

From: [Schneider, Timothy A \(DEC\)](#)
To: [akrasnopoler@geosyntec.com](#); [Bogardus, Sara \(HEALTH\)](#); [Pratt, David \(DEC\)](#); [Zappia, Kaleigh M \(DEC\)](#); [Cruden, Michael \(DEC\)](#); [Deming, Justin H \(HEALTH\)](#); [Stenerson, Justin \(DEC\)](#); [McCartney, W Scott](#); [Bonsteel, Nicole](#); [Howe, Alexander](#); [Whelan, Vincent](#)
Cc: [Krueger, Kevin D.](#); [Etter, Terry R.](#); [Elizabeth.Parker](#); [mmurphy](#); [Jen Huha](#); [Eric Lovenduski](#); [Kaitlin Ouverson](#); [Miranda Stelmach](#); [Amanda McNally](#); [Magliocca, Joseph](#); [pmeybaum](#); [Andrew Millsbaugh](#); [Amanda.Castignetti@SterlingEnvironmental.com](#); [psylvestri](#)
Subject: RE: NYSDEC #c808022 - 2022 – 2023 Heating Season Soil Vapor Intrusion Monitoring and Sampling Report
Date: Wednesday, May 31, 2023 4:30:53 PM
Attachments: [image002.png](#)
[image003.png](#)

Hi Kevin and Aron,

I hope you are having a pleasant day. The Agency has reviewed and accepts the revised 2022-2023 Heating Season Soil Vapor Intrusion Monitoring and Sampling Report for inclusion in the annual PRR .

Within 15 days please provide a schedule to revise the ISMP in accordance with the report recommendations, including resumption of annual VOC stack testing and quarterly floor crack inspections. Additionally, ISMP sections on floor crack and cover system inspection, routine response/repair and certification complete need to be expanded. Rolls and responsibilities must be defined and the 2018 crack inventory and repair methods included.

Please let me know if you have any questions.

Thank you,

Tim

Timothy A. Schneider P.E.

Pronouns: he / him / his

Professional Engineer 1, Division of Environmental Remediation

New York State Department of Environmental Conservation

6274 East Avon-Lima Road, Avon, NY 14414

P: (585) 226-5480 | F: (585) 226-8139 | timothy.schneider@dec.ny.gov

www.dec.ny.gov |  |  | 

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From: Aron Krasnopoler <AKrasnopoler@Geosyntec.com>

Sent: Friday, May 19, 2023 4:56 PM

To: Schneider, Timothy A (DEC) <timothy.schneider@dec.ny.gov>; Bogardus, Sara (HEALTH) <Sara.Bogardus@health.ny.gov>; Pratt, David (DEC) <david.pratt@dec.ny.gov>; Zappia, Kaleigh M (DEC) <Kaleigh.Zappia@dec.ny.gov>; Cruden, Michael (DEC) <michael.cruden@dec.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Stenerson, Justin (DEC) <Justin.Stenerson@dec.ny.gov>; McCartney, W Scott <w.scott.mccartney@wsp.com>; Bonsteel, Nicole <nicole.bonsteel@wsp.com>; Howe, Alexander <alexander.howe@wsp.com>; Whelan, Vincent <vincent.whelan@wsp.com>

Cc: Krueger, Kevin D. <Kevin.Krueger@unisys.com>; Etter, Terry R. <terry.etter@unisys.com>; Elizabeth.Parker <Elizabeth.Parker@unisys.com>; mmurphy <mmurphy@bdlaw.com>; Jen Huha <JHuha@Geosyntec.com>; Eric Lovenduski <ELovenduski@Geosyntec.com>; Kaitlin Ouverson

19 May 2023

Ms. Sara Bogardus
New York State Department of Health (NYSDOH)
Bureau of Environmental Exposure Investigation
Corning Tower Rm 1787
Albany, New York 12237

**Subject: 2022 – 2023 Heating Season Soil Vapor Intrusion Monitoring and Sampling Report
Interim Site Management Plan
Former Sperry Remington Site – North Portion
777 South Main Street
City of Elmira, Chemung County, New York
NYSDEC Project Number C808022**

Dear Ms. Bogardus,

On behalf of Unisys Corporation (Unisys), Geosyntec Consultants, Inc. and its New York affiliate Beech and Bonaparte Engineering, P.C. (collectively Geosyntec) are submitting this letter report for monitoring and sampling activities that were conducted during the 2022-23 heating season as part of the interim Site Management Plan (ISMP) and subsequent amendments for the Former Sperry Remington Site – North Portion Site (Site No. c808022) located in Elmira, New York (hereinafter referred to as the “Site”). On 23 March 2017, Unisys entered into a Brownfields Cleanup Program (BCP) Agreement with the New York State Department of Environmental Conservation (NYSDEC). The Site is located at the Elmira High School (EHS) property (formerly known as Southside High School [SHS]), 777 South Main Street in Elmira, Chemung County, New York and is owned by the Elmira City School District (ECSD).

The NYSDEC approved an ISMP on 20 December 2019. Amendment #1 to the interim SMP was approved on 23 December 2020 to include an extended period for soil vapor intrusion sampling and the addition of cross-slab differential pressure monitoring and remedial system sampling. Amendment #2 to the ISMP was approved as modified on 21 July 2021 to include the collection of data on polychlorinated biphenyls (PCBs) in indoor air and sub-slab vapor in the third and fourth quarter 2021 monitoring events. On 30 March 2022, Geosyntec (on behalf of Unisys) submitted a 2021 Monitoring and Sampling Report summarizing the results of the 2021 monitoring and

MN08321/MD23018.EHS 2022 IASamplingReport.rv1

sampling. Based on the recommendations of the 30 March 2022 report, Geosyntec submitted a letter to NYSDEC and NYSDOH on 08 December 2022 notifying of 2022–23 Heating Season Soil Vapor Intrusion and Sub-Slab Depressurization System Monitoring (2022-23 Heating Season Sampling Notification Letter). The work described herein was performed in accordance with Sections 4.2, 4.3.1 and 4.4.1 of the 20 December 2019 interim SMP and the 2022 Heating Season Sampling Notification Letter.

The remainder of this letter report summarizes indoor air and SSD system monitoring conducted during the one sampling event conducted between December 2022 and January 2023.

SUMMARY OF WORK COMPLETED

Soil Vapor Intrusion Sampling (ISMP Section 4.4.1)

In accordance with ISMP Section 4.4.1, and the 2022-23 Heating Season Notification Letter, on 02 January 2023, Geosyntec collected indoor and outdoor air samples from the K-Wing, Gymnasium, Cafeteria, F-Wing and Music Wing and from the K-Wing and F-Wing rooftop locations of the EHS for analysis of volatile organic compound (VOC). Indoor air and outdoor air samples were collected over an approximate eight-hour time period in January 2023 pursuant to recommendations provided in the 2021 Monitoring and Sampling Report. The sampling event coincided with the ECSD winter break and was completed in coordination with ECSD. **Table 1** presents indoor and outdoor air sample locations and analyses, consistent with the locations specified in the ISMP. Locations where samples were collected are presented on **Figure 1**.

Indoor and outdoor air samples for VOC analyses were collected in six-liter (6L) Summa[®] canisters using flow controllers over an approximately eight-hour time period following protocols in the ISMP Quality Assurance Project Plan/Field Sampling Plan (QAPP/FSP). Summa canisters and flow controllers were individually certified clean by Eurofins Air Toxics, Inc. of Folsom, CA (ATL) to be free of VOCs down to their respective reporting limits. Indoor air samplers were deployed at breathing zone height (3-5 feet above the floor). The outdoor samplers were deployed near HVAC air intakes at the rooftop location above the F-Wing and K-Wing. Summa cannister samples were properly documented and shipped under USEPA standard chain-of-custody protocol to ATL for analysis using USEPA Method TO-15 Hi/Lo (SIM). A vacuum gauge was used to assess that the canister vacuum upon arrival (i.e., greater than 25 inches mercury (in Hg) vacuum, and a residual vacuum remained at the end of sample collection). Final vacuum was also measured by the laboratory upon receipt to confirm the absence of leaks during return shipment. Field notes

from air sampling are provided as **Attachment 1**. Laboratory analytical data are provided in **Attachment 2**. Data validation documentation is provided in **Attachment 3**.

SSD SYSTEM MONITORING AND FLOOR SLAB INSPECTION

Remedial System Monitoring (Interim SMP Sections 4.2 and 4.3.1)

In addition to indoor air sampling at the noted locations above, Geosyntec conducted inspections of the SSD systems and floor slab to document conditions in accordance with Section 4.2 of the ISMP. Inspections included 1) visual inspection of floor cracks, holes, or penetrations; and 2) inspection of visible SSD system components, including piping and vent stacks. Site inspection results documented on Daily Field Reports are provided in **Attachment 4**.

Geosyntec also assessed operation of SSD systems installed in the Gymnasium, K-Wing Science Addition, Cafeteria and Cafeteria Addition, F-Wing, and Music Wing of EHS by measuring the stack vacuum and/or flow of each SSD system. These measurements are also documented on Daily Field Reports provided in **Attachment 4**.

EVALUATION AND DISCUSSION OF DATA

This section provides an evaluation and discussion of the air sample analytical data.

Indoor Air VOC Data

As discussed above, samples of indoor air were collected on 02 January 2023 in areas where the remedial systems have been installed. Concurrently with indoor air sampling, outdoor air samples were collected from the building rooftop to characterize the potential influence of background ambient air sources. Samples were submitted to the laboratory for VOC analyses via USEPA Method TO-15. Analytical results from the 2023 sampling are summarized in **Table 2**. Indoor and outdoor sample locations are depicted on **Figure 1**. Laboratory reports and data validation reports are included as **Attachments 2** and **3**, respectively. **Table 3** presents a summary of indoor and outdoor air VOC results between December 2020 and January 2023).

Similar to prior sampling events, various compounds were detected above the laboratory reporting limit in the samples collected during the January 2023 sampling event. Detected compounds compared to NYSDOH Matrix Criteria include carbon tetrachloride and tetrachloroethene (PCE). In summary, this comparison indicates all detected compounds are below applicable NYSDOH Matrix Criteria.

Carbon tetrachloride was detected above the laboratory reporting limit in outdoor air at a concentration of 0.42 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) at both K-Wing and F-Wing roof locations. Carbon tetrachloride was also detected above the laboratory reporting limit in each indoor air sample at concentrations ranging from 0.40 to 0.48 $\mu\text{g}/\text{m}^3$. All results were below the NYSDOH Matrix A Indoor Air Criteria for carbon tetrachloride of 1 $\mu\text{g}/\text{m}^3$. Carbon tetrachloride is not a contaminant of potential concern (CPOC) for the Site. Furthermore, the presence of carbon tetrachloride in outdoor air is an indication that outdoor air (as opposed to soil gas) is the source of carbon tetrachloride detected in indoor air.

PCE was detected above laboratory reporting limits in the Room 127, Room 148, and Room 148 duplicate indoor air samples during the January 2023 sampling event at concentrations of 0.24 $\mu\text{g}/\text{m}^3$, 0.67 $\mu\text{g}/\text{m}^3$, and 0.61 $\mu\text{g}/\text{m}^3$, respectively, which are below the NYSDOH Matrix B Indoor Air Criteria of for PCE of 10 $\mu\text{g}/\text{m}^3$. PCE was not detected in indoor air samples between December 2020 and December 2021. As presented in the 2021 Monitoring and Sampling Report, PCE was not detected in the 2021 SSD system stack samples. Indoor sources of PCE were not noted during the sampling event. The source of the PCE detection in indoor air during the January 2023 sampling event is unknown and is unlikely a result of the vapor intrusion pathway.

Various other compounds were detected above the laboratory reporting limit in the samples collected during the January 2023 sampling event discussed herein, as presented in **Table 2**.

SSD System Monitoring and Floor Slab Inspection

As documented in the Inspection Forms/Daily Field Reports (**Attachment 4**), SSD system inspections did not identify operational or maintenance concerns with the systems. Minor floor slab cracks were identified with marking tape during the 2022 and January 2023 inspections. Floor cracks were visually inspected and screened for air flow using a smoke pen. Data collected from SSD systems indicate that the minor floor cracks observed did not adversely impact the performance of these systems. Floor cracks were identified for sealing in the following locations, as documented in Attachment 4:

- entryway hallway near L.H.-149
- vicinity of Stairway 2 and Office 104A
- vicinity of southern auditorium entrance
- hallway near Office 141
- lobby near internal entrance to gymnasium and pool

- entrance to Room 143

ECSD staff repaired the identified cracks in March and April 2023 using polyurethane caulk in accordance with the ISMP and as documented in **Attachment 5**.

RECOMMENDATIONS

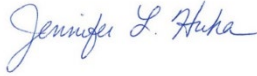
VOC data from the indoor and outdoor air samples presented herein indicate the SSD systems are operating as designed. Based on the findings of this sampling event, the following items listed below are recommended:

- SSD systems should continue to operate to mitigate the potential for vapor intrusion to occur;
- Regular inspections of the SSD systems and concrete floor slab should be conducted quarterly with repairs to be made as needed;
- 8-hour duration indoor air samples for VOC analyses should be collected annually during the heating season (e.g., during the ECSD winter break) in accordance with the ISMP Section 4.4.1 beginning in 2023;
- Grab SSD system stack samples for VOC analyses should be collected annually during the heating season (e.g., during the ECSD winter break) as modification to ISMP Section 4.3.2 starting in 2024;
- An inventory of products in the vicinity of indoor air sampling locations should be conducted annually during the heating season to document potential indoor air sources of VOCs during sampling; and
- Specific inspection forms should be used for documentation of SSD system inspections.

CLOSING

Should you have any questions or need additional information, please do not hesitate to contact the undersigned.

Sincerely,



Jen Huha
Senior Principal/Project Director



Aron Krasnopoler, Ph.D., P.E. (MD, NY)
Senior Engineer/Project Manager

Attachments: Table 1 – Analysis Summary (December 2020 - January 2023)
Table 2 – Indoor and Outdoor Air VOC Results January 2023
Table 3 – Indoor and Outdoor Air VOC Results (December 2020 - January 2023)
Figure 1 – Indoor/Outdoor Air Sample Locations
Attachment 1 – Field Notes and Sampling Sheets
Attachment 2 – Laboratory Analytical Data
Attachment 3 – Data Validation Documentation
Attachment 4 – SSD System Inspection Forms/Daily Field Reports
Attachment 5 – Floor Crack Repair Documentation

Copies to: Tim Schneider, NYSDEC
Kaleigh Zappia, NYSDEC
Dave Pratt NYSDEC
Justin Deming, NYSDOH
Joe Magliocca, ECSD
Peter Meybaum, ECSD
Terry Etter, Unisys
Paul Brookner, Geosyntec
Eric Lovenduski, Geosyntec
Miranda Stelmach, Geosyntec
Andrew Millspaugh, STERLING
Amanda Castignetti, STERLING

Tables

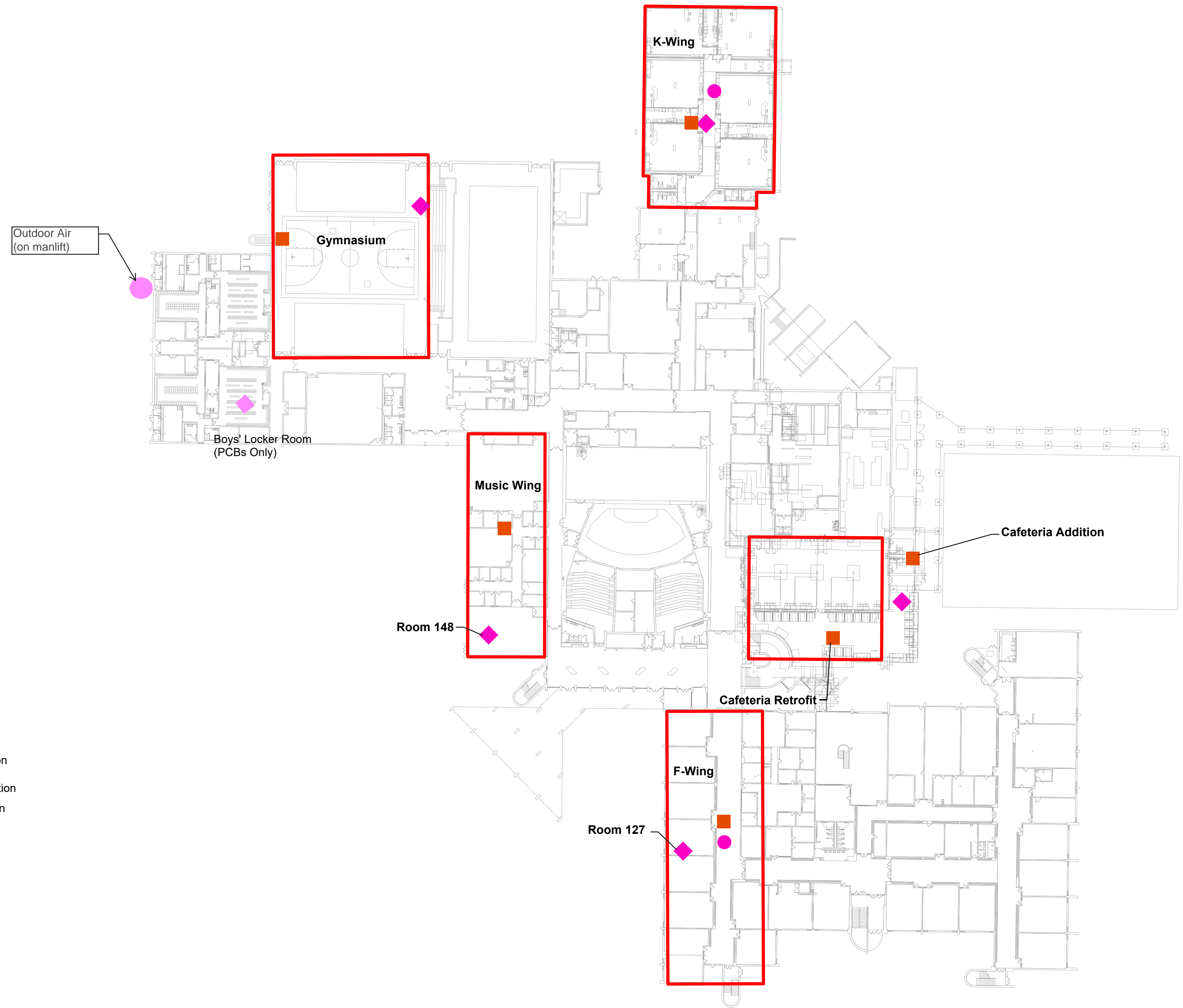
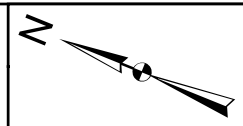
TABLE 1
ANALYSIS SUMMARY (DECEMBER 2020 - JANUARY 2023)
 Elmira High School
 Elmira, NY

Sampling Location	Sampling Event									
	December 2020		April 2021		July - August 2021		December 2021		January 2023	
	VOCs	PCBs	VOCs	PCBs	VOCs	PCBs	VOCs	PCBs	VOCs	PCBs
INDOOR AIR										
K-Wing Corridor	X		X		X	X	X	X	X	
Gymnasium	X				X	X	X	X	X	
Cafeteria	X		X		X	X	X	X	X	
Room 127	X		X		X	X	X	X	X	
Room 148	X		X		X	X	X	X	X	
Boys' Locker Room	X					X		X		
OUTDOOR AIR										
Outdoor Air K-Wing Roof	X				X		X		X	
Outdoor Air F-Wing Roof									X	
Outdoor Air Gymnasium Roof	X		X		X		X			
North of A-Wing - Man Lift						X		X		
SSD SYSTEM STACKS										
K-Wing	X		X		X	X	X	X		
Gymnasium	X		X		X	X	X	X		
Cafeteria Retrofit	X		X		X	X	X	X		
Cafeteria Addition	X		X		X	X	X	X		
F-Wing	X		X		X	X	X	X		
Music Wing			X		X	X	X	X		

Notes:

- 1) VOCs - Volatile organic compounds
- 2) PCBs - Polychlorinated biphenyls
- 3) VOC samples analyzed via USEPA Method TO-15.
- 4) Indoor and outdoor air PCB samples analyzed via USEPA Method TO-4A.

Figure



Legend

- ◆ Indoor Air Sampling Location
- Outdoor Air Sampling Location
- SSD Stack Sample Location
- SSD System Areas

Indoor/Outdoor Air and SSD Stack Sample Locations 2021	
Former Sperry Remington - North Portion B&B Engineers & Geologists of new york, p.c. <i>an affiliate of Geosyntec Consultants</i>	
<small>Notes</small> 1. Building layout derived from First Floor - SSHA CAD.dwg	Figure 1
<small>Columbia, Maryland</small>	<small>March 2022</small>

C:\Users\mimms\OneDrive\Documents\SSHA\SSHA.dwg - 2/24/2021 10:24:10 AM

Attachment 1
Field Notes and Sampling Sheets

AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN08323T~~ MN0832J 3m
01/02/2023

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller

Sample Location: Building High School Floor 1st Room 148 + Dup

Sample Type: 6 Liter Summa _____ Weather Conditions N/A

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
EHS-01022023-1A-148	6L2034	26151	-28.5"	8:04	01/02/2023	-4.0"	15:56	01/02/2023
EHS-01022023-1A-DUP	6L3197	26046	-28.0"	—	01/02/2023	-2.0"	—	01/02/2023

Room Temperature 70°F

PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

- SSD TEST (ROOF OF MUSIC WING)
 - 10.902 IN. / H₂O
 - 1754 FT. / MIN.
- ROOM 148 USED AS MUSTER POINT DURING AIR SAMPLING EVENT. USED TO HOUSE ADDITIONAL SUPPLIES THROUGHOUT THE DAY.

Sketch of Sample Location (s)



148&DUP

2023-01-02
07:45:52-05:00

AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN08223~~ MN0832J gm 01032023

Sampler Name Miranda Stelnach / Tom Wiker / Zach Miller

Sample Location: Building High School Floor 1st Room Gymnasium

Sample Type: 6 Liter Summa _____ Weather Conditions N/A

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
<u>EHS-01022023-1A-GYM</u>	<u>6L1797</u>	<u>24180</u>	<u>-27.5"</u>	<u>8:09</u>	<u>01/02/2023</u>	<u>-8.5"</u>	<u>16:00</u>	<u>01/02/2023</u>

Room Temperature 70°F

PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

- Odor of Chlorine in gym, warm, poor ventilation.
- NO OTHER ACTIVITY OBSERVED (E.G. - STUDENTS, SPORTS PRACTICE, CUSTODIANS).
- PHOTO DOCUMENTED U-TUBE LEVELS.



AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN08323~~ MN0832J 3m 01032023

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller

Sample Location: Building High School Floor 1st Room Cafeteria

Sample Type: 6 Liter Summa _____ Weather Conditions N/A

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
<u>ENS-01022023-1A-Cafe</u>	<u>6L0880</u>	<u>25698</u>	<u>-28.5"</u>	<u>8:12</u>	<u>01/02/2023</u>	<u>-6.0"</u>	<u>16:04</u>	<u>01/02/2023</u>

Room Temperature 70°F

PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

- South West SSD was observed to have broken/missing support bolts.
- SSD TESTS:
- NE CAFE UNIT:
- 0.017 in./H₂O
- SW CAFE UNIT:
- 0.034 in./H₂O

Sketch of Sample Location (s)



Cafe

2023-01-02
09:07:31-05:00

AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN08323~~ MN0832J 3m
01032023

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller

Sample Location: Building High School Floor 1st Room 127

Sample Type: 6 Liter Summa _____ Weather Conditions N/A

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

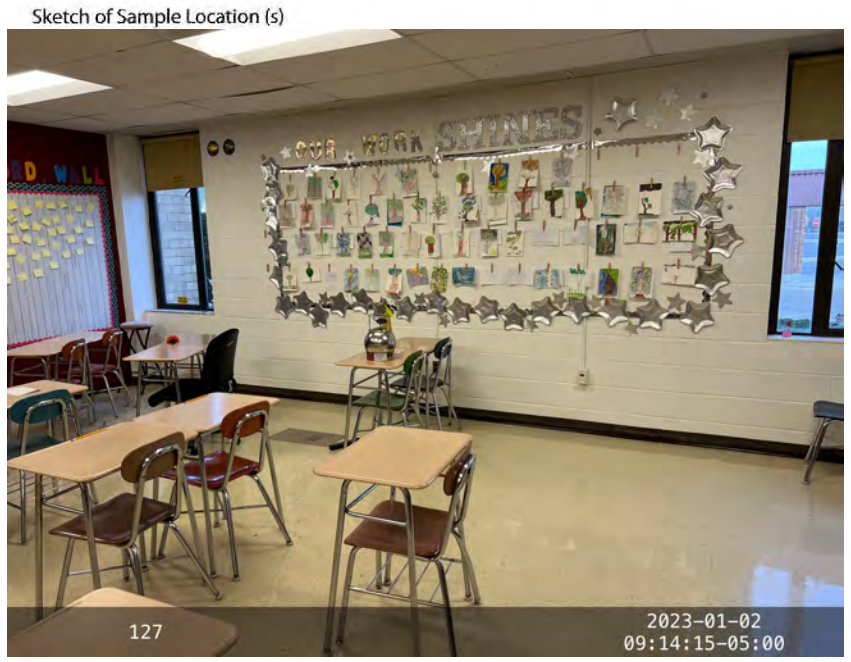
Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
<u>FHS-01022023-1A-127</u>	<u>6L0867</u>	<u>25610</u>	<u>-30.0"</u>	<u>8:14</u>	<u>01/02/2023</u>	<u>-5.5"</u>	<u>16:06</u>	<u>01/02/2023</u>

Room Temperature 70°F

PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

- INSPECTED THE SUMMA THROUGHOUT THE DAY TO ENSURE EQUIPMENT REMAINED IN GOOD WORKING ORDER.
- DID NOT OBSERVE ANY EXTERNAL ACTIVITY IN ROOM, OUTSIDE OF THE SAMPLING TEAM.
- SEE F-WING ROOF TOP FOR SSD INFORMATION.



AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN08323~~ MN0832J 3M
01/03/2023

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller
High School

Sample Location: Building _____ Floor Outdoor Air / Roof Room F-Wing Rooftop

Sample Type: 6 Liter Summa _____ Weather Conditions 58°F Sunny

Analytical Method (circle one): TO-15 SIM And TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
<i>EHS-</i> 01022023-0A-FWing-RT	6L3224	24175	-29.0"	8:18	01/02/2023	-3.0"	16:11	01/02/2023

Room Temperature _____
 PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

• OBSERVED SSD SYSTEM TO HAVE SOME DAMAGE AT THE BASE OF THE UNIT - MISSING SCREWS TO SECURE UNIT TO F-WING ROOF.

• SSD TEST!

→ 1262 FT./MIN.

→ PRES. TOO GREAT, UNABLE TO OBTAIN DATA.

Sketch of Sample Location (s)



F-Wing OA

2023-01-02
08:18:33-05:00

AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN0832J~~ MN0832J ^{for} 01032023

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller

Sample Location: Building High School Floor FIRST FLOOR Room K-Wing Corridor

Sample Type: 6 Liter Summa _____ Weather Conditions N/A

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
EHS-01022023-1A-Kwing	6L0210	25939	-28.5"	8:25	01/02/2023	-5.0"	16:20	01/02/2023

Room Temperature 70°F

PID Reading _____ (ppm)

Other Comments (e.g., PID readings, intermediate vacuum readings)

Slight odor from unknown source

-science wing (possible classroom contents)

U-TUBE PRESSURE:

→ 0.923 IN./H₂O

Sketch of Sample Location (s)



K Wing

2023-01-02
07:53:55-05:00

AIR MONITORING FORM

Site Name Elmira High School Project ID ~~MN0832J~~ MN0832J 3m
01032-23

Sampler Name Miranda Stelmach / Tom Wiker / Zach Miller
High School

Sample Location: Building _____ Floor Outdoor Air / Roof Room K-wing Rooftop

Sample Type: 6 Liter Summa _____ Weather Conditions 58°F Sunny

Analytical Method (circle one): TO-15 SIM and TO-15 Scan

Sample ID	Canister ID	Regulator ID	Start			End		
			Vacuum (in Hg)	Time	Date	Vacuum (in Hg)	Time	Date
<u>EHS-01022023-0A-Kwing-RF</u>	<u>6L1533</u>	<u>26146</u>	<u>-27.5"</u>	<u>8:32</u>	<u>01/02/2023</u>	<u>-2.5"</u>	<u>16:28</u>	<u>01/02/2023</u>

Room Temperature _____

PID Reading _____ (ppm.)

Other Comments (e.g., PID readings, intermediate vacuum readings)

- UNIT WAS INSPECTED THROUGHOUT SAMPLING EVENT WITH NO ISSUES TO NOTE.
- SSD TEST WAS NOT CONDUCTED ON ROOF DUE TO U-TUBE ACCESS INSIDE EHS K-WING.
- SEE K-WING CORRIDOR FOR SSD INFORMATION.



Attachment 2
Laboratory Analytical Data

1/17/2023

Mr. Aron Krasnopoler
GeoSyntec Consultants
10211 Wincopin Circle, 4th Floor

Columbia MD 210444

Project Name: EHS
Project #:
Workorder #: 2301092

Dear Mr. Aron Krasnopoler

The following report includes the data for the above referenced project for sample(s) received on 1/4/2023 at Eurofins Air Toxics LLC.

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 LLC. 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: Jade White at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Jade White
Project Manager

WORK ORDER #: 2301092

Work Order Summary

CLIENT:	Mr. Aron Krasnopoler GeoSyntec Consultants 10211 Wincopin Circle, 4th Floor Columbia, MD 210444	BILL TO:	Mr. Aron Krasnopoler GeoSyntec Consultants 10211 Wincopin Circle, 4th Floor Columbia, MD 210444
PHONE:	410-381-4333	P.O. #	125000655
FAX:		PROJECT #	EHS
DATE RECEIVED:	01/04/2023	CONTACT:	Jade White
DATE COMPLETED:	01/17/2023		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	EHS-01022023-IA-148	Modified TO-15	5.3 "Hg	1.9 psi
01B	EHS-01022023-IA-148	Modified TO-15	5.3 "Hg	1.9 psi
02A	EHS-01022023-IA-DUP	Modified TO-15	4.7 "Hg	1.9 psi
02B	EHS-01022023-IA-DUP	Modified TO-15	4.7 "Hg	1.9 psi
03A	EHS-01022023-IA-GYM	Modified TO-15	9.4 "Hg	1.9 psi
03B	EHS-01022023-IA-GYM	Modified TO-15	9.4 "Hg	1.9 psi
04A	EHS-01022023-IA-CAFE	Modified TO-15	5.9 "Hg	1.8 psi
04B	EHS-01022023-IA-CAFE	Modified TO-15	5.9 "Hg	1.8 psi
05A	EHS-01022023-IA-127	Modified TO-15	5.7 "Hg	1.9 psi
05B	EHS-01022023-IA-127	Modified TO-15	5.7 "Hg	1.9 psi
06A	EHS-01022023-OA-FWING-RF	Modified TO-15	4.3 "Hg	1.7 psi
06B	EHS-01022023-OA-FWING-RF	Modified TO-15	4.3 "Hg	1.7 psi
07A	EHS-01022023-IA-KWING	Modified TO-15	5.1 "Hg	2.2 psi
07B	EHS-01022023-IA-KWING	Modified TO-15	5.1 "Hg	2.2 psi
08A	EHS-01022023-OA-KWING-RF	Modified TO-15	4.3 "Hg	2 psi
08B	EHS-01022023-OA-KWING-RF	Modified TO-15	4.3 "Hg	2 psi
09A	Lab Blank	Modified TO-15	NA	NA
09B	Lab Blank	Modified TO-15	NA	NA
10A	CCV	Modified TO-15	NA	NA
10B	CCV	Modified TO-15	NA	NA
11A	LCS	Modified TO-15	NA	NA
11AA	LCSD	Modified TO-15	NA	NA
11B	LCS	Modified TO-15	NA	NA

Continued on next page

WORK ORDER #: 2301092

Work Order Summary

CLIENT:	Mr. Aron Krasnopoler GeoSyntec Consultants 10211 Wincopin Circle, 4th Floor Columbia, MD 210444	BILL TO:	Mr. Aron Krasnopoler GeoSyntec Consultants 10211 Wincopin Circle, 4th Floor Columbia, MD 210444
PHONE:	410-381-4333	P.O. #	125000655
FAX:		PROJECT #	EHS
DATE RECEIVED:	01/04/2023	CONTACT:	Jade White
DATE COMPLETED:	01/17/2023		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
11BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 01/17/23

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-017, Effective date: 10/18/2022, Expiration date: 10/17/2023.

Eurofins Air Toxics, LLC 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 Full Scan/SIM
GeoSyntec Consultants
Workorder# 2301092**

Eight 6 Liter Summa Canister (100% SIM Ambient) samples were received on January 04, 2023. 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.

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

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	$\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD	For Full Scan: 30% RSD with 4 compounds allowed out to <math>< 40\%</math> RSD For SIM: Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD
Daily Calibration	+/- 30% Difference	For Full Scan: $\leq 30\%$ Difference with four allowed out up to $\leq 40\%$; flag and narrate outliers For SIM: Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; 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 EHS-01022023-OA-FWING-RF 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.

Ethanol was detected at concentrations less than 5 times the reporting limit in samples EHS-01022023-IA-GYM. Because the preceding sample contained concentrations of Ethanol exceeding the calibration range, the results for this compound in sample EHS-01022023-IA-GYM

may be biased high.

Definition of Data Qualifying Flags

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

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

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

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

N - The identification is based on presumptive evidence.

CN - See case narrative explanation

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

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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

Client Sample ID: EHS-01022023-IA-148

Lab ID#: 2301092-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.14	0.20	0.77	1.1
Ethanol	2.7	89 E	5.2	170 E
Acetone	2.7	5.3	6.5	12

Client Sample ID: EHS-01022023-IA-148

Lab ID#: 2301092-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.068	3.1	0.34	15
Chloroform	0.027	0.20	0.13	0.96
Carbon Tetrachloride	0.027	0.068	0.17	0.43
Benzene	0.068	0.18	0.22	0.56
Toluene	0.068	0.43	0.26	1.6
Tetrachloroethene	0.027	0.098	0.18	0.67
Ethyl Benzene	0.027	0.042	0.12	0.18
m,p-Xylene	0.055	0.12	0.24	0.50
o-Xylene	0.027	0.039	0.12	0.17

Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.13	0.20	0.75	1.1
Ethanol	2.7	83 E	5.0	160 E
Acetone	2.7	7.1	6.4	17

Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.067	3.1	0.33	15
Chloroform	0.027	0.20	0.13	0.96

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

Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02B

Carbon Tetrachloride	0.027	0.068	0.17	0.43
Benzene	0.067	0.17	0.21	0.55
Toluene	0.067	0.42	0.25	1.6
Tetrachloroethene	0.027	0.090	0.18	0.61
Ethyl Benzene	0.027	0.045	0.12	0.19
m,p-Xylene	0.054	0.12	0.23	0.54
o-Xylene	0.027	0.042	0.12	0.18

Client Sample ID: EHS-01022023-IA-GYM

Lab ID#: 2301092-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.16	0.20	0.92	1.1
Ethanol	3.3	7.3	6.2	14
Acetone	3.3	8.4	7.8	20
Bromodichloromethane	0.16	0.16 J	1.1	1.0 J

Client Sample ID: EHS-01022023-IA-GYM

Lab ID#: 2301092-03B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.082	0.91	0.40	4.5
Chloroform	0.033	6.8	0.16	33
Carbon Tetrachloride	0.033	0.077	0.21	0.48
Benzene	0.082	0.16	0.26	0.50
Toluene	0.082	0.21	0.31	0.81
Ethyl Benzene	0.033	0.044	0.14	0.19
m,p-Xylene	0.066	0.13	0.28	0.58
o-Xylene	0.033	0.049	0.14	0.21

Client Sample ID: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04A

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: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.14	0.20	0.79	1.1
Ethanol	2.8	15	5.3	29
Acetone	2.8	6.5	6.6	16

Client Sample ID: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.070	0.49	0.35	2.4
Chloroform	0.028	0.030	0.14	0.15
Carbon Tetrachloride	0.028	0.064	0.18	0.40
Benzene	0.070	0.16	0.22	0.52
Toluene	0.070	0.18	0.26	0.67
Ethyl Benzene	0.028	0.069	0.12	0.30
m,p-Xylene	0.056	0.24	0.24	1.0
o-Xylene	0.028	0.073	0.12	0.32

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.14	0.20	0.79	1.2
Ethanol	2.8	48	5.3	90
Acetone	2.8	8.3	6.6	20

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.070	2.9	0.35	14
Carbon Tetrachloride	0.028	0.065	0.18	0.41
Benzene	0.070	0.19	0.22	0.60

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

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05B

1,2-Dichloroethane	0.028	0.067	0.11	0.27
Toluene	0.070	0.39	0.26	1.5
Tetrachloroethene	0.028	0.036	0.19	0.24
Ethyl Benzene	0.028	0.039	0.12	0.17
m,p-Xylene	0.056	0.10	0.24	0.46
o-Xylene	0.028	0.037	0.12	0.16

Client Sample ID: EHS-01022023-OA-FWING-RF

Lab ID#: 2301092-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.13	0.16	0.73	0.90
Acetone	2.6	2.7	6.2	6.4

Client Sample ID: EHS-01022023-OA-FWING-RF

Lab ID#: 2301092-06B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.065	0.43	0.32	2.1
Carbon Tetrachloride	0.026	0.067	0.16	0.42
Benzene	0.065	0.12	0.21	0.38
Toluene	0.065	0.093	0.24	0.35

Client Sample ID: EHS-01022023-IA-KWING

Lab ID#: 2301092-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.14	0.21	0.78	1.2
Ethanol	2.8	77 E	5.2	140 E
Acetone	2.8	5.4	6.6	13
2-Propanol	2.8	4.9	6.8	12
4-Methyl-2-pentanone	0.14	0.26	0.56	1.0

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

Client Sample ID: EHS-01022023-IA-KWING

Lab ID#: 2301092-07B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.069	0.45	0.34	2.2
Chloroform	0.028	0.045	0.13	0.22
Carbon Tetrachloride	0.028	0.066	0.17	0.42
Benzene	0.069	0.17	0.22	0.56
1,2-Dichloroethane	0.028	0.050	0.11	0.20
Toluene	0.069	0.40	0.26	1.5
Ethyl Benzene	0.028	0.050	0.12	0.22
m,p-Xylene	0.055	0.14	0.24	0.60
o-Xylene	0.028	0.048	0.12	0.21

Client Sample ID: EHS-01022023-OA-KWING-RF

Lab ID#: 2301092-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	0.13	0.20	0.74	1.1

Client Sample ID: EHS-01022023-OA-KWING-RF

Lab ID#: 2301092-08B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.066	0.41	0.33	2.0
Carbon Tetrachloride	0.026	0.067	0.17	0.42
Benzene	0.066	0.11	0.21	0.36
Toluene	0.066	0.096	0.25	0.36



Air Toxics

Client Sample ID: EHS-01022023-IA-148

Lab ID#: 2301092-01A

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

File Name:	22011223	Date of Collection:	1/2/23 15:56:00
Dil. Factor:	1.37	Date of Analysis:	1/12/23 09:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.14	Not Detected	0.30	Not Detected
Bromomethane	6.8	Not Detected	27	Not Detected
Freon 11	0.14	0.20	0.77	1.1
Ethanol	2.7	89 E	5.2	170 E
Freon 113	0.14	Not Detected	1.0	Not Detected
Acetone	2.7	5.3	6.5	12
2-Propanol	2.7	Not Detected	6.7	Not Detected
Carbon Disulfide	0.68	Not Detected	2.1	Not Detected
3-Chloropropene	0.68	Not Detected	2.1	Not Detected
Methylene Chloride	0.27	Not Detected	0.95	Not Detected
Hexane	0.68	Not Detected	2.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.68	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Cyclohexane	0.68	Not Detected	2.4	Not Detected
2,2,4-Trimethylpentane	0.68	Not Detected	3.2	Not Detected
Heptane	0.68	Not Detected	2.8	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.63	Not Detected
1,4-Dioxane	0.14	Not Detected	0.49	Not Detected
Bromodichloromethane	0.14	Not Detected	0.92	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.62	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.56	Not Detected
trans-1,3-Dichloropropene	0.14	Not Detected	0.62	Not Detected
2-Hexanone	0.68	Not Detected	2.8	Not Detected
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
Chlorobenzene	0.14	Not Detected	0.63	Not Detected
Styrene	0.14	Not Detected	0.58	Not Detected
Bromoform	0.14	Not Detected	1.4	Not Detected
Cumene	0.14	Not Detected	0.67	Not Detected
Propylbenzene	0.14	Not Detected	0.67	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.67	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.67	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.67	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.82	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.71	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.82	Not Detected
1,2,4-Trichlorobenzene	0.68	Not Detected	5.1	Not Detected
Hexachlorobutadiene	0.68	Not Detected	7.3	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
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Client Sample ID: EHS-01022023-IA-148

Lab ID#: 2301092-01A

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

File Name:	22011223	Date of Collection: 1/2/23 15:56:00
Dil. Factor:	1.37	Date of Analysis: 1/12/23 09:29 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: EHS-01022023-IA-148

Lab ID#: 2301092-01B

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

File Name:	22011223sim	Date of Collection: 1/2/23 15:56:00
Dil. Factor:	1.37	Date of Analysis: 1/12/23 09:29 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.068	3.1	0.34	15
Freon 114	0.027	Not Detected	0.19	Not Detected
Chloromethane	0.68	Not Detected	1.4	Not Detected
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
Chloroethane	0.068	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.054	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.54	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.49	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Chloroform	0.027	0.20	0.13	0.96
1,1,1-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.027	0.068	0.17	0.43
Benzene	0.068	0.18	0.22	0.56
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.15	Not Detected
Toluene	0.068	0.43	0.26	1.6
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.098	0.18	0.67
1,2-Dibromoethane (EDB)	0.027	Not Detected	0.21	Not Detected
Ethyl Benzene	0.027	0.042	0.12	0.18
m,p-Xylene	0.055	0.12	0.24	0.50
o-Xylene	0.027	0.039	0.12	0.17
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.027	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02A

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

File Name:	22011216	Date of Collection:	1/2/23
Dil. Factor:	1.34	Date of Analysis:	1/12/23 04:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.13	Not Detected	0.30	Not Detected
Bromomethane	6.7	Not Detected	26	Not Detected
Freon 11	0.13	0.20	0.75	1.1
Ethanol	2.7	83 E	5.0	160 E
Freon 113	0.13	Not Detected	1.0	Not Detected
Acetone	2.7	7.1	6.4	17
2-Propanol	2.7	Not Detected	6.6	Not Detected
Carbon Disulfide	0.67	Not Detected	2.1	Not Detected
3-Chloropropene	0.67	Not Detected	2.1	Not Detected
Methylene Chloride	0.27	Not Detected	0.93	Not Detected
Hexane	0.67	Not Detected	2.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.67	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.67	Not Detected	2.0	Not Detected
Cyclohexane	0.67	Not Detected	2.3	Not Detected
2,2,4-Trimethylpentane	0.67	Not Detected	3.1	Not Detected
Heptane	0.67	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.62	Not Detected
1,4-Dioxane	0.13	Not Detected	0.48	Not Detected
Bromodichloromethane	0.13	Not Detected	0.90	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.61	Not Detected
4-Methyl-2-pentanone	0.13	Not Detected	0.55	Not Detected
trans-1,3-Dichloropropene	0.13	Not Detected	0.61	Not Detected
2-Hexanone	0.67	Not Detected	2.7	Not Detected
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
Chlorobenzene	0.13	Not Detected	0.62	Not Detected
Styrene	0.13	Not Detected	0.57	Not Detected
Bromoform	0.13	Not Detected	1.4	Not Detected
Cumene	0.13	Not Detected	0.66	Not Detected
Propylbenzene	0.13	Not Detected	0.66	Not Detected
4-Ethyltoluene	0.13	Not Detected	0.66	Not Detected
1,3,5-Trimethylbenzene	0.13	Not Detected	0.66	Not Detected
1,2,4-Trimethylbenzene	0.13	Not Detected	0.66	Not Detected
1,3-Dichlorobenzene	0.13	Not Detected	0.80	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.69	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.80	Not Detected
1,2,4-Trichlorobenzene	0.67	Not Detected	5.0	Not Detected
Hexachlorobutadiene	0.67	Not Detected	7.1	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
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Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02A

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

File Name:	22011216	Date of Collection:	1/2/23
Dil. Factor:	1.34	Date of Analysis:	1/12/23 04:42 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-DUP

Lab ID#: 2301092-02B

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

File Name:	22011216sim	Date of Collection:	1/2/23
Dil. Factor:	1.34	Date of Analysis:	1/12/23 04:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.067	3.1	0.33	15
Freon 114	0.027	Not Detected	0.19	Not Detected
Chloromethane	0.67	Not Detected	1.4	Not Detected
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
Chloroethane	0.067	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.053	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.53	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.48	Not Detected
1,1-Dichloroethane	0.027	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.027	Not Detected	0.11	Not Detected
Chloroform	0.027	0.20	0.13	0.96
1,1,1-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.027	0.068	0.17	0.43
Benzene	0.067	0.17	0.21	0.55
1,2-Dichloroethane	0.027	Not Detected	0.11	Not Detected
Trichloroethene	0.027	Not Detected	0.14	Not Detected
Toluene	0.067	0.42	0.25	1.6
1,1,2-Trichloroethane	0.027	Not Detected	0.15	Not Detected
Tetrachloroethene	0.027	0.090	0.18	0.61
1,2-Dibromoethane (EDB)	0.027	Not Detected	0.20	Not Detected
Ethyl Benzene	0.027	0.045	0.12	0.19
m,p-Xylene	0.054	0.12	0.23	0.54
o-Xylene	0.027	0.042	0.12	0.18
1,1,2,2-Tetrachloroethane	0.027	Not Detected	0.18	Not Detected
1,4-Dichlorobenzene	0.027	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-GYM

Lab ID#: 2301092-03A

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

File Name:	22011217	Date of Collection:	1/2/23 16:00:00
Dil. Factor:	1.64	Date of Analysis:	1/12/23 05:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.16	Not Detected	0.36	Not Detected
Bromomethane	8.2	Not Detected	32	Not Detected
Freon 11	0.16	0.20	0.92	1.1
Ethanol	3.3	7.3	6.2	14
Freon 113	0.16	Not Detected	1.2	Not Detected
Acetone	3.3	8.4	7.8	20
2-Propanol	3.3	Not Detected	8.1	Not Detected
Carbon Disulfide	0.82	Not Detected	2.6	Not Detected
3-Chloropropene	0.82	Not Detected	2.6	Not Detected
Methylene Chloride	0.33	Not Detected	1.1	Not Detected
Hexane	0.82	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.82	Not Detected	2.4	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Cyclohexane	0.82	Not Detected	2.8	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Heptane	0.82	Not Detected	3.4	Not Detected
1,2-Dichloropropane	0.16	Not Detected	0.76	Not Detected
1,4-Dioxane	0.16	Not Detected	0.59	Not Detected
Bromodichloromethane	0.16	0.16 J	1.1	1.0 J
cis-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
4-Methyl-2-pentanone	0.16	Not Detected	0.67	Not Detected
trans-1,3-Dichloropropene	0.16	Not Detected	0.74	Not Detected
2-Hexanone	0.82	Not Detected	3.4	Not Detected
Dibromochloromethane	0.16	Not Detected	1.4	Not Detected
Chlorobenzene	0.16	Not Detected	0.76	Not Detected
Styrene	0.16	Not Detected	0.70	Not Detected
Bromoform	0.16	Not Detected	1.7	Not Detected
Cumene	0.16	Not Detected	0.81	Not Detected
Propylbenzene	0.16	Not Detected	0.81	Not Detected
4-Ethyltoluene	0.16	Not Detected	0.81	Not Detected
1,3,5-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,2,4-Trimethylbenzene	0.16	Not Detected	0.81	Not Detected
1,3-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
alpha-Chlorotoluene	0.16	Not Detected	0.85	Not Detected
1,2-Dichlorobenzene	0.16	Not Detected	0.99	Not Detected
1,2,4-Trichlorobenzene	0.82	Not Detected	6.1	Not Detected
Hexachlorobutadiene	0.82	Not Detected	8.7	Not Detected

J = Estimated value.

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
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Air Toxics

Client Sample ID: EHS-01022023-IA-GYM

Lab ID#: 2301092-03A

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

File Name:	22011217	Date of Collection:	1/2/23 16:00:00
Dil. Factor:	1.64	Date of Analysis:	1/12/23 05:19 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-GYM

Lab ID#: 2301092-03B

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

File Name:	22011217sim	Date of Collection:	1/2/23 16:00:00
Dil. Factor:	1.64	Date of Analysis:	1/12/23 05:19 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.082	0.91	0.40	4.5
Freon 114	0.033	Not Detected	0.23	Not Detected
Chloromethane	0.82	Not Detected	1.7	Not Detected
Vinyl Chloride	0.016	Not Detected	0.042	Not Detected
Chloroethane	0.082	Not Detected	0.22	Not Detected
1,1-Dichloroethene	0.016	Not Detected	0.065	Not Detected
trans-1,2-Dichloroethene	0.16	Not Detected	0.65	Not Detected
Methyl tert-butyl ether	0.16	Not Detected	0.59	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
Chloroform	0.033	6.8	0.16	33
1,1,1-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Carbon Tetrachloride	0.033	0.077	0.21	0.48
Benzene	0.082	0.16	0.26	0.50
1,2-Dichloroethane	0.033	Not Detected	0.13	Not Detected
Trichloroethene	0.033	Not Detected	0.18	Not Detected
Toluene	0.082	0.21	0.31	0.81
1,1,2-Trichloroethane	0.033	Not Detected	0.18	Not Detected
Tetrachloroethene	0.033	Not Detected	0.22	Not Detected
1,2-Dibromoethane (EDB)	0.033	Not Detected	0.25	Not Detected
Ethyl Benzene	0.033	0.044	0.14	0.19
m,p-Xylene	0.066	0.13	0.28	0.58
o-Xylene	0.033	0.049	0.14	0.21
1,1,2,2-Tetrachloroethane	0.033	Not Detected	0.22	Not Detected
1,4-Dichlorobenzene	0.033	Not Detected	0.20	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04A

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

File Name:	22011218	Date of Collection:	1/2/23 16:04:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.14	Not Detected	0.31	Not Detected
Bromomethane	7.0	Not Detected	27	Not Detected
Freon 11	0.14	0.20	0.79	1.1
Ethanol	2.8	15	5.3	29
Freon 113	0.14	Not Detected	1.1	Not Detected
Acetone	2.8	6.5	6.6	16
2-Propanol	2.8	Not Detected	6.9	Not Detected
Carbon Disulfide	0.70	Not Detected	2.2	Not Detected
3-Chloropropene	0.70	Not Detected	2.2	Not Detected
Methylene Chloride	0.28	Not Detected	0.97	Not Detected
Hexane	0.70	Not Detected	2.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.70	Not Detected	2.1	Not Detected
Tetrahydrofuran	0.70	Not Detected	2.1	Not Detected
Cyclohexane	0.70	Not Detected	2.4	Not Detected
2,2,4-Trimethylpentane	0.70	Not Detected	3.3	Not Detected
Heptane	0.70	Not Detected	2.9	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.65	Not Detected
1,4-Dioxane	0.14	Not Detected	0.50	Not Detected
Bromodichloromethane	0.14	Not Detected	0.94	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.57	Not Detected
trans-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
2-Hexanone	0.70	Not Detected	2.9	Not Detected
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
Chlorobenzene	0.14	Not Detected	0.64	Not Detected
Styrene	0.14	Not Detected	0.60	Not Detected
Bromoform	0.14	Not Detected	1.4	Not Detected
Cumene	0.14	Not Detected	0.69	Not Detected
Propylbenzene	0.14	Not Detected	0.69	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.69	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.69	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.69	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.84	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.72	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.84	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected	5.2	Not Detected
Hexachlorobutadiene	0.70	Not Detected	7.5	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130

Client Sample ID: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04A

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

File Name:	22011218	Date of Collection:	1/2/23 16:04:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:11 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: EHS-01022023-IA-CAFE

Lab ID#: 2301092-04B

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

File Name:	22011218sim	Date of Collection:	1/2/23 16:04:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:11 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.070	0.49	0.35	2.4
Freon 114	0.028	Not Detected	0.20	Not Detected
Chloromethane	0.70	Not Detected	1.4	Not Detected
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
Chloroethane	0.070	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.056	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.50	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Chloroform	0.028	0.030	0.14	0.15
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.028	0.064	0.18	0.40
Benzene	0.070	0.16	0.22	0.52
1,2-Dichloroethane	0.028	Not Detected	0.11	Not Detected
Trichloroethene	0.028	Not Detected	0.15	Not Detected
Toluene	0.070	0.18	0.26	0.67
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,2-Dibromoethane (EDB)	0.028	Not Detected	0.22	Not Detected
Ethyl Benzene	0.028	0.069	0.12	0.30
m,p-Xylene	0.056	0.24	0.24	1.0
o-Xylene	0.028	0.073	0.12	0.32
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.028	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05A

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

File Name:	22011219	Date of Collection:	1/2/23 16:06:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.14	Not Detected	0.31	Not Detected
Bromomethane	7.0	Not Detected	27	Not Detected
Freon 11	0.14	0.20	0.79	1.2
Ethanol	2.8	48	5.3	90
Freon 113	0.14	Not Detected	1.1	Not Detected
Acetone	2.8	8.3	6.6	20
2-Propanol	2.8	Not Detected	6.9	Not Detected
Carbon Disulfide	0.70	Not Detected	2.2	Not Detected
3-Chloropropene	0.70	Not Detected	2.2	Not Detected
Methylene Chloride	0.28	Not Detected	0.97	Not Detected
Hexane	0.70	Not Detected	2.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.70	Not Detected	2.1	Not Detected
Tetrahydrofuran	0.70	Not Detected	2.1	Not Detected
Cyclohexane	0.70	Not Detected	2.4	Not Detected
2,2,4-Trimethylpentane	0.70	Not Detected	3.3	Not Detected
Heptane	0.70	Not Detected	2.9	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.65	Not Detected
1,4-Dioxane	0.14	Not Detected	0.50	Not Detected
Bromodichloromethane	0.14	Not Detected	0.94	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
4-Methyl-2-pentanone	0.14	Not Detected	0.57	Not Detected
trans-1,3-Dichloropropene	0.14	Not Detected	0.64	Not Detected
2-Hexanone	0.70	Not Detected	2.9	Not Detected
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
Chlorobenzene	0.14	Not Detected	0.64	Not Detected
Styrene	0.14	Not Detected	0.60	Not Detected
Bromoform	0.14	Not Detected	1.4	Not Detected
Cumene	0.14	Not Detected	0.69	Not Detected
Propylbenzene	0.14	Not Detected	0.69	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.69	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.69	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.69	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.84	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.72	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.84	Not Detected
1,2,4-Trichlorobenzene	0.70	Not Detected	5.2	Not Detected
Hexachlorobutadiene	0.70	Not Detected	7.5	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05A

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

File Name:	22011219	Date of Collection:	1/2/23 16:06:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:48 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: EHS-01022023-IA-127

Lab ID#: 2301092-05B

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

File Name:	22011219sim	Date of Collection:	1/2/23 16:06:00
Dil. Factor:	1.40	Date of Analysis:	1/12/23 06:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.070	2.9	0.35	14
Freon 114	0.028	Not Detected	0.20	Not Detected
Chloromethane	0.70	Not Detected	1.4	Not Detected
Vinyl Chloride	0.014	Not Detected	0.036	Not Detected
Chloroethane	0.070	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.056	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.56	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.50	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Chloroform	0.028	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.028	0.065	0.18	0.41
Benzene	0.070	0.19	0.22	0.60
1,2-Dichloroethane	0.028	0.067	0.11	0.27
Trichloroethene	0.028	Not Detected	0.15	Not Detected
Toluene	0.070	0.39	0.26	1.5
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	0.036	0.19	0.24
1,2-Dibromoethane (EDB)	0.028	Not Detected	0.22	Not Detected
Ethyl Benzene	0.028	0.039	0.12	0.17
m,p-Xylene	0.056	0.10	0.24	0.46
o-Xylene	0.028	0.037	0.12	0.16
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.028	Not Detected	0.17	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	91	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-FWING-RF

Lab ID#: 2301092-06A

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

File Name:	22011220	Date of Collection:	1/2/23 16:11:00
Dil. Factor:	1.30	Date of Analysis:	1/12/23 07:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.13	Not Detected	0.29	Not Detected
Bromomethane	6.5	Not Detected	25	Not Detected
Freon 11	0.13	0.16	0.73	0.90
Ethanol	2.6	Not Detected	4.9	Not Detected
Freon 113	0.13	Not Detected	1.0	Not Detected
Acetone	2.6	2.7	6.2	6.4
2-Propanol	2.6	Not Detected	6.4	Not Detected
Carbon Disulfide	0.65	Not Detected	2.0	Not Detected
3-Chloropropene	0.65	Not Detected	2.0	Not Detected
Methylene Chloride	0.26	Not Detected	0.90	Not Detected
Hexane	0.65	Not Detected	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.65	Not Detected	1.9	Not Detected
Tetrahydrofuran	0.65	Not Detected	1.9	Not Detected
Cyclohexane	0.65	Not Detected	2.2	Not Detected
2,2,4-Trimethylpentane	0.65	Not Detected	3.0	Not Detected
Heptane	0.65	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.60	Not Detected
1,4-Dioxane	0.13	Not Detected	0.47	Not Detected
Bromodichloromethane	0.13	Not Detected	0.87	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.59	Not Detected
4-Methyl-2-pentanone	0.13	Not Detected	0.53	Not Detected
trans-1,3-Dichloropropene	0.13	Not Detected	0.59	Not Detected
2-Hexanone	0.65	Not Detected	2.7	Not Detected
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
Chlorobenzene	0.13	Not Detected	0.60	Not Detected
Styrene	0.13	Not Detected	0.55	Not Detected
Bromoform	0.13	Not Detected	1.3	Not Detected
Cumene	0.13	Not Detected	0.64	Not Detected
Propylbenzene	0.13	Not Detected	0.64	Not Detected
4-Ethyltoluene	0.13	Not Detected	0.64	Not Detected
1,3,5-Trimethylbenzene	0.13	Not Detected	0.64	Not Detected
1,2,4-Trimethylbenzene	0.13	Not Detected	0.64	Not Detected
1,3-Dichlorobenzene	0.13	Not Detected	0.78	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.67	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.78	Not Detected
1,2,4-Trichlorobenzene	0.65	Not Detected	4.8	Not Detected
Hexachlorobutadiene	0.65	Not Detected	6.9	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-FWING-RF

Lab ID#: 2301092-06A

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

File Name:	22011220	Date of Collection:	1/2/23 16:11:00
Dil. Factor:	1.30	Date of Analysis:	1/12/23 07:26 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-FWING-RF

Lab ID#: 2301092-06B

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

File Name:	22011220sim	Date of Collection:	1/2/23 16:11:00
Dil. Factor:	1.30	Date of Analysis:	1/12/23 07:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.065	0.43	0.32	2.1
Freon 114	0.026	Not Detected	0.18	Not Detected
Chloromethane	0.65	Not Detected	1.3	Not Detected
Vinyl Chloride	0.013	Not Detected	0.033	Not Detected
Chloroethane	0.065	Not Detected	0.17	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.052	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.47	Not Detected
1,1-Dichloroethane	0.026	Not Detected	0.10	Not Detected
cis-1,2-Dichloroethene	0.026	Not Detected	0.10	Not Detected
Chloroform	0.026	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.026	0.067	0.16	0.42
Benzene	0.065	0.12	0.21	0.38
1,2-Dichloroethane	0.026	Not Detected	0.10	Not Detected
Trichloroethene	0.026	Not Detected	0.14	Not Detected
Toluene	0.065	0.093	0.24	0.35
1,1,2-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Tetrachloroethene	0.026	Not Detected	0.18	Not Detected
1,2-Dibromoethane (EDB)	0.026	Not Detected	0.20	Not Detected
Ethyl Benzene	0.026	Not Detected	0.11	Not Detected
m,p-Xylene	0.052	Not Detected	0.22	Not Detected
o-Xylene	0.026	Not Detected	0.11	Not Detected
1,1,2,2-Tetrachloroethane	0.026	Not Detected	0.18	Not Detected
1,4-Dichlorobenzene	0.026	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: EHS-01022023-IA-KWING

Lab ID#: 2301092-07A

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

File Name:	22011221	Date of Collection:	1/2/23 16:20:00
Dil. Factor:	1.38	Date of Analysis:	1/12/23 08:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.14	Not Detected	0.30	Not Detected
Bromomethane	6.9	Not Detected	27	Not Detected
Freon 11	0.14	0.21	0.78	1.2
Ethanol	2.8	77 E	5.2	140 E
Freon 113	0.14	Not Detected	1.0	Not Detected
Acetone	2.8	5.4	6.6	13
2-Propanol	2.8	4.9	6.8	12
Carbon Disulfide	0.69	Not Detected	2.1	Not Detected
3-Chloropropene	0.69	Not Detected	2.2	Not Detected
Methylene Chloride	0.28	Not Detected	0.96	Not Detected
Hexane	0.69	Not Detected	2.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.69	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.69	Not Detected	2.0	Not Detected
Cyclohexane	0.69	Not Detected	2.4	Not Detected
2,2,4-Trimethylpentane	0.69	Not Detected	3.2	Not Detected
Heptane	0.69	Not Detected	2.8	Not Detected
1,2-Dichloropropane	0.14	Not Detected	0.64	Not Detected
1,4-Dioxane	0.14	Not Detected	0.50	Not Detected
Bromodichloromethane	0.14	Not Detected	0.92	Not Detected
cis-1,3-Dichloropropene	0.14	Not Detected	0.63	Not Detected
4-Methyl-2-pentanone	0.14	0.26	0.56	1.0
trans-1,3-Dichloropropene	0.14	Not Detected	0.63	Not Detected
2-Hexanone	0.69	Not Detected	2.8	Not Detected
Dibromochloromethane	0.14	Not Detected	1.2	Not Detected
Chlorobenzene	0.14	Not Detected	0.64	Not Detected
Styrene	0.14	Not Detected	0.59	Not Detected
Bromoform	0.14	Not Detected	1.4	Not Detected
Cumene	0.14	Not Detected	0.68	Not Detected
Propylbenzene	0.14	Not Detected	0.68	Not Detected
4-Ethyltoluene	0.14	Not Detected	0.68	Not Detected
1,3,5-Trimethylbenzene	0.14	Not Detected	0.68	Not Detected
1,2,4-Trimethylbenzene	0.14	Not Detected	0.68	Not Detected
1,3-Dichlorobenzene	0.14	Not Detected	0.83	Not Detected
alpha-Chlorotoluene	0.14	Not Detected	0.71	Not Detected
1,2-Dichlorobenzene	0.14	Not Detected	0.83	Not Detected
1,2,4-Trichlorobenzene	0.69	Not Detected	5.1	Not Detected
Hexachlorobutadiene	0.69	Not Detected	7.4	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
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Client Sample ID: EHS-01022023-IA-KWING
Lab ID#: 2301092-07A
MODIFIED EPA METHOD TO-15 GC/MS SIM/FULL SCAN

File Name:	22011221	Date of Collection: 1/2/23 16:20:00
Dil. Factor:	1.38	Date of Analysis: 1/12/23 08:13 PM

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: EHS-01022023-IA-KWING

Lab ID#: 2301092-07B

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

File Name:	22011221sim	Date of Collection:	1/2/23 16:20:00
Dil. Factor:	1.38	Date of Analysis:	1/12/23 08:13 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.069	0.45	0.34	2.2
Freon 114	0.028	Not Detected	0.19	Not Detected
Chloromethane	0.69	Not Detected	1.4	Not Detected
Vinyl Chloride	0.014	Not Detected	0.035	Not Detected
Chloroethane	0.069	Not Detected	0.18	Not Detected
1,1-Dichloroethene	0.014	Not Detected	0.055	Not Detected
trans-1,2-Dichloroethene	0.14	Not Detected	0.55	Not Detected
Methyl tert-butyl ether	0.14	Not Detected	0.50	Not Detected
1,1-Dichloroethane	0.028	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.028	Not Detected	0.11	Not Detected
Chloroform	0.028	0.045	0.13	0.22
1,1,1-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Carbon Tetrachloride	0.028	0.066	0.17	0.42
Benzene	0.069	0.17	0.22	0.56
1,2-Dichloroethane	0.028	0.050	0.11	0.20
Trichloroethene	0.028	Not Detected	0.15	Not Detected
Toluene	0.069	0.40	0.26	1.5
1,1,2-Trichloroethane	0.028	Not Detected	0.15	Not Detected
Tetrachloroethene	0.028	Not Detected	0.19	Not Detected
1,2-Dibromoethane (EDB)	0.028	Not Detected	0.21	Not Detected
Ethyl Benzene	0.028	0.050	0.12	0.22
m,p-Xylene	0.055	0.14	0.24	0.60
o-Xylene	0.028	0.048	0.12	0.21
1,1,2,2-Tetrachloroethane	0.028	Not Detected	0.19	Not Detected
1,4-Dichlorobenzene	0.028	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-KWING-RF

Lab ID#: 2301092-08A

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

File Name:	22011222	Date of Collection:	1/2/23 16:28:00
Dil. Factor:	1.32	Date of Analysis:	1/12/23 08:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.13	Not Detected	0.29	Not Detected
Bromomethane	6.6	Not Detected	26	Not Detected
Freon 11	0.13	0.20	0.74	1.1
Ethanol	2.6	Not Detected	5.0	Not Detected
Freon 113	0.13	Not Detected	1.0	Not Detected
Acetone	2.6	Not Detected	6.3	Not Detected
2-Propanol	2.6	Not Detected	6.5	Not Detected
Carbon Disulfide	0.66	Not Detected	2.0	Not Detected
3-Chloropropene	0.66	Not Detected	2.1	Not Detected
Methylene Chloride	0.26	Not Detected	0.92	Not Detected
Hexane	0.66	Not Detected	2.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.66	Not Detected	1.9	Not Detected
Tetrahydrofuran	0.66	Not Detected	1.9	Not Detected
Cyclohexane	0.66	Not Detected	2.3	Not Detected
2,2,4-Trimethylpentane	0.66	Not Detected	3.1	Not Detected
Heptane	0.66	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.13	Not Detected	0.61	Not Detected
1,4-Dioxane	0.13	Not Detected	0.48	Not Detected
Bromodichloromethane	0.13	Not Detected	0.88	Not Detected
cis-1,3-Dichloropropene	0.13	Not Detected	0.60	Not Detected
4-Methyl-2-pentanone	0.13	Not Detected	0.54	Not Detected
trans-1,3-Dichloropropene	0.13	Not Detected	0.60	Not Detected
2-Hexanone	0.66	Not Detected	2.7	Not Detected
Dibromochloromethane	0.13	Not Detected	1.1	Not Detected
Chlorobenzene	0.13	Not Detected	0.61	Not Detected
Styrene	0.13	Not Detected	0.56	Not Detected
Bromoform	0.13	Not Detected	1.4	Not Detected
Cumene	0.13	Not Detected	0.65	Not Detected
Propylbenzene	0.13	Not Detected	0.65	Not Detected
4-Ethyltoluene	0.13	Not Detected	0.65	Not Detected
1,3,5-Trimethylbenzene	0.13	Not Detected	0.65	Not Detected
1,2,4-Trimethylbenzene	0.13	Not Detected	0.65	Not Detected
1,3-Dichlorobenzene	0.13	Not Detected	0.79	Not Detected
alpha-Chlorotoluene	0.13	Not Detected	0.68	Not Detected
1,2-Dichlorobenzene	0.13	Not Detected	0.79	Not Detected
1,2,4-Trichlorobenzene	0.66	Not Detected	4.9	Not Detected
Hexachlorobutadiene	0.66	Not Detected	7.0	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	110	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-KWING-RF

Lab ID#: 2301092-08A

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

File Name:	22011222	Date of Collection:	1/2/23 16:28:00
Dil. Factor:	1.32	Date of Analysis:	1/12/23 08:50 PM

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: EHS-01022023-OA-KWING-RF

Lab ID#: 2301092-08B

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

File Name:	22011222sim	Date of Collection:	1/2/23 16:28:00
Dil. Factor:	1.32	Date of Analysis:	1/12/23 08:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.066	0.41	0.33	2.0
Freon 114	0.026	Not Detected	0.18	Not Detected
Chloromethane	0.66	Not Detected	1.4	Not Detected
Vinyl Chloride	0.013	Not Detected	0.034	Not Detected
Chloroethane	0.066	Not Detected	0.17	Not Detected
1,1-Dichloroethene	0.013	Not Detected	0.052	Not Detected
trans-1,2-Dichloroethene	0.13	Not Detected	0.52	Not Detected
Methyl tert-butyl ether	0.13	Not Detected	0.48	Not Detected
1,1-Dichloroethane	0.026	Not Detected	0.11	Not Detected
cis-1,2-Dichloroethene	0.026	Not Detected	0.10	Not Detected
Chloroform	0.026	Not Detected	0.13	Not Detected
1,1,1-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Carbon Tetrachloride	0.026	0.067	0.17	0.42
Benzene	0.066	0.11	0.21	0.36
1,2-Dichloroethane	0.026	Not Detected	0.11	Not Detected
Trichloroethene	0.026	Not Detected	0.14	Not Detected
Toluene	0.066	0.096	0.25	0.36
1,1,2-Trichloroethane	0.026	Not Detected	0.14	Not Detected
Tetrachloroethene	0.026	Not Detected	0.18	Not Detected
1,2-Dibromoethane (EDB)	0.026	Not Detected	0.20	Not Detected
Ethyl Benzene	0.026	Not Detected	0.11	Not Detected
m,p-Xylene	0.053	Not Detected	0.23	Not Detected
o-Xylene	0.026	Not Detected	0.11	Not Detected
1,1,2,2-Tetrachloroethane	0.026	Not Detected	0.18	Not Detected
1,4-Dichlorobenzene	0.026	Not Detected	0.16	Not Detected

Container Type: 6 Liter Summa Canister (100% SIM Ambient)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	92	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2301092-09A

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

File Name:	22011206	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 09:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2301092-09A

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

File Name:	22011206	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/12/23 09:51 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130
4-Bromofluorobenzene	94	70-130

Client Sample ID: Lab Blank

Lab ID#: 2301092-09B

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

File Name:	22011206sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 09:51 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.050	Not Detected	0.25	Not Detected
Freon 114	0.020	Not Detected	0.14	Not Detected
Chloromethane	0.50	Not Detected	1.0	Not Detected
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
Chloroethane	0.050	Not Detected	0.13	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	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
Chloroform	0.020	Not Detected	0.098	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Carbon Tetrachloride	0.020	Not Detected	0.12	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.050	Not Detected	0.19	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
1,2-Dibromoethane (EDB)	0.020	Not Detected	0.15	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
1,4-Dichlorobenzene	0.020	Not Detected	0.12	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	95	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301092-10A

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

File Name:	22011202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:14 AM

Compound	%Recovery
1,3-Butadiene	105
Bromomethane	98
Freon 11	103
Ethanol	98
Freon 113	95
Acetone	96
2-Propanol	95
Carbon Disulfide	100
3-Chloropropene	109
Methylene Chloride	94
Hexane	112
2-Butanone (Methyl Ethyl Ketone)	104
Tetrahydrofuran	99
Cyclohexane	104
2,2,4-Trimethylpentane	107
Heptane	113
1,2-Dichloropropane	103
1,4-Dioxane	112
Bromodichloromethane	99
cis-1,3-Dichloropropene	111
4-Methyl-2-pentanone	113
trans-1,3-Dichloropropene	109
2-Hexanone	111
Dibromochloromethane	103
Chlorobenzene	100
Styrene	115
Bromoform	106
Cumene	115
Propylbenzene	107
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	113
1,2,4-Trimethylbenzene	115
1,3-Dichlorobenzene	93
alpha-Chlorotoluene	110
1,2-Dichlorobenzene	93
1,2,4-Trichlorobenzene	102
Hexachlorobutadiene	94

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130



Air Toxics

Client Sample ID: CCV

Lab ID#: 2301092-10A

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

File Name:	22011202	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:14 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: CCV

Lab ID#: 2301092-10B

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

File Name:	22011202sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:14 AM

Compound	%Recovery
Freon 12	105
Freon 114	99
Chloromethane	76
Vinyl Chloride	105
Chloroethane	103
1,1-Dichloroethene	98
trans-1,2-Dichloroethene	100
Methyl tert-butyl ether	119
1,1-Dichloroethane	96
cis-1,2-Dichloroethene	103
Chloroform	95
1,1,1-Trichloroethane	96
Carbon Tetrachloride	115
Benzene	93
1,2-Dichloroethane	91
Trichloroethene	93
Toluene	100
1,1,2-Trichloroethane	94
Tetrachloroethene	90
1,2-Dibromoethane (EDB)	96
Ethyl Benzene	106
m,p-Xylene	110
o-Xylene	118
1,1,2,2-Tetrachloroethane	86
1,4-Dichlorobenzene	85

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2301092-11A

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

File Name:	22011203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:51 AM

Compound	%Recovery	Method Limits
1,3-Butadiene	109	70-130
Bromomethane	82	70-130
Freon 11	78	70-130
Ethanol	88	70-130
Freon 113	80	70-130
Acetone	84	70-130
2-Propanol	92	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	82	70-130
Methylene Chloride	82	70-130
Hexane	113	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
Tetrahydrofuran	105	70-130
Cyclohexane	109	70-130
2,2,4-Trimethylpentane	108	70-130
Heptane	110	70-130
1,2-Dichloropropane	102	70-130
1,4-Dioxane	116	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	126	70-130
4-Methyl-2-pentanone	121	70-130
trans-1,3-Dichloropropene	108	70-130
2-Hexanone	123	70-130
Dibromochloromethane	101	70-130
Chlorobenzene	98	70-130
Styrene	114	70-130
Bromoform	103	70-130
Cumene	112	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	90	70-130
alpha-Chlorotoluene	108	70-130
1,2-Dichlorobenzene	91	70-130
1,2,4-Trichlorobenzene	106	70-130
Hexachlorobutadiene	98	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 2301092-11A

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

File Name:	22011203	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:51 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: LCSD

Lab ID#: 2301092-11AA

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

File Name:	22011204	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 08:28 AM

Compound	%Recovery	Method Limits
1,3-Butadiene	110	70-130
Bromomethane	95	70-130
Freon 11	100	70-130
Ethanol	106	70-130
Freon 113	94	70-130
Acetone	98	70-130
2-Propanol	111	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	95	70-130
Methylene Chloride	93	70-130
Hexane	114	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
Tetrahydrofuran	106	70-130
Cyclohexane	108	70-130
2,2,4-Trimethylpentane	108	70-130
Heptane	110	70-130
1,2-Dichloropropane	101	70-130
1,4-Dioxane	116	70-130
Bromodichloromethane	95	70-130
cis-1,3-Dichloropropene	111	70-130
4-Methyl-2-pentanone	123	70-130
trans-1,3-Dichloropropene	110	70-130
2-Hexanone	125	70-130
Dibromochloromethane	101	70-130
Chlorobenzene	99	70-130
Styrene	114	70-130
Bromoform	104	70-130
Cumene	113	70-130
Propylbenzene	103	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	111	70-130
1,2,4-Trimethylbenzene	113	70-130
1,3-Dichlorobenzene	89	70-130
alpha-Chlorotoluene	109	70-130
1,2-Dichlorobenzene	89	70-130
1,2,4-Trichlorobenzene	108	70-130
Hexachlorobutadiene	99	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2301092-11AA

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

File Name:	22011204	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	1/12/23 08:28 AM

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
4-Bromofluorobenzene	97	70-130

Client Sample ID: LCS

Lab ID#: 2301092-11B

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

File Name:	22011203sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 07:51 AM

Compound	%Recovery	Method Limits
Freon 12	101	70-130
Freon 114	97	70-130
Chloromethane	78	70-130
Vinyl Chloride	107	70-130
Chloroethane	89	70-130
1,1-Dichloroethene	89	70-130
trans-1,2-Dichloroethene	102	70-130
Methyl tert-butyl ether	124	70-130
1,1-Dichloroethane	98	70-130
cis-1,2-Dichloroethene	106	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	98	70-130
Carbon Tetrachloride	111	60-140
Benzene	91	70-130
1,2-Dichloroethane	89	70-130
Trichloroethene	92	70-130
Toluene	97	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	88	70-130
1,2-Dibromoethane (EDB)	97	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	106	70-130
o-Xylene	115	70-130
1,1,2,2-Tetrachloroethane	87	70-130
1,4-Dichlorobenzene	83	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	100	70-130

Client Sample ID: LCSD

Lab ID#: 2301092-11BB

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

File Name:	22011204sim	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 1/12/23 08:28 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	98	70-130
Chloromethane	79	70-130
Vinyl Chloride	109	70-130
Chloroethane	106	70-130
1,1-Dichloroethene	103	70-130
trans-1,2-Dichloroethene	104	70-130
Methyl tert-butyl ether	125	70-130
1,1-Dichloroethane	99	70-130
cis-1,2-Dichloroethene	108	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	98	70-130
Carbon Tetrachloride	110	60-140
Benzene	89	70-130
1,2-Dichloroethane	87	70-130
Trichloroethene	90	70-130
Toluene	95	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	87	70-130
1,2-Dibromoethane (EDB)	98	70-130
Ethyl Benzene	104	70-130
m,p-Xylene	105	70-130
o-Xylene	114	70-130
1,1,2,2-Tetrachloroethane	87	70-130
1,4-Dichlorobenzene	83	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	99	70-130

Attachment 3
Data Validation Documentation

Memorandum

Date: 16 February 2023
To: Aron Krasnopoler
From: Kristoffer Henderson
CC: Julia Caprio
Subject: **Stage 4 Data Validation - Level IV Data Deliverable – Eurofins Air
Toxics, Inc. Work Order # 2301092**

SITE: Elmira High School

INTRODUCTION

This report summarizes the findings of the Stage 4 data validation of seven air samples and one field duplicate, collected on 2 January 2023, in support of the Elmira High School sampling event. Eurofins AirToxics, Inc., Folsom, California analyzed the samples. The samples were analyzed for the following test:

- United States Environmental Protection Agency (USEPA) Method TO-15 Using Full Scan and Selected Ion Monitoring (SIM) – Volatile Organic Compounds (VOCs)

EXECUTIVE SUMMARY

Overall, based on this Stage 4 data validation covering the quality control (QC) parameters listed below and the information provided, the data as qualified are usable for meeting project objectives. Qualified data should be used within the limitations of the qualification.

The organic data were reviewed based on the pertinent method referenced by the data package, professional and technical judgment, and the following documents:

- Quality Assurance Project Plan (QAPP) / Field Sampling Plan (FSP), Former Sperry Remington Site – North Portion, 777 South Main Street, City of Elmira, Chemung County, New York, NYSDEC Project C808022, April 2019;
- Amendment #1 to Interim Site Management Plan, Former Sperry Remington Site – North Portion, 777 South Main Street, City of Elmira, Chemung County, New York, NYSDEC Project C808022, December 2020; and

- USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, November 2020 (OLEM 9240.0-51, EPA 540-R-20-005).

The following samples were analyzed and validated at a Stage 4 level in the data set:

Laboratory ID	Client ID
2301092-01A/ 2301092-01B	EHS-01022023-IA-148
2301092-02A/ 2301092-02B	EHS-01022023-IA-DUP
2301092-03A/ 2301092-03B	EHS-01022023-IA-GYM
2301092-04A/ 2301092-04B	EHS-01022023-IA-CAFE

Laboratory ID	Client ID
2301092-05A/ 2301092-05B	EHS-01022023-IA-127
2301092-06A/ 2301092-06B	EHS-01022023-OA-FWING-RF
2301092-07A/ 2301092-07B	EHS-01022023-IA-KWING
2301092-08A/ 2301092-08B	EHS-01022023-OA-KWING-RF

Each sample was logged in under two separate laboratory IDs; the full scan results were reported under the laboratory IDs ending in “A” and the SIM results were reported under the laboratory IDs ending in “B”.

The Chain of Custody (COC) information for sample EHS-01022023-OA-FWING-RF 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.

1.0 VOLATILE ORGANIC COMPOUNDS

The samples were analyzed for VOCs per USEPA Method TO-15 using both full scan and SIM.

The areas of data review are listed below. A leading check mark (✓) indicates an area of review in which the data were acceptable. A preceding crossed circle (⊗) signifies areas where issues were raised during the course of the validation review and should be considered to determine any impact on data quality and usability.

- ✓ Overall Assessment
- ✓ Holding Time
- ✓ Instrument Performance Check
- ✓ Initial Calibration
- ✓ Continuing Calibration Verification
- ✓ Method Blank
- ✓ Laboratory Control Sample
- ✓ Laboratory Duplicate
- ✓ Surrogates

- ⊗ Sensitivity
- ✓ Field Duplicate
- ✓ Internal Standards
- ✓ Target Compound Identifications
- ⊗ Target Compound Quantitations
- ✓ Electronic Data Deliverable Review

1.1 Overall Assessment

The VOC data reported in this data package are considered usable for supporting project objectives. The results are considered valid; the analytical completeness, defined as the ratio of the number of valid analytical results (valid analytical results include values qualified as estimated) to the total number of analytical results requested on samples submitted for these analyses, for this sample set is 100%.

1.2 Holding Time

The holding time for an air sample collected in a Summa® canister is 30 days from collection to analysis. The holding times were met for the sample analyses.

1.3 Instrument Performance Check

Instrument performance check (tune) standards were analyzed at the beginning of each 24-hour period during sample analysis. The samples were analyzed within the 24-hour period. The method specified ion abundance criteria were met for bromofluorobenzene (BFB).

1.4 Initial Calibration

Appropriate initial calibrations were performed for each analyte. The laboratory calculated the percent relative standard deviations (%RSDs) of the relative response factors (RRFs). The %RSDs met the method specified acceptance criteria of less than or equal to 30% RSD, with two exceptions up to a limit of 40% RSD.

In addition, an initial calibration verification (ICV) was analyzed with each initial calibration. The ICV recovery results were within the laboratory specified acceptance criteria (70-130%).

1.5 Continuing Calibration Verification (CCV)

CCVs were performed at the required frequency. The percent differences (%Ds) between the RRFs in the initial calibration and the CCVs were within the method specified acceptance criteria of less than or equal to 30%.

1.6 Method Blank

Method blanks were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two method blanks were reported (2301092-09A and 2301092-09B). VOCs were not detected in the method blanks above the reporting limits (RLs).

1.7 Laboratory Control Sample (LCS)

LCSs were analyzed at the proper frequency for the number and types of samples analyzed (one per batch of 20 samples). Two LCS/LCS duplicate (LCS/D) pairs were reported. The recovery and relative percent difference (RPD) results were within the method specified acceptance criteria.

1.8 Laboratory Duplicate

Laboratory duplicates were not reported.

1.9 Surrogates

The surrogate recoveries were within the laboratory specified acceptance criteria.

1.10 Sensitivity

The samples were reported to the RLs. Elevated non-detect results were reported due to the dilutions analyzed. The RLs met the RLs and screening criteria listed for Method TO-15 SIM in Table C.2 of the QAPP, with the following exceptions.

Analyte	Reported RL (µg/m ³)	QAPP RL (µg/m ³)
2-Butanone (Methyl Ethyl Ketone)	1.5	0.30
2-Propanol	4.9	1.2
Acetone	4.8	1.2
Bromomethane	19	0.39
Chloromethane	1.0	0.21
Cyclohexane	1.7	0.35
Ethanol	3.8	0.96
Heptane	2.0	0.42
Hexane	1.8	0.36

The Method TO-15 SIM RLs reported by the laboratory for chloromethane and toluene ($1.0 \mu\text{g}/\text{m}^3$ and $0.19 \mu\text{g}/\text{m}^3$, respectively) did not meet the RLs listed in Table C.2. ($0.21 \mu\text{g}/\text{m}^3$ and $0.076 \mu\text{g}/\text{m}^3$, respectively).

RLs and screening criteria were not listed in the QAPP for Method TO-15 in full scan mode.

1.11 Field Duplicate

The QAPP specified that field duplicates will be collected at a frequency of 1 per 10 regular samples and will be analyzed for the full set of analyses used for the regular samples collected. One field duplicate was submitted with the sample set, EHS-01022023-IA-DUP. Acceptable precision ($\text{RPD} \leq 25\%$) was demonstrated between the field duplicate and the original sample, EHS-01022023-IA-148.

1.12 Internal Standards

The internal standard areas and retention times were within the method specified acceptance limits.

1.13 Target Compound Identifications

The target compound identifications were within the validation criteria.

1.14 Target Compound Quantitation

The compound quantitations were within the validation criteria, with the following exceptions.

The ethanol concentrations in samples EHS-01022023-IA-148, EHS-01022023-IA-DUP and EHS-01022023-IA-KWING were flagged E to indicate the concentrations exceeded the calibration range. Therefore, the ethanol concentrations in samples EHS-01022023-IA-148, EHS-01022023-IA-DUP and EHS-01022023-IA-KWING were J qualified as estimated.

The laboratory noted the ethanol concentration in sample EHS-01022023-IA-GYM may be biased high due to carryover. Therefore, based on professional and technical judgment the ethanol concentration in sample EHS-01022023-IA-GYM was J qualified as estimated.

Sample	Analyte	Laboratory Result ($\mu\text{g}/\text{m}^3$)	Laboratory Flag	Validation Result ($\mu\text{g}/\text{m}^3$)	Validation Qualifier*	Reason Code**
EHS-01022023-IA-148	Ethanol	170	E	170	J	10
EHS-01022023-IA-DUP	Ethanol	160	E	160	J	10
EHS-01022023-IA-KWING	Ethanol	140	E	140	J	10
EHS-01022023-IA-GYM	Ethanol	14	NA	14	J	13

$\mu\text{g}/\text{m}^3$ - microgram per cubic meter

E-Exceeds instrument calibration range.

NA-not applicable

* Validation qualifiers are defined in Attachment 1 at the end of this report

**Reason codes are defined in Attachment 2 at the end of this report

1.15 Electronic Data Deliverable (EDD) Review

Results and sample IDs in the EDD were reviewed against the information provided by the associated level IV report at a minimum of 20% as part of the data validation process. No discrepancies were identified between the level IV report and the EDD.

* * * * *

ATTACHMENT 1
DATA VALIDATION QUALIFIER DEFINITIONS
AND INTERPRETATION KEY
Assigned by Geosyntec's Data Validation Team

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected at or above the reported sample quantitation limit. Upon application of the U qualifier to a reported result, the definition changes to “not detected at or above the reported result”.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The analyte was positively identified; however, the associated numerical value is likely to be higher than the concentration of the analyte in the sample due to positive bias of associated QC or calibration data or attributable to matrix interference (inorganic analyses only).
- J- The analyte was positively identified; however, the associated numerical value is likely to be lower than the concentration of the analyte in the sample due to negative bias of associated QC or calibration data or attributable to matrix interference (inorganic analyses only).
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

ATTACHMENT 2
DATA VALIDATION REASON CODES
Assigned by Geosyntec’s Data Validation Team

Valid Value	Description
1	Preservation requirement not met
2	Analysis holding time exceeded
3	Blank contamination (i.e., method, trip, equipment, etc.)
4	Matrix spike/matrix spike duplicate recovery or RPD outside limits
5	LCS recovery outside limits
6	Surrogate recovery outside limits
7	Field Duplicate RPD exceeded
8	Serial dilution percent difference exceeded
9	Calibration criteria not met
10	Linear range exceeded
11	Internal standard criteria not met
12	Lab duplicates RPD exceeded
13	Other
14	Laboratory flag removed: no validation qualification required

RPD-relative percent difference

Attachment 4
SSD System Inspection Forms/Daily Field Reports

SITE INSPECTION FORM

Beech and Bonaparte

**Former Sperry Remington Site - North Portion
Elmira, New York**

Inspector: Miranda Stelmach

Date: 12/28/21 & 1/2/22

1. Inspection

	STATUS			COMMENTS
	ADEQUATE	NEEDS ATTENTION	N/A	
PERMANENT COVER SYSTEMS				
Asphalt - Inspect for cracks, potholes, and other penetrations	<u> </u>	<u> X </u>	<u> </u>	Cracks observed to be forming or re-forming within Edger work area due to heavy truck traffic
Concrete - Inspect for cracks, spalling and loose concrete	<u> X </u>	<u> </u>	<u> </u>	Some damage to grass
Vegetated areas - Inspect for signs of erosion and bare soil	<u> </u>	<u> X </u>	<u> </u>	immediately adjacent to pavement of STRA. Outside IRM1 excavation limits.
Building floor slabs - Inspect for cracks, new and unsealed penetrations of concrete floor-slab	<u> </u>	<u> X </u>	<u> </u>	New cracks forming within the school. Areas that had sealant observed to be re-cracking.
TEMPORARY COVER SYSTEMS				
Mulch Beds - Inspect for min. 2 ft of cover and weeds	<u> </u>	<u> X </u>	<u> </u>	Heavy weeds

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed
Communicated to management.

3. Attach photographs to this report and include description of each photograph and date.
1. Inspection

SITE INSPECTION FORM

Beech and Bonaparte

Former Sperry Remington Site - North Portion
Elmira, New York



SITE INSPECTION FORM

Beech and Bonaparte

**Former Sperry Remington Site - North Portion
Elmira, New York**

Inspector: Miranda Stelmach

Date: 12/28/21 & 1/2/22

		ADEQUATE	STATUS NEEDS ATTENTION	N/A	COMMENTS
VAPOR BARRIERS					
K Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	<u>X</u>	<u> </u>	<u> </u>	<u> </u>
	Inspect for gaps in joint sealer, crack sealer, and sealer at penetration (Note Location):	<u>X</u>	<u> </u>	<u> </u>	<u> </u>
Gymnasium					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	<u> </u>	<u>X</u>	<u> </u>	<u>New cracks forming</u>
Inspect	Inspect for gaps in joint sealer, crack sealer, and sealer at penetration (Note Location):	<u> </u>	<u>X</u>	<u> </u>	<u>Cracks re-forming in joint sealer</u>

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed
Smoke pen investigation to determine pressure change within observed cracks.

3. Attach photographs to this report and include description of each photograph and date.

SITE INSPECTION FORM

Beech and Bonaparte

Former Sperry Remington Site - North Portion
Elmira, New York



SITE INSPECTION FORM

Beech and Bonaparte

**Former Sperry Remington Site - North Portion
Elmira, New York**

Inspector: Miranda Stelmach

Date: 12/28/21 & 1/2/22

1. Inspection

		ADEQUATE	STATUS NEEDS ATTENTION	N/A	COMMENTS
SUB-SLAB DEPRESSURIZATION SYSTEM					
K Wing					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	X			
Inspect	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	X			
Gymnasium					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):		X		New cracks
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):		X		Possible new cracks
F-Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):		X		New cracks
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):		X		Possible new cracks
Music Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):		X		Possible new cracks
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	X			
Cafeteria					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	X			
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	X			

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed
Smoke pen investigation to determine if pressure is observed through cracks

3. Attach photographs to this report and include description of each photograph and date.

SITE INSPECTION FORM

Beech and Bonaparte

Former Sperry Remington Site - North Portion
Elmira, New York



SITE INSPECTION FORM

Beech and Bonaparte

Former Sperry Remington Site - North Portion
Elmira, New York

Inspector: Miranda Stelmach

Date: 12/28/21 & 1/2/22

1. Inspection

	STATUS NEEDS ATTENTION	N/A
ADEQUATE		

COMMENTS

GROUNDWATER MONITORING NETWORK

Inspect groundwater monitoring network visually for well condition (Note

Location):

 X _____

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed

N/A

3. Attach photographs to this report and include description of each photograph and date.

SITE INSPECTION FORM

Beech and Bonaparte

**Former Sperry Remington Site - North Portion
Elmira, New York**

Inspector: T. Wiker/ Z. Miller/ M. Stelmach

Date: 1/2/2023

I. Inspection

		ADEQUATE	STATUS NEEDS ATTENTION	N/A	COMMENTS
SUB-SLAB DEPRESSURIZATION SYSTEM					
K Wing					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	X	_____	-Observed crack, adjacent to office 141. Conducted smoke pen and marked.
Inspect	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	X	_____	-Transition piece, entering Room 143. Crack/opening. (Images 5 & 7)
Gymnasium					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	X	_____	-Observed crack near internal entrance to gym/pool lobby. Marked crack following
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	X	_____	smoke pen test. (Image 6)
F-Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	X	_____	-Additional crack with leakage observed at Stairway 1 entrance, in the vicinity of Room 112.
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	X	_____	-Open crack in the vicinity of Stairway 2 and Office 104A. (Images 2 & 3)
Music Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	X	_____	-Crack observed in entrance hallway near L.H.-149. (Image 1)
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	X	_____	-Observed multiple cracks in the southern entrance to auditorium. Conducted smoke pen investigation and subsequently marked. (Image 4)
Cafeteria					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	X	_____	_____	-No new cracks or openings observed.
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	X	_____	_____	

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed
Smoke pen investigation to determine if pressure is observed through cracks. Repairs to come.

3. Attach photographs to this report and include description of each photograph and date.

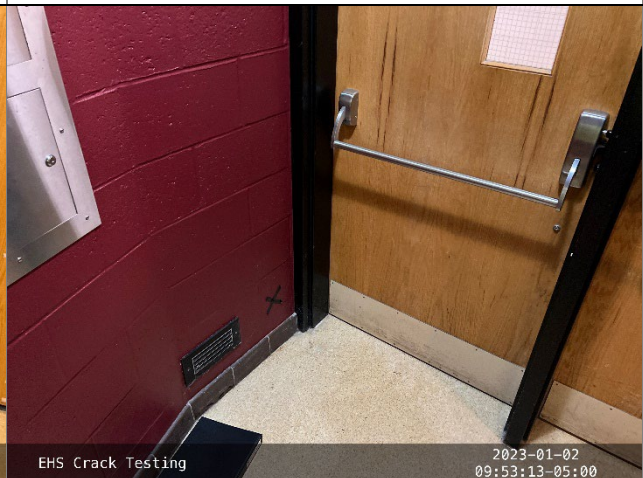
SITE INSPECTION FORM
Former Sperry Remington Site - North Portion
Elmira, New York

Beech and Bonaparte



Crack observed in entrance hallway near L.H.-149.

Open crack in the vicinity of Stairway 2 and Office 104A.



Open crack in the vicinity of Stairway 2 and Office 104A.

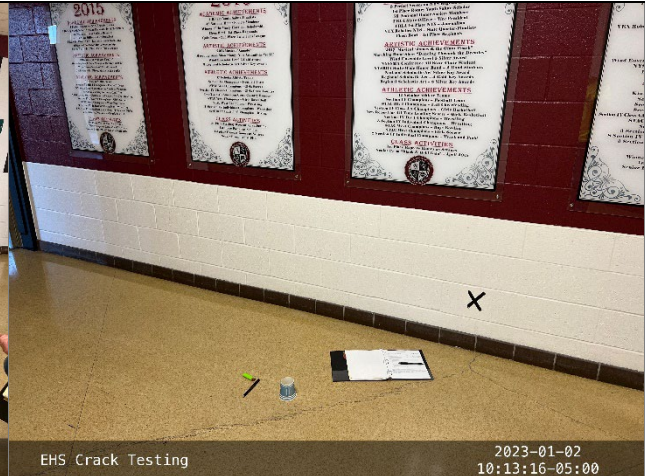
Observed multiple cracks in the southern entrance to auditorium.

SITE INSPECTION FORM
Former Sperry Remington Site - North Portion
Elmira, New York

Beech and Bonaparte



Observed crack, adjacent to Office 141.



Observed crack near internal entrance to gym/pool lobby.



Transition piece, entering Room 143.
Crack/opening.

SITE INSPECTION FORM

Beech and Bonaparte

**Former Sperry Remington Site - North Portion
Elmira, New York**

Inspector: T. Wiker/ Z. Miller/ M. Stelmach

Date: 1/2/2023

1. Inspection

		ADEQUATE	STATUS NEEDS ATTENTION	N/A	COMMENTS
VAPOR BARRIERS					
K Wing					
	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	_____X_____	_____	See SSD system form.
	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	_____X_____	_____	_____
Gymnasium					
Inspect	Inspect for new cracks, spalling, loose concrete, holes or objects newly penetrating concrete (Note Location):	_____	_____X_____	_____	See SSD system form.
Inspect	Inspect for gaps in joint searler, crack sealer, and sealer at penetration (Note Location):	_____	_____X_____	_____	_____

2. Indicate corrective actions taken for any and all deficiencies noted above, who accomplished and date completed
Smoke pen investigation to determine pressure change within observed cracks.

3. Attach photographs to this report and include description of each photograph and date.

SITE INSPECTION FORM
Former Sperry Remington Site - North Portion
Elmira, New York

Beech and Bonaparte



Observed loose support on SSD system near F-Wing.

1/2/23

Attachment 5
Floor Crack Repair Documentation

From: [Meybaum, Peter](#)
To: [Eric Lovenduski](#); [Miranda Stelmach](#)
Subject: RE: EHS Crack Inspection
Date: Thursday, April 20, 2023 12:19:20 PM

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Eric,

I was over at EHS this morning and verified that the identified cracks had a recent coat of seal over them.

Peter

Peter Meybaum
Health & Safety Compliance Specialist
GST BOCES/Elmira City School District
Office: (607)-735-3992
pmeysbaum@gstboces.org

From: Eric Lovenduski <ELovenduski@Geosyntec.com>
Sent: Wednesday, April 19, 2023 3:21 PM
To: Meybaum, Peter <pmeysbaum@gstboces.org>; Miranda Stelmach <MStelmach@Geosyntec.com>
Subject: RE: EHS Crack Inspection

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Hi Peter – I just wanted to check in to see if you had verified that the last of the cracks had been sealed.

Thank you!

Eric

Eric Lovenduski
Geosyntec Consultants
1930 County Route 113
Greenwich, NY 12834
518-258-3859

From: Meybaum, Peter <PMEYBAUM@gstboces.org>
Sent: Tuesday, March 28, 2023 10:39 AM
To: Miranda Stelmach <MStelmach@Geosyntec.com>
Cc: Eric Lovenduski <ELovenduski@Geosyntec.com>
Subject: RE: EHS Crack Inspection

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Miranda & Eric,

I was able to bring over a printed copy of the report and review it with the Head Custodian at EHS, Peter Lotocky yesterday. I also left him the hard copy. I think he just missed those cracks in that part of the building but he told me he would take care of them. The next time I get over there – for sure by the middle of next week - I will verify those cracks have been re-sealed and email you that confirmation.

Thanks,
Peter

Peter Meybaum
Health & Safety Compliance Specialist
GST BOCES/Elmira City School District
Office: (607)-735-3992
pmeybaum@gstboces.org

From: Meybaum, Peter
Sent: Monday, March 27, 2023 7:30 AM
To: Miranda Stelmach <MStelmach@Geosyntec.com>
Cc: Eric Lovenduski <ELovenduski@Geosyntec.com>
Subject: RE: EHS Crack Inspection

Miranda,

Thanks for sending this over. I will be heading to EHS this morning to discuss with the Head Custodian and schedule the sealing of those that were identified as having been missed.

Peter

Peter Meybaum
Health & Safety Compliance Specialist
GST BOCES/Elmira City School District
Office: (607)-735-3992
pmeybaum@gstboces.org

From: Miranda Stelmach <MStelmach@Geosyntec.com>
Sent: Monday, March 27, 2023 7:01 AM
To: Meybaum, Peter <pmeybaum@gstboces.org>
Cc: Eric Lovenduski <ELovenduski@Geosyntec.com>
Subject: EHS Crack Inspection

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replying to any unsolicited requests for information.

Good Morning Peter,

Attached are the crack inspection forms for your reference. The three crack locations that will need to be sealed are photographed and documented within the attached. Could you please keep us updated when these will or have been sealed?

Have a great week!

Miranda

Miranda Stelmach
Professional

Geosyntec Consultants

Cell: 920.676.4194

mstelmach@geosyntec.com

www.geosyntec.com

Geosyntec 
consultants

engineers | scientists | innovators

Eric Lovenduski

From: Meybaum, Peter <PMEYBAUM@gstboces.org>
Sent: Tuesday, March 14, 2023 1:47 PM
To: Eric Lovenduski
Cc: Magliocca, Joseph
Subject: FW: Crack Filling

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Eric,

I appreciate you tracking this info down and am forwarding it to Joe so he has it as well. I will give you an update once the work has been completed.

Thanks,
Peter

Peter Meybaum
Health & Safety Compliance Specialist
GST BOCES/Elmira City School District
Office: (607)-735-3992
pmeybaum@gstboces.org

From: Eric Lovenduski <ELovenduski@Geosyntec.com>
Sent: Tuesday, March 14, 2023 9:52 AM
To: Meybaum, Peter <pmeybaum@gstboces.org>
Subject: FW: Crack Filling

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Peter – see message below. I believe that the Sika 1A is available at Home Depot.

Eric

Eric Lovenduski
Geosyntec Consultants
1930 County Route 113
Greenwich, NY 12834
518-258-3859

From: Dunn, Mike <mdunn@elmiracityschools.com>
Sent: Monday, July 9, 2018 1:11 PM
To: William Wertz
Cc: Paul Brookner; Aron Krasnopoler; Kevin.Krueger@unisys.com
Subject: RE: Crack Filling

Thanks Bill

From: William Wertz <WWertz@Geosyntec.com>
Sent: Monday, July 09, 2018 10:59 AM
To: Dunn, Mike <mdunn@elmiracityschools.com>
Cc: Paul Brookner <PBrookner@Geosyntec.com>; Aron Krasnopoler <AKrasnopoler@geosyntec.com>;
Kevin.Krueger@unisys.com
Subject: Crack Filling

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Mike:

Just wanted to let you know that I'm in the process of finding suitable materials for use in sealing the cracks at EHS. I'll reach out to you sometime later this week with some ideas.

Bill

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