAD 145 (TD)

File Name:	**6122817**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 3:50:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 06:10 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	6.6	0.18
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK1-AMB-4-12112018

Lab ID#: 1812362A-08A

PASSIVE RAD 145 (TD)

File Name:	**6122818**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 3:54:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 06:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	7.9	0.21
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-PATH-2-12112018

Lab ID#: 1812362A-09A

PASSIVE RAD 145 (TD)

File Name:	**6122819**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 3:58:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 07:24 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	14	0.36
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML2-AMB-1-12112018

Lab ID#: 1812362A-10A

PASSIVE RAD 145 (TD)

File Name:	**6122820**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:02:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 08:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	6.4	0.17
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-AMB-1-12112018

Lab ID#: 1812362A-11A

PASSIVE RAD 145 (TD)

File Name:	**6122821**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:04:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 08:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	6.6	0.17
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML1-PATH-2-12112018

Lab ID#: 1812362A-12A

PASSIVE RAD 145 (TD)

File Name:	**6122822**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:11:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 09:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	13	0.34
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-12112018

Lab ID#: 1812362A-13A

PASSIVE RAD 145 (TD)

File Name:	**6122823**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 09:50 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	10	0.27
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.41 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-4-12112018

Lab ID#: 1812362A-14A

PASSIVE RAD 145 (TD)

File Name:	**6122824**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:18:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 10:27 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-12112018

Lab ID#: 1812362A-49A

PASSIVE RAD 145 (TD)

File Name:	**6122825**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:22:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 11:04 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.32
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1424 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-2-12112018

Lab ID#: 1812362A-50A

PASSIVE RAD 145 (TD)

File Name:	**6122826**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 11:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.34
Tetrachloroethene	5.0	0.14	13	0.37
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.42 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-12112018

Lab ID#: 1812362A-51A

PASSIVE RAD 145 (TD)

File Name:	**6122827**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:32:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/29/18 12:17 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	8.0	0.21
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-3-12112018

Lab ID#: 1812362A-52A

PASSIVE RAD 145 (TD)

File Name:	**6122828**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:34:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/29/18 12:54 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	8.0	0.21
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-5-12112018

Lab ID#: 1812362A-53A

PASSIVE RAD 145 (TD)

File Name:	**6122829**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/29/18 01:31 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	13	0.35
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-OUT-1-12112018

Lab ID#: 1812362A-54A

PASSIVE RAD 145 (TD)

File Name:	**6122830**	**Date of Extraction: NA**	**Date of Collection: 12/11/18 4:40:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 12/29/18 02:07 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	14	0.37
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-999-12112018

Lab ID#: 1812362A-55A

PASSIVE RAD 145 (TD)

File Name:	**6122726**	**Date of Extraction: NA**	**Date of Collection: 12/11/18**
Dil. Factor:	**1.00**		**Date of Analysis: 12/27/18 03:36 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1812362A-56A

PASSIVE RAD 145 (TD)

File Name:	**6122725**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/27/18 02:29 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1812362A-56B

PASSIVE RAD 145 (TD)

File Name:	**6122815**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 02:02 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1812362A-57A
PASSIVE RAD 145 (TD)

File Name:	**6122722**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/27/18 12:48 PM**

Compound	%Recovery
1,1,1-Trichloroethane	106
Trichloroethene	99
Tetrachloroethene	122
1,1-Dichloroethane	108
1,1-Dichloroethene	103
cis-1,2-Dichloroethene	117
Freon 113	111
trans-1,2-Dichloroethene	112

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1812362A-57B
PASSIVE RAD 145 (TD)

File Name:	**6122812**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 12:20 PM**

Compound	%Recovery
1,1,1-Trichloroethane	106
Trichloroethene	96
Tetrachloroethene	119
1,1-Dichloroethane	101
1,1-Dichloroethene	93
cis-1,2-Dichloroethene	111
Freon 113	107
trans-1,2-Dichloroethene	102

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1812362A-58A
PASSIVE RAD 145 (TD)

File Name:	**6122723**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/27/18 01:24 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	130	70-130
Trichloroethene	92	70-130
Tetrachloroethene	120	70-130
1,1-Dichloroethane	114	70-130
1,1-Dichloroethene	94	70-130
cis-1,2-Dichloroethene	114	70-130
Freon 113	114	70-130
trans-1,2-Dichloroethene	133 Q	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1812362A-58AA
PASSIVE RAD 145 (TD)

File Name:	**6122724**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/27/18 01:55 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	129	70-130
Trichloroethene	95	70-130
Tetrachloroethene	118	70-130
1,1-Dichloroethane	112	70-130
1,1-Dichloroethene	93	70-130
cis-1,2-Dichloroethene	114	70-130
Freon 113	114	70-130
trans-1,2-Dichloroethene	126	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1812362A-58B
PASSIVE RAD 145 (TD)

File Name:	**6122813**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 12:56 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	123	70-130
Trichloroethene	92	70-130
Tetrachloroethene	116	70-130
1,1-Dichloroethane	106	70-130
1,1-Dichloroethene	89	70-130
cis-1,2-Dichloroethene	106	70-130
Freon 113	108	70-130
trans-1,2-Dichloroethene	117	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1812362A-58BB
PASSIVE RAD 145 (TD)

File Name:	**6122814**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 12/28/18 01:28 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	125	70-130
Trichloroethene	94	70-130
Tetrachloroethene	117	70-130
1,1-Dichloroethane	106	70-130
1,1-Dichloroethene	91	70-130
cis-1,2-Dichloroethene	106	70-130
Freon 113	111	70-130
trans-1,2-Dichloroethene	120	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#: 1902123

Case Seal #: _____

Company: LOCUS TECHNOLOGIES Project #: 27006 08 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU-TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: RICKY K. / MIN J.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	ML-AMB-2-02052019	0117P	2/5/19	14:45	2/6/19	14:49	X				TO-17	24.3°C
02A	ML-AMB-3-02052019	0116P		14:48		14:51						19.8°C
03A	ML-PATH-1-02052019	P247F		14:49		14:52						17.6°C
04A	ML-AMB-1-02052019	P250F		14:54		14:54						20.6°C
05A	ML-OUT-1-02052019	0136Q		14:59		14:57						21.6°C
06A	MK-AMB-1-02052019	0137Q		15:02		15:00						20.5°C
07A	MK-PATH-1-02052019	0138Q		15:06		15:03						20.3°C
08A	MK-AMB-2-02052019	0139Q		15:08		15:05						20.1°C
09A	MJ-AMB-2-02052019	0140Q		15:11		15:07						17.4°C
10A	MJ-PATH-2-02052019	0141Q		15:13		15:09						13.4°C
11A	MJ-PATH-1-02052019	P248F		15:16		15:11						15.7°C
12A	MJ-AMB-1-02052019	P249F		15:18		15:12						20.9°C
13A	MJ-OUT-1-02052019	P252F		15:20		15:14						9.2°C
14A	MJ-AMB-1-02052019	P251F	↓	15:26	↓	15:17	↓				↓	20.6°C

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: ☒ Normal ☐ Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	2/7/19	8:00		2/8/19	1200	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS

Air bill #:

Custody Seals Intact? Yes No (None)

Temperature (°C) NA

Sample Condition Upon Receipt: (circle) (Good) SDR

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2/20/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1902123

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 2/8/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1902123

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12924
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/08/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	02/20/2019		

FRACTION #	NAME	TEST
01A	ML-AMB-2-02052019	Passive RAD 145 (TD)
02A	ML-AMB-3-02052019	Passive RAD 145 (TD)
03A	ML-PATH-1-02052019	Passive RAD 145 (TD)
04A	ML-AMB-1-02052019	Passive RAD 145 (TD)
05A	ML-OUT-1-02052019	Passive RAD 145 (TD)
06A	MK-AMB-1-02052019	Passive RAD 145 (TD)
07A	MK-PATH-1-02052019	Passive RAD 145 (TD)
08A	MK-AMB-2-02052019	Passive RAD 145 (TD)
09A	MJ-AMB-2-02052019	Passive RAD 145 (TD)
10A	MJ-PATH-2-02052019	Passive RAD 145 (TD)
11A	MJ-PATH-1-02052019	Passive RAD 145 (TD)
12A	MJ-AMB-1-02052019	Passive RAD 145 (TD)
13A	MJ-OUT-1-02052019	Passive RAD 145 (TD)
14A	MI-AMB-1-02052019	Passive RAD 145 (TD)
15A	Lab Blank	Passive RAD 145 (TD)
16A	CCV	Passive RAD 145 (TD)
17A	LCS	Passive RAD 145 (TD)
17AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 02/20/19

Technical Director

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1902123

Fourteen Radiello 145 (VOC TD) samples were received on February 08, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 1444 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: ML-AMB-2-02052019

Lab ID#: 1902123-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	10	0.28
Freon 113	5.0	0.12	18 C	0.43 C

Client Sample ID: ML-AMB-3-02052019

Lab ID#: 1902123-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	9.9	0.28
Freon 113	5.0	0.12	20 C	0.49 C

Client Sample ID: ML-PATH-1-02052019

Lab ID#: 1902123-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	10	0.29
Freon 113	5.0	0.12	18 C	0.46 C

Client Sample ID: ML-AMB-1-02052019

Lab ID#: 1902123-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	8.1	0.21
Tetrachloroethene	5.0	0.14	9.8	0.27
Freon 113	5.0	0.12	21 C	0.53 C

Client Sample ID: ML-OUT-1-02052019

Lab ID#: 1902123-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	7.3	0.20
Freon 113	5.0	0.12	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	5.1 C	0.14 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MK-AMB-1-02052019

Lab ID#: 1902123-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.29
Tetrachloroethene	5.0	0.14	11	0.31
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: MK-PATH-1-02052019

Lab ID#: 1902123-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	7.4	0.19
Tetrachloroethene	5.0	0.14	8.6	0.24
Freon 113	5.0	0.12	22 C	0.54 C

Client Sample ID: MK-AMB-2-02052019

Lab ID#: 1902123-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.8	0.15
Tetrachloroethene	5.0	0.14	11	0.30
Freon 113	5.0	0.12	22 C	0.54 C

Client Sample ID: MJ-AMB-2-02052019

Lab ID#: 1902123-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	9.8	0.28
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MJ-PATH-2-02052019

Lab ID#: 1902123-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	13	0.38

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-PATH-2-02052019

Lab ID#: 1902123-10A

Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MJ-PATH-1-02052019

Lab ID#: 1902123-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	12	0.33
Freon 113	5.0	0.13	21 C	0.54 C

Client Sample ID: MJ-AMB-1-02052019

Lab ID#: 1902123-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	11	0.30
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: MJ-OUT-1-02052019

Lab ID#: 1902123-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.15	11	0.33
Freon 113	5.0	0.13	21 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.15	5.8 C	0.17 C

Client Sample ID: MI-AMB-1-02052019

Lab ID#: 1902123-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	11	0.31
Freon 113	5.0	0.12	20 C	0.50 C

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Client Sample ID: ML-AMB-2-02052019

Lab ID#: 1902123-01A

PASSIVE RAD 145 (TD)

File Name:	**6021106**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 2:45:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:55 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	10	0.28
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-3-02052019

Lab ID#: 1902123-02A

PASSIVE RAD 145 (TD)

File Name:	**6021107**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 2:48:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 12:32 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	9.9	0.28
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-PATH-1-02052019

Lab ID#: 1902123-03A

PASSIVE RAD 145 (TD)

File Name:	**6021108**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 2:49:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 01:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	10	0.29
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-1-02052019

Lab ID#: 1902123-04A

PASSIVE RAD 145 (TD)

File Name:	**6021109**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 2:54:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 01:46 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	8.1	0.21
Tetrachloroethene	5.0	0.14	9.8	0.27
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-OUT-1-02052019

Lab ID#: 1902123-05A

PASSIVE RAD 145 (TD)

File Name:	**6021110**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 2:59:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 02:23 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	7.3	0.20
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	5.1 C	0.14 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-1-02052019

Lab ID#: 1902123-06A

PASSIVE RAD 145 (TD)

File Name:	**6021111**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:02:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 03:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.29
Tetrachloroethene	5.0	0.14	11	0.31
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-PATH-1-02052019

Lab ID#: 1902123-07A

PASSIVE RAD 145 (TD)

File Name:	**6021112**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:06:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 03:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	7.4	0.19
Tetrachloroethene	5.0	0.14	8.6	0.24
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	22 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-2-02052019

Lab ID#: 1902123-08A

PASSIVE RAD 145 (TD)

File Name:	**6021113**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:08:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 04:14 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.8	0.15
Tetrachloroethene	5.0	0.14	11	0.30
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	22 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-2-02052019

Lab ID#: 1902123-09A

PASSIVE RAD 145 (TD)

File Name:	**6021114**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:11:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 04:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	9.8	0.28
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1436 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-2-02052019

Lab ID#: 1902123-10A

PASSIVE RAD 145 (TD)

File Name:	**6021115**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:13:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 05:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	13	0.38
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1436 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-1-02052019

Lab ID#: 1902123-11A

PASSIVE RAD 145 (TD)

File Name:	**6021116**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 06:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	12	0.33
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1435 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-1-02052019

Lab ID#: 1902123-12A

PASSIVE RAD 145 (TD)

File Name:	**6021117**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:18:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 06:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	11	0.30
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-OUT-1-02052019

Lab ID#: 1902123-13A

PASSIVE RAD 145 (TD)

File Name:	**6021118**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:20:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 07:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	11	0.33
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.55 C
trans-1,2-Dichloroethene	5.0	0.15	5.8 C	0.17 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-1-02052019

Lab ID#: 1902123-14A

PASSIVE RAD 145 (TD)

File Name:	**6021119**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:26:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 07:57 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	11	0.31
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902123-15A

PASSIVE RAD 145 (TD)

File Name:	**6021105**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:10 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1902123-16A
PASSIVE RAD 145 (TD)

File Name:	**6021102**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:28 AM**

Compound	%Recovery
1,1,1-Trichloroethane	113
Trichloroethene	83
Tetrachloroethene	108
1,1-Dichloroethane	95
1,1-Dichloroethene	85
cis-1,2-Dichloroethene	103
Freon 113	101
trans-1,2-Dichloroethene	104

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902123-17A
PASSIVE RAD 145 (TD)

File Name:	**6021103**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	110	70-130
Trichloroethene	90	70-130
Tetrachloroethene	104	70-130
1,1-Dichloroethane	92	70-130
1,1-Dichloroethene	80	70-130
cis-1,2-Dichloroethene	92	70-130
Freon 113	95	70-130
trans-1,2-Dichloroethene	105	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902123-17AA
PASSIVE RAD 145 (TD)

File Name:	**6021104**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:36 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	114	70-130
Trichloroethene	94	70-130
Tetrachloroethene	105	70-130
1,1-Dichloroethane	96	70-130
1,1-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	95	70-130
Freon 113	102	70-130
trans-1,2-Dichloroethene	113	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

WO#: 1902124

Case Seal #: _____

Company: LOCUS TECHNOLOGIES Project #: 27006 08 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU-TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: RICKY K. / MIN J.

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other

Reporting Units (circle): ppbv (ug/m3) ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush _____ Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MI-PATH-2-02052019	520ZK	2/5/19	15:35	2/6/19	15:23	X				TO-17	18.6°C
02A	MI-AMB-2-02052019	523ZK		15:37		15:24						22.1°C
03A	MI-AMB-2D-02052019	526ZK		15:37		15:24						22.1°C
04A	MI-PATH-1-02052019	529ZK		15:40		15:25						16.1°C
05A	MH-AMB-2-02052019	530ZK		15:44		15:32						17.1°C
06A	MH-AMB-1-02052019	0156Q		15:47		15:36						20.0°C
07A	MH-PATH-1-02052019	827JX		15:50		15:39						22.3°C
08A	MF-PATH-1-02052019	P253F		15:54		15:42						17.5°C
09A	MF-AMB-2-02052019	P255F		15:55		15:45						20.4°C
10A	MF-AMB-1-02052019	P254F		15:58		15:47						19.4°C
11A	ME-OUT-1-02052019	P257F		16:03		15:50						14.0°C
12A	MD-PATH-2-02052019	P258F		16:05		15:52						14.9°C
13A	MD-AMB-1-02052019	P256F		16:07		15:54						19.1°C
14A	MD-AMB-2-02052019	831JX	✓	16:11	✓	15:55	✓				✓	19.0°C

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	2/7/19	8:00		2/8/19	1200	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)		NA				

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Passive Sorbent Chain of Custody

Page ___of___

Case Seal #: _____ WO#: 1902124

Company: LOCUS TECHNOLOGIES Project #: 27006 08 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU-TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: RICKY K. / MIN J.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
15A	MD-PATH-1-020520	828JX	2/5/19	16:13	2/6/19	15:58	X				TO-17	19.6°C
16A	MC-PATH-2-020520	833JX	↓	16:16	↓	16:02	↓				↓	16.4°C
17A	MC-AMB-1-02052019	834JX		16:18		16:00						18.4°C
18A	MC-PATH-3-02052019	830JX		16:22		16:04						19.8°C
19A	MC-AMB-2-02052019	829JX		16:24		16:06						19.5°C
20A	MC-PATH-1-02052019	832JX		16:27		16:08						13.5°C
21A	MC-999-02052019	528ZK	↓	00:00	↓	00:00	↓				↓	

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time
RICKY KAZAKOFF	2/7/19	8:00		2/8/19	1200
Relinquished by:	Date	Time	Received by:	Date	Time

Notes to Lab:

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS Air bill #:

Custody Seals Intact? Yes No None

Temperature (°C) N/A

Sample Condition Upon Receipt: (circle) Good SDR

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2/20/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1902124

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 2/8/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1902124

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12924
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/08/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	02/20/2019		

FRACTION #	NAME	TEST
01A	MI-PATH-2-02052019	Passive RAD 145 (TD)
02A	MI-AMB-2-02052019	Passive RAD 145 (TD)
03A	MI-AMB-2D-02052019	Passive RAD 145 (TD)
04A	MI-PATH-1-02052019	Passive RAD 145 (TD)
05A	MH-AMB-2-02052019	Passive RAD 145 (TD)
06A	MH-AMB-1-02052019	Passive RAD 145 (TD)
07A	MH-PATH-1-02052019	Passive RAD 145 (TD)
08A	MF-PATH-1-02052019	Passive RAD 145 (TD)
09A	MF-AMB-2-02052019	Passive RAD 145 (TD)
10A	MF-AMB-1-02052019	Passive RAD 145 (TD)
11A	ME-OUT-1-02052019	Passive RAD 145 (TD)
12A	MD-PATH-2-02052019	Passive RAD 145 (TD)
13A	MD-AMB-1-02052019	Passive RAD 145 (TD)
14A	MD-AMB-2-02052019	Passive RAD 145 (TD)
15A	MD-PATH-1-02052019	Passive RAD 145 (TD)
16A	MC-PATH-2-02052019	Passive RAD 145 (TD)
17A	MC-AMB-1-02052019	Passive RAD 145 (TD)
18A	MC-PATH-3-02052019	Passive RAD 145 (TD)
19A	MC-AMB-2-02052019	Passive RAD 145 (TD)
20A	MC-PATH-1-02052019	Passive RAD 145 (TD)
21A	MC-999-02052019	Passive RAD 145 (TD)
22A	Lab Blank	Passive RAD 145 (TD)
22B	Lab Blank	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1902124

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12924
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/08/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	02/20/2019		

FRACTION #	NAME	TEST
23A	CCV	Passive RAD 145 (TD)
23B	CCV	Passive RAD 145 (TD)
24A	LCS	Passive RAD 145 (TD)
24AA	LCSD	Passive RAD 145 (TD)
24B	LCS	Passive RAD 145 (TD)
24BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY:  DATE: 02/20/19

Technical Director

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1902124

Twenty-one Radiello 145 (VOC TD) samples were received on February 08, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MI-PATH-2-02052019

Lab ID#: 1902124-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	6.1	0.16
Tetrachloroethene	5.0	0.14	9.6	0.27
Freon 113	5.0	0.13	20 C	0.49 C

Client Sample ID: MI-AMB-2-02052019

Lab ID#: 1902124-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	20	0.51
Tetrachloroethene	5.0	0.14	13	0.35
Freon 113	5.0	0.12	23 C	0.58 C

Client Sample ID: MI-AMB-2D-02052019

Lab ID#: 1902124-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	19	0.50
Tetrachloroethene	5.0	0.14	11	0.30
Freon 113	5.0	0.12	23 C	0.57 C

Client Sample ID: MI-PATH-1-02052019

Lab ID#: 1902124-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	19	0.52
Tetrachloroethene	5.0	0.14	9.4	0.27
Freon 113	5.0	0.13	21 C	0.53 C

Client Sample ID: MH-AMB-2-02052019

Lab ID#: 1902124-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MH-AMB-2-02052019

Lab ID#: 1902124-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	11	0.32
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MH-AMB-1-02052019

Lab ID#: 1902124-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	11	0.32
Freon 113	5.0	0.12	21 C	0.52 C

Client Sample ID: MH-PATH-1-02052019

Lab ID#: 1902124-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	10	0.29
Freon 113	5.0	0.12	19 C	0.47 C

Client Sample ID: MF-PATH-1-02052019

Lab ID#: 1902124-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	7.5 C	0.19 C

Client Sample ID: MF-AMB-2-02052019

Lab ID#: 1902124-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	10	0.30
Freon 113	5.0	0.12	18 C	0.46 C

Client Sample ID: MF-AMB-1-02052019

Lab ID#: 1902124-10A

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MF-AMB-1-02052019

Lab ID#: 1902124-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	9.4	0.27
Freon 113	5.0	0.13	17 C	0.44 C

Client Sample ID: ME-OUT-1-02052019

Lab ID#: 1902124-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Tetrachloroethene	5.0	0.14	11	0.31
Freon 113	5.0	0.13	22 C	0.57 C
trans-1,2-Dichloroethene	5.0	0.14	6.8 C	0.20 C

Client Sample ID: MD-PATH-2-02052019

Lab ID#: 1902124-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	5.6	0.15
Tetrachloroethene	5.0	0.14	11	0.31
Freon 113	5.0	0.13	21 C	0.54 C

Client Sample ID: MD-AMB-1-02052019

Lab ID#: 1902124-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	10	0.27
Tetrachloroethene	5.0	0.14	11	0.32
Freon 113	5.0	0.13	16 C	0.40 C

Client Sample ID: MD-AMB-2-02052019

Lab ID#: 1902124-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	16	0.44

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MD-AMB-2-02052019

Lab ID#: 1902124-14A

Tetrachloroethene	5.0	0.14	15	0.43
Freon 113	5.0	0.13	19 C	0.48 C

Client Sample ID: MD-PATH-1-02052019

Lab ID#: 1902124-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	15	0.39
Tetrachloroethene	5.0	0.14	11	0.31
Freon 113	5.0	0.13	17 C	0.43 C

Client Sample ID: MC-PATH-2-02052019

Lab ID#: 1902124-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	19	0.51
Tetrachloroethene	5.0	0.14	9.5	0.27
Freon 113	5.0	0.13	21 C	0.53 C

Client Sample ID: MC-AMB-1-02052019

Lab ID#: 1902124-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	20	0.55
Tetrachloroethene	5.0	0.14	11	0.33
Freon 113	5.0	0.13	16 C	0.41 C

Client Sample ID: MC-PATH-3-02052019

Lab ID#: 1902124-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	26	0.70
Tetrachloroethene	5.0	0.14	9.9	0.28
Freon 113	5.0	0.13	18 C	0.46 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-AMB-2-02052019

Lab ID#: 1902124-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	29	0.76
Tetrachloroethene	5.0	0.14	10	0.30
Freon 113	5.0	0.13	18 C	0.45 C

Client Sample ID: MC-PATH-1-02052019

Lab ID#: 1902124-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	5.4	0.15
Tetrachloroethene	5.0	0.15	9.7	0.28
Freon 113	5.0	0.13	19 C	0.49 C

Client Sample ID: MC-999-02052019

Lab ID#: 1902124-21A

No Detections Were Found.

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Client Sample ID: MI-PATH-2-02052019

Lab ID#: 1902124-01A

PASSIVE RAD 145 (TD)

File Name:	**11021106**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 12:43 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	6.1	0.16
Tetrachloroethene	5.0	0.14	9.6	0.27
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-2-02052019

Lab ID#: 1902124-02A

PASSIVE RAD 145 (TD)

File Name:	**11021107**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 01:30 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	20	0.51
Tetrachloroethene	5.0	0.14	13	0.35
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	23 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-2D-02052019

Lab ID#: 1902124-03A

PASSIVE RAD 145 (TD)

File Name:	**11021108**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:37:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 02:17 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	19	0.50
Tetrachloroethene	5.0	0.14	11	0.30
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	23 C	0.57 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-1-02052019

Lab ID#: 1902124-04A

PASSIVE RAD 145 (TD)

File Name:	**6021122**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:40:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:45 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	19	0.52
Tetrachloroethene	5.0	0.14	9.4	0.27
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-2-02052019

Lab ID#: 1902124-05A

PASSIVE RAD 145 (TD)

File Name:	**11021110**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:44:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 03:33 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	11	0.32
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 62.6F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-1-02052019

Lab ID#: 1902124-06A

PASSIVE RAD 145 (TD)

File Name:	**11021112**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 04:50 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	11	0.32
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	21 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-PATH-1-02052019

Lab ID#: 1902124-07A

PASSIVE RAD 145 (TD)

File Name:	**11021113**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:50:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 05:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	10	0.29
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-PATH-1-02052019

Lab ID#: 1902124-08A

PASSIVE RAD 145 (TD)

File Name:	**11021114**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:54:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 06:39 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	7.5 C	0.19 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-2-02052019

Lab ID#: 1902124-09A

PASSIVE RAD 145 (TD)

File Name:	**11021115**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:55:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 07:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	10	0.30
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-1-02052019

Lab ID#: 1902124-10A

PASSIVE RAD 145 (TD)

File Name:	**11021116**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 3:58:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 08:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	9.4	0.27
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.44 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-02052019

Lab ID#: 1902124-11A

PASSIVE RAD 145 (TD)

File Name:	**11021117**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:03:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	11	0.31
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.57 C
trans-1,2-Dichloroethene	5.0	0.14	6.8 C	0.20 C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-2-02052019

Lab ID#: 1902124-12A

PASSIVE RAD 145 (TD)

File Name:	**11021118**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:05:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	5.6	0.15
Tetrachloroethene	5.0	0.14	11	0.31
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-1-02052019

Lab ID#: 1902124-13A

PASSIVE RAD 145 (TD)

File Name:	**11021119**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:07:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	10	0.27
Tetrachloroethene	5.0	0.14	11	0.32
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-2-02052019

Lab ID#: 1902124-14A

PASSIVE RAD 145 (TD)

File Name:	**11021120**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:11:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:21 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	16	0.44
Tetrachloroethene	5.0	0.14	15	0.43
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1424 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-1-02052019

Lab ID#: 1902124-15A

PASSIVE RAD 145 (TD)

File Name:	**11021121**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:13:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 12:08 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	15	0.39
Tetrachloroethene	5.0	0.14	11	0.31
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-2-02052019

Lab ID#: 1902124-16A

PASSIVE RAD 145 (TD)

File Name:	**11021122**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 12:55 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	19	0.51
Tetrachloroethene	5.0	0.14	9.5	0.27
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-02052019

Lab ID#: 1902124-17A

PASSIVE RAD 145 (TD)

File Name:	**11021123**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:18:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 01:42 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	20	0.55
Tetrachloroethene	5.0	0.14	11	0.33
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	16 C	0.41 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-3-02052019

Lab ID#: 1902124-18A

PASSIVE RAD 145 (TD)

File Name:	**11021124**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:22:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 02:29 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	26	0.70
Tetrachloroethene	5.0	0.14	9.9	0.28
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-2-02052019

Lab ID#: 1902124-19A

PASSIVE RAD 145 (TD)

File Name:	**11021125**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:24:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 03:16 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	29	0.76
Tetrachloroethene	5.0	0.14	10	0.30
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-1-02052019

Lab ID#: 1902124-20A

PASSIVE RAD 145 (TD)

File Name:	**11021126**	**Date of Extraction: NA**	**Date of Collection: 2/5/19 4:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/12/19 04:03 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	5.4	0.15
Tetrachloroethene	5.0	0.15	9.7	0.28
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1421 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-999-02052019

Lab ID#: 1902124-21A

PASSIVE RAD 145 (TD)

File Name:	**6021121**	**Date of Extraction: NA**	**Date of Collection: 2/5/19**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902124-22A

PASSIVE RAD 145 (TD)

File Name:	**6021105**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:10 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902124-22B

PASSIVE RAD 145 (TD)

File Name:	**11021105**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:46 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV

Lab ID#: 1902124-23A

PASSIVE RAD 145 (TD)

File Name:	**6021102**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:28 AM**

Compound	%Recovery
1,1,1-Trichloroethane	113
Trichloroethene	83
Tetrachloroethene	108
1,1-Dichloroethane	95
1,1-Dichloroethene	85
cis-1,2-Dichloroethene	103
Freon 113	101
trans-1,2-Dichloroethene	104

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902124-23B
PASSIVE RAD 145 (TD)

File Name:	**11021102**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 09:41 AM**

Compound	%Recovery
1,1,1-Trichloroethane	111
Trichloroethene	109
Tetrachloroethene	114
1,1-Dichloroethane	123
1,1-Dichloroethene	158 Q
cis-1,2-Dichloroethene	104
Freon 113	110
trans-1,2-Dichloroethene	117

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902124-24A
PASSIVE RAD 145 (TD)

File Name:	**6021103**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	110	70-130
Trichloroethene	90	70-130
Tetrachloroethene	104	70-130
1,1-Dichloroethane	92	70-130
1,1-Dichloroethene	80	70-130
cis-1,2-Dichloroethene	92	70-130
Freon 113	95	70-130
trans-1,2-Dichloroethene	105	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902124-24AA
PASSIVE RAD 145 (TD)

File Name:	**6021104**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:36 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	114	70-130
Trichloroethene	94	70-130
Tetrachloroethene	105	70-130
1,1-Dichloroethane	96	70-130
1,1-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	95	70-130
Freon 113	102	70-130
trans-1,2-Dichloroethene	113	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1902124-24B

PASSIVE RAD 145 (TD)

File Name:	**11021103**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 10:27 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	104	70-130
Trichloroethene	99	70-130
Tetrachloroethene	108	70-130
1,1-Dichloroethane	113	70-130
1,1-Dichloroethene	117	70-130
cis-1,2-Dichloroethene	96	70-130
Freon 113	101	70-130
trans-1,2-Dichloroethene	119	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902124-24BB
PASSIVE RAD 145 (TD)

File Name:	**11021104**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/11/19 11:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	104	70-130
Trichloroethene	102	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	113	70-130
1,1-Dichloroethene	119	70-130
cis-1,2-Dichloroethene	97	70-130
Freon 113	101	70-130
trans-1,2-Dichloroethene	122	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___ of ___

Case Seal #: _____ WO#: 1902515

Company: LOCUS TECHNOLOGIES Project #: 27006.08.9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU-TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: RICKY K./ALAN T./HANK C.

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	ML-AMB-1-02212019	472KA	2/21/19	9:10	2/22/19	9:10	X				TO-17	15.6°C
02A	ML-OUT-1-02212019	474KA		9:15		9:15						2.2°
03A	ML-AMB-3-02212019	473KA		9:20		9:20						11.3°
04A	ML-PATH-1-02212019	475KA		9:25		9:22						10.9°
05A	ML-AMB-2-02212019	103XX		9:30		9:25						12.4°
06A	MK-AMB-1-02212019	B022X		9:35		9:27						11.3°
07A	MK-PATH-1-02212019	029XX		9:40		9:30						14.2°
08A	MK-AMB-2-02212019	065XX		9:45		9:35						20.6°
09A	MJ-AMB-2-02212019	478KA		9:50		9:37						16.5°
10A	MJ-PATH-2-02212019	051XX		9:52		9:40						12.8°
11A	MT-AMB-1-02212019	078XX		9:55		9:42						14.6°
12A	MT-PATH-1-02212019	L026M		9:57		9:44						12.6°
13A	MT-OUT-1-02212019	054XX		10:00		9:46						8.6°
14A	MI-AMB-1-02212019	B002X	↓	10:03	↓	9:50	↓				↓	11.8°

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	2/22/19	14:30		2/26/19	1145	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS
Air bill #:

Custody Seals Intact? Yes No (None)

Temperature (°C): N/A

Sample Condition Upon Receipt: (circle) (Good) SDR

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3/8/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1902515

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 2/26/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1902515

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12925
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/26/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/08/2019		

FRACTION #	NAME	TEST
01A	ML-AMB-1-02212019	Passive RAD 145 (TD)
02A	ML-OUT-1-02212019	Passive RAD 145 (TD)
03A	ML-AMB-3-02212019	Passive RAD 145 (TD)
04A	ML-PATH-1-02212019	Passive RAD 145 (TD)
05A	ML-AMB-2-02212019	Passive RAD 145 (TD)
06A	MK-AMB-1-02212019	Passive RAD 145 (TD)
07A	MK-PATH-1-02212019	Passive RAD 145 (TD)
08A	MK-AMB-2-02212019	Passive RAD 145 (TD)
09A	MJ-AMB-2-02212019	Passive RAD 145 (TD)
10A	MJ-PATH-2-02212019	Passive RAD 145 (TD)
11A	MJ-AMB-1-02212019	Passive RAD 145 (TD)
12A	MJ-PATH-1-02212019	Passive RAD 145 (TD)
13A	MJ-OUT-1-02212019	Passive RAD 145 (TD)
14A	MI-AMB-1-02212019	Passive RAD 145 (TD)
15A	Lab Blank	Passive RAD 145 (TD)
15B	Lab Blank	Passive RAD 145 (TD)
15C	Lab Blank	Passive RAD 145 (TD)
16A	CCV	Passive RAD 145 (TD)
16B	CCV	Passive RAD 145 (TD)
16C	CCV	Passive RAD 145 (TD)
17A	LCS	Passive RAD 145 (TD)
17AA	LCSD	Passive RAD 145 (TD)
17B	LCS	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1902515

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12925
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/26/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/08/2019		

FRACTION #	NAME	TEST
17BB	LCSD	Passive RAD 145 (TD)
17C	LCS	Passive RAD 145 (TD)
17CC	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 03/08/19

Technical Director

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1902515

Fourteen Radiello 145 (VOC TD) samples were received on February 26, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: ML-AMB-1-02212019

Lab ID#: 1902515-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	19 C	0.48 C

Client Sample ID: ML-OUT-1-02212019

Lab ID#: 1902515-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.14	20 C	0.56 C

Client Sample ID: ML-AMB-3-02212019

Lab ID#: 1902515-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.48 C

Client Sample ID: ML-PATH-1-02212019

Lab ID#: 1902515-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.48 C

Client Sample ID: ML-AMB-2-02212019

Lab ID#: 1902515-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MK-AMB-1-02212019

Lab ID#: 1902515-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	19 C	0.49 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MK-PATH-1-02212019

Lab ID#: 1902515-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	5.7	0.16
Freon 113	5.0	0.13	20 C	0.51 C

Client Sample ID: MK-AMB-2-02212019

Lab ID#: 1902515-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	17 C	0.43 C

Client Sample ID: MJ-AMB-2-02212019

Lab ID#: 1902515-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.46 C

Client Sample ID: MJ-PATH-2-02212019

Lab ID#: 1902515-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.46 C

Client Sample ID: MJ-AMB-1-02212019

Lab ID#: 1902515-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	19 C	0.49 C

Client Sample ID: MJ-PATH-1-02212019

Lab ID#: 1902515-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.54 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MJ-OUT-1-02212019

Lab ID#: 1902515-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	21 C	0.56 C

Client Sample ID: MI-AMB-1-02212019

Lab ID#: 1902515-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	20 C	0.52 C

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Client Sample ID: ML-AMB-1-02212019

Lab ID#: 1902515-01A

PASSIVE RAD 145 (TD)

File Name:	**11022812**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:10:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 05:37 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-OUT-1-02212019

Lab ID#: 1902515-02A

PASSIVE RAD 145 (TD)

File Name:	**6030408**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:15:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 12:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	20 C	0.56 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 35.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-3-02212019

Lab ID#: 1902515-03A

PASSIVE RAD 145 (TD)

File Name:	**11022814**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 06:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-PATH-1-02212019

Lab ID#: 1902515-04A

PASSIVE RAD 145 (TD)

File Name:	**11022815**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:25:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 07:39 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ML-AMB-2-02212019

Lab ID#: 1902515-05A

PASSIVE RAD 145 (TD)

File Name:	**11022816**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:30:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 08:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1435 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-1-02212019

Lab ID#: 1902515-06A

PASSIVE RAD 145 (TD)

File Name:	**11022817**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:35:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 09:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1432 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-PATH-1-02212019

Lab ID#: 1902515-07A

PASSIVE RAD 145 (TD)

File Name:	**11022818**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:40:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	5.7	0.16
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.51 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MK-AMB-2-02212019

Lab ID#: 1902515-08A

PASSIVE RAD 145 (TD)

File Name:	**11022819**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:48 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-2-02212019

Lab ID#: 1902515-09A

PASSIVE RAD 145 (TD)

File Name:	**11022820**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:50:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 11:35 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-2-02212019

Lab ID#: 1902515-10A

PASSIVE RAD 145 (TD)

File Name:	**11022821**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:52:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/19 12:22 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-AMB-1-02212019

Lab ID#: 1902515-11A

PASSIVE RAD 145 (TD)

File Name:	**11022822**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/19 01:09 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-PATH-1-02212019

Lab ID#: 1902515-12A

PASSIVE RAD 145 (TD)

File Name:	**11022823**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 9:57:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/19 01:56 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MJ-OUT-1-02212019

Lab ID#: 1902515-13A

PASSIVE RAD 145 (TD)

File Name:	**11022824**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:00:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/1/19 02:44 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	21 C	0.56 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-1-02212019

Lab ID#: 1902515-14A

PASSIVE RAD 145 (TD)

File Name:	**6030506**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:03:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 02:39 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902515-15A

PASSIVE RAD 145 (TD)

File Name:	**11022805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 11:36 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902515-15B

PASSIVE RAD 145 (TD)

File Name:	**6030406**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 11:23 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902515-15C

PASSIVE RAD 145 (TD)

File Name:	**6030505**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 01:44 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1902515-16A
PASSIVE RAD 145 (TD)

File Name:	**11022802**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 09:30 AM**

Compound	%Recovery
1,1,1-Trichloroethane	109
Trichloroethene	105
Tetrachloroethene	92
1,1-Dichloroethane	94
1,1-Dichloroethene	81
cis-1,2-Dichloroethene	84
Freon 113	100
trans-1,2-Dichloroethene	100

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902515-16B
PASSIVE RAD 145 (TD)

File Name:	**6030403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 09:41 AM**

Compound	%Recovery
1,1,1-Trichloroethane	96
Trichloroethene	122
Tetrachloroethene	106
1,1-Dichloroethane	89
1,1-Dichloroethene	96
cis-1,2-Dichloroethene	83
Freon 113	82
trans-1,2-Dichloroethene	87

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902515-16C
PASSIVE RAD 145 (TD)

File Name:	**6030502**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 12:02 PM**

Compound	%Recovery
1,1,1-Trichloroethane	99
Trichloroethene	99
Tetrachloroethene	100
1,1-Dichloroethane	104
1,1-Dichloroethene	102
cis-1,2-Dichloroethene	97
Freon 113	95
trans-1,2-Dichloroethene	92

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902515-17A
PASSIVE RAD 145 (TD)

File Name:	**11022803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:16 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	106	70-130
Trichloroethene	92	70-130
Tetrachloroethene	89	70-130
1,1-Dichloroethane	85	70-130
1,1-Dichloroethene	75	70-130
cis-1,2-Dichloroethene	83	70-130
Freon 113	89	70-130
trans-1,2-Dichloroethene	82	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902515-17AA
PASSIVE RAD 145 (TD)

File Name:	**11022804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:55 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	106	70-130
Trichloroethene	93	70-130
Tetrachloroethene	90	70-130
1,1-Dichloroethane	86	70-130
1,1-Dichloroethene	77	70-130
cis-1,2-Dichloroethene	93	70-130
Freon 113	92	70-130
trans-1,2-Dichloroethene	82	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1902515-17B

PASSIVE RAD 145 (TD)

File Name:	**6030404**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 10:18 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	84	70-130
Trichloroethene	117	70-130
Tetrachloroethene	113	70-130
1,1-Dichloroethane	91	70-130
1,1-Dichloroethene	107	70-130
cis-1,2-Dichloroethene	104	70-130
Freon 113	90	70-130
trans-1,2-Dichloroethene	83	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902515-17BB
PASSIVE RAD 145 (TD)

File Name:	**6030405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 10:49 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	82	70-130
Trichloroethene	120	70-130
Tetrachloroethene	113	70-130
1,1-Dichloroethane	88	70-130
1,1-Dichloroethene	108	70-130
cis-1,2-Dichloroethene	103	70-130
Freon 113	90	70-130
trans-1,2-Dichloroethene	82	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902515-17C
PASSIVE RAD 145 (TD)

File Name:	**6030503**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 12:39 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	102	70-130
Trichloroethene	97	70-130
Tetrachloroethene	102	70-130
1,1-Dichloroethane	93	70-130
1,1-Dichloroethene	86	70-130
cis-1,2-Dichloroethene	95	70-130
Freon 113	82	70-130
trans-1,2-Dichloroethene	75	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902515-17CC
PASSIVE RAD 145 (TD)

File Name:	**6030504**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 01:10 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	104	70-130
Trichloroethene	96	70-130
Tetrachloroethene	104	70-130
1,1-Dichloroethane	94	70-130
1,1-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	98	70-130
Freon 113	84	70-130
trans-1,2-Dichloroethene	77	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___of___

Case Seal #: _____

WO#: 1902516

Company: LOCUS TECHNOLOGIES Project #: 17006 08 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: COU-TRIPLE SITE

Contact phone/email: LEFEVRE@LOCUSTECH.COM Collected by: RICKY K. / ALAN T. / HANK C.

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush (Specify)

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MI-PATH-2-02212019	106XX	2/21/19	10:11	~~9155~~ 02/22/19	9155	X				TO-17	12.4°C
02A	MI-AMB-2-02212019	045XX		10:15	02/22/19	1000						13.4°
03A	MI-PATH-1-02212019	038XX		10:17		10:03						12.7°
04A	MH-AMB-2-02212019	047XX		10:21		10:05						13.2°
05A	MH-AMB-1-02212019	067XX		10:24		10:15						12.9°
06A	MH-PATH-1-02212019	070XX		10:30		10:19						14.9°
07A	MF-PATH-1-02212019	073XX		10:36		10:21						13.1°
08A	MF-AMB-2-02212019	005XX		10:38		10:25						14.8°
09A	MF-AMB-1-02212019	B010X		10:41		10:26						13.8°
10A	ME-OUT-1-02212019	B008X		10:47		10:30						5.8°
11A	MD-PATH-2-02212019	059XX		10:50		10:32						6.6°
12A	MD-AMB-1-02212019	L005M		10:54		10:35						9.1°
13A	MD-AMB-1D-02212019	B020X		10:54		10:35						9.1°
14A	MD-AMB-2-02212019	L023M		10:59		10:39	↓				↓	9.7°

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	2/22/19	14:30		2/26/19	1145	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS
Air bill #:

Custody Seals Intact? Yes No None

Temperature (°C): NA

Sample Condition Upon Receipt: (circle) Good SDR

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3/12/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1902516

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 2/26/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1902516

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12925
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/26/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/12/2019		

FRACTION #	NAME	TEST
01A	MI-PATH-2-02212019	Passive RAD 145 (TD)
02A	MI-AMB-2-02212019	Passive RAD 145 (TD)
03A	MI-PATH-1-02212019	Passive RAD 145 (TD)
04A	MH-AMB-2-02212019	Passive RAD 145 (TD)
05A	MH-AMB-1-02212019	Passive RAD 145 (TD)
06A	MH-PATH-1-02212019	Passive RAD 145 (TD)
07A	MF-PATH-1-02212019	Passive RAD 145 (TD)
08A	MF-AMB-2-02212019	Passive RAD 145 (TD)
09A	MF-AMB-1-02212019	Passive RAD 145 (TD)
10A	ME-OUT-1-02212019	Passive RAD 145 (TD)
11A	MD-PATH-2-02212019	Passive RAD 145 (TD)
12A	MD-AMB-1-02212019	Passive RAD 145 (TD)
13A	MD-AMB-1D-02212019	Passive RAD 145 (TD)
14A	MD-AMB-2-02212019	Passive RAD 145 (TD)
15A	Lab Blank	Passive RAD 145 (TD)
15B	Lab Blank	Passive RAD 145 (TD)
15C	Lab Blank	Passive RAD 145 (TD)
16A	CCV	Passive RAD 145 (TD)
16B	CCV	Passive RAD 145 (TD)
16C	CCV	Passive RAD 145 (TD)
17A	LCS	Passive RAD 145 (TD)
17AA	LCSD	Passive RAD 145 (TD)
17B	LCS	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1902516

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12925
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/26/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/12/2019		

FRACTION #	NAME	TEST
17BB	LCSD	Passive RAD 145 (TD)
17C	LCS	Passive RAD 145 (TD)
17CC	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 03/12/19

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1902516

Fourteen Radiello 145 (VOC TD) samples were received on February 26, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1431 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MI-PATH-2-02212019

Lab ID#: 1902516-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	5.3	0.15
Freon 113	5.0	0.13	22 C	0.58 C

Client Sample ID: MI-AMB-2-02212019

Lab ID#: 1902516-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	21	0.58
Freon 113	5.0	0.13	18 C	0.48 C

Client Sample ID: MI-PATH-1-02212019

Lab ID#: 1902516-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	20	0.55
Freon 113	5.0	0.13	28 C	0.72 C

Client Sample ID: MH-AMB-2-02212019

Lab ID#: 1902516-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MH-AMB-1-02212019

Lab ID#: 1902516-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.48 C

Client Sample ID: MH-PATH-1-02212019

Lab ID#: 1902516-06A

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MH-PATH-1-02212019

Lab ID#: 1902516-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.47 C

Client Sample ID: MF-PATH-1-02212019

Lab ID#: 1902516-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MF-AMB-2-02212019

Lab ID#: 1902516-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	20 C	0.50 C

Client Sample ID: MF-AMB-1-02212019

Lab ID#: 1902516-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.46 C

Client Sample ID: ME-OUT-1-02212019

Lab ID#: 1902516-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.14	21 C	0.56 C

Client Sample ID: MD-PATH-2-02212019

Lab ID#: 1902516-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.14	19 C	0.51 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MD-AMB-1-02212019

Lab ID#: 1902516-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	10	0.28
Freon 113	5.0	0.13	20 C	0.54 C

Client Sample ID: MD-AMB-1D-02212019

Lab ID#: 1902516-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	9.9	0.28
Freon 113	5.0	0.13	20 C	0.54 C

Client Sample ID: MD-AMB-2-02212019

Lab ID#: 1902516-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	14	0.39
Freon 113	5.0	0.13	20 C	0.54 C

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Client Sample ID: MI-PATH-2-02212019

Lab ID#: 1902516-01A

PASSIVE RAD 145 (TD)

File Name:	**11031215**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:11:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/12/19 11:31 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	5.3	0.15
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1424 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-AMB-2-02212019

Lab ID#: 1902516-02A

PASSIVE RAD 145 (TD)

File Name:	**11030417**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:15:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 06:53 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	21	0.58
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MI-PATH-1-02212019

Lab ID#: 1902516-03A

PASSIVE RAD 145 (TD)

File Name:	**11030418**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:17:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 07:40 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	20	0.55
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	28 C	0.72 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-AMB-2-02212019

Lab ID#: 1902516-04A

PASSIVE RAD 145 (TD)

File Name:	**11030419**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:21:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 08:27 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1424 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MH-AMB-1-02212019

Lab ID#: 1902516-05A

PASSIVE RAD 145 (TD)

File Name:	**11030420**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:24:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 09:14 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MH-PATH-1-02212019

Lab ID#: 1902516-06A

PASSIVE RAD 145 (TD)

File Name:	**11030506**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:30:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 02:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-PATH-1-02212019

Lab ID#: 1902516-07A

PASSIVE RAD 145 (TD)

File Name:	**11030507**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:36:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 02:54 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 55.4F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-2-02212019

Lab ID#: 1902516-08A

PASSIVE RAD 145 (TD)

File Name:	**11030508**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:38:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 03:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MF-AMB-1-02212019

Lab ID#: 1902516-09A

PASSIVE RAD 145 (TD)

File Name:	**11030509**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 04:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.46 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: ME-OUT-1-02212019

Lab ID#: 1902516-10A

PASSIVE RAD 145 (TD)

File Name:	**11030510**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:47:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 05:15 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	21 C	0.56 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 42.8F , duration time = 1423 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-PATH-2-02212019

Lab ID#: 1902516-11A

PASSIVE RAD 145 (TD)

File Name:	**11030511**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:50:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 06:02 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	19 C	0.51 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 44.6F , duration time = 1422 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-1-02212019

Lab ID#: 1902516-12A

PASSIVE RAD 145 (TD)

File Name:	**11030512**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:54:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 06:49 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	10	0.28
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-1D-02212019

Lab ID#: 1902516-13A

PASSIVE RAD 145 (TD)

File Name:	**11030513**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:54:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 07:36 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	9.9	0.28
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 48.2F , duration time = 1425 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MD-AMB-2-02212019

Lab ID#: 1902516-14A

PASSIVE RAD 145 (TD)

File Name:	**11030514**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 10:59:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 08:23 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	14	0.39
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.54 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1420 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902516-15A

PASSIVE RAD 145 (TD)

File Name:	**11030407**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 01:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902516-15B

PASSIVE RAD 145 (TD)

File Name:	**11030505**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 12:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902516-15C

PASSIVE RAD 145 (TD)

File Name:	**11031212**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/12/19 09:35 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1431 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1902516-16A
PASSIVE RAD 145 (TD)

File Name:	**11030403**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 10:26 AM**

Compound	%Recovery
1,1,1-Trichloroethane	116
Trichloroethene	100
Tetrachloroethene	94
1,1-Dichloroethane	94
1,1-Dichloroethene	86
cis-1,2-Dichloroethene	87
Freon 113	106
trans-1,2-Dichloroethene	98

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902516-16B
PASSIVE RAD 145 (TD)

File Name:	**11030502**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 10:36 AM**

Compound	%Recovery
1,1,1-Trichloroethane	96
Trichloroethene	112
Tetrachloroethene	96
1,1-Dichloroethane	87
1,1-Dichloroethene	82
cis-1,2-Dichloroethene	79
Freon 113	84
trans-1,2-Dichloroethene	90

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902516-16C
PASSIVE RAD 145 (TD)

File Name:	**11031209**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/12/19 07:30 AM**

Compound	%Recovery
1,1,1-Trichloroethane	96
Trichloroethene	103
Tetrachloroethene	92
1,1-Dichloroethane	83
1,1-Dichloroethene	76
cis-1,2-Dichloroethene	77
Freon 113	86
trans-1,2-Dichloroethene	88

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1902516-17A

PASSIVE RAD 145 (TD)

File Name:	**11030405**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 11:50 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	104	70-130
Trichloroethene	83	70-130
Tetrachloroethene	87	70-130
1,1-Dichloroethane	74	70-130
1,1-Dichloroethene	62 Q	70-130
cis-1,2-Dichloroethene	76	70-130
Freon 113	85	70-130
trans-1,2-Dichloroethene	73	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902516-17AA
PASSIVE RAD 145 (TD)

File Name:	**11030406**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/4/19 12:29 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	111	70-130
Trichloroethene	85	70-130
Tetrachloroethene	88	70-130
1,1-Dichloroethane	78	70-130
1,1-Dichloroethene	72	70-130
cis-1,2-Dichloroethene	84	70-130
Freon 113	91	70-130
trans-1,2-Dichloroethene	77	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1902516-17B

PASSIVE RAD 145 (TD)

File Name:	**11030503**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 11:22 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	102	70-130
Trichloroethene	108	70-130
Tetrachloroethene	101	70-130
1,1-Dichloroethane	97	70-130
1,1-Dichloroethene	94	70-130
cis-1,2-Dichloroethene	101	70-130
Freon 113	101	70-130
trans-1,2-Dichloroethene	94	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902516-17BB
PASSIVE RAD 145 (TD)

File Name:	**11030504**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/5/19 12:01 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	100	70-130
Trichloroethene	110	70-130
Tetrachloroethene	101	70-130
1,1-Dichloroethane	95	70-130
1,1-Dichloroethene	98	70-130
cis-1,2-Dichloroethene	101	70-130
Freon 113	99	70-130
trans-1,2-Dichloroethene	91	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902516-17C
PASSIVE RAD 145 (TD)

File Name:	**11031210**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/12/19 08:16 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	70-130
Trichloroethene	111	70-130
Tetrachloroethene	98	70-130
1,1-Dichloroethane	89	70-130
1,1-Dichloroethene	88	70-130
cis-1,2-Dichloroethene	94	70-130
Freon 113	93	70-130
trans-1,2-Dichloroethene	88	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902516-17CC
PASSIVE RAD 145 (TD)

File Name:	**11031211**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 3/12/19 08:55 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	90	70-130
Trichloroethene	114	70-130
Tetrachloroethene	103	70-130
1,1-Dichloroethane	92	70-130
1,1-Dichloroethene	89	70-130
cis-1,2-Dichloroethene	92	70-130
Freon 113	94	70-130
trans-1,2-Dichloroethene	85	70-130

Container Type: NA - Not Applicable

eurofins Air Toxics

Passive Sorbent Chain of Custody

WO#: 1902517

Case Seal #: _____

Company: LOCUS TECHNOLOGIES Project #: 27006.08 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU - TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.C Collected by: RICKY K / ALAN T. / HANK C.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MD-PATH-1-022119	B013X	2/21/19	11:02	02/22/19	1040	X				TO-17	9.6°C
02A	MC-AMB-1-022119	097XX	2/21/19	11:05	"	1044	"				"	11.5°C
03A	MC-PATH-2-022119	L022M	2/21/19	1107	"	1045	"				"	10.1°C
04A	MC-AMB-2-022119	L037M	2/21/19	1110	"	1048	"				"	11.4°C
05A	MC-PATH-3-022119	B011X	2/21/19	1112	"	1050	"				"	11.7°C
06A	MC-PATH-1-022119	B021X	2/21/19	1115	"	1053	"				"	11.3°C
AA	MC-999-022219	049XX	2/21/19	0000	↓	0000	↓				↓	

Sample Matrix (check one)

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: ☑ Normal ☐ Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time
RICKY KAZAKOFF	2/22/19	14:30	GATE	2/26/19	1145
Relinquished by:	Date	Time	Received by:	Date	Time

Notes to Lab:

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)		NA				

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3/11/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLE SITE
Project #: 27006 08 9018
Workorder #: 1902517

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 2/26/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1902517

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12925
FAX:	650-960-0739	**PROJECT #**	27006 08 9018 OOU-TRIPLE SITE
DATE RECEIVED:	02/26/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	03/11/2019		

FRACTION #	NAME	TEST
01A	MD-PATH-1-02212019	Passive RAD 145 (TD)
02A	MC-AMB-1-02212019	Passive RAD 145 (TD)
03A	MC-PATH-2-02212019	Passive RAD 145 (TD)
04A	MC-AMB-2-02212019	Passive RAD 145 (TD)
05A	MC-PATH-3-02212019	Passive RAD 145 (TD)
06A	MC-PATH-1-02212019	Passive RAD 145 (TD)
07A	MC-999-02222019	Passive RAD 145 (TD)
08A	Lab Blank	Passive RAD 145 (TD)
08B	Lab Blank	Passive RAD 145 (TD)
09A	CCV	Passive RAD 145 (TD)
09B	CCV	Passive RAD 145 (TD)
10A	LCS	Passive RAD 145 (TD)
10AA	LCSD	Passive RAD 145 (TD)
10B	LCS	Passive RAD 145 (TD)
10BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 03/11/19

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1902517

Seven Radiello 145 (VOC TD) samples were received on February 26, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1440 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MD-PATH-1-02212019

Lab ID#: 1902517-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	14	0.40
Freon 113	5.0	0.13	20 C	0.53 C

Client Sample ID: MC-AMB-1-02212019

Lab ID#: 1902517-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	24	0.66
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MC-PATH-2-02212019

Lab ID#: 1902517-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	22	0.62
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: MC-AMB-2-02212019

Lab ID#: 1902517-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	52	1.5
Freon 113	5.0	0.13	20 C	0.52 C

Client Sample ID: MC-PATH-3-02212019

Lab ID#: 1902517-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	40	1.1
Freon 113	5.0	0.13	20 C	0.53 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MC-PATH-1-02212019

Lab ID#: 1902517-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	22 C	0.58 C

Client Sample ID: MC-999-02222019

Lab ID#: 1902517-07A

No Detections Were Found.

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Client Sample ID: MD-PATH-1-02212019

Lab ID#: 1902517-01A

PASSIVE RAD 145 (TD)

File Name:	**11022806**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:02:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 12:54 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	14	0.40
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-1-02212019

Lab ID#: 1902517-02A

PASSIVE RAD 145 (TD)

File Name:	**11022807**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:05:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 01:41 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	24	0.66
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1419 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-2-02212019

Lab ID#: 1902517-03A

PASSIVE RAD 145 (TD)

File Name:	**11022808**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:07:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 02:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	22	0.62
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-AMB-2-02212019

Lab ID#: 1902517-04A

PASSIVE RAD 145 (TD)

File Name:	**11022809**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:10:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 03:16 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	52	1.5
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.52 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-3-02212019

Lab ID#: 1902517-05A

PASSIVE RAD 145 (TD)

File Name:	**11022810**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:12:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 04:03 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	40	1.1
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	20 C	0.53 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-PATH-1-02212019

Lab ID#: 1902517-06A

PASSIVE RAD 145 (TD)

File Name:	**11022811**	**Date of Extraction: NA**	**Date of Collection: 2/21/19 11:15:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 04:50 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	22 C	0.58 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 51.8F , duration time = 1418 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MC-999-02222019

Lab ID#: 1902517-07A

PASSIVE RAD 145 (TD)

File Name:	**6022806**	**Date of Extraction: NA**	**Date of Collection: 2/21/19**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 11:29 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902517-08A

PASSIVE RAD 145 (TD)

File Name:	**6022805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:39 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1902517-08B

PASSIVE RAD 145 (TD)

File Name:	**11022805**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 11:36 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV

Lab ID#: 1902517-09A

PASSIVE RAD 145 (TD)

File Name:	**6022802**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 08:57 AM**

Compound	%Recovery
1,1,1-Trichloroethane	87
Trichloroethene	106
Tetrachloroethene	100
1,1-Dichloroethane	86
1,1-Dichloroethene	94
cis-1,2-Dichloroethene	80
Freon 113	80
trans-1,2-Dichloroethene	80

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1902517-09B
PASSIVE RAD 145 (TD)

File Name:	**11022802**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 09:30 AM**

Compound	%Recovery
1,1,1-Trichloroethane	109
Trichloroethene	105
Tetrachloroethene	92
1,1-Dichloroethane	94
1,1-Dichloroethene	81
cis-1,2-Dichloroethene	84
Freon 113	100
trans-1,2-Dichloroethene	100

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902517-10A
PASSIVE RAD 145 (TD)

File Name:	**6022803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 09:34 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	86	70-130
Trichloroethene	118	70-130
Tetrachloroethene	113	70-130
1,1-Dichloroethane	91	70-130
1,1-Dichloroethene	100	70-130
cis-1,2-Dichloroethene	103	70-130
Freon 113	88	70-130
trans-1,2-Dichloroethene	79	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902517-10AA
PASSIVE RAD 145 (TD)

File Name:	**6022804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	70-130
Trichloroethene	120	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	98	70-130
1,1-Dichloroethene	111	70-130
cis-1,2-Dichloroethene	111	70-130
Freon 113	97	70-130
trans-1,2-Dichloroethene	84	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1902517-10B
PASSIVE RAD 145 (TD)

File Name:	**11022803**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:16 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	106	70-130
Trichloroethene	92	70-130
Tetrachloroethene	89	70-130
1,1-Dichloroethane	85	70-130
1,1-Dichloroethene	75	70-130
cis-1,2-Dichloroethene	83	70-130
Freon 113	89	70-130
trans-1,2-Dichloroethene	82	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1902517-10BB
PASSIVE RAD 145 (TD)

File Name:	**11022804**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/28/19 10:55 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	106	70-130
Trichloroethene	93	70-130
Tetrachloroethene	90	70-130
1,1-Dichloroethane	86	70-130
1,1-Dichloroethene	77	70-130
cis-1,2-Dichloroethene	93	70-130
Freon 113	92	70-130
trans-1,2-Dichloroethene	82	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___ of ___

WO#: 1905235

Case Seal #: _____

Company: LOCUS TECHNOLOGIES Project #: 27006-08-9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU - TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: HANK C. + ALAN T. + RICKY K.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
01A	MG-AMB-1-050619	P604Y	05/6/19	15:10	05/07/19	15:10	X				TO-17	22.7°C
02A	MG-PATH-1-050619	P605Y	05/06/19	15:11		15:12	X					22.5°C
03A	MG-PATH-4-050619	P606Y		15:12		15:13	X					21.2°C
04A	MG-PATH-2-050619	P444Y		15:16		15:14	X					22.9°C
05A	MG-AMB-2-050619	P607Y		15:19		15:18	X					23.8°C
06A	MG-AMB-2D-050619	P443Y		15:19		15:18	X					23.8°C
07A	MG-PATH-3-050619	P442Y		15:21		15:20	X					23.9°C
	MG-PATH-5-050619	P609Y		15:25		NOT PRESENT UPON RETRIEVAL						20.7°C
08A	MG-OUT-1-050619	P608Y		15:27		15:24	X					20.9°C
09A	MG-999-050619	P445Y		00:00		00:00	X					
10A	AUD-AMB-1-050719	P446Y	5/7/19	7:06	5/8/19	7:11	X					20.6°C
11A	AUD-AMB-3-050719	P447Y		7:09		7:12	X					20.3°
12A	AUD-AMB-2-050719	P450Y		7:11		7:15	X					20.0°
DA	AUD-PATH-2-050719	P449Y		7:17		7:19	X					20.7°

Reporting Units (circle): ppbv, ug/m3, ppmv, mg/m3, ug, ng

Turn Around Time: [X] Normal [ ] Rush — Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	5/9/19	9:45	EAR	5/10/19	1235	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS
Air bill #:

Custody Seals Intact? Yes No (None)
Temperature (°C)

Sample Condition Upon Receipt: (circle) (Good) SDR

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Passive Sorbent Chain of Custody

Page ___ of ___

WO#: 1905235

Case Seal #: _____

Company: LOCUS TECHNOLOGIES Project #: 270608 9018 P.O.#

Project Manager: NANCY-JEANNE LEFEVRE Project Name: OOU - TRIPLE SITE

Contact phone/email: LEFEVREN@LOCUSTEC.COM Collected by: HANK C. + ALAN T. + RICKY K.

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
19A	AUD-PATH-3-050719	P448Y	05/07/19	7:18	05/08/19	7:20	X				TO-17	21.3°C
15A	AUD-PATH-4-050719	P451Y		7:20		7:21	X					21.0°C
16A	AUD-AMB-4-050719	P452Y		7:24		7:22	X					20.7°C
17A	AUD-AMB-4D-050719	P453Y		7:24		7:22	X					20.7°C
18A	AUD-PATH-1-050719	P454Y		7:30		7:24	X					18.4°C
	AUD-OUT-1-050719	P455Y		7:32		FOUND ON GROUND/DESTROYED						18.3°C
19A	RES230-PATH-2-050719	050XX		11:45		11:32	X					21.3°C
20A	RES230-PATH-1-050719	L031M		11:47		11:33	X					23.0°C
21A	RES230-AMB-1-050719	L017M		11:48		11:35	X					22.5°C
22A	RES230-PATH-3-050719	L034M		11:50		11:36	X					21.0°C
23A	RES228-PATH-3-050719	092XX		11:53		11:43	X					21.6°C
24A	RES228-PATH-2-050719	081XX		11:55		11:44	X					21.2°C
25A	RES228-PATH-1-050719	058XX		11:57		11:45	X					22.2°C
	RES228-AMB-1-050719	090XX		11:58		11:46	X					21.7°C

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush (Specify)

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	5/9/19	9:45	GAR	5/10/19	1235	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)						

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6/3/2019
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: OOU-TRIPLESITE
Project #: 27006-08-9018
Workorder #: 1905235

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 5/10/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Sarah Westerman at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Sarah Westerman

Project Manager

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WORK ORDER #: 1905235

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12934
FAX:	650-960-0739	**PROJECT #**	27006-08-9018 OOU-TRIPLESITE
DATE RECEIVED:	05/10/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	05/23/2019		

FRACTION #	NAME	TEST
01A	MG-AMB-1-050619	Passive RAD 145 (TD)
02A	MG-PATH-1-050619	Passive RAD 145 (TD)
03A	MG-PATH-4-050619	Passive RAD 145 (TD)
04A	MG-PATH-2-050619	Passive RAD 145 (TD)
05A	MG-AMB-2-050619	Passive RAD 145 (TD)
06A	MG-AMB-2D-050619	Passive RAD 145 (TD)
07A	MG-PATH-3-050619	Passive RAD 145 (TD)
08A	MG-OUT-1-050619	Passive RAD 145 (TD)
09A	MG-999-050619	Passive RAD 145 (TD)
10A	AUD-AMB-1-050719	Passive RAD 145 (TD)
11A	AUD-AMB-3-050719	Passive RAD 145 (TD)
12A	AUD-AMB-2-050719	Passive RAD 145 (TD)
13A	AUD-PATH-2-050719	Passive RAD 145 (TD)
14A	AUD-PATH-3-050719	Passive RAD 145 (TD)
15A	AUD-PATH-4-050719	Passive RAD 145 (TD)
16A	AUD-AMB-4-050719	Passive RAD 145 (TD)
17A	AUD-AMB-4D-050719	Passive RAD 145 (TD)
18A	AUD-PATH-1-050719	Passive RAD 145 (TD)
19A	RES230-PATH-2-050719	Passive RAD 145 (TD)
20A	RES230-PATH-1-050719	Passive RAD 145 (TD)
21A	RES230-AMB-1-050719	Passive RAD 145 (TD)
22A	RES230-PATH-3-050719	Passive RAD 145 (TD)
23A	RES228-PATH-3-050719	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1905235

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12934
FAX:	650-960-0739	**PROJECT #**	27006-08-9018 OOU-TRIPLESITE
DATE RECEIVED:	05/10/2019	**CONTACT:**	Sarah Westerman
DATE COMPLETED:	05/23/2019		

FRACTION #	NAME	TEST
24A	RES228-PATH-2-050719	Passive RAD 145 (TD)
25A	RES228-PATH-1-050719	Passive RAD 145 (TD)
26A	Lab Blank	Passive RAD 145 (TD)
26B	Lab Blank	Passive RAD 145 (TD)
26C	Lab Blank	Passive RAD 145 (TD)
27A	CCV	Passive RAD 145 (TD)
27B	CCV	Passive RAD 145 (TD)
27C	CCV	Passive RAD 145 (TD)
28A	LCS	Passive RAD 145 (TD)
28AA	LCSD	Passive RAD 145 (TD)
28B	LCS	Passive RAD 145 (TD)
28BB	LCSD	Passive RAD 145 (TD)
28C	LCS	Passive RAD 145 (TD)
28CC	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 06/03/19

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1905235

Twenty-five Radiello 145 (VOC TD) samples were received on May 10, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks, a sampling duration of 1445 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-1-050619

Lab ID#: 1905235-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	15 C	0.37 C

Client Sample ID: MG-PATH-1-050619

Lab ID#: 1905235-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	15 C	0.36 C

Client Sample ID: MG-PATH-4-050619

Lab ID#: 1905235-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.39 C

Client Sample ID: MG-PATH-2-050619

Lab ID#: 1905235-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	14 C	0.35 C

Client Sample ID: MG-AMB-2-050619

Lab ID#: 1905235-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	12 C	0.30 C

Client Sample ID: MG-AMB-2D-050619

Lab ID#: 1905235-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	12 C	0.29 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-PATH-3-050619

Lab ID#: 1905235-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	11 C	0.27 C

Client Sample ID: MG-OUT-1-050619

Lab ID#: 1905235-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	18 C	0.44 C

Client Sample ID: MG-999-050619

Lab ID#: 1905235-09A

No Detections Were Found.

Client Sample ID: AUD-AMB-1-050719

Lab ID#: 1905235-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: AUD-AMB-3-050719

Lab ID#: 1905235-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.41 C

Client Sample ID: AUD-AMB-2-050719

Lab ID#: 1905235-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.41 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: AUD-PATH-2-050719

Lab ID#: 1905235-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	18 C	0.44 C

Client Sample ID: AUD-PATH-3-050719

Lab ID#: 1905235-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	14 C	0.34 C

Client Sample ID: AUD-PATH-4-050719

Lab ID#: 1905235-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	15 C	0.36 C

Client Sample ID: AUD-AMB-4-050719

Lab ID#: 1905235-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: AUD-AMB-4D-050719

Lab ID#: 1905235-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	17 C	0.43 C

Client Sample ID: AUD-PATH-1-050719

Lab ID#: 1905235-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.13	18 C	0.47 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES230-PATH-2-050719

Lab ID#: 1905235-19A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.39 C

Client Sample ID: RES230-PATH-1-050719

Lab ID#: 1905235-20A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	11 C	0.28 C

Client Sample ID: RES230-AMB-1-050719

Lab ID#: 1905235-21A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	13 C	0.32 C

Client Sample ID: RES230-PATH-3-050719

Lab ID#: 1905235-22A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	14 C	0.34 C

Client Sample ID: RES228-PATH-3-050719

Lab ID#: 1905235-23A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	18 C	0.45 C

Client Sample ID: RES228-PATH-2-050719

Lab ID#: 1905235-24A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	14 C	0.34 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: RES228-PATH-1-050719

Lab ID#: 1905235-25A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	14 C	0.35 C

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Client Sample ID: MG-AMB-1-050619

Lab ID#: 1905235-01A

PASSIVE RAD 145 (TD)

File Name:	**11051520**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:10:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 09:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.37 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-050619

Lab ID#: 1905235-02A

PASSIVE RAD 145 (TD)

File Name:	**11051521**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:11:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 10:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-4-050619

Lab ID#: 1905235-03A

PASSIVE RAD 145 (TD)

File Name:	**11051522**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:12:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 11:00 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.39 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-2-050619

Lab ID#: 1905235-04A

PASSIVE RAD 145 (TD)

File Name:	**11051523**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:16:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 11:47 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.35 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-050619

Lab ID#: 1905235-05A

PASSIVE RAD 145 (TD)

File Name:	**11051524**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:19:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 12:34 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	12 C	0.30 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2D-050619

Lab ID#: 1905235-06A

PASSIVE RAD 145 (TD)

File Name:	**11051525**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:19:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 01:21 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	12 C	0.29 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MG-PATH-3-050619

Lab ID#: 1905235-07A

PASSIVE RAD 145 (TD)

File Name:	**11051526**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:21:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 02:08 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	11 C	0.27 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-OUT-1-050619

Lab ID#: 1905235-08A

PASSIVE RAD 145 (TD)

File Name:	**11051527**	**Date of Extraction: NA**	**Date of Collection: 5/6/19 3:27:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 02:55 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.44 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1437 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-999-050619

Lab ID#: 1905235-09A

PASSIVE RAD 145 (TD)

File Name:	**11052007**	**Date of Extraction: NA**	**Date of Collection: 5/6/19**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 02:24 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-1-050719

Lab ID#: 1905235-10A

PASSIVE RAD 145 (TD)

File Name:	**11051528**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:06:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 03:42 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1445 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-3-050719

Lab ID#: 1905235-11A

PASSIVE RAD 145 (TD)

File Name:	**11051529**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:09:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 04:29 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.41 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-2-050719

Lab ID#: 1905235-12A

PASSIVE RAD 145 (TD)

File Name:	**11051530**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:11:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 05:16 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.41 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-2-050719

Lab ID#: 1905235-13A

PASSIVE RAD 145 (TD)

File Name:	**11051711**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:17:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 08:06 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.44 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1442 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-3-050719

Lab ID#: 1905235-14A

PASSIVE RAD 145 (TD)

File Name:	**11051532**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:18:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 06:32 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.34 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1442 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-4-050719

Lab ID#: 1905235-15A

PASSIVE RAD 145 (TD)

File Name:	**11051533**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/16/19 07:19 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1441 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-4-050719

Lab ID#: 1905235-16A

PASSIVE RAD 145 (TD)

File Name:	**11051712**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:24:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 08:51 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-4D-050719

Lab ID#: 1905235-17A

PASSIVE RAD 145 (TD)

File Name:	**11051713**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:24:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 09:38 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-1-050719

Lab ID#: 1905235-18A

PASSIVE RAD 145 (TD)

File Name:	**11051714**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 7:30:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 10:26 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1438 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES230-PATH-2-050719

Lab ID#: 1905235-19A

PASSIVE RAD 145 (TD)

File Name:	**11051715**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:45:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 11:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.39 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES230-PATH-1-050719

Lab ID#: 1905235-20A

PASSIVE RAD 145 (TD)

File Name:	**11051716**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:47:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/18/19 12:00 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	11 C	0.28 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 73.4F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES230-AMB-1-050719

Lab ID#: 1905235-21A

PASSIVE RAD 145 (TD)

File Name:	**11051717**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:48:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/18/19 12:47 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	13 C	0.32 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1427 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES230-PATH-3-050719

Lab ID#: 1905235-22A

PASSIVE RAD 145 (TD)

File Name:	**11052008**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:50:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 03:09 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.34 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1426 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES228-PATH-3-050719

Lab ID#: 1905235-23A

PASSIVE RAD 145 (TD)

File Name:	**11052009**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:53:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 03:56 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	18 C	0.45 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1430 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES228-PATH-2-050719

Lab ID#: 1905235-24A

PASSIVE RAD 145 (TD)

File Name:	**11052010**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:55:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 04:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.34 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 69.8F , duration time = 1429 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: RES228-PATH-1-050719

Lab ID#: 1905235-25A

PASSIVE RAD 145 (TD)

File Name:	**11051721**	**Date of Extraction: NA**	**Date of Collection: 5/7/19 11:57:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 5/18/19 03:25 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.35 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1428 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1905235-26A

PASSIVE RAD 145 (TD)

File Name:	**11051514**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 04:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1445 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1905235-26B

PASSIVE RAD 145 (TD)

File Name:	**11051705**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 03:18 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 75.2F , duration time = 1445 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1905235-26C

PASSIVE RAD 145 (TD)

File Name:	**11052006**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 01:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	Not Detected	Not Detected
Tetrachloroethene	5.0	0.16	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C
Freon 113	5.0	0.14	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 32.0F , duration time = 0 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: CCV
Lab ID#: 1905235-27A
PASSIVE RAD 145 (TD)

File Name:	**11051508**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 12:38 PM**

Compound	%Recovery
1,1,1-Trichloroethane	126
Trichloroethene	127
Tetrachloroethene	97
1,1-Dichloroethane	123
1,1-Dichloroethene	109
cis-1,2-Dichloroethene	110
Freon 113	100
trans-1,2-Dichloroethene	110

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1905235-27B
PASSIVE RAD 145 (TD)

File Name:	**11051702**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 01:13 PM**

Compound	%Recovery
1,1,1-Trichloroethane	105
Trichloroethene	118
Tetrachloroethene	122
1,1-Dichloroethane	109
1,1-Dichloroethene	106
cis-1,2-Dichloroethene	102
Freon 113	92
trans-1,2-Dichloroethene	98

Container Type: NA - Not Applicable

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Client Sample ID: CCV
Lab ID#: 1905235-27C
PASSIVE RAD 145 (TD)

File Name:	**11052003**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 11:02 AM**

Compound	%Recovery
1,1,1-Trichloroethane	113
Trichloroethene	121
Tetrachloroethene	115
1,1-Dichloroethane	117
1,1-Dichloroethene	112
cis-1,2-Dichloroethene	105
Freon 113	97
trans-1,2-Dichloroethene	103

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1905235-28A

PASSIVE RAD 145 (TD)

File Name:	**11051512**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 03:23 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	128	70-130
Trichloroethene	103	70-130
Tetrachloroethene	115	70-130
1,1-Dichloroethane	120	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	109	70-130
Freon 113	93	70-130
trans-1,2-Dichloroethene	91	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1905235-28AA
PASSIVE RAD 145 (TD)

File Name:	**11051513**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/15/19 04:02 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	127	70-130
Trichloroethene	103	70-130
Tetrachloroethene	110	70-130
1,1-Dichloroethane	120	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	110	70-130
Freon 113	93	70-130
trans-1,2-Dichloroethene	90	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS

Lab ID#: 1905235-28B

PASSIVE RAD 145 (TD)

File Name:	**11051703**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 01:59 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	107	70-130
Trichloroethene	99	70-130
Tetrachloroethene	116	70-130
1,1-Dichloroethane	99	70-130
1,1-Dichloroethene	84	70-130
cis-1,2-Dichloroethene	94	70-130
Freon 113	79	70-130
trans-1,2-Dichloroethene	77	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1905235-28BB
PASSIVE RAD 145 (TD)

File Name:	**11051704**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/17/19 02:38 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	106	70-130
Trichloroethene	102	70-130
Tetrachloroethene	115	70-130
1,1-Dichloroethane	98	70-130
1,1-Dichloroethene	84	70-130
cis-1,2-Dichloroethene	92	70-130
Freon 113	76	70-130
trans-1,2-Dichloroethene	74	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCS
Lab ID#: 1905235-28C
PASSIVE RAD 145 (TD)

File Name:	**11052004**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 11:48 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	103	70-130
Trichloroethene	98	70-130
Tetrachloroethene	100	70-130
1,1-Dichloroethane	92	70-130
1,1-Dichloroethene	86	70-130
cis-1,2-Dichloroethene	91	70-130
Freon 113	76	70-130
trans-1,2-Dichloroethene	76	70-130

Container Type: NA - Not Applicable

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Client Sample ID: LCSD
Lab ID#: 1905235-28CC
PASSIVE RAD 145 (TD)

File Name:	**11052005**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 5/20/19 12:27 PM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	107	70-130
Trichloroethene	101	70-130
Tetrachloroethene	98	70-130
1,1-Dichloroethane	101	70-130
1,1-Dichloroethene	91	70-130
cis-1,2-Dichloroethene	97	70-130
Freon 113	82	70-130
trans-1,2-Dichloroethene	78	70-130

Container Type: NA - Not Applicable

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Passive Sorbent Chain of Custody

Page ___ of ___

Case Seal #: _____

WO#: 1912667

Company: LOCUS TECHNOLOGIES Project #: 2700608/9018 P.O.#

Project Manager: Nancy-Jeanne Lefevre Project Name: Philips - OOU

Contact phone/email: LefevreN@Locustec.com Collected by: Alan T/Nicole L/Ricky K

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Sample Matrix (check one): Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other( )	Analysis Requested	Sample Comments:
01A	AUD-AMB-1-121819	Z176K	12/18/19	7:17	12/19/19	7:26	X				TO-17	15.3°C
02A	AUD-AMB-3-121819	U787T		7:20		7:29	X					15.4°C
03A	AUD-AMB-3-D-121819	U788T		7:20		7:29	X					15.4°C
04A	AUD-PATH-2-121819	U789T		7:25		7:31	X					18.8°C
05A	AUD-PATH-3-121819	U790T		7:28		7:32	X					19.1°C
06A	AUD-PATH-4-121819	U791T		7:31		7:34	X					18.1°C
07A	AUD-PATA-1-121819	U792T		7:35		7:35	X					11.5°C
08A	AUD-AMB-4-121819	U793T		7:37		7:36	X					14.1°C
09A	AUD-AMB-2-121819	U794T		7:41		7:37	X					20.1°C
10A	AUD-OUT-1-121819	U795T		7:43		7:38	X					10.1°C
11A	AUD-PATH-5-121819	Z160K		8:21		7:40	X					10.5°C
12A	MG-AMB-1-121819	Z161K		14:40		15:02	X					21.9°C
13A	MG-PATH-1-121819	Z162K		14:41		15:03	X					16.5°C
14A	MG-PATH-4-121819	Z163K	↓	14:42	↓	15:04	X				↓	19.4°C

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush Specify

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	12/26/19	9:00	CATL	12/27/19	0812	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact? Yes No (None)	Sample Condition Upon Receipt: (circle) (Good) SDR
Air bill #:	Temperature (°C) NA	

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Passive Sorbent Chain of Custody

Page ___of___

WO#: 1912667

Case Seal #: _____

Company: Locus TECHNOLOGIES Project #: 2700608/9018 P.O.#

Project Manager: Nancy-Jeanne Lefevre Project Name: Phillips - 004

Contact phone/email: LefevreNC@locustech.com Collected by: Alan T/NicoleL/RickyK

Sample Matrix (check one): Indoor/Outdoor Air | Soil Gas | Workplace Monitoring | Other( )

Reporting Units (circle): ppbv ug/m3 ppmv mg/m3 ug ng

Turn Around Time: [X] Normal [ ] Rush _____ Specify

Lab ID	Sample Identification	Sampler ID	Date of Deployment (mm/dd/yy)	Time of Deployment (hr:min)	Date of Retrieval (mm/dd/yy)	Time of Retrieval (hr:min)	Indoor/Outdoor Air	Soil Gas	Workplace Monitoring	Other	Analysis Requested	Sample Comments:
19A	MG-PATH-5-121819	Z164K	12/18/19	14:48	12/19/19	15:06	X				TO-17	14.2°C
16A	MG-AMB-2-121819	Z165K		14:51		15:09	X					21.8°C
17A	MG-PATH-3-121819	Z166K		14:52		15:10	X					19.2°C
18A	MG-PATH-2-121819	Z167K		14:56		15:13	X					19.8°C
15A	MG-999-121819	Z168K		00:00		00:00	X					

Relinquished by:	Date	Time	Received by:	Date	Time	Notes to Lab:
RICKY KAZAKOFF	12/26/19	9:00	EAT	12/27/19	0812	
Relinquished by:	Date	Time	Received by:	Date	Time	

Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples.

Lab Use Only

Shipper Name: UPS	Custody Seals Intact?	Yes	No	None	Sample Condition Upon Receipt: (circle)	Good	SDR
Air bill #:	Temperature (°C)		N/A				

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1/6/2020
Ms. Nancy-Jeanne LeFevre
Locus Technologies
299 Fairchild Drive

Mountain View CA 94043

Project Name: Philips-OOU
Project #: 2700608/9018
Workorder #: 1912667

Dear Ms. Nancy-Jeanne LeFevre

The following report includes the data for the above referenced project for sample(s) received on 12/27/2019 at Air Toxics Ltd.

The data and associated QC analyzed by Passive RAD 145 (TD) 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 contact the Project Manager: Allyson Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Allyson Scott

Project Manager

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WORK ORDER #: 1912667

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12957
FAX:	650-960-0739	**PROJECT #**	2700608/9018 Philips-OOU
DATE RECEIVED:	12/27/2019	**CONTACT:**	Allyson Scott
DATE COMPLETED:	01/06/2020		

FRACTION #	NAME	TEST
01A	AUD-AMB-1-121819	Passive RAD 145 (TD)
02A	AUD-AMB-3-121819	Passive RAD 145 (TD)
03A	AUD-AMB-3-D-121819	Passive RAD 145 (TD)
04A	AUD-PATH-2-121819	Passive RAD 145 (TD)
05A	AUD-PATH-3-121819	Passive RAD 145 (TD)
06A	AUD-PATH-4-121819	Passive RAD 145 (TD)
07A	AUD-PATH-1-121819	Passive RAD 145 (TD)
08A	AUD-AMB-4-121819	Passive RAD 145 (TD)
09A	AUD-AMB-2-121819	Passive RAD 145 (TD)
10A	AUD-OUT-1-121819	Passive RAD 145 (TD)
11A	AUD-PATH-5-121819	Passive RAD 145 (TD)
12A	MG-AMB-1-121819	Passive RAD 145 (TD)
13A	MG-PATH-1-121819	Passive RAD 145 (TD)
14A	MG-PATH-4-121819	Passive RAD 145 (TD)
15A	MG-PATH-5-121819	Passive RAD 145 (TD)
16A	MG-AMB-2-121819	Passive RAD 145 (TD)
17A	MG-PATH-3-121819	Passive RAD 145 (TD)
18A	MG-PATH-2-121819	Passive RAD 145 (TD)
19A	MG-999-121819	Passive RAD 145 (TD)
20A	Lab Blank	Passive RAD 145 (TD)
20B	Lab Blank	Passive RAD 145 (TD)
21A	CCV	Passive RAD 145 (TD)
21B	CCV	Passive RAD 145 (TD)

Continued on next page

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WORK ORDER #: 1912667

Work Order Summary

CLIENT:	Ms. Nancy-Jeanne LeFevre Locus Technologies 299 Fairchild Drive Mountain View, CA 94043	**BILL TO:**	Accounts Payable Locus Technologies 299 Fairchild Drive Mountain View, CA 94043
PHONE:	415-992-5360	**P.O. #**	30-12957
FAX:	650-960-0739	**PROJECT #**	2700608/9018 Philips-OOU
DATE RECEIVED:	12/27/2019	**CONTACT:**	Allyson Scott
DATE COMPLETED:	01/06/2020		

FRACTION #	NAME	TEST
22A	LCS	Passive RAD 145 (TD)
22AA	LCSD	Passive RAD 145 (TD)
22B	LCS	Passive RAD 145 (TD)
22BB	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 01/06/20

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Locus Technologies
Workorder# 1912667

Nineteen Radiello 145 (VOC TD) samples were received on December 27, 2019. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blanks and sample MG-999-121819, a sampling duration of 1462 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

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
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

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
PASSIVE RAD 145 (TD)

Client Sample ID: AUD-AMB-1-121819

Lab ID#: 1912667-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.32
Freon 113	5.0	0.13	17 C	0.42 C

Client Sample ID: AUD-AMB-3-121819

Lab ID#: 1912667-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	13	0.35
Freon 113	5.0	0.13	17 C	0.44 C

Client Sample ID: AUD-AMB-3-D-121819

Lab ID#: 1912667-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	13	0.35
Freon 113	5.0	0.13	19 C	0.48 C

Client Sample ID: AUD-PATH-2-121819

Lab ID#: 1912667-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	9.2	0.24
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: AUD-PATH-3-121819

Lab ID#: 1912667-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	12	0.31
Freon 113	5.0	0.12	20 C	0.51 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: AUD-PATH-4-121819

Lab ID#: 1912667-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	8.6	0.23
Freon 113	5.0	0.12	20 C	0.50 C

Client Sample ID: AUD-PATH-1-121819

Lab ID#: 1912667-07A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	10	0.28
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: AUD-AMB-4-121819

Lab ID#: 1912667-08A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	14	0.37
Freon 113	5.0	0.13	19 C	0.50 C

Client Sample ID: AUD-AMB-2-121819

Lab ID#: 1912667-09A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	11	0.30
Freon 113	5.0	0.12	19 C	0.47 C

Client Sample ID: AUD-OUT-1-121819

Lab ID#: 1912667-10A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	16	0.44
Freon 113	5.0	0.13	18 C	0.49 C

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: AUD-PATH-5-121819

Lab ID#: 1912667-11A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.14	11	0.32
Freon 113	5.0	0.14	17 C	0.47 C

Client Sample ID: MG-AMB-1-121819

Lab ID#: 1912667-12A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.40 C

Client Sample ID: MG-PATH-1-121819

Lab ID#: 1912667-13A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	15 C	0.38 C

Client Sample ID: MG-PATH-4-121819

Lab ID#: 1912667-14A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	17 C	0.42 C

Client Sample ID: MG-PATH-5-121819

Lab ID#: 1912667-15A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.1	0.14
Freon 113	5.0	0.13	17 C	0.43 C

Client Sample ID: MG-AMB-2-121819

Lab ID#: 1912667-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: MG-AMB-2-121819

Lab ID#: 1912667-16A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	6.6	0.17
Freon 113	5.0	0.12	15 C	0.37 C

Client Sample ID: MG-PATH-3-121819

Lab ID#: 1912667-17A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Trichloroethene	5.0	0.13	5.7	0.15
Freon 113	5.0	0.12	14 C	0.36 C

Client Sample ID: MG-PATH-2-121819

Lab ID#: 1912667-18A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Freon 113	5.0	0.12	16 C	0.40 C

Client Sample ID: MG-999-121819

Lab ID#: 1912667-19A

No Detections Were Found.

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Client Sample ID: AUD-AMB-1-121819

Lab ID#: 1912667-01A

PASSIVE RAD 145 (TD)

File Name:	**6010207**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:17:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 11:14 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.32
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.42 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-3-121819

Lab ID#: 1912667-02A

PASSIVE RAD 145 (TD)

File Name:	**6010208**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 11:51 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	13	0.35
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.44 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-3-D-121819

Lab ID#: 1912667-03A

PASSIVE RAD 145 (TD)

File Name:	**6010209**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:20:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 12:27 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	13	0.35
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.48 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 59.0F , duration time = 1449 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-2-121819

Lab ID#: 1912667-04A

PASSIVE RAD 145 (TD)

File Name:	**6010210**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:25:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 01:03 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	9.2	0.24
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1446 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-3-121819

Lab ID#: 1912667-05A

PASSIVE RAD 145 (TD)

File Name:	**6010307**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:28:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 11:28 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	12	0.31
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.51 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1444 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-4-121819

Lab ID#: 1912667-06A

PASSIVE RAD 145 (TD)

File Name:	**6010212**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:31:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 02:16 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	8.6	0.23
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	20 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 64.4F , duration time = 1443 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-1-121819

Lab ID#: 1912667-07A

PASSIVE RAD 145 (TD)

File Name:	**6010308**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:35:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 12:01 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	10	0.28
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 53.6F , duration time = 1440 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-4-121819

Lab ID#: 1912667-08A

PASSIVE RAD 145 (TD)

File Name:	**6010309**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:37:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 12:34 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.37	Not Detected	Not Detected
Trichloroethene	5.0	0.14	14	0.37
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	19 C	0.50 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1439 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-AMB-2-121819

Lab ID#: 1912667-09A

PASSIVE RAD 145 (TD)

File Name:	**6010215**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:41:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 04:05 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	11	0.30
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	19 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1436 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-OUT-1-121819

Lab ID#: 1912667-10A

PASSIVE RAD 145 (TD)

File Name:	**6010216**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 7:43:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 04:42 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.38	Not Detected	Not Detected
Trichloroethene	5.0	0.14	16	0.44
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.13	18 C	0.49 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1434 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: AUD-PATH-5-121819

Lab ID#: 1912667-11A

PASSIVE RAD 145 (TD)

File Name:	**6010310**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 8:21:00 AM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 01:07 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.39	Not Detected	Not Detected
Trichloroethene	5.0	0.14	11	0.32
Tetrachloroethene	5.0	0.15	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.14	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.12	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C
Freon 113	5.0	0.14	17 C	0.47 C
trans-1,2-Dichloroethene	5.0	0.15	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 50.0F , duration time = 1399 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-1-121819

Lab ID#: 1912667-12A

PASSIVE RAD 145 (TD)

File Name:	**6010311**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:40:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 01:40 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-1-121819

Lab ID#: 1912667-13A

PASSIVE RAD 145 (TD)

File Name:	**6010312**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:41:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 02:13 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.38 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 60.8F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-4-121819

Lab ID#: 1912667-14A

PASSIVE RAD 145 (TD)

File Name:	**6010313**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:42:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 02:46 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	17 C	0.42 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-5-121819

Lab ID#: 1912667-15A

PASSIVE RAD 145 (TD)

File Name:	**6010221**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:48:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 07:44 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.36	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.1	0.14
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.13	17 C	0.43 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 57.2F , duration time = 1458 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-AMB-2-121819

Lab ID#: 1912667-16A

PASSIVE RAD 145 (TD)

File Name:	**6010314**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:51:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 03:19 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	6.6	0.17
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	15 C	0.37 C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1458 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-PATH-3-121819

Lab ID#: 1912667-17A

PASSIVE RAD 145 (TD)

File Name:	**6010315**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:52:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 03:52 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	5.7	0.15
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	14 C	0.36 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 66.2F , duration time = 1458 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: MG-PATH-2-121819

Lab ID#: 1912667-18A

PASSIVE RAD 145 (TD)

File Name:	**6010316**	**Date of Extraction: NA**	**Date of Collection: 12/18/19 2:56:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 04:25 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.11	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	16 C	0.40 C
trans-1,2-Dichloroethene	5.0	0.14	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 68.0F , duration time = 1457 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: MG-999-121819

Lab ID#: 1912667-19A

PASSIVE RAD 145 (TD)

File Name:	**6010206**	**Date of Extraction: NA**	**Date of Collection: 12/18/19**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 10:38 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

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Client Sample ID: Lab Blank

Lab ID#: 1912667-20A

PASSIVE RAD 145 (TD)

File Name:	**6010205**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 09:10 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1912667-20B

PASSIVE RAD 145 (TD)

File Name:	**6010306**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 09:38 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	0.35	Not Detected	Not Detected
Trichloroethene	5.0	0.13	Not Detected	Not Detected
Tetrachloroethene	5.0	0.14	Not Detected	Not Detected
1,1-Dichloroethane	5.0	0.13	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.10	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C
Freon 113	5.0	0.12	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.13	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 71.6F , duration time = 1462 minutes.
Container Type: Radiello 145 (VOC TD)

eurofins | Air Toxics

Client Sample ID: CCV

Lab ID#: 1912667-21A

PASSIVE RAD 145 (TD)

File Name:	**6010204**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 08:38 AM**

Compound	%Recovery
1,1,1-Trichloroethane	104
Trichloroethene	126
Tetrachloroethene	97
1,1-Dichloroethane	102
1,1-Dichloroethene	103
cis-1,2-Dichloroethene	101
Freon 113	100
trans-1,2-Dichloroethene	108

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: CCV
Lab ID#: 1912667-21B
PASSIVE RAD 145 (TD)

File Name:	**6010303**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 07:57 AM**

Compound	%Recovery
1,1,1-Trichloroethane	85
Trichloroethene	87
Tetrachloroethene	99
1,1-Dichloroethane	88
1,1-Dichloroethene	92
cis-1,2-Dichloroethene	94
Freon 113	90
trans-1,2-Dichloroethene	101

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1912667-22A

PASSIVE RAD 145 (TD)

File Name:	**6010202**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 07:33 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	74	70-130
Trichloroethene	90	70-130
Tetrachloroethene	83	70-130
1,1-Dichloroethane	82	70-130
1,1-Dichloroethene	96	70-130
cis-1,2-Dichloroethene	79	70-130
Freon 113	82	70-130
trans-1,2-Dichloroethene	101	70-130

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCSD
Lab ID#: 1912667-22AA
PASSIVE RAD 145 (TD)

File Name:	**6010203**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/2/20 08:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	74	70-130
Trichloroethene	90	70-130
Tetrachloroethene	84	70-130
1,1-Dichloroethane	83	70-130
1,1-Dichloroethene	104	70-130
cis-1,2-Dichloroethene	82	70-130
Freon 113	88	70-130
trans-1,2-Dichloroethene	107	70-130

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1912667-22B

PASSIVE RAD 145 (TD)

File Name:	**6010304**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 08:34 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	70-130
Trichloroethene	100	70-130
Tetrachloroethene	96	70-130
1,1-Dichloroethane	93	70-130
1,1-Dichloroethene	92	70-130
cis-1,2-Dichloroethene	89	70-130
Freon 113	93	70-130
trans-1,2-Dichloroethene	111	70-130

Container Type: NA - Not Applicable

eurofins | Air Toxics

Client Sample ID: LCSD
Lab ID#: 1912667-22BB
PASSIVE RAD 145 (TD)

File Name:	**6010305**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 1/3/20 09:05 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	97	70-130
Trichloroethene	104	70-130
Tetrachloroethene	91	70-130
1,1-Dichloroethane	94	70-130
1,1-Dichloroethene	98	70-130
cis-1,2-Dichloroethene	94	70-130
Freon 113	99	70-130
trans-1,2-Dichloroethene	117	70-130

Container Type: NA - Not Applicable

Appendix R
Records of Previous Communications to Property Owners

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

December 2014

San Miguel Neighborhood School Community
Sunnyvale, California

Dear Parents and Community Members:

Attached to this letter is a notice with information about an upcoming community meeting being held by the U.S. Environmental Protection Agency (EPA) at San Miguel Elementary School.

The meeting will focus on the upcoming indoor air sampling study at schools and residences in this part of Sunnyvale, associated with the "Triple Site."

The community meeting will be held on Wednesday, December 10th from 6:30 to 8:00 p.m., in the Multipurpose Room at San Miguel Elementary School – 777 San Miguel Avenue in Sunnyvale. You are invited to attend and learn more about the investigation, as well as meet the EPA staff who will be involved in the sampling.

Please do not hesitate to contact me at (415) 972-3050 or by e-mail to morash.melanie@epa.gov if you have any questions.

You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz, who is fluent in Spanish, at (415) 972-3242 or by e-mail to diaz.alejandro@epa.gov.

EPA also has a website for the project: www.epa.gov/region9/triplesite which has additional information.

Sincerely,

Melanie Morash

Melanie Morash, EPA Project Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

August 2014

San Miguel Neighborhood School Community
Sunnyvale, California

Dear Parents and Community Members:

Attached to this letter is a fact sheet with information about an environmental investigation being conducted by the U.S. Environmental Protection Agency (EPA) at schools and residences in this part of Sunnyvale.

This fall and winter, EPA plans to conduct indoor air sampling at schools and residences in the Duane/San Miguel Avenue neighborhood to investigate the potential for vapor intrusion (a process where vapors from groundwater contamination may migrate into the indoor air of nearby buildings).

The majority of the data EPA has collected from Sunnyvale residences in the last year has shown no evidence of vapor intrusion, and sampling at some school buildings (the Montessori School buildings, which are over the highest concentrations in groundwater) has shown that levels of trichloroethene (TCE) – the main chemical we are concerned about in this investigation – are very low, and protective of children's health.

However, EPA has developed a comprehensive testing program for vapor intrusion and we plan to conduct additional sampling this fall and winter to ensure that levels of TCE in buildings are protective. We also plan to hold a community meeting this fall and will distribute additional fact sheets once we have the results of each testing event.

Please note that your drinking water is not affected by this contamination. Neighborhood drinking water comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

Please do not hesitate to contact me at (415) 972-3050 or by e-mail to morash.melanie@epa.gov if you have any questions. You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz, at (415) 972-3242 or by e-mail to diaz.alejandro@epa.gov. EPA is also developing a website for the project: www.epa.gov/region9/triplesite which will have additional information.

Sincerely,

Melanie Morash

Melanie Morash, Superfund Project Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION IX
75 Hawthorne Street • San Francisco, CA 94105

March 2015

San Miguel Elementary School
Sunnyvale, California

Dear Parents and Community Members:

We are sending this third letter to update you with the results of the trichloroethene (TCE) indoor air testing that was conducted by the U.S. Environmental Protection Agency (EPA) at your school this past January and February, associated with the long-term groundwater cleanup at the "Triple Site." **EPA is working diligently to ensure the community is being protected from any chemicals related to the Triple Site. The good news is that in this sampling round the majority of samples showed very low concentrations which do not pose a health risk.**

San Miguel Elementary School Sampling Results

All of the samples collected from San Miguel Elementary fully met EPA's requirements for protecting children's health. TCE was detected in some samples at concentrations higher than outdoor air (which is around 0.2 micrograms per cubic meter or µg/m^3, typical for a South Bay city). The maximum concentration was detected in a sample collected from a crawlspace beneath the California Young World portable classroom, which measured 1.3 µg/m^3. However, samples collected from inside the portable classroom itself were similar to outdoor air.

Background on EPA Investigation

As you may know, EPA has been investigating the potential for vapor intrusion – a process where vapors from groundwater contamination may migrate into the indoor air – at schools and residences in the Duane/San Miguel Avenue neighborhood. Indoor air sampling has been conducted every year for the past 10 years at the Rainbow Montessori Child Development Center (Rainbow Montessori), which continues to confirm that levels meet EPA's requirements for protecting children's health.

However, because we have learned more about how vapor intrusion can vary over time, EPA recently lowered its screening levels for TCE in indoor air to make them more protective. In addition, EPA has developed a more comprehensive testing approach. EPA took more air samples at Rainbow Montessori, The King's Academy, Children's Creative Learning Center and San Miguel Elementary School this past winter, as well as at 54 households in the neighborhood, to make sure that the new, lower levels for TCE are not being exceeded. The first round of sampling was conducted during the winter months, when we expect the concentrations of TCE in indoor air to be at their highest.

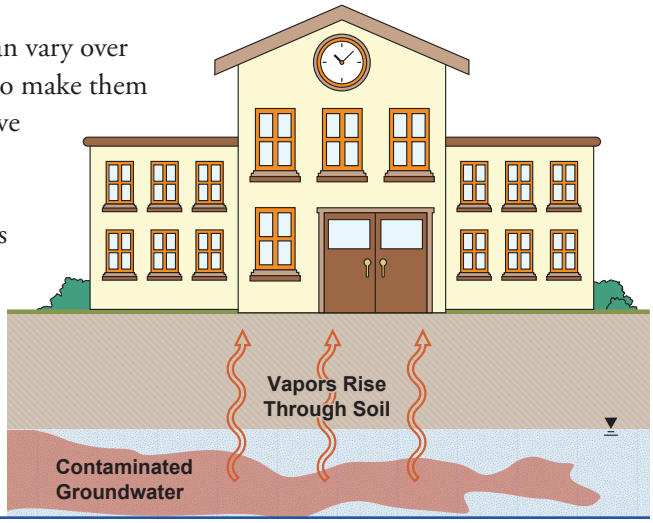


Figure: Vapor intrusion into a building

Again, the majority of school samples showed very low concentrations which do not pose a health risk, with the exception of one sample (out of more than 100 total) that was unexpectedly high – collected from Rainbow Montessori's Building L auditorium. EPA has sent a letter similar to this one to Rainbow Montessori parents, with more information about the testing results in Building L. EPA discovered a ventilation issue at this building and worked to address it to promptly lower levels in the short term. To be fully protective in the long term a mitigation system is being designed for this building, and we are continuing to investigate further to better understand the problem.

EPA considers the safe range of concentrations of TCE to be below 2.0 µg/m^3 for "residential use," which assumes a 24-hour-per-day/7-day-per-week exposure. These levels are very conservative for school occupancy, where exposures times are much less.

TCE and Vapor Intrusion

The main chemical of concern in this area of Sunnyvale is TCE. TCE can move as a vapor from groundwater up through soil under certain conditions. If vapors move under a building it is possible for them to pass through cracks and other openings in the foundation and enter the indoor air. If this happens, and if the levels are high enough and prolonged enough, it might create a health risk.

Note: Your drinking water is not affected by this contamination. Drinking water in this area of Sunnyvale comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

Next Steps

EPA will coordinate ventilation inspections with a Heating, Ventilation and Air Conditioning (HVAC) Specialist at each school to ensure that each system is functioning correctly and bringing fresh outdoor air into each classroom. **We are confident that supplying outdoor air to the classrooms will maintain the air quality for the children and teachers.** More sampling events at schools and homes are planned to better understand the vapor intrusion and help us decide whether additional monitoring and mitigation systems are needed as precautionary measures to further reduce risk.

Please do not hesitate to contact me at (415) 972-3050 or by e-mail to *morash.melanie@epa.gov* if you have any questions. You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz, at (415) 972-3242 or by e-mail to *diaz.alejandro@epa.gov*. EPA also has a website for the project: **www.epa.gov/region9/triplesite** which has additional information.

Sincerely,

Melanie Morash

Melanie Morash, Project Manager

United States Environmental Protection Agency /
Agencia de Protección Ambiental de los Estados Unidos

The Triple Site / *Sitio Triple Site*

You're invited!

Thursday
May 14th, 2015
6:30 – 8:00 p.m.

¡Estas invitado!

jueves
14 de mayo, 2015
6:30 – 8:00 p.m.

San Miguel Elementary School
Multipurpose Room
777 San Miguel Avenue
Sunnyvale, CA

¡Habrá interpretación en Español!

EPA Contact
Melanie Morash
(415) 972-3050
morash.melanie@epa.gov

Contacto de EPA
Alejandro Diaz
(415) 972-3242
diaz.alejandro@epa.gov

Come to the 2nd Triple Site Community Meeting / *Venga a la 2nda Reunión Comunitaria del Sitio Triple Site*

We'll share the results from the first round of neighborhood indoor air testing and outline our next steps. / *Compartiremos los resultados de la primera vuelta del muestreo del aire interior en la vecindad y resumiremos nuestros próximos pasos.*

Agenda	
6:30	Sign in, Poster Sessions
7:15	Welcome & Introduction – Enrique Manzanilla, EPA Division Director
7:30	Indoor Air Sampling Update – Melanie Morash, EPA Project Manager
7:40	Open Discussion/Question & Answer
8:00	Meeting Adjourn

Orden del día	
6:30	Registro, Sesión de Cartulinas
7:15	Bienvenido e Introducción – Enrique Manzanilla, Director del Programa Superfund
7:30	Actualización del Muestreo del Aire Interior – Melanie Morash, Gerente del Proyecto de la EPA
7:40	Discusión Abierta/Preguntas y Respuestas
8:00	Cierre de Sesión

Website / *Sitio Web*: www.epa.gov/region9/triplesite

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

January 2016

San Miguel Neighborhood School Community
Sunnyvale, California

Dear Parents and Community Members:

Attached to this letter is a fact sheet with information about the ongoing environmental investigation being conducted by the U.S. Environmental Protection Agency (EPA) at schools and residences in this part of Sunnyvale. Throughout 2015, EPA sampled over 120 homes and all four neighborhood schools as part of a study of the potential for vapor intrusion (a process where vapors from groundwater contamination may migrate into the indoor air of nearby buildings).

Please note that your drinking water is not affected by this contamination. Neighborhood drinking water comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

As expected, the majority of locations sampled at Rainbow Montessori, San Miguel Elementary, The King's Academy and Children's Creative Learning Center (CCLC) **showed low concentrations of TCE which do not pose a health risk and fully meet EPA's requirements for protecting children's and teachers' health**. None of the CCLC samples showed any evidence of vapor intrusion. However, elevated levels were measured in the crawlspaces underneath certain other school buildings and in some classroom locations when EPA sampled under "ventilation-off" conditions.

Out of precaution, mitigation systems are being designed for all of the Rainbow Montessori buildings, and monthly indoor air sampling is being conducted to verify that various ventilation upgrades are working to maintain air quality for the students and staff. Additional sampling is planned at certain classrooms at The King's Academy and San Miguel Elementary, to evaluate whether additional mitigation systems would be appropriate to further reduce risk.

During the past year of indoor air sampling, 120 households (out of over 400 total) were sampled. Eighteen residences showed unacceptable vapor intrusion levels in the crawlspaces underneath the buildings, however, indoor air levels generally met EPA's health-protective requirements. Out of precaution, mitigation systems are being designed for these residences to prevent future unacceptable exposures.

EPA will distribute another fact sheet to the school community in late 2016 with an update on the investigation and next steps. We will also hold another community meeting to provide an update on the mitigation work and groundwater cleanup progress. Please do not hesitate to contact me at (415) 972-3050 or by e-mail to morash.melanie@epa.gov if you have any questions. You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz, who is fluent in Spanish, at (415) 972-3242 or by e-mail to diaz.alejandro@epa.gov.

Sincerely,

Melanie Morash

Melanie Morash, EPA Project Manager

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY • REGION IX

75 Hawthorne Street • San Francisco, CA 94105

October 2016

San Miguel Elementary School
California Young World
Sunnyvale, California

Dear Parents and Community Members:

We are sending this letter to provide you with an update on the ongoing trichloroethene (TCE) indoor air investigation at your school associated with the long-term groundwater cleanup at the "Triple Site." We have also attached to this letter our most recent fact sheet which summarizes our findings at the other neighborhood schools and next steps for the community.

All of the sampling results that have been collected over the past year and a half at San Miguel Elementary School and California Young World continue to fully meet EPA's requirements for protecting children's health. In our sampling elsewhere in the neighborhood, we did measure elevated TCE levels at two other schools and more than 30 households, showing evidence of "vapor intrusion." EPA is overseeing the development of mitigation plans and installation of the mitigation systems for all of the affected homes and school buildings.

Due to these findings elsewhere in the neighborhood and as an additional safety measure, we are working with the school to install vapor mitigation systems into the new classroom buildings being constructed in the southern area of the campus, as well as at the California Young World building.

More About San Miguel Elementary School

All of the sampling results from San Miguel Elementary School have shown very low concentrations of TCE (similar to outdoor air levels) which do not pose a health risk. Sampling during the past year and half in the South Bay area have found typical outdoor air TCE levels have ranging from around 0.1 micrograms per cubic meter or µg/m3 to 0.6 µg/m3. As an added safety measure and because nearby homes have been found to be affected by vapor intrusion, we are installing vapor mitigation systems in the new classroom buildings being constructed this year. The mitigation systems are composed of a vapor barrier and passive venting system below the building, with the capability of being converted to an active system if necessary. We have already successfully installed five similar systems in nearby residential buildings where higher levels of TCE were detected. Sampling results in these buildings after the systems were installed showed that TCE concentrations dropped to non-detectable levels.

More About California Young World

As a precaution, we are designing and installing a mitigation system for the California Young World building concurrently with our mitigation work at San Miguel Elementary School. TCE concentrations detected inside the California Young World classroom have all been very low

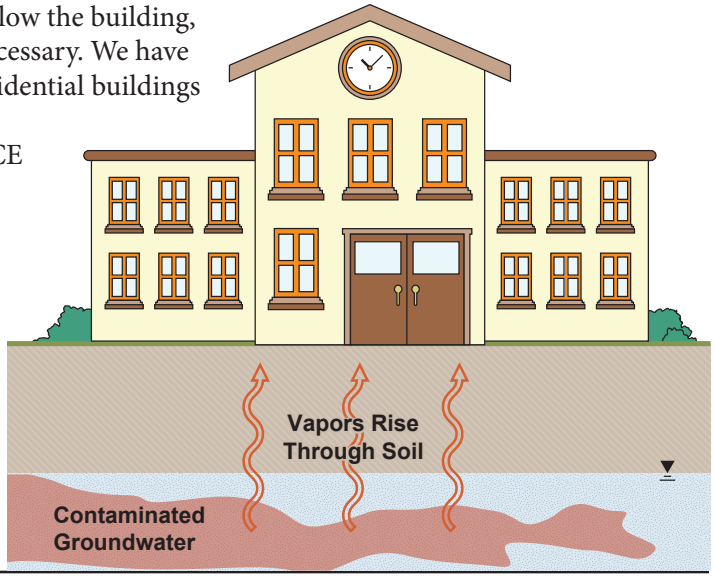


Figure 1: Vapor intrusion into a building

and similar to outdoor air levels, fully meeting EPA's requirements for protecting children's health. Slightly elevated levels of TCE were detected underneath the building in the crawlspace, up to 1.4 µg/m3, slightly higher than outdoor air levels but still fully meeting EPA's requirements for being protective.

Background on EPA Investigation

EPA has been investigating the potential for vapor intrusion – a process where vapors from groundwater contamination may migrate into the indoor air – at schools and residences in the East Duane/San Miguel Avenue neighborhood since January 2015.

EPA considers the safe range of concentrations of TCE to be below 2.0 µg/m3 for "residential use," which assumes a 24-hour-per-day/7-day-per-week exposure. These levels are very protective for school occupancy, where exposures times are much less.

TCE and Vapor Intrusion

The main chemical of concern in this area of Sunnyvale is TCE. TCE can move as a vapor from groundwater up through soil under certain conditions. If vapors move under a building it is possible for them to pass through cracks and other openings in the foundation and enter the indoor air. If this happens, and if the levels are high enough and prolonged enough, it might create a health risk.

Note: Your drinking water is not affected by this contamination in the groundwater. Drinking water in this area of Sunnyvale comes from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains and meets all state and federal drinking water standards.

Planned Construction Work

EPA has been working with the school administration throughout the summer to design and install vapor intrusion mitigation systems in the new San Miguel Elementary School buildings. We are still working on our design for the California Young World building, which will be completed sometime this fall. Installation of the mitigation system at California Young World will likely take two days.

Looking Ahead

After the mitigation systems are installed, EPA will test the indoor and crawlspace air two weeks later to ensure that results meet EPA's requirements. EPA will also test one month later, during the upcoming winter, and then again the following spring and second winter. Quarterly inspections of the system components will take place the first year, and annual inspections in subsequent years.

Similar to EPA's approach at the other neighborhood schools, EPA is developing a long-term air monitoring plan for the remaining San Miguel Elementary School buildings to confirm that TCE levels continue to remain within EPA's acceptable range.

Please do not hesitate to contact me at (415) 972 – 3050 or by e-mail to morash.melanie@epa.gov if you have any questions. You may also contact EPA's Community Involvement Coordinator, Alejandro Diaz who is fluent in Spanish, at (415) 972 – 3242 or by e-mail to *diaz.alejandro@epa.gov*.

Sincerely,

Melanie Morash

Melanie Morash, EPA Project Manager