# FORMER DURASPEC ELECTROPLATING FACILITY

## **QUEENS COUNTY**

JAMAICA, NEW YORK

# **2021-2022 PERIODIC REVIEW REPORT**

NYSDEC Site Number: 241204

## **Prepared for:**

Hastings Capital, LLC 100 Field Street West Babylon, NY 11704

## **Prepared by:**

AMEC E&E, PC 209-35 Northern Blvd., Suite 203 Bayside, NY 11361 347-836-4343

April 2022

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#### 2021-2022 Periodic Review Report Former Duraspec Electroplating Facility 87-83 139<sup>th</sup> Street Jamaica, New York

#### 1.0 EXECUTIVE SUMMARY

The following Periodic Review Report (PRR) has been prepared by AMEC E&E, PC (AMEC) on behalf of Hastings Capital, LLC. This report was prepared in accordance with the NYSDEC's PRR General Guidance document and a NYSDEC Order On Consent R2-20170622-235.

#### A. Nature and Extent of Contamination

Historically, the contaminated media at the former Durspec Electroplating Facility (the Site) included soil, soil vapor and groundwater.

- The primary contaminants in the soil were the metals cadmium, chromium, copper and nickel.
- The primary contaminant of concern in the soil vapor was trichloroethene (TCE).
- The groundwater historically contained detections of ethylbenzene and several semivolatile organic compounds in the upgradient site well. The downgradient well has not display exceedances of the metals and VOCs detected in the soil and soil vapor.

The active sub-slab depressurization (SSD) system will not be discontinued unless prior written approval is granted by the NYSDEC and the NYSDOH. For further details regarding operation and maintenance of the SSD system, please refer to the Site Management Plan (SMP) dated May 2019 (Ref. 1). A composite cover system and SSD system were installed underneath the building on the Site.

#### B. Effectiveness of Remedial Program

The remedial program has been effective.

- The majority of the soil impacted by these metals was excavated and removed from the property as part of the renovation activities. The entire property is capped with pavement or a concrete slab.
- The active SSD system is maintaining negative pressure below the slap. Indoor air sample results do not exceed the NYSDOH matrices values for PCE or TCE.
- The samples collected and analyzed over the past three sampling rounds from the site's downgradient well do not indicate that groundwater below the site has been negatively impacted by the past activities at Duraspec (Ref. 2).

#### C. Compliance

The site is in compliance.

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#### D. Recommendations

Annual inspections and indoor air sampling during the heating season should continue in accordance with the SMP.

#### 2.0 SITE OVERVIEW

# A. Site Location, Surrounding Area and Nature & Extent of Contamination Prior to Site Remediation

The Site is located in Jamaica, Queens, NY and currently encompasses a 90-foot by 55-foot property developed with a two-story industrial/commercial building and basement level with an associated driveway along the northern portion of the property. The NYC Tax Map designates the Site as Queens County; Block: 9685; Lot: 50. The neighborhood surrounding the subject property consists of a highly urbanized area of Jamaica with adjacent properties generally consisting of commercial use along Hillside Avenue toward the north and residential use toward the south (Figure 1). The tenant of the building on the Site is RCA Stone & Tiles. Indoor air samples were taken inside the building on both the first floor and in the basement.

Prior to redevelopment, the soils below the plating areas were impacted with the metals cadmium, chromium, copper and nickel to a depth of approximately 11 feet below sidewalk grade. Chromium, copper, and nickel were detected in concentrations exceeding the Commercial Soil Cleanup Objectives (SCOs) and Cadmium was detected in concentrations exceeding the Industrial SCOs.

Soil vapor below the building slab contained TCE at a concentration of 82.8 ug/m<sup>3</sup>.

Benzene, Ethylbenzene, Toluene and Xylene (BTEX) type compounds and several Polynuclear Aromatic Hydrocarbons (PAHs) were detected in the upgradient well at the site. These were not detected in the site's downgradient well and are believed to have originated from auto repair facilities or filling stations located to the north along Hillside Avenue.

Several naturally occurring metals such as iron, manganese and sodium were detected in the upgradient well and, to a lesser degree, in the downgradient well. Cadmium and chromium were detected above groundwater standards in the site's upgradient well but were not detected above the groundwater standard in site's the downgradient well. Generally, the concentrations of metals in the groundwater displayed a decreasing or stable trend over a three year following the approval of the SMP.

#### B. Chronology of Remedial Program

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site.

#### Facility Decommissioning

Duraspec operated an electroplating facility and was a hazardous waste generator under EPA ID NYD012379798. They ceased operation during the summer of 2015. Prior to closing, metal parts were electroplated with cadmium, copper, and zinc. In previous years, Duraspec also plated parts with chromium, gold, nickel, and silver. Metallic parts were prepared for plating using alkaline cleaners, acid etching solutions, and/or stripping solutions (depending on the process at the time) and rinsed. Once the metallic parts were prepared, the parts were electroplated in process solutions that contained the required metals in solution followed by a parts rinse. Parts were cleaned and plated in tanks located in different sections of the plant. This includes Plating Area 1

which was used for plating metal parts with chromium & nickel and Plating Area 2 which was used to plate metal parts with cadmium, copper, gold, nickel, silver, & zinc. (See Appendix B.)

The property was acquired by Hastings Capital, LLC in December 2015. Subsequently, Hastings retained Innovative Recycling Technologies, Inc. (IRT) to initiate decommissioning procedures. The first step in decommissioning the facility was to pressure wash and dispose of the metal equipment as scrap metal. The plastic process tanks, rubber coating over the floors, and concrete containment berms were also pressure washed and disposed of as hazardous waste. The concrete floors were pressure washed, broken up, and disposed of. All the pressure wash water from the above operations was collected into 55-gallon drums and disposed of by a contractor under a hazardous manifest at Republic Environmental Systems (P) LLC of Hatfield, PA.

Wastewater generated during the operation of the Duraspec facility was pretreated on-site before being discharged to the New York City municipal sewer system pursuant to a New York City Department of Environmental Protection Industrial Wastewater Discharge Permit. The wastewater treatment system consisted of five 400-gallon tanks, which contained the hazardous waste generated at Duraspec. During the decommissioning process, the wastewater remaining in the tanks was pumped into a total of eight 275-gallon, DOT approved totes. These were in turn, shipped to Republic Environmental Systems, LLC.

#### RCRA Closure Activities

In June 2016, Hastings retained AMEC to prepare a RCRA Closure Plan for submittal and approval by the NYSDEC. The procedures outlined in the NYSDEC-approved RCRA Closure Plan and dated October 2016, involved a soil boring program in Plating Area 1, Plating Area 2, and the Alleyway to evaluate the presence and/or extent of contamination onsite. The soil boring program revealed exceedances above the Commercial Soil Cleanup Objectives (SCOs) for several metals (i.e. chromium, copper, and nickel) at numerous boring locations. Cadmium was detected at concentrations exceeding the Industrial SCOs in some boring locations. In addition, some SVOCs (i.e. benzo(b)fluoranthene, chrysene, and ideno(1,2,3-cd)pyrene) were detected at concentration exceeding the Unrestricted SCO and benzo(a)pyrene was detected at a concentration exceeding the Commercial SCO for one sample. However, the SVOCs exceedances were attributed to urban fill.

Based on the results of the soil boring program, Hastings initiated an excavation program to remove the concrete floors and underlying metals-impacted soils from below Plating Area 1, Plating Area 2, and the Wastewater Treatment Area. The excavation extended to a depth of 5 feet bgs in Plating Area 1, to a depth of 11 feet bgs in Plating Area 2 and the Wastewater Treatment Area, and to a depth of 2 feet bgs in the Alleyway. With the exception of the Alleyway, the excavation continued to the maximum extent possible without comprising the building's structural integrity.

AMCE returned to the site to collect excavation endpoint samples in accordance with the NYSDEC DER-10. The laboratory analytical results for the endpoint samples continued to display exceedances comparable to those detected during the soil boring program. In Plating Area 1, no metals exceeded the Industrial SCOs, however the several metals (i.e. chromium, copper, and nickel) exceeded the Commercial SCOs in numerous endpoint samples. In Plating Area 2 and the Wastewater Treatment Area, copper exceeded the Commercial SCOs and cadmium exceeded the Industrial SCOs at numerous endpoint sample locations. In the Alleyway, there were several exceedances for metals above the Unrestricted SCOs, but none above the Commercial or Industrial SCOs.

Due to the exceedances of various metals in the soil, the NYSDEC requested that other subsurface media (i.e. groundwater and soil vapor) be evaluated. An existing onsite groundwater monitoring well and an existing off-site downgradient groundwater monitoring well were sampled

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using low-flow sampling procedures. The groundwater samples were analyzed for VOCs, SVOCs, cyanide, and the metals of concern from the RCRA Closure. In summary, the laboratory analytical results indicated the presences of several petroleum-related VOCs in the upgradient well. Very few SVOCs exceedances above the TOGS Ambient Water Quality Standards were detected. The VOCs and SVOCs contaminants were attributed to an offsite source. No metal contaminants in exceedance of the TOGS Ambient Water Quality Standards was detected. One sub-slab vapor sample was collected beneath the floor of the office area and analyzed for VOCs using EPA method TO-15. The laboratory analytical report for the sub-slab vapor sample indicated TCE was present at an elevated concertation of at 82.8 ug/m<sup>3</sup>.

#### Post-RCRA Remedial Activities

The investigation completed under the RCRA Closure program revealed that contamination remained at the Site. More specifically, the investigative activities identified the contaminants of concerns as cadmium, chromium, copper, and to a lesser extent nickel in the soil as well as TCE in the soil vapor.

To address the contamination revealed from the RCRA Closure activities, an Interim Remedial Measures (IRM) Work Plan dated November 6, 2017 was prepared and submitted to the NYSDEC for approval. Upon approval, the IRM was implemented as outlined in the Work Plan. The IRM consisted of excavation in the Alleyway with clean soil replacement, installation of a Sub-Slab Depressurization System, a site cover system, and a post-remediation groundwater monitoring program.

#### 3.0 REMEDIAL PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

The remedial actions performed at the site have been effective and protective of human health.

#### PERFORMANCE

The soil excavation activities have been completed. A sub-slab depressurization system (SSDS) has been installed and remains in operation. Groundwater and indoor air monitoring are completed on an annual basis.

#### EFFECTIVENESS

The remedy has been effective. The site is completely covered by a pavement or concrete slab cap. An SSDS has been installed and is in operation.

#### PROTECTIVENESS

The remedy is protective

- The entire property is capped with pavement or a concrete slab.
- The active SSD system is maintaining negative pressure below the slap. Indoor air sample results do not exceed the NYSDOH matrices values.
- There rounds of samples collected from the Site's downgradient well and analyzed do not indicate that groundwater below the site has been negatively impacted by the past activities at Duraspec.

#### 4.0 INSTITUTIONAL CONTROL/ENGINEERING CONTROL (IC/ECs) PLAN

#### A. IC/EC Requirements and Compliance

The following institutional controls for this Site have been implemented by the property owner:

1) The property may only be used for commercial and industrial use;

2) All ECs must be operated and maintained as specified in the SMP;

3) All ECs must be inspected at a frequency and in a manner defined in the SMP;

4) The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Queens County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department;

5) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

6) Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;

7) All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;

8) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;

9) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP;

10) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement;

11) The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries and any potential impacts that are identified must be monitored or mitigated; and

12) Vegetable gardens and farming on the Site are prohibited. The property owner has implemented these twelve institutional controls.

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The following engineering controls for this Site have been implemented by the property owner and are in good condition:

1) In Plating Area 1, a section of 4-inch diameter perforated PVC pipe surrounded with filter fabric was placed in the bottom of an excavation. The pipe was placed with the perforation holes facing downward so that condensation water can drain from the pipe. The pipe was then covered with <sup>3</sup>⁄<sub>4</sub> - inch graded recycled concrete aggregate followed by a 20-mil vapor barrier as manufactured by Stego<sup>™</sup> and installed in accordance with the manufacturer's recommendations.

Plating Area 2, which was excavated to a depth of 11 feet below sidewalk grade, was completed as a basement. A section of 4-inch diameter perforated PVC pipe surrounded with filter fabric was placed in the bottom of the excavation. The pipe was then covered with <sup>3</sup>/<sub>4</sub> - inch graded recycled concrete aggregate followed by a 20-mil vapor barrier;

Trenches were cut into the floors of the former Office and the Shipping & Receiving area. These trenches were excavated to a depth of approximately 1 foot below grade. A section of 4-inch diameter perforated PVC pipe surrounded with filter fabric were placed in the bottom of the trenches. The pipe was then covered with <sup>3</sup>/<sub>4</sub> - inch graded recycled concrete aggregate. The trench was then covered with 6 inches of concrete;

Four-inch diameter sheet metal risers were extended from the vent pipes to the roof. A sign was posted on the duct that says "This is part of a Sub Slab Depressurization System. Do not alter or disconnect". The fans were connected to their respected risers. An electrical connection was completed along with a weather tight on/off switch. A vacuum switch was installed within the duct work servicing each fan.

2) Site Cover System: After the placement of the soil, piping, aggregate, and vapor barriers were completed, new concrete floors at least 4-inches thick were poured to serve as a cap between the underlying soil and future occupants of the building. The area of excavation in the alleyway was also restored with a concrete or asphalt cover.

#### B. IC/EC Certification

We certify that the ICs and ECs for this project are: in place and effective; are performing as designed; nothing has occurred that would impair the ability of the controls to protect public health and the environment; no violations have occurred and there were no failures to comply with the Site Management Plan; site access is available to maintain the engineering controls; and, there is no groundwater usage at the site.

A PRR Certification Form is included in Appendix A.

#### 5.0 MONITORING PLAN COMPLIANCE REPORT

#### Groundwater Sampling Procedures

In the 2020-2021 Periodic Review Report, AMEC recommended that groundwater sampling be discontinued after the 2020 sampling event. Samples from the Sites downgradient well taken over the three rounds of sampling indicate the site has not been negatively impacted by the past activities at Duraspec. NYSDEC approved this request on May 28, 2021.

#### Indoor Air Monitoring Procedures

Also in accordance with the SMP, indoor air samples were collected, on an annual basis during the winter heating season, at the former Durapsec Electroplating Facility (currently RCA Stone &

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Tiles) on the first floor and in the basement. Sample location maps are included on Figures 2 and 3. Samples were collected using Summa Canisters calibrated to collect air for an 8-hour period. The samples were delivered to an ELAP-approved Laboratory and are analyzed for halogenated volatile organic compounds using EPA Method TO-15.

#### Summary of Results

Since the SSDS was placed into operation, there have been no exceedances of the NYSDOH indoor air Matrices for PCE or TCE. In November 2021 TCE was not detected in either of the indoor air samples. PCE was detected at 0.251 and 0.231 ug/m<sup>3</sup>. Carbon tetrachloride, a substance not related to the operations at Duraspec and not detected in the previous soil vapor samples, was detected between 0.409 and 0.415 ug/m<sup>3</sup> during the most recent sampling round. The data collected from the November 2021 sampling round is included on Table 1. A presentation of the historical detections during the last three sampling rounds are included on Table 2.

#### 6.0 OPERATIONS AND MAINTENANCE PLAN

Operations and Maintenance (O&M) procedures that apply to the Fantech® fans includes a physical inspection of the fans to confirm that air is being discharged and that the units are operating. No other maintenance is recommended in the owner's manual.

All of the SSD fans and piping were inspected during the November 2021 sampling event and everything was observed to be in good working order. A map summarizing our observations is included as Figure 4.

The exterior pavement and interior floor slabs (the capping system) were observed to be in good condition on the date of our inspections.

#### 7.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

- On November 19, 2021, AMEC conducted an annual physical inspection of SSD system. The fans were operating and the ducts, floor and pavement were in good condition. TCE was not detected in either of the indoor air samples. PCE was detected at 0.251 and 0.231 ug/m<sup>3</sup>, which are both below the NYSDOH indoor air Matrices.
- We recommend that the SSD system remain in operation and that monitoring continue as outlined in the SMP.
- Prior to the 2022 sampling event, AMEC will notify the tenants in advance in order to make sure the vacuum monitoring points on the riser vents are accessible.

#### REFERENCES

- 1. Amec (May 2019) Site Management Plan, Former Duraspec Electroplating Facility, 87-83 139<sup>th</sup> Street, Jamaica, NY 11435.
- 2. Amec (May 2021) 2020-2021 Periodic Review Report, Former Duraspec Electroplating Facility, 87-83 139<sup>th</sup> Street, Jamaica, NY 11435.

# **FIGURES**

- 1. Site Map
- 2. Indoor Air Sampling Locations, First Floor
- Indoor Air Sampling Locations, Basement SSD System Annual Vacuum Readings 3.
- 4.



Location	Forme	r Duraspec Electroplat	ing Facility/RCA Stone	& Tiles	MON./MIT. for IAQ & AA	NYSDOH Action Levels
Matrix Date Sampled	Indoor Air 1/16/2019	Indoor Air 2/12/2020	Indoor Air 12/29/2020	Indoor Air 11/19/21	Indoor Air (1)	Indoor Air (2)
	<b>F</b> <sup>1</sup> ( <b>F</b>	<b>E</b> ' <b>( E</b> )	E's ( El ser	E. ( El		
Level	First Floor	First Floor	First Floor	First Floor		
Sample ID	IAQ-FIRST-012019	IAQ-FIRST-022020	IAQ-FIRST-122020	IAQ-BASEMENT-		
Sample Method	TO-15 SIM	TO-15 SIM	TO-15 SIM	TO-15 SIM		
Parameter						
Methylene Chloride (µg/m3)	7.3	ND	ND	ND	3	60
Carbon Tetrachloride (µg/m3)	0.56	0.352	0.459	0.409	0.2	NS
Tetrachloroethene (µg/m3)	0.42	2.04	0.8	0.251	3	30
Trichloroethene (µg/m3)	ND	ND	ND	ND	0.2	2

Notes:

µg/m3 - micrograms per cubic meter

NS - No Standard

(1) New York State Department of Health Soil Vapor Intrusion Guidance No Further Action criteria for Indoor Air Samples

(2) New York State Department of Health Indoor Air Guideline

Concentration exceeds MON./MIT. for IAQ & AA Standard



Location	Forme	r Duraspec Electroplati	ng Facility/RCA Stone	& Tiles	MON./MIT. for IAQ & AA	NYSDOH Action Levels
Matrix Date Sampled	Indoor Air 1/16/2019	Indoor Air 2/12/2020	Indoor Air 12/29/2020	Indoor Air 11/19/2021	Indoor Air (1)	Indoor Air (2)
Level	Basement	Basement	Basement	Basement		
Sample ID	IAQ-BASEMENT-0119	IAQ-BASEMENT- 022020	IAQ-BASEMENT- 122020	IAQ-BASEMENT- 112021		
Sample Method	TO-15 SIM	TO-15 SIM	TO-15 SIM	TO-15 SIM		
Parameter						
Methylene Chloride (µg/m3)	ND	ND	ND	ND	3	60
Carbon Tetrachloride (µg/m3)	0.541	0.409	0.44	0.409	0.2	NS
Tetrachloroethene (µg/m3)	0.481	1.61	0.658	0.251	3	30
Trichloroethene (µg/m3)	ND	ND	ND	ND	0.2	2

Notes:

µg/m3 - micrograms per cubic meter

NS - No Standard

(1) New York State Department of Health Soil Vapor Intrusion Guidance No Further Action criteria for Indoor Air Samples

(2) New York State Department of Health Indoor Air Guideline

Concentration exceeds MON./MIT. for IAQ & AA Standard





# **TABLES**

- 1.
- Indoor Air Sample Results Historical Indoor Air Sample Results for Contaminants of Concern 2.

#### TABLE 1: 2022 FORMER DURASPEC ELECTROPLATING VAPOR INTRUSION SAMPLING 87-83 139TH STREET, JAMAICA, NY

	COLLEC SAMPLE SAMP	SAMPLE ID: TION DATE: LOCATION LE MATRIX:	IAQ-BASEME 11/19/ BASEM	ENT-112021 2021 IENT Q	IAQ-FIRST 11/19/2 FIRST F IAC	-112021 2021 LOOR
ANALYTE (µg/m3)	MON./MIT. for IAQ & AA	IAQ Guideline for IAQ &	Conc	Qual	Conc	Qual
Volatile Organics in Air	1	<i></i>		1		
1,1,2,2-Tetrachloroethane	NS	NS	1.37	U	1.37	U
1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	NS	NS	1.53	U	1.53	U
1,1,2-Trichloroethane	NS	NS	1.09	U	1.09	U
1,1-Dichloroethane	NS	NS	0.809	0	0.809	U
1,2,4-menorobenzene	NS	NS	0.083	0	1.48	U
1,2-Dibromoethane	NS	NS	1.54	U	1.54	U
1,2-Dichlorobenzene	NS	NS	1.2	U	1.2	U
1,2-Dichloroethane	NS	NS	0.809	U	0.809	U
1,2-Dichloropropane	NS	NS	0.924	U	0.924	U
1,3,5-Trimethylbenzene	NS	NS	0.983	U	0.983	U
1,3-Butadiene	NS	NS	0.442	U	0.442	U
1,3-Dichlorobenzene	NS	NS	1.2	U	1.2	U 
1,4-Dichlorobenzene	NS	NS	0.721	U	0.721	U
2-Butanone	NS	NS	1.47	U U	1.47	u
2-Hexanone	NS	NS	0.82	U	0.82	U
4-Ethyltoluene	NS	NS	0.983	U	0.983	U
4-Methyl-2-pentanone	NS	NS	2.05	U	2.05	U
Acetone	NS	NS	8.29	J-	5.11	J-
Benzene	NS	NS	0.639	U	0.639	U
Benzyl chloride	NS	NS	1.04	U	1.04	U
Bromodichloromethane	NS	NS	1.34	U	1.34	U
Bromotorm	NS	NS	2.07	U 	2.07	U 
Bromometnane	NS	NS	0.777	0	0.777	U 11
Chlorobenzene	NS	NS	0.921	u	0.921	u
Chloroethane	NS	NS	0.528	U	0.528	U
Chloroform	NS	NS	0.977	U	0.977	U
Chloromethane	NS	NS	1.08		1.06	
cis-1,3-Dichloropropene	NS	NS	0.908	U	0.908	U
Cyclohexane	NS	NS	0.688	U	0.688	U
Dibromochloromethane	NS	NS	1.7	U	1.7	U
Dichlorodifluoromethane	NS	NS	2.23		2.12	
Ethalio	NS	NS	1.8	υ.	13.0	u-
Ethylbenzene	NS	NS	0.869	U	0.869	U
Heptane	NS	NS	0.82	U	0.82	U
Hexachlorobutadiene	NS	NS	2.13	U	2.13	U
Hexane	NS	NS	0.705	U	0.705	U
Methyl Tertbutyl Ether	NS	NS	0.721	U	0.721	U
Methylene chloride	NS	NS	1.74	U	1.74	U
Styrene	NS	NS	0.852	U	0.852	0
Tetrahydrofuran	NS	NS	1.52	0	1.52	U
Toluene	NS	NS	1.8	-	1.91	-
trans-1,2-Dichloroethene	NS	NS	0.793	U	0.793	U
trans-1,3-Dichloropropene	NS	NS	0.908	U	0.908	U
Trichlorofluoromethane	NS	NS	1.19		1.17	
Vinyl bromide	NS	NS	0.874	U	0.874	U
Xylene, o	NS	NS	0.869	U	0.869	U
Xylenes (m&p)	NS	NS	1.74	0	1.74	U
Volatile Organics in Air by SIM	IN5	IN5	0.809	U	0.869	U
1,1,1-Trichloroethane	3	NS	0.109	U	0.109	U
1,1-Dichloroethene	0.2	NS	0.079	U	0.079	U
Carbon tetrachloride	0.2	NS NG	0.409		0.415	
us-1,2-Dichloroethene	0.2	NS 30	0.079	U	0.079	U
Trichloroethene	0.2	2	0.107	U	0.107	U
Vinyl chloride	0.2	NS	0.051	U	0.051	U
Notes: µg/m3 micrograms/cubic meter						
Bold Analyte detected for sample U Not detected at the reported de MON./MIT. for IAQ & AA New York State Department of NYSDOH IAQ	tection limit for	the sample	Guidance No Fu	rther Action cr	iteria for Indoor	Air Samples

# Table 2 Historical Indoor Air Sample Results for Contaminants of Concern Former Duraspec Electrplating Facility 87-83 139th Street, Jamaica, NY

Location	Forme	r Duraspec Electroplat	ing Facility/RCA Stone	& Tiles	MON./MIT. for IAQ & AA	NYSDOH Action Levels
Matrix	Indoor Air	Indoor Air	Indoor Air	Indoor Air	Indoor Air (1)	Indoor Air (2)
Date Sampled	1/16/2019	2/12/2020	12/29/2020	11/19/2021		
Level	First Floor	First Floor	First Floor	First Floor		
Sample ID	IAQ-FIRST-012019	IAQ-FIRST-022020	IAQ-FIRST-122020	IAQ-BASEMENT- 112021		
Sample Method	TO-15 SIM	TO-15 SIM	TO-15 SIM	TO-15 SIM		
Parameter						
Methylene Chloride (µg/m3)	7.3	ND	ND	ND	3	60
Carbon Tetrachloride (µg/m3)	0.56	0.352	0.459	0.409	0.2	NS
Tetrachloroethene (µg/m3)	0.42	2.04	0.8	0.251	3	30
Trichloroethene (µg/m3)	ND	ND	ND	ND	0.2	2
1	Bernard	Descussof	Descent	Descust		
Level	Basement					
Sample ID	IAQ-BASEMENT-0119	IAQ-BASEIVIENT-	IAQ-BASEIVIENT-	IAQ-BASEIVIENT-		
Sample Mothod	TO 15 SIM	022020 TO 15 SIM	122020 TO 15 SIM	TO 15 SIM		
Parameter	10-13 SIM	10-13 SIM	10-13 SIM	10-13 500		
Methylene Chloride (ug/m3)	ND	ND	ND	ND	3	60
Carbon Tetrachloride (ug/m3)	0.541	0.409	0.44	0.409	0.2	NS
Tetrachloroethene (ug/m3)	0.481	1.61	0.658	0.251	3	30
Trichloroethene (µg/m3)	ND	ND	ND	ND	0.2	2

Notes:

µg/m3 - micrograms per cubic meter

NS - No Standard

(1) New York State Department of Health Soil Vapor Intrusion Guidance No Further Action criteria for Indoor Air Samples

(2) New York State Department of Health Indoor Air Guideline

Concentration exceeds MON./MIT. for IAQ & AA Standard

# **APPENDIX A – CERTIFICATION FORM**



#### Enclosure 2 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



Sit	e No. 2	241204	Site Details		Box 1	
Sit	e Name Forr	ner Duraspec Electrop	plating			
Site City Co Site	e Address: 87 //Town: Jam unty:Queens e Acreage: 0.	7-83 139th Street aica 093	Zip Code: 11435			
Re	porting Period	I: December 12, 2020 t	o December 12, 2021			
					YES	NO
1.	Is the inform	ation above correct?			X	
	If NO, includ	e handwritten above or	on a separate sheet.			
2.	Has some or tax map ame	all of the site property endment during this Rep	been sold, subdivided, merged, porting Period?	or undergone a		X
3.	Has there be (see 6NYCR	en any change of use a R 375-1.11(d))?	at the site during this Reporting	Period		X
4.	Have any fee for or at the p	deral, state, and/or loca property during this Rep	l permits (e.g., building, dischar porting Period?	ge) been issued		X
	If you answe that docume	ered YES to questions entation has been pre	s 2 thru 4, include documenta viously submitted with this ce	tion or evidence ertification form.		
5.	Is the site cu	rrently undergoing deve	elopment?			
					Box 2	
					YES	NO
6.	Is the curren Commercial	t site use consistent wit and Industrial	h the use(s) listed below?		Χ	
7.	Are all ICs in	place and functioning a	as designed?	X		
	IF THE	E ANSWER TO EITHER DO NOT COMPLETE TH	QUESTION 6 OR 7 IS NO, sign IE REST OF THIS FORM. Other	and date below a wise continue.	Ind	
AC	corrective Me	asures Work Plan must	t be submitted along with this f	orm to address th	nese issi	ues.
	nature of Own	er Remedial Party or De	esignated Penresentative	Date		

SITE NO. 241204		Box 3
Description of	f Institutional Controls	
Parcel 9685-50	<u>Owner</u> Hastings Capital, LLC	Institutional Control
		Ground Water Use Restriction Landuse Restriction Monitoring Plan Site Management Plan O&M Plan IC/EC Plan
<ul> <li>The property may be the property may be the use of ground determined by the N or for industrial purp Department;</li> <li>Operation, mainter of the remedy shall be the property owner to the potential for v boundaries, and any or Vegetable gardens</li> </ul>	be used for commercial use; lwater underlying the property is prohibite IYSDOH or the Queens Department of He ose, and the user must first notify and ob nance, monitoring, inspection, and report be performed as defined in this SMP; assure compliance with the restrictions ic apor intrusion must be evaluated for any potential impacts that are identified mus s and farming on the site are prohibited.	d without necessary water quality treatment as ealth to render it safe for use as drinking water tain written approval to do so from the ing of any mechanical or physical component dentified by the Environmental Easement; buildings developed in the area within the IC t be monitored or mitigated; and
		Box 4
Description of	f Engineering Controls	
<u>Parcel</u> 9685-50	Engineering Contro	<u>I</u>
	Vapor Mitigation Cover System	
- A cover system wa - A Sub-Slab Depres the concrete slab.	is installed consisting of a concrete slab a sourization System with two fans and a pl	at least 4-inches in thick. astic vapor barrier were installed below

		Box 5
	Periodic Review Report (PRR) Certification Statements	
1.	I certify by checking "YES" below that:	
	a) the Periodic Review report and all attachments were prepared under the direction of, reviewed by, the party making the Engineering Control certification;	and
	b) to the best of my knowledge and belief, the work and conclusions described in this care in accordance with the requirements of the site remedial program, and generally acconduce program practices; and the information presented is accurate and competence.	ertification epted
	YES	NO
	X	
2.	For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:	
	(a) The Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Departmen	t;
	(b) nothing has occurred that would impair the ability of such Control, to protect public h the environment;	ealth and
	(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;	
	(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and	
	(e) if a financial assurance mechanism is required by the oversight document for the site mechanism remains valid and sufficient for its intended purpose established in the docur	e, the ment.
	YES	NO
	X	
	IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.	
	A Corrective Measures Work Plan must be submitted along with this form to address these iss	sues.
	Signature of Owner, Remedial Party or Designated Representative Date	

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IC CERTIFICATIONS SITE NO. 241204	Box 6
SITE OWNER OR DESIGNATED REPRESE I certify that all information and statements in Boxes 1,2, and 3 statement made herein is punishable as a Class "A" misdement Penal Law.	are true. I understand that a false anor, pursuant to Section 210.45 of the
1 Robert Birnbourn at west Boby	100, NY 11704
print name print bus	iness address
am certifying as OWAL	(Owner or Remedial Party
for the Site named in the site Details Section of this form.	Advances of Personal Paras
IICA	1-5:22
Signature of Owner, Remedial Party, or Designated Represen Rendering Certification	ntative Date

EC CERTIFICATIO	NS
Signature	Box 7
I certify that all information in Boxes 4 and 5 are true. I und punishable as a Class "A" misdemeanor, pursuant to Section	erstand that a false statement made herein is on 210.45 of the Penal Ľaw.
Eric Weinstock at 204-35	5vite 203, Ba-1side, NH 11361
print name print b	usiness address
am certifying as a for the Owner	(Owner or Remedial Party)
Signature of , for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)

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# **APPENDIX B – PLANT LAYOUT**



# **APPENDIX C – IAQ QUESTIONAIRE**

NEW YORK STATE DEPARTMENT OF HEALTH INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY CENTER FOR ENVIRONMENTAL HEALTH
This form must be completed for each residence involved in indoor air testing.
Preparer's Name Mill bates Date/Time Prepared 1/20/2021 Preparer's Affiliation CONTRACTOR Phone No. 914 3550693 Purpose of Investigation ANUA Check of SSDS
Interviewed: Y/O Last Name:
2. OWNER OR LANDLORD: (Check-if same as occupant_) Interviewed: Y ( Hostings Colitor Last Name:
3. BUILDING CHARACTERISTICS
Type of Building: (Circle appropriate response)
Residential School <u>Commercial/Multi-use</u> Industrial Church Other:

If the property is residenti	al, type? (Circle appropri	ate response)	
Ranch Raised Ranch Cape Cod Duplex Modular	2-Family Split Level Contemporary Apartment House Log Home	3-Family Colonial Mobile Home Townhouses/Condos Other:	
If multiple units, how man	y?		
If the property is commercial	cial, type?		
Business Type(s)	elling Tile	block stone shik	
Does it include resident	ces (i.e., multi-use)? Y	N If yes, how many?	
Other characteristics:			
Number of floors	Buil	ding age	
Is the building insulated	Y/N How	air tight? (Tight / Average / Not Tight	
4 AIDELOW			
4. AIRFLOW	A Lamont D		
Use air current tubes or tr	acer smoke to evaluate a	urflow patterns and qualitatively descri	be:
Airflow between floors	+	anni the the (c.E. crocie) and y for it, c	
Airflow near source	/A	ING (Circle all that apply) rele all that apply – actor providery)	
Hat air chuadad on 8 mar H. aice	Heat pump Steppi radiat	on Resident for a	
Outdoor air infiltration	MA	Control Color Color	
Domentic and water tank h	ansis Das		
Infiltration into air ducts	NA	and Other	
	and the second s		

a. Above grade constructi	on: wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other
c. Basement floor:	concrete	dirt	stone	other
d. Basement floor:	uncovered	covered	covered with	Concrete
e. Concrete floor:	unsealed	sealed	sealed with	
f. Foundation walls:	poured	block	stone	other
g. Foundation walls:	unsealed	sealed	ealed with	Paint
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially fini	shed
j. Sump present?	Y/N	nii-ryon, bein		
k. Water in sump?	Y / N / not applicable	Á.		
Basement/Lowest level depth	below grade: 12	_(feet)		
Identify potential soil vapor e	ntry points and appro	oximate size (e.	g., cracks, utilit	y ports, drains)
ifuir	TIED			
	TIEJ			
6. HEATING, VENTING an	TY UT	ING (Circle all	that apply)	
<ul> <li>6. HEATING, VENTING an Type of heating system(s) use</li> </ul>	T CONDITION ad AIR CONDITION d in this building: (cir	ING (Circle all cle all that app	that apply) Dly – note prima	ary)
6. HEATING, VENTING an Type of heating system(s) use Hot air circulation Space Heaters Electric baseboard	nd AIR CONDITION d in this building: (cir Heat pump Steam radiatio Wood stove	ING (Circle all cle all that app Hot on Radi Outo	that apply) <b>oly – note prima</b> water baseboard iant floor door wood boile	ary) I r Other
6. HEATING, VENTING an Type of heating system(s) use Hot air circulation Space Heaters Electric baseboard The primary type of fuel used	nd AIR CONDITION d in this building: (cir Heat pump Steam radiatio Wood stove is:	ING (Circle all cle all that app on Radi Outo	that apply) <b>oly – note prima</b> water baseboard iant floor door wood boile	ary) I r Other
6. HEATING, VENTING an Type of heating system(s) use Hot air circulation Space Heaters Electric baseboard The primary type of fuel used Natural Gas Electric Wood	nd AIR CONDITION d in this building: (cir Heat pump Steam radiatio Wood stove is: Fuel Oil Propane Coal	ING (Circle all cle all that app don Radi Outo Kerc Sola	that apply) <b>bly – note prima</b> water baseboard iant floor door wood boile osene ur	ary) I r Other
6. HEATING, VENTING an Type of heating system(s) use Hot air circulation Space Heaters Electric baseboard The primary type of fuel used Natural Gas Electric Wood	nd AIR CONDITION d in this building: (cir Heat pump Steam radiatio Wood stove is: Fuel Oil Propane Coal	ING (Circle all cle all that app on Radi Outo Kerc Sola	that apply) <b>bly – note prima</b> water baseboard iant floor door wood boile osene ur	ary) I r Other
6. HEATING, VENTING an Type of heating system(s) use Hot air circulation Space Heaters Electric baseboard The primary type of fuel used Natural Gas Electric Wood Domestic hot water tank fuele Boiler/furnace located in:	nd AIR CONDITION d in this building: (cir Heat pump Steam radiatio Wood stove is: Fuel Oil Propane Coal d by:OS Basement Outdo	ING (Circle all cle all that app on Radi Outo Kero Sola	that apply) <b>oly – note prima</b> water baseboard iant floor door wood boile osene ur	ary) I r Other

Are there air distribution ducts present?

p. Bas there been a pesticide application

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram. l

#### 7. OCCUPANCY

Is basement/le	owest level occupied?	Full-time	Occasionally	Seldom	Almost Never
Level	General Use of Each	Floor (e.g., fa	milyroom, bedro	oom, laundry	v, workshop, storage)
Basement	Storage	constant points			
1 <sup>st</sup> Floor	Storage	t Scllibo	Tile		
2 <sup>nd</sup> Floor	Offices	,	)		
3 <sup>rd</sup> Floor	NA	galerly less or a	early of a des-ela	ulag service	* (Cuclo appropriate
4 <sup>th</sup> Floor	NA			m.	

## 8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage?	Y / 🔊
b. Does the garage have a separate heating unit?	Y/N/NA
c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car)	Y / N / NA Please specify
d. Has the building ever had a fire?	Y / N When?
e. Is a kerosene or unvented gas space heater present?	Y /(N) Where?
f. Is there a workshop or hobby/craft area? Y / N	) Where & Type?
g. Is there smoking in the building? Y /N	How frequently?
h. Have cleaning products been used recently? Y/M	When & Type?
i. Have cosmetic products been used recently? Y / Y	When & Type?

(Y)N

N Justen & Type

j. Has painting/sta	ining been done in the last 6 months?	Y / N Where & When?		
k. Is there new car	rpet, drapes or other textiles?	Y / Where & When?		
l. Have air fresher	ners been used recently?	Y / (N) When & Type?		
m. Is there a kitch	en exhaust fan?	Y (N) If yes, where vented?		
n. Is there a bath	room exhaust fan?	Y / (N) If yes, where vented?		
o. Is there a clothe	es dryer?	Y / N If yes, is it vented outside? Y / N		
p. Has there been	a pesticide application?	Y N When & Type?		
Are there odors in If yes, please desc	<b>1 the building?</b> cribe:	Y (N)		
<b>)o any of the buildi</b> e.g., chemical manu: poiler mechanic, pest	<b>ng occupants use solvents at work?</b> facturing or laboratory, auto mechanic or a ticide application, cosmetologist)	Y $(N)$ auto body shop, painting, fuel oil delivery,		
If yes, what types of	of solvents are used?			
If yes, are their clo	thes washed at work?	Y/N		
Jo any of the build esponse) Yes, use dry- Yes, use dry- Yes, work at s there a radon mit	ng occupants regularly use or work at a -cleaning regularly (weekly) -cleaning infrequently (monthly or less) a dry-cleaning service 	No Unknown		
s the system active	or passive? Active/Passive			
. WATER AND SE	CWAGE			
Water Supply:	Dublic Webr Drilled Well Drive	en Well Dug Well Other:		
	Public water Drilled well Drive			
ewage Disposal:	Public Sewer Septic Tank Leach	h Field Dry Well Other:		
ewage Disposal: 0. RELOCATION	Public Sewer Septic Tank Leach	h Field Dry Well Other:		
Sewage Disposal: 0. RELOCATION a. Provide reaso	Public Sewer Septic Tank Leach INFORMATION (for oil spill resident ns why relocation is recommended:	h Field Dry Well Other: ial emergency)		
Sewage Disposal: 0. RELOCATION a. Provide reaso b. Residents cho	Public Sewer Septic Tank Leach INFORMATION (for oil spill resident ns why relocation is recommended: pose to: remain in home relocate to fr	h Field Dry Well Other: ial emergency) riends/family relocate to hotel/motel		
Sewage Disposal: 0. RELOCATION a. Provide reaso b. Residents cho c. Responsibility	Public Sewer Septic Tank Leach INFORMATION (for oil spill resident ns why relocation is recommended: pose to: remain in home relocate to fr of costs associated with reimburseme	h Field Dry Well Other: ial emergency) riends/family relocate to hotel/motel ent explained? Y / N		

#### 11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.



**First Floor:** 



#### 12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



\* Superior States Service & Super Const Const Of Read of a

#### **13. PRODUCT INVENTORY FORM**

Make & Model of field instrument used:

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** <u>Y / N</u>
	None Observed					
				13 m 1 + 4 1 1 m		
	and the second of					
						at said
		14 12 1	- Andrews			
			1.1.1.1.1.1	All the state of the state		
				and the second second		
	Contraction of the			and the second second		
					1.2.4.3.	Starly 1
			1 1 1			

\* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)** \*\* Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible. 2021-2022 Periodic Review Report Former Duraspec Electroplating Facility Jamaica, New York

# **APPENDIX D – DUSR**

### DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

## **1.0 INTRODUCTION**

Air samples were collected at the Hastings Capital - Duraspec site in November 2021 and submitted to Alpha Analytical Laboratories, located in Westborough, Massachusetts, for analysis. Samples were analyzed by one or more of the following methods:

• VOCs in Air by Method TO-15 and TO-15 Selected Ion Monitoring (SIM)

Results were reported in the following sample delivery groups (SDGs):

• L2164604

A Data Usability Summary Report (DUSR) review was completed based on the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation guidance (NYSDEC, 2010) and the Project Quality Assurance Project Plan (QAPP) [AMEC, 2016]. Sample event information included in this DUSR is presented in the following tables:

- Table 1 Summary of Samples and Analytical Methods
- Table 2 Summary of Analytical Results
- Table 3 Summary of Qualification Actions

Laboratory deliverables included:

• Category B deliverables as defined in the NYSDEC Analytical Services Protocols (NYSDEC, 2005).

The DUSR review included the checks listed below. A table of the project control limits used for QC evaluations is presented in Attachment A. Applicable laboratory QC summary forms are included in Attachment B to document QC outliers associated with qualification actions.

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- Instrument Calibration (report narrative/lab-qualifier evaluation)
- QC Blanks
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)
- Surrogate Spikes/Isotope Dilutions (if applicable)
- Field Duplicates
- Target Analyte Identification and Quantitation

- Raw Data (chromatograms), Calculation Checks and Transcription Verifications
- Reporting Limits
- Electronic Data Qualification and Verification

Data qualification actions are applied when necessary based on general procedures in USEPA validation guidelines (USEPA, 2016a) and the judgment of the project chemist. The following laboratory or data review qualifiers are used in the final data presentation:

U = target analyte is not detected above the reported detection limit

- J = concentration is estimated
- J- = concentration is estimated with a potential low bias

Results are interpreted to be usable as reported by the laboratory or as qualified in the following sections.

## 2.0 POTENTIAL DATA LIMITATIONS

Based on the DUSR review the majority of data can be used as reported by the laboratory. Results for a subset of samples were qualified during the DUSR review. Data qualification actions are summarized on Table 3. Data usability limitations for analytical method results are discussed in the following sections.

## VOCs by TO-15

Results for ethanol and acetone in samples IAQ-BASEMENT-112021 and IAQ-FIRST-112021 were qualified estimated with potential low bias (J-) based on low recoveries in the associated LCS/LCSD. Qualified results are included in Table 3 with reason code LCSL.

## 3.0 ADDITIONAL QC EXCEEDANCES AND OBSERVATIONS

There were no additional observations or quality control exceedances not specifically addressed above (Section 2.0) or included in Table 3. Unless presented in Table 3, sample results are interpreted to be usable as reported by the laboratory.

## Reference:

AMEC Environment and Infrastructure (Amec), 2016. Closure Plan Appendix N Quality Assurance Project Plan; October 12, 2016.

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; June 2005.

New York State Department of Environmental Conservation (NYSDEC), 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA, 2016a. "Analysis of Volatile Organic Compounds in Air Contained in Canisters by Method TO-15"; SOP NO. HW-31; Revision 6; Hazardous Waste Support Section; September 2016.
December 17, 2021

Data Validator: Amber Jones

amen fonts

December 15, 2021

Reviewed by: Julie Ricardi

Julie Rinanci

December 17, 2021

#### Standard Table Notes:

Sample Type (QC Code)	Qualification Reason Codes
FS – field sample	BL1 – method blank qualifier
FD – field duplicate	BL2 – field or trip blank qualifier
TB – trip blank	CCV – continuing calibration verification recovery outside limits
EB – equipment blank	CCV%D – continuing calibration verification percent difference exceeds goal
FB – field blank	CCVRRF – continuing calibration relative response factor low
	CI – chromatographic interference present
Matrix	DCPD – dual column percent difference exceeds limit
GW – ground water	E – result exceeds calibration range
BW – blank water	FD – field duplicate precision goal exceeded
TW – tap water	FP – false positive interference
SV – soil vapor	HT – holding time for prep or analysis exceeded
SED - sediment	HTG – holding time for prep or analysis grossly exceeded
	ICV – initial calibration verification recovery outside limit
<u>Units</u>	ICVRRF – initial calibration verification relative response factor low
mg/L – milligrams per liter	ICVRSD – initial calibration verification % relative standard deviation exceeds
ng/L – nanograms per liter	ISH – internal standard response greater than limit
μg/L – micrograms per liter	ISIinternal standard response loss than limit
mg/kg – milligrams per kilogram	
μg/kg – micrograms per kilogram	
μg/m <sup>3</sup> – micrograms per cubic meter	LCSL – laboratory control sample recovery low LCSRPD – laboratory control sample/duplicate relative % difference precision goal exceeded
Qualifiers	LD – lab duplicate precision goal exceeded
U – not detected above quantitation limit	MSH – matrix spike and/or MS duplicate recovery high
J – estimated quantity	MSL – matrix spike and/or MS duplicate recovery low
J+ - estimated quantity, biased high	MSRPD – matrix spike/duplicate relative % difference precision goal exceeded
J estimated quantity, biased low	N – analyte identification is not certain
R – data unusable	PEM – performance evaluation mixture exceeds limit
	PM – sample percent moisture exceeds EPA guideline
Fraction	SD – serial dilution result exceeds percent difference limit
T – total	SP – sample preservation/collection does not meet method requirement
D – dissolved	SSH – surrogate recovery high
N – normal	SSL – surrogate recovery low

TD – dissolved concentration exceeds total

## TABLE 1 DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

						Method	TO-15	TO15 SIM
						Fraction	Ν	Ν
SDG	Location	Field Sample ID	Sample Date	Media	Lab Sample ID	QC Code	Count	Count
L2164604	IAQ-BASEMENT	IAQ-BASEMENT-112021	11/19/2021	AIR	L2164604-01	FS	59	8
L2164604	IAQ-FIRST	IAQ-FIRST-112021	11/19/2021	AIR	L2164604-02	FS	59	8

## TABLE 2 DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

		SDG	L2164	604	L216	4604
		Location	IAQ-BAS	EMENT	IAQ-F	IRST
	San	nple Date	11/19/	2021	11/19,	/2021
	S	ample ID	IAQ-BASEME	NT-112021	IAQ-FIRST	-112021
		QC Code	FS	5	F	S
			Final	Final	Final	Final
Method	Parameter	Unit	Result	Qualifier	Result	Qualifier
TO-15	1,1,2,2-Tetrachloroethane	UG/M3	1.37	J	1.37	U
TO-15	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	UG/M3	1.53	J	1.53	U
TO-15	1,1,2-Trichloroethane	UG/M3	1.09	J	1.09	U
TO-15	1,1-Dichloroethane	UG/M3	0.809 (	J	0.809	U
TO-15	1,2,4-Trichlorobenzene	UG/M3	1.48	J	1.48	U
TO-15	1,2,4-Trimethylbenzene	UG/M3	0.983 (	J	0.983	U
TO-15	1,2-Dibromoethane	UG/M3	1.54	J	1.54	U
TO-15	1,2-Dichloro-1,1,2,2-tetrafluoroethane	UG/M3	1.4 0	J	1.4	U
TO-15	1,2-Dichlorobenzene	UG/M3	1.2	J	1.2	U
TO-15	1,2-Dichloroethane	UG/M3	0.809 (	J	0.809	U
TO-15	1,2-Dichloroethene (total)	UG/M3	0.793 0	J	0.793	U
TO-15	1,2-Dichloropropane	UG/M3	0.924 0	J	0.924	U
TO-15	1,3,5-Trimethylbenzene	UG/M3	0.983 (	J	0.983	U
TO-15	1,3-Butadiene	UG/M3	0.442 (	J	0.442	U
TO-15	1,3-Dichlorobenzene	UG/M3	1.2	J	1.2	U
TO-15	1,3-Dichloropropene (total)	UG/M3	0.908 0	J	0.908	U
TO-15	1,4-Dichlorobenzene	UG/M3	1.2	J	1.2	U
TO-15	1,4-Dioxane	UG/M3	0.721	J	0.721	U
TO-15	2-Butanone	UG/M3	1.47	J	1.47	U
TO-15	2-Hexanone	UG/M3	0.82	J	0.82	U
TO-15	2-Propanol	UG/M3	2.3		1.51	
TO-15	4-Ethyltoluene	UG/M3	0.983 (	J	0.983	U
TO-15	4-Methyl-2-pentanone	UG/M3	2.05	J	2.05	U
TO-15	Acetone	UG/M3	8.29 J	-	5.11	J-
TO-15	Allyl chloride	UG/M3	0.626	J	0.626	U
TO-15	Benzene	UG/M3	0.639	J	0.639	U
TO-15	Benzyl chloride	UG/M3	1.04	J	1.04	U
TO-15	Bromodichloromethane	UG/M3	1.34	J	1.34	U
TO-15	Bromoform	UG/M3	2.07	J	2.07	U
TO-15	Bromomethane	UG/M3	0.777 (	J	0.777	U
TO-15	Carbon disulfide	UG/M3	0.623	J	0.623	U
TO-15	Chlorobenzene	UG/M3	0.921	J	0.921	U
TO-15	Chloroethane	UG/M3	0.528	J	0.528	U
TO-15	Chloroform	UG/M3	0.977	J	0.977	U
TO-15	Chloromethane	UG/M3	1.08		1.06	
TO-15	cis-1,3-Dichloropropene	UG/M3	0.908	J	0.908	U

## TABLE 2 DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

		SDG	L216	4604	L216	4604
		Location	IAQ-BAS	SEMENT	IAQ-I	IRST
	S	ample Date	11/19	/2021	11/19	/2021
		Sample ID	IAQ-BASEM	ENT-112021	IAQ-FIRS	Г-112021
		QC Code	F	S	F	S
			Final	Final	Final	Final
Method	Parameter	Unit	Result	Qualifier	Result	Qualifier
TO-15	Cyclohexane	UG/M3	0.688	U	0.688	U
TO-15	Dibromochloromethane	UG/M3	1.7	U	1.7	U
TO-15	Dichlorodifluoromethane	UG/M3	2.23		2.12	
TO-15	Ethanol	UG/M3	22.2	J-	19.6	J-
TO-15	Ethyl acetate	UG/M3	1.8	U	1.8	U
TO-15	Ethylbenzene	UG/M3	0.869	U	0.869	U
TO-15	Heptane	UG/M3	0.82	U	0.82	U
TO-15	Hexachlorobutadiene	UG/M3	2.13	U	2.13	U
TO-15	Hexane	UG/M3	0.705	U	0.705	U
TO-15	Isooctane	UG/M3	0.934	U	0.934	U
TO-15	Methyl Tertbutyl Ether	UG/M3	0.721	U	0.721	U
TO-15	Methylene chloride	UG/M3	1.74	U	1.74	U
TO-15	Styrene	UG/M3	0.852	U	0.852	U
TO-15	t-Butyl alcohol	UG/M3	1.52	U	1.52	U
TO-15	Tetrahydrofuran	UG/M3	1.47	U	1.47	U
TO-15	Toluene	UG/M3	1.8		1.91	
TO-15	trans-1,2-Dichloroethene	UG/M3	0.793	U	0.793	U
TO-15	trans-1,3-Dichloropropene	UG/M3	0.908	U	0.908	U
TO-15	Trichlorofluoromethane	UG/M3	1.19		1.17	
TO-15	Vinyl bromide	UG/M3	0.874	U	0.874	U
TO-15	Xylene, o	UG/M3	0.869	U	0.869	U
TO-15	Xylenes (m&p)	UG/M3	1.74	U	1.74	U
TO-15	Xylenes, Total	UG/M3	0.869	U	0.869	U
TO15 SIM	1,1,1-Trichloroethane	UG/M3	0.109	U	0.109	U
TO15 SIM	1,1-Dichloroethene	UG/M3	0.079	U	0.079	U
TO15 SIM	1,2-Dichloroethene (total)	UG/M3	0.079	U	0.079	U
TO15 SIM	Carbon tetrachloride	UG/M3	0.409		0.415	
TO15 SIM	cis-1,2-Dichloroethene	UG/M3	0.079	U	0.079	U
TO15 SIM	Tetrachloroethene	UG/M3	0.251		0.231	
TO15 SIM	Trichloroethene	UG/M3	0.107	U	0.107	U
TO15 SIM	Vinyl chloride	UG/M3	0.051	U	0.051	U

#### TABLE 3

## DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

											Val	
		Lab Sample						Lab	Final	Final	Reason	
SDG	Method	ID	Sample Date	Field Sample ID	Fraction	Parameter Name	Lab Result	Qualifier	Result	Qualifier	Code	Units
L2164604	TO-15	L2164604-01	11/19/2021	IAQ-BASEMENT-112021	N	Acetone	8.29		8.29	J-	LCSL	UG/M3
L2164604	TO-15	L2164604-01	11/19/2021	IAQ-BASEMENT-112021	N	Ethanol	22.2		22.2	J-	LCSL	UG/M3
L2164604	TO-15	L2164604-02	11/19/2021	IAQ-FIRST-112021	N	Acetone	5.11		5.11	J-	LCSL	UG/M3
L2164604	TO-15	L2164604-02	11/19/2021	IAQ-FIRST-112021	N	Ethanol	19.6		19.6	J-	LCSL	UG/M3

## ATTACHMENT A SUMMARY OF VALIDATION QC LIMITS FOR SURROGATES, SPIKES, AND DUPLICATES BASED ON THE REGION 2 VALIDATION GUIDELINES

DADAMETED	OC TEST		Air	Air
PARAWETER	QC TEST	ANALTTE	(%R)	(RPD)
	Surrogate	All Surrogate Compounds	Lab Limits	
Volatiles TO-15	LCS	All Target Compounds	70 - 130	25
	Field Duplicate	All Target Compounds		50

Notes:

LCS - Laboratory Control Sample

RPD = Relative percent difference

%R = percent recovery

QC Limits are based on USEPA Region II Data Validation Guidelines and Project QA/QC Objectives Surrogates are not specified in the Region II Data Validation Guidelines (2016)

Hastings Capital – Duraspec November 2021 Air Sampling Jamaica, Queens, New York Amec Foster Wheeler Environment & Infrastructure, Inc. 3612162326

## DATA USABILITY SUMMARY REPORT NOVEMBER 2021 AIR MONITORING EVENT HASTINGS CAPITAL – DURASPEC SITE JAMAICA, QUEENS, NEW YORK

## ATTACHMENT B

## **VOCs in Air**

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD Project: Duraspec November 2021 Method : TO-15/TO-15 SIM Laboratory and SDG(s): Alpha Analytical SDG# L2164604 Date: 12/14/2021 Reviewer: Amber Jones Review Level X NYSDEC DUSR USEPA

USEPA Region II Guideline

#### Control limits are from EPA Region 2 - SOP# HW-31, October 2006.

 1. ☑
 Case Narrative Review and Data Package Completeness
 COMMENTS

 Were problems noted?
 no problems noted
 Comments

 Are Field Sample IDs and Locations assigned correctly? YES
 NO (circle one)

 Were all the samples on the COC analyzed for the requested analyses?
 YES NO (circle one)

## 2. ☑ Holding time and Sample Collection Were samples analyzed within the 30 day holding time? YES NO (circle one)

3. **Ø QC Blanks** (use 5x rule for calculating action levels) Are method blanks free of contamination? **YES** NO (circle one)

## 4. 🗹 🛛 Instrument Tuning – Data Package Narrative Review

Did the laboratory narrative identify any results that were not within method criteria? YES NO (circle one)

If yes, use professional judgment to evaluate data and qualify results if needed

## 5. 🗹 Instrument Calibration - Data Package Narrative Review

Did the laboratory narrative identify compounds that were not within method criteria (%RSD  $\leq$ 30; %D  $\leq$ 30) in the initial calibration and/or continuing calibration standards? YES **NO** 

Did the laboratory qualify results based on initial or continuing calibration exceedances? YES NO NA If yes to above, use professional judgment to evaluate data and qualify results if needed

## 6. 🗹 Internal Standards – Data Package Narrative Review

(Area Limits = +40% to -40%, RTs within 20 seconds of daily CCAL standard (or ICAL midpoint if samples follow ICAL)) Did the laboratory narrative identify any sample internal standards that were not within criteria?

YES NO (circle one)

Did the laboratory qualify results based on internal standard exceedances? YES NO NA If yes to above, use professional judgment to evaluate data and qualify results if needed

## 7. 🗹 Surrogate Recovery

Were all results within laboratory limits? YES NO (circle one) N/A - no surrogates provided

### 8. 🗹 Field Duplicates

Were Field Duplicates submitted/analyzed? YES NO

Were all results were within criteria (Field Dup RPD goal = 50). YES NO NA (circle one)

#### 9. Z Laboratory Control Sample Results (limits 70-130%)

see attached - TO-15 - acetone and ethanol - J-, LCSL

Were all results within limits? YES NO (circle one)

10. Z Raw Data Review and Calculation Checks see attached for calculations

## 11. ZElectronic Data Review and Edits

Does the EDD match the Form Is? **YES** NO (circle one)

## 12. **Z** Tables Review

Table 1 (Samples and Analytical Methods)Table 2 (Analytical Results)Table 3 (Qualification Actions)Were all tables produced and reviewed?YES NO (circle one)

Did lab report TICs?

Table 4 (TICs)

YES NO (circle one)

Project Name:	FORMER DURASF	PEC	-	ab Control Satch Qua	ample / ality Contr	Analysis ol	Lab Nur	nber:	L2164604	
Project Number:	3612162326.05						Report I	Date:	12/10/21	
		70-130								
Parameter		LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics in Ai	ir - Mansfield Lab Asso	ociated sample(s)	: 01-02	Batch: WG158137	1-3 TO-1	Q				
Chlorodifluoromethane		80		Ţ		70-130	ı			
Propylene		88		I		70-130	ı			
Propane		80		•		70-130	•			
Dichlorodifluoromethan	e	89				70-130	I			
Chloromethane		93		I		70-130	I			
1,2-Dichloro-1,1,2,2-tet	trafluoroethane	96		I		70-130	I			
Methanol		80		I		70-130	Ţ			
Vinyl chloride		93		I		70-130	I			
1,3-Butadiene		98		I		70-130	I			
Butane		77		I		70-130	I			
Bromomethane		66		I		70-130	I			
Chloroethane		06		I		70-130	I			
Ethyl Alcohol J-, LC	SL	69				40-160	I			
Dichlorofluoromethane		81				70-130	I			
Vinyl bromide		74		ı		70-130	I			
Acrolein		82		ı		60-113	I			
Acetone J-, LCSL		69		I		40-160	Ţ			
Acetonitrile NTC - n	to quals	49	a	ı		70-130	I			
Trichlorofluoromethan€		102		·		70-130	I			
iso-Propyl Alcohol		82		I		40-160	Ĩ			
Acrylonitrile		88		I		70-130	Ĩ			
Pentane		85		I		70-130	Ţ			
Ethyl ether		88		I		70-130	I			
Page 23 of 51									Ацяна	

atch Quality Control Lab Number: L2164604 Report Date: 12/10/21	CSD %Recovery RPD 200 Aual Limits Aual Limits Aual Limits Aual Limits Aual Limits	VG1581371-3 TO-15	- 20-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 40-160 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -	- 70-130 -
PEC 70-130	LCS %Recovery Qual	ociated sample(s): 01-02 I	81	81	82	83	80	83	84	85	89	93	84	<mark>63</mark>	78	92	78	77	92	95	88	82	101	101
roject Name: FORMER DURASF roject Number: 3612162326.05	ameter	atile Organics in Air - Mansfield Lab Assi	1,1-Dichloropropene	Benzene	Carbon tetrachloride	Cyclohexane	Tertiary-Amyl Methyl Ether	Dibromomethane	1,2-Dichloropropane	Bromodichloromethane	1,4-Dioxane	Trichloroethene	2,2,4-Trimethylpentane	Methyl Methacrylate NTC - no quals	Heptane	cis-1,3-Dichloropropene	4-Methyl-2-pentanone	trans-1,3-Dichloropropene	1,1,2-Trichloroethane	Toluene	1,3-Dichloropropane	2-Hexanone	Dibromochloromethane	1,2-Dibromoethane

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Project Name:	FORMER DURASF	EC	La La	ab Control S Batch Qu	sample Al ality Contro	nalysis I	Lab N	umber:	L2164604
Project Number:	3612162326.05						Repor	t Date:	12/10/21
			70-130						
Parameter		LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in A	ir by SIM - Mansfield La	ab Associated sa	mple(s): 01	-02 Batch: WC	31581374-3	TO-15 SIM			
Propylene		62		ı		70-130	ı		25
Dichlorodifluoromethar	ЭС	82		ı		70-130	ı		25
Chloromethane		83		I		70-130	•		25
1,2-Dichloro-1,1,2,2-te	trafluoroethane	86				70-130	ı		25
Vinyl chloride		82				70-130	•		25
1,3-Butadiene		89		I		70-130			25
Bromomethane		86		ļ		70-130	ı		25
Chloroethane		80		I		70-130	·		25
Ethyl Alcohol NTC -	- no quals	67		I		40-160	·		25
Vinyl bromide		20		I		70-130	·		25
Acrolein		76		I		60-113	ı		25
Acetone NTC - nc	o quals	<mark>99</mark>		I		40-160	I		25
Trichlorofluoromethan6	0	78		I		70-130	∎		25
iso-Propyl Alcohol		80		I		40-160	∎		25
Acrylonitrile		82				70-130	I		25
1,1-Dichloroethene		85		I		70-130	•		25
tert-Butyl Alcohol <sup>1</sup>		82		I		70-130	ı		25
Methylene chloride		66		Ţ		70-130	ı		25
3-Chloropropene		85		Ţ		70-130	ı		25
Carbon disulfide		84		I		70-130	·		25
1,1,2-Trichloro-1,2,2-T.	rifluoroethane	95		I		70-130	·		25
trans-1,2-Dichloroethe	пе	75		ļ		70-130	I		25
1,1-Dichloroethane		62		I		70-130	I		25



L2164604 12/10/21	RPD Limits		25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Number: oort Date:	Qual																								
Lab Rep	RPD	_	I	ı	ı	I	I	I	ı		I	I		I	I	•	ı	•	I	ı	ı	I	I	ı	I
ualysis ol	%Recovery Limits	TO-15 SIN	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130	70-130
Sample A ality Contr	Qual	31581374-3																							
Lab Control S Batch Qu	LCSD %Recovery	01-02 Batch: W	ı	ı		·	·	•	ı	ı	·	•	ı	I	I			·	I	·		I	·	I	I
70-130	Qual	tmple(s):		ø																					
C	LCS %Recovery	tb Associated se	78	69	77	82	85	84	76	75	78	79	74	78	80	75	78	79	82	88	81	87	74	73	86
FORMER DURASP 3612162326.05		ir by SIM - Mansfield La		- no quals														C.				۵		ene	
Project Name: Project Number:	Parameter	Volatile Organics in Ai	Methyl tert butyl ether	Vinyl acetate NTC	2-Butanone	cis-1,2-Dichloroethene	Ethyl Acetate	Chloroform	Tetrahydrofuran	1,2-Dichloroethane	n-Hexane	1,1,1-Trichloroethane	Benzene	Carbon tetrachloride	Cyclohexane	Dibromomethane <sup>1</sup>	1,2-Dichloropropane	Bromodichloromethane	1,4-Dioxane	Trichloroethene	2,2,4-Trimethylpentane	cis-1,3-Dichloropropen	4-Methyl-2-pentanone	trans-1,3-Dichloroprope	1,1,2-Trichloroethane

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## Initial Calibration Summary Form 6 Air Volatiles

Client	: Wood Env & Infra	structure Solutions	Lab Number	: L2164604
Project Name	: FORMER DURA	SPEC	Project Number	: 3612162326.05
Instrument ID	: AIRLAB19		Ical Ref	: ICAL18472
Calibration dates	: 11/16/21 22:28	11/17/21 03:07		

Calibration Files

0.2 =r1911383.D 0.5 =r1911384.D 1.0 =r1911385.D 5.0 =r1911386.D 10 =r1911387.D 20 =r1911388.D 50 =r1911389.D 100 =r1911390.D

	Compound	0.2	0.5	1.0	5.0	10	20	50	100	Avg	%RSD
37)	cis-1,2-dichloroethene	0.758	0.754	0.762	0.726	0.716	0.697	0.657	0.604	0.7093	7.80
38)	Ethyl Acetate	0.191	0.206	0.230	0.211	0.192	0.188	0.187	0.186	0.1990	7.82
39) C	chloroform	0.960	0.983	0.955	0.879	0.851	0.804	0.721	0.639	0.8490	14.43
40)	Tetrahydrofuran	0.831	0.816	0.851	0.802	0.787	0.746	0.702	0.686	0.7777	7.76
41)	2,2-dichloropropane	0.914	0.895	0.902	0.822	0.815	0.783	0.703	0.610	0.8055	13.17
42) C	1,2-dichloroethane	0.718	0.733	0.719	0.665	0.641	0.617	0.573	0.545	0.6513	10.78
43) I	1,4-difluorobenzene			I:	STD						
44) C	hexane	0.532	0.492	0.491	0.473	0.481	0.489	0.456	0.407	0.4778	7.50
45)	diisopropyl ether	0.228	0.229	0.233	0.218	0.218	0.214	0.202	0.186	0.2159	7.27
46)	tert-butyl ethyl ether	0.869	0.866	0.893	0.838	0.834	0.824	0.794	0.753	0.8340	5.38
47) s	1,2-dichloroethane-D4	0.323	0.313	0.313	0.320	0.317	0.323	0.321	0.317	0.3184	1.31
48) C	1,1,1-trichloroethane	0.402	0.374	0.373	0.357	0.352	0.351	0.331	0.303	0.3552	8.36
49)	1,1-dichloropropene	0.382	0.362	0.359	0.347	0.344	0.343	0.323	0.299	0.3450	7.31
50) C	benzene	1.028	0.863	0.807	0.746	0.726	0.718	0.674	0.625	0.7733	16.36
51)	thiophene	0.473	0.454	0.441	0.417	0.411	0.413	0.388	0.357	0.4192	8.82
52) C	carbon tetrachloride	0.371	0.339	0.340	0.321	0.324	0.323	0.299	0.258	0.3219	10.23
53)	cyclohexane	0.549	0.506	0.503	0.488	0.494	0.503	0.490	0.441	0.4966	5.96
54)	tert-amyl methyl ether	0.766	0.722	0.747	0.733	0.732	0.710	0.663	0.636	0.7137	6.10
55)	dibromomethane	0.219	0.208	0.214	0.202	0.199	0.193	0.179	0.168	0.1977	8.74
56) C	1,2-dichloropropane	0.308	0.291	0.299	0.276	0.275	0.271	0.257	0.250	0.2782	7.24
57)	bromodichloromethane	0.471	0.448	0.471	0.442	0.437	0.426	0.394	0.368	0.4322	8.31
58) C	1,4-dioxane	0.165	0.166	0.166	0.169	0.167	0.168	0.156	0.146	0.1629	4.77
59) C	trichloroethene	0.260	0.262	0.256	0.245	0.242	0.234	0.216	0.198	0.2391	9.45
60) C	2,2,4-trimethylpentane	1.728	1.664	1.629	1.475	1.448	1.445	1.378	1.257	1.5030	10.53
61)	methyl methacrylate		0.438	0.445	0.475	0.472	0.449	0.430	0.425	0.4477	4.38
62)	heptane	0.666	0.635	0.624	0.585	0.578	0.569	0.543	0.517	0.5896	8.34
63) C	cis-1,3-dichloropropene	0.387	0.383	0.391	0.391	0.393	0.385	0.363	0.351	0.3805	4.04
64) C	4-methyl-2-pentanone		0.680	0.683	0.688	0.712	0.688	0.651	0.625	0.6752	4.21
65)	trans-1,3-dichloropropene	0.340	0.331	0.362	0.382	0.385	0.379	0.357	0.347	0.3603	5.66
66) C	1,1,2-trichloroethane	0.262	0.239	0.251	0.251	0.244	0.239	0.223	0.215	0.2405	6.46
67) I	chlorobenzene-D5			I:	STD						
68) C	toluene	4.774	4.183	4.088	3.562	3.379	3.224	3.022	2.865	3.6370 🗸	18.04
69) s	toluene-D8	3.884	3.977	4.074	3.938	3.790	3.807	3.761	3.846	3.8847	2.74
70)	2-methylthiophene	2.667	2.732	2.753	2.503	2.384	2.341	2.199	2.138	2.4649	9.65
71)	1,3-dichloropropane	1.993	1.915	1.952	1.855	1.764	1.715	1.618	1.540	1.7942	9.07
72)	2-hexanone	2.845	2.778	2.914	2.777	2.775	2.762	2.649	2.525	2.7532	4.32



Data Path : O:\Forensics\Data Data File : r1911385.D Acq On : 16 Nov 2021 11:48 Operator : AIRLAB19:TS Sample : ITO15-LLSTD1.0 Misc : WG1573031 ALS Vial : O Sample Multipl	Airlab19\2 3 PM Lier: 1	2021\1:	l\1116T_I\		
Quant Time: Nov 18 09:59:18 20 Quant Method : O:\Forensics\Da Quant Title : TO-14A/TO-15 SI QLast Update : Wed Nov 17 08:2 Response via : Initial Calibra	)21 ata\Airlab1 IM/Full Sca 23:20 2021 ation	9\2023 an Ana	l\11\1116T_I lysis	\TFS19_211116.	M
CCAL FILE : O:\Forensics\Da Sub List : Default - All c	ata\Airlab1 compounds 1	9\2023 Listed	l\11\1116T_I	\r1911387.D	
Compound	R.T.	QIon	Response C	onc Units Dev	(Min)
Internal Standards					
1) bromochloromethane Standard Area = 3654	9.033	49	364289 Recovery	10.000 ppbV = 99.69%	0.00
43) 1,4-difluorobenzene	11.287	114	839805	10.000 ppbV	0.00
67) chlorobenzene-D5	16.033	54	Recovery 181927	= 104.89% 10.000 ppbV	0.00
Standard Area = 1897	721		Recovery	= 95.89%	
System Monitoring Compounds 47) 1,2-dichloroethane-D4 Spiked Amount 10.000 69) toluene-D8 Spiked Amount 10.000 90) bromofluorobenzene Spiked Amount 10.000	9.908 Range 70 14.075 Range 70 17.392 Range 70	65 - 130 98 - 130 95 - 130	262699 Recovery 741258 Recovery 481529 Recovery	9.874 ppbV = 98.74% 10.751 ppbV = 107.51% 10.387 ppbV = 103.87%	0.00 0.00 0.00
<pre>Target Compounds 2) chlorodifluoromethane 3) propylene 4) propane 5) dichlorodifluoromethane</pre>	3.508 3.532 3.556 3.610	51 41 29 85	28236 17479M6 22945 35504	Qva 1.042 ppbV 0.988 ppbV 1.051 ppbV 1.058 ppbV	alue 99 99 97
<pre>7) Freon-114 8) methanol 9) vinyl chloride 10) 1,3-butadiene 11) butane 12) acetaldehyde 13) bromomethane 14) chloroethane 15) ethanol 16) dichlorofluoromethane 17) vinyl bromide 18) acrolein 19) acetone 20) acetonitrile 21) trichlorofluoromethane 22) isopropyl alcohol</pre>	3.892 4.000 4.012 4.168 4.228 3.910 4.456 4.660 4.834 4.792 5.070 5.223 5.380 5.077 5.577 5.713	85 31 62 54 43 29 94 64 31 67 106 56 43 41 101 45	36573 45680 18522 14808 33230 52801 12569 10149 100668 33471 14336 6529 159627 21628M6 28606 90974	1.044 ppbV 5.682 ppbV 1.035 ppbV 1.035 ppbV 1.011 ppbV 1.081 ppbV 4.820 ppbV 1.033 ppbV 1.010 ppbV 6.718 ppbV 1.018 ppbV 0.990 ppbV 0.928 ppbV 5.507 ppbV 1.161 ppbV 1.052 ppbV 2.805 ppbV	98 99 99 99 100 98 97 98 100 100 95 100 100 100 100 100
23) acrylonitrile 24) pentane	5.957	53 43	13320M6 38445	1.182 ppbV 1.018 ppbV	99
·		-		· · T-T	

TFS19\_211116.M Thu Nov 18 10:28:02 2021

Data Path : O:\Forensics\Data\A Data File : r1911385.D Acq On : 16 Nov 2021 11:48 Operator : AIRLAB19:TS Sample : ITO15-LLSTD1.0 Misc : WG1573031 ALS Vial : O Sample Multipli	irlab19\2 PM er: 1	2021\1	1\1116T_I\		
Quant Time: Nov 18 09:59:18 202 Quant Method : O:\Forensics\Dat Quant Title : TO-14A/TO-15 SIM QLast Update : Wed Nov 17 08:23 Response via : Initial Calibrat	1 a\Airlab1 /Full Sca :20 2021 ion	19\202 an Ana	1\11\1116T lysis	_I\TFS19_211116.M	
CCAL FILE : O:\Forensics\Dat Sub List : Default - All co	a\Airlab1 mpounds ]	9\202 Listed	1\11\1116T I	_I\r1911387.D	
Compound	R.T.	QIon	Response	Conc Units Dev(Mi	_n)
68) toluene	14.192	91	74363	1.210 ppbV	97
70) 2-methylthiophene	14.267	97	50089	1.155 ppbV	100
71) 1,3-dichloropropane	14.225	76	35510	1.106 ppbV	99
72) 2-hexanone	14.517	43	53015	1.050 ppbV	98
73) 3-methylthiophene	14.475	97	50645	1.144 ppbV	100
74) dibromochloromethane	14.6/5	129	28846	1.102 ppbV	98
75) 1,2-dibromoethane	14.933 15 217	107 72	29673	1.055 pppv	98
70) Dulyi acetale 77) octane	15 308	73	28992	1.043  ppbv 1.124  ppbv	99
78) tetrachloroethene	15 417	166	23324	1 144  ppbV	99
79) 1.1.1.2-tetrachloroethane	16.067	131	20344	1.076  ppbV	98
80) chlorobenzene	16.075	112	51536	Vdqq 880.1	99
81) ethylbenzene	16.433	91	85877	1.077 ppbV	98
82) 2-ethylthiophene	16.467	97	59305	1.117 ppbV	98
83) m+p-xylene	16.592	91	142701	2.197 ppbV	98
84) bromoform	16.650	173	22415	1.071 ppbV	99
85) styrene	16.908	104	54624	1.076 ppbV	99
86) 1,1,2,2-tetrachloroethane	17.000	83	51419	1.134 ppbV	100
87) o-xylene	17.000	91	71731	1.141 ppbV	100
88) 1,2,3-trichloropropane	17.117	.75	41915	1.114 ppbV	99
89) nonane	17.208	43	/0334	1.129 ppbV	100
91) isopropyidenzene	17.500 17.575	105 77	90048 50065	1.165 pppv	98
92) Dromobelizelle 93) 2-chlorotoluono	17.373	126	22605	1.086  ppbV	97
94) n-propylbenzene	17 925	120	28361	1.000  ppbV 1.073 mpbV	90
95) 4-chlorotoluene	17 950	126	21801	1 077  ppbV	94
96) 4-ethyl toluene	18.042	105	102391	1.102  ppb	100
97) 1,3,5-trimethylbenzene	18.108	105	86361	Vdqq 779.0	100
98) tert-butylbenzene	18.433	119	87864	1.131 ppbV	100
99) 1,2,4-trimethylbenzene	18.433	105	84665	1.145 ppbV	99
100) decane	18.517	57	78668	1.095 ppbV	100
101) Benzyl Chloride	18.550	91	57590	0.941 ppbV	98
102) 1,3-dichlorobenzene	18.558	146	41409	1.116 ppbV	97
103) 1,4-dichlorobenzene	18.608	146	40181	1.091 ppbV	98
104) sec-butylbenzene	18.650	105	121999	1.163 ppbV	98
105) 1,2,3-trimethylbenzene	18.767	105	88557	1.141 ppbV	100
105) p-isopropyltoluene	18./6/	119	105468	1.15/ ppbV	98
100) n butulbar	10.000	146 01	31139	1.0/2 ppbV	98
100) indon	19.U92	91 117	0/009 01007	1.042 pppV	90 00
IUUJ IIUdii	10.940		91921	ναqq ευτ.τ	59

TFS19\_211116.M Thu Nov 18 10:28:02 2021

Data Path : O:\Forensics\Data\Ai Data File : r1911865.D Acq On : 9 Dec 2021 10:00 F Operator : AIRLAB19:RY Sample : L2164604-02,3,250,25 Misc : WG1581371,ICAL18472 ALS Vial : 0 Sample Multiplie	rlab19\2 M 60 er: 1	2021\1	2\1209T\				
Quant Time: Dec 10 11:45:22 2021 Quant Method : O:\Forensics\Data Quant Title : TO-14A/TO-15 SIM/ QLast Update : Thu Nov 18 10:11: Response via : Initial Calibrati	Airlab1 Full Sca 32 2021 .on	.9\202 in Ana	1\12\1209T\ lysis	\TFS19_2111	16.M		
CCAL FILE : O:\Forensics\Data Sub List : TO15-NY-7-SIM	\Airlab1	9\202	1\12\1209T\	r1911856.I	)		
Compound	R.T.	QIon	Response	Conc Units	s Dev	(Min	)
Internal Standards 1) bromochloromethane Standard Area = 426336	9.04	49	389786 Becover	10.000 pr	bV 43%	0	.00
43) 1,4-difluorobenzene	11.29	114	860346	10.000 pr		0	.00
67) <mark>chlorobenzene-D5</mark> Standard Area = 189202	16.03	54	174184 Recover	ry = 93 10.000 pp ry = 92	2.06%	0	.00
System Monitoring Compounds							
Target Compounds					Qva	alue	:
<pre>5) dichlorodifluoromethane 6) chloromethane 7) Freon-114 10) 1,3-butadiene 13) bromomethane 14</pre>	3.61 3.78 3.90 4.17 0.00	85 50	14926 7519 0 0 0	0.428 0.512 N.D. N.D. N.D.	Vdqq Vdqq		100 98
14) chloroethane 15) ethanol 17) vinyl bromide	0.00 4.85 0.00	31	169486 0	N.D. 10.448 N.D.	ppbV		99
19) acetone 21) trichlorofluoromethane 22) isopropyl alcohol 27) tertiary butyl alcohol	5.40 5.58 5.74 6.46	43 101 45	66365M6 5787 21594 0	5 2.148 0.209 0.614	ppbV ppbV ppbV		99 99
<pre>28) methylene chloride 29) 3-chloropropene 30) carbon disulfide</pre>	6.51 0.00 6.80	49	2607 0 0	0.129 N.D. N.D.	ppbV d		95
<pre>31) Freon 113 32) trans-1,2-dichloroethene 33) 1,1-dichloroethane 34) MTBE</pre>	6.85 0.00 0.00 7.97	101	2048 0 0 0	0.074 N.D. N.D. N.D.	ppbV		94
36) 2-butanone 38) Ethyl Acetate 39) chloroform	8.38 9.18 9.20	43	6688 0 0	0.137 N.D. N.D.	ppbV	#	96
40) Tetrahydrofuran 42) 1,2-dichloroethane	9.67 0.00	42	5033 0	0.166 N.D.	ppbV		90
<pre>44) hexane 50) benzene 53) cyclohexane 56) 1,2-dichloropropane 57) bromodichloromethane</pre>	9.13 10.84 11.15 0.00 0.00	57 78 56	4988 12271 6375 0 0	0.121 0.184 0.149 N.D. N.D.	PpbV ppbV ppbV	#	57 99 95

TFS19\_211116.M Fri Dec 10 11:45:41 2021

Data Path : O:\Forensics\Data\Ain Data File : r1911865.D Acq On : 9 Dec 2021 10:00 PM Operator : AIRLAB19:RY Sample : L2164604-02,3,250,250 Misc : WG1581371,ICAL18472 ALS Vial : 0 Sample Multiplier	rlab19\2 4 ) r: 1	021\1	2\1209T\		
Quant Time: Dec 10 11:45:22 2021 Quant Method : O:\Forensics\Data\ Quant Title : TO-14A/TO-15 SIM/H QLast Update : Thu Nov 18 10:11:3 Response via : Initial Calibratic	\Airlab1 Full Sca 32 2021 on	9\202 n Ana	1\12\1209T lysis	\TFS19_211116.M	
CCAL FILE : O:\Forensics\Data` Sub List : TO15-NY-7-SIM	\Airlab1	9\202	1\12\1209T	\r1911856.D	
Compound	R.T.	QIon	Response	Conc Units Dev(Min	)
<pre>58) 1,4-dioxane 60) 2,2,4-trimethylpentane 62) heptane 63) cis-1,3-dichloropropene 64) 4-methyl-2-pentanone 65) trans-1,3-dichloropropene</pre>	0.00 12.12 12.44 0.00 13.14 0.00	57 43	0 12617 3997 0 0 0	N.D. 0.098 ppbV 0.079 ppbV N.D. N.D. N.D. N.D.	- 98 97
<ul> <li>66) 1,1,2-trichloroethane</li> <li>68) toluene</li> <li>72) 2-hexanone</li> <li>74) dibromochloromethane</li> <li>75) 1,2-dibromoethane</li> <li>80) chlorobenzene</li> </ul>	$ \begin{array}{c} 0.00 \\ 14.19 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \\ 0.00 \end{array} $	91	0 32059 0 0 0 0	N.D. 0.506 ppbV✓ N.D. d N.D. N.D. N.D. N.D.	100
<pre>81) ethylbenzene 83) m+p-xylene 84) bromoform 85) styrene 86) 1,1,2,2-tetrachloroethane</pre>	16.43 16.58 0.00 16.92 0.00	91 91	6019 17868 0 0 0	0.079 ppbV 0.292 ppbV N.D. N.D. N.D. N.D.	99 98
87) o-xylene 96) 4-ethyl toluene 97) 1,3,5-trimethylbenzene	17.00 18.04 18.11	91	8278 0 0	0.138 ppbV N.D. N.D.	99
<pre>99) 1,2,4-trimethylbenzene 101) Benzyl Chloride 102) 1,3-dichlorobenzene 103) 1,4-dichlorobenzene 107) 1,2-dichlorobenzene 115) 1,2,4-trichlorobenzene 119) hexachlorobutadiene</pre>	18.43 0.00 18.61 18.61 0.00 0.00 0.00	105	6993 0 0 0 0 0 0	0.103 ppbV # N.D. d N.D. N.D. N.D. N.D. N.D. N.D. N.D.	54
<pre>107) 1,2-dichlorobenzene 115) 1,2,4-trichlorobenzene 119) hexachlorobutadiene (#) = qualifier out of range (m)</pre>	$0.00 \\ 0.00 \\ 0.00 \\ \\ 0 = manu$	al in	0 0  tegration	N.D. N.D. N.D. (+) = signals summe	– d

TO-15

Sample ID: IAQ-FIRST-112021 TC:Toluene ICAL Level:STD1.0 Val File Result for TC:1.91

## Ical Calc

Area TC	74363	1	4.774
Area IS	181927	2	4.183
		3	4.088
Conc TC	1.21	4	3.562
Conc IS	10	5	3.379
		6	3.224
RRF =	3.378115	7	3.022
		8	2.865
		9	
		10	
		Avg RRF =	3.637125
		Std Dev =	0.65588
		%RSD =	18.03293

## Sample Calc

Area TC	32059	Pi	
Area IS	174184	Pf	
		Canister DF	1
Conc IS	10	Total DF	
Avg RRF	3.637125		
Conc TC (ng/L) =	0.506038	Conc (ug/m3) = Final Conc (ug/m3) =	0.506038 <b>1.905451</b>

Notes: Green = matched reported value Red = did not match reported value Repor Factor Response

Ĥ 0: \Forensics \Data \Airlab19 \2021 \11 \1116SIM Ŋ Analysi 18 08:47:34 2021 O-14A/TO-15 SIM/Full Scan Calibration TSIM19 211116.M Nov Initial Thu ] File •• •• ••• ൻ ath ile Við •• Φ Calibration Updat Response ഫ് Гц Method Method Φ Last itl E

Ev2.D Ev2.D 21.24 2.99 2.99 6.35 6.35 6.35 6.35 6.35 7.25 9.13 7.33 7.95 RSD 80 I  $\infty$ 0/0 -911384 -911389 821 676 676 419 4983 2206 2970 4489 2576 5168 5849 3756 6634 4867 6033 2140 0435 4 σ  $\circ$  $\circ$ 000 .7420 680 3419 1089 7567 6117 7078 51 Avg  $\tilde{m}$ m ŵ m N す =r1 . 50.0 = r1• . . . . . . . . • . . . • 0 0 0 00 0 1 0 0 M N 0  $\circ$ 0 000 0  $\circ$  $\circ$ J  $\leftarrow$  $\neg$  $\neg \neg$ 4 0.316 0.331 0.671 0.671 0.484 0.180 0.254 0.2531 0.355 0.355 0.355 0.355 0.355 0.355 0.355 0.223 .449 .316 .331 50.0 74 ഹ. . ص 0 0  $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$   $\square$ 0 0 0 0 0 848 744 602 052 015 015 7280 7280 ΩО ഹ തയത 0 4 Ev2.1 .47 .61 30 . . Ev2. 0  $\sim$ 0 0000<mark>0</mark>000000000000 00 =r1911383 10.0 649 0=r1911388 50 4. • 0 00 00  $\circ$ 00 00  $^{\circ}$ 0 1 00 00  $\square$   $\square$   $\square$   $\square$   $\square$   $\square$  $\neg \lor$ 4 M 0  $\infty$ 0.465 0.317 0.353 0.740 0.326 0.4790.2790.2790.1660.24390.24441.4430.2440.24390.3810.3810.3810.2524.050 2.766 1.520 1.642 1.191 1.071 2.759 4.509 3.639 638 ഹ °. 0.66! ഹ . 0.2 .  $\infty$ 0 4.183 2.860 1.600 1.717 1.1399 4.865 3.981 3.981 0.498 0.215 0.299 0.470 0.165 0.257 1.602 0.604 0.309 0.372 0.811 0.342 0.498 .387 .656 .355  $\overline{\sim}$  $\infty$  $\odot$ 1.0  $\tilde{\infty}$ m .71 4 Ev2.D Ev2.D 0 0 0 00 Ţ 0.491 0.315 0.375 0.375 0.342 0.503 0.219 0.219 0.374 0.374 0.374 0.374 0.374 0.374 0.670 4.055 2.711 1.572 1.699 1.699 1.267 1.151 2.983 3.969 3.969 .266 4 4 0.737 ഹ .34. . Т =r1911382 =r1911387 0 STD Ŭ L 00 Ą 3.935 2.725 1.598 1.740 1.320 1.320 3.065 5.043 .534 .323 .323 .323 .329 .389 .389 .389 .389 .3235 .2355 .179 .280 .719 .649 .362 .743 404 --IS. .861 Ñ 0.2 Н 0=r1Т 0 0 00  $\overline{}$ 0 0 4 0.256 0.286 0.437 0.181 0.271 .332  $^{\circ}$ σ .691 Q .197 0.1 . 38 . .92 Ч. 0 1 0  $\leftarrow$ 0 00 0 0 00 ыm 0 4 0 H H H H -.282 .336 .436 1.457 1.573 1.573 1.222 1.136 2.844 4.851 3.814 .05 .235 60 49 6 ω σ ŝ .31, .34 97 Т  $\sim$ Ev2. Ev2 Ē. м́. i  $\sim$ 0 Í 0 0 0 0 00 0 0 0 00  $^{\circ}$ 0.351 0.502 1.479 1.585 1.585 1.319 1.192 4.675 3.768 0.05=r1911381 5.0 =r1911386 60 02 Q 9 .337 Ч С σ  $\sim \infty$ . 378 . 233 ഹ ω 0 <u>ن</u> с.  $\sim$ ÷. . 0 00 0 0  $\circ$ 00 0 4 1,2-dichloroethane-D4 1,1,1-trichloroethane trans-1, 3-dichloro... 1,1,2-trichloroethane etrachloride bromodichloromethane : -methyl-2-pentanone ibromochloromethane 1,2-dichloropropane cis-1,3-dichloropr ,4-difluorobenzen 2,2,4-trimethylpen 1,1,1,2-tetrachlor
chlorobenzene -dichloroethane Φ 1,2-dibromoethane etrachloroethen chlorobenzene-D5 trichloroethene Dibromomethane iles \_\_Ev2.D thylbenzene cyclohexane 1,4-dioxane -hexanone oluene-D8 Ч Compound heptane enzene oluene .02=r1911380 T carbon =r1911385<sup>-</sup> exane  $\sim$ 1 1,  $\neg$ Õ 4 Ē ũ  $\sim$ ರ Ť . (1) υυυ  $\bigcirc$ НО ФООО U υU υ нυ S υυ υυυ 0 51) 522) 552) 552) 552) 60) 60) 60) 322 50 0  $\leftarrow$ 

021  $\sim$ ഹ 4. . 39 10 ω Ч Nov Thu ≥. 6 21111 σ TSIM1

-xylene

-d+u

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Data Path : O:\Forensics\Data\A Data File : r1911385 Ev2.D Acq On : 16 Nov 2021 11:48 Operator : AIRLAB19:TS Sample : ITO15-SIMSTD1.0 Misc : WG1573032 ALS Vial : O Sample Multipli	Airlab19\2 PM .er: 1	2021\1:	1\1116SIM_I\		
Quant Time: Nov 18 08:42:47 202 Quant Method : O:\Forensics\Dat Quant Title : TO-14A/TO-15 SIM QLast Update : Wed Nov 17 09:26 Response via : Initial Calibrat	21 ca\Airlab1 4/Full Sca 5:44 2021 cion	19\2023 an Ana	l\11\1116SIM lysis	I_I\TSIM19_2111	.16.M
CCAL FILE : O:\Forensics\Dat Sub List : Default - All co	a\Airlab mpounds	19\202: Listed	1\11\1116SIM	I_I\r1911386_Ex	72.D
Compound	R.T.	QIon	Response C	onc Units Dev	(Min)
Internal Standards 1) bromochloromethane Standard Area = 23868	9.025	49	241015 Recovery	10.000 ppbV	0.00
33) 1,4-difluorobenzene	11.280	114	568422	10.000 ppbV	0.00
51) chlorobenzene-D5 Standard Area = 12133	16.033	54	Recovery 119925 Recovery	$ \begin{array}{rcl}     103.08\% \\     10.000 & ppbV \\     &= & 98.83\% \end{array} $	0.00
System Monitoring Compounds 35) 1,2-dichloroethane-D4 Spiked Amount 10.000 F 53) toluene-D8 Spiked Amount 10.000 F 67) bromofluorobenzene Spiked Amount 10.000 F	9.908 Range 70 14.075 Range 70 17.383 Range 70	65 - 130 98 - 130 95 - 130	175476 Recovery 501689 Recovery 329179 Recovery	9.743 ppbV = 97.43% 10.329 ppbV = 103.29% 9.988 ppbV = 99.88%	0.00 0.00 0.00
<pre>Target Compounds 2) propylene 3) dichlorodifluoromethane 4) chloromethane 5) Freon-114 6) vinyl chloride 7) 1,3-butadiene 8) bromomethane 9) chloroethane 10) ethanol 11) vinyl bromide 12) acrolein 13) acetone 14) trichlorofluoromethane 15) isopropyl alcohol 16) acrylonitrile 17) 1,1-dichloroethene 18) tertiary butyl alcohol 19) methylene chloride 20) 3-chloropropene 21) carbon disulfide 22) Freon 113 23) trans-1,2-dichloroethene 24) 1 1-dichloroethane</pre>	3.526 3.604 3.772 3.892 4.012 4.162 4.456 4.660 4.828 5.070 5.227 5.573 5.710 5.953 6.334 6.430 6.502 6.640 6.784 6.826 7.625 7.850	41 85 50 85 62 54 64 106 53 104 53 61 94 101 56 101 63	11376M6 23624 9599 24500 12369 9942 8551 6825 68931 9859 5105M6 105043 20027 60239 6530 18972 27088 13542 19464 29624M6 18967 19571M6 25390	Qva 1.006 ppbV 1.002 ppbV 1.002 ppbV 0.996 ppbV 1.002 ppbV 0.960 ppbV 1.033 ppbV 1.033 ppbV 1.006 ppbV 6.555 ppbV 0.997 ppbV 1.068 ppbV 1.068 ppbV 2.642 ppbV 0.872 ppbV 1.045 ppbV 1.045 ppbV 1.055 ppbV 1.055 ppbV 1.022 ppbV 1.022 ppbV 1.024 ppbV 1.024 ppbV 1.025 ppbV	alue 99 98 92 92 97 93 95 100 94 100 94 100 97 95 95 95 95

TSIM19\_211116.M Thu Nov 18 10:38:14 2021

Page: 1

Quantitation Report (QT Reviewed)

Data Path : C Data File : r Acq On : 1 Operator : A Sample : I Misc : W ALS Vial : C	0:\Forensics\Data\Ai 21911385 Ev2.D .6 Nov 2021 11:48 F AIRLAB19:TS 2TO15-SIMSTD1.0 G1573032 Sample Multiplie	rlab19\2 PM er: 1	2021\1	1\1116SIM_	Ι\		
Quant Time: N Quant Method Quant Title QLast Update Response via	Nov 18 08:42:47 2021 : O:\Forensics\Data : TO-14A/TO-15 SIM/ : Wed Nov 17 09:26: : Initial Calibrati	Airlab1 Full Sca 44 2021 .on	19\202 an Ana	1\11\1116S lysis	IM_I\TSIM19	9_211116.	М
CCAL FILE Sub List	: O:\Forensics\Data : Default - All com	\Airlab1 pounds ]	9\202 Listed	1\11\1116s	IM_I\r19113	386_Ev2.D	)
Compo	ound	R.T.	QIon	Response	Conc Units	3 Dev(Min	1)
<pre>25) MTBE 26) vinyl a 27) 2-butan 28) cis-1,2 29) Ethyl A 30) chlorof 31) Tetrahy 32) 1,2-dic 34) hexane 36) 1,1,1-t 37) benzene 38) carbon 39) cyclohe 40) Dibromc 41) 1,2-dic 42) bromodi 43) 1,4-dic 43) 1,4-dic 43) 1,4-dic 44) trichlc 45) 2,2,4-t 46) heptane 47) cis-1,3 48) 4-methy 49) trans-1 50) 1,1,2-t 52) toluene 54) 2-hexan 55) dibromc 56) 1,2-dik 57) tetrach 58) 1,1,1,2 59) chlorok 60) ethylbe 61) m+p-xyl 62) bromofc</pre>	acetate one -dichloroethene acetate form drofuran chloroethane tetrachloride exane methane chloropropane chloromethane proethene rimethylpentane -dichloropropene 1-2-pentanone , 3-dichloropropene chloromethane chl	7.942 8.083 8.342 9.158 9.192 9.642 10.025 9.108 10.308 10.308 10.833 11.007 11.147 11.747 12.067 12.067 12.067 12.067 12.067 12.433 13.058 13.108 13.675 13.867 14.192 14.508 14.667 14.933 15.417 16.058 16.0592 16.650	$\begin{array}{c} 73\\ 43\\ 61\\ 83\\ 42\\ 62\\ 57\\ 78\\ 11\\ 59\\ 33\\ 88\\ 13\\ 75\\ 43\\ 75\\ 43\\ 75\\ 99\\ 1312\\ 106\\ 1312\\ 91\\ 3\end{array}$	40012 31980 3329 18527 5274 23472 19878 17293 27404 21169 46127 19425 28279 12198 16985 26727 9396 14633 91046 34314 21979 37281 20178 14213 49634 34295 19187 20594 16781 13678 35323 58344 95476 14254	$\begin{array}{c} 1.103\\ 1.077\\ 1.089\\ 1.068\\ 1.077\\ 1.096\\ 1.043\\ 1.078\\ 1.037\\ 1.054\\ 1.096\\ 1.047\\ 1.038\\ 1.068\\ 1.071\\ 1.070\\ 0.995\\ 1.054\\ 1.071\\ 1.070\\ 0.995\\ 1.054\\ 1.110\\ 1.077\\ 0.993\\ 0.981\\ 0.932\\ 0.991\\ 1.138\\ 1.034\\ 1.053\\ 1.046\\ 1.175\\ 1.065\\ 1.067\\ 1.079\\ 2.188\\ 1.037\\ \end{array}$	ppbV         ppbV <t< td=""><td>987 964 988 990 990 990 990 990 990 990 990 990</td></t<>	987 964 988 990 990 990 990 990 990 990 990 990
64) 1,1,2,2 65) o-xyler 66) 1,2,3-1 68) isoprop 69) Bromobe	-tetrachloroethane e richloropropane oylbenzene enzene	17.000 17.000 17.108 17.500 17.567	83 91 75 105 77	34184 48061 28229 64326 36531	1.067 1.091 1.064 1.095 1.064	ppbV ppbV ppbV ppbV ppbV	99 95 98 98 98

TSIM19\_211116.M Thu Nov 18 10:38:14 2021

Data Path : O:\Forensics\I Data File : r1911864 Ev2.I Acq On : 9 Dec 2021 Operator : AIRLAB19:RY Sample : L2164604-01,3, Misc : WG1581374,ICAI ALS Vial : 0 Sample Mul	Data\Air 9:19 PM 250,250 18473 tiplier	lab19\2	2021\1	2\1209SIM\			
Quant Time: Dec 10 06:26:4 Quant Method : O:\Forensic Quant Title : TO-14A/TO-1 QLast Update : Thu Nov 18 Response via : Initial Cal CCAL FILE : O:\Forensic	10 2021 cs\Data\ 5 SIM/F 08:47:3 ibratio cs\Data\	Airlab ull Sca 4 2021 n Airlab	19\202 an Ana 19\202	1\12\1209S: lysis 1\12\1209S:	IM\TSIM19 IM\r19118	9_211116 358_Ev2.	5.M .D
Sub List : /-NY-SIM -	•	ייי מ	OTop	Bogbobgo	Conglin	ita Dau	(Min)
		R.I.	Q1011				
<pre>Internal Standards 1) bromochloromethane Standard Area = 33) 1,4-difluorobenzene Standard Area = 51) chlorobenzene-D5</pre>	278658 649423	9.03 11.28 16.03	49 114 54	255603 Recover 582366 Recover 111322	10.000 ry = 10.000 ry = 10.000	ppbV 91.73% ppbV 89.67% ppbV	0.00 0.00 # 0.00
Standard Area =	125976			Recover	ry =	88.37%	
System Monitoring Compour	nds						
<pre>Target Compounds    6) vinyl chloride    17) 1,1-dichloroethene    28) cis-1,2-dichloroether    36) 1,1,1-trichloroethar    38) carbon tetrachloride    44) trichloroethene</pre>	ene ne	0.00 0.00 0.00 0.00 11.01 0.00	117	0 0 0 1303 0	N.1 N.1 N.1 0.00 N.1	Qva D. D. D. C. 65 ppbV	alue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

TO-15 SIM

Sample ID: IAQ-FIRST-112021 TC: Carbon tetrachloride ICAL Level: STD1.0 Val File Result for TC: 0.409

## Ical Calc

Area TC	19425	1	0.36
Area IS	568422	2	0.346
		3	0.361
Conc TC	1.047	4	0.389
Conc IS	10	5	0.342
		6	0.342
RRF =	0.326395	7	0.326
		8	0.327
		9	0.323
		10	0.303
		Avg RRF =	0.3419
		Std Dev =	0.024205
		%RSD =	7.07953

## Sample Calc

Area TC	1303	Pi	
Area IS	582366	Pf	
		Canister DF	1
Conc IS	10	Total DF	
Avg RRF	0.3419		
Conc TC (ng/L) =	0.065441	Conc (ug/m3) = Final Conc (ug/m3) =	0.065441 <b>0.411366</b>

Notes: Green = matched reported value Red = did not match reported value

## **APPENDIX E – LABORATORY REPORT**



## ANALYTICAL REPORT

Lab Number:	L2164604
Client:	Wood Env & Infrastructure Solutions, Inc 209-35 Northern Blvd Suite 203 Bayside, NY 11361
ATTN:	Eric Weinstock
Phone:	(347) 836-4445
Project Name:	FORMER DURASPEC
Project Number:	3612162326.05
Report Date:	12/10/21

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806 508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name:FORMER DURASPECProject Number:3612162326.05

 Lab Number:
 L2164604

 Report Date:
 12/10/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2164604-01	IAQ-BASEMENT-112021	AIR	JAMAICA, NY	11/19/21 17:03	11/22/21
L2164604-02	IAQ-FIRST-112021	AIR	JAMAICA, NY	11/19/21 17:06	11/22/21



## Project Name:FORMER DURASPECProject Number:3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

#### **Case Narrative**

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.



Project Name: FORMER DURASPEC Project Number: 3612162326.05 
 Lab Number:
 L2164604

 Report Date:
 12/10/21

#### **Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on November 11, 2021. The canister certification results are provided as an addendum.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Christoph J Christopher J. Anderson

Authorized Signature:

Title: Technical Director/Representative

Date: 12/10/21



# AIR



Project Name:	FORMER DURASPEC	Lab Number:	L2164604
Project Number:	3612162326.05	Report Date:	12/10/21

Lab ID: Client ID: Sample Location:	L2164604-01 IAQ-BASEMEN JAMAICA, NY	T-112021				Date Date Field	Collecte Receive Prep:	ed: 11/19 ed: 11/22 Not \$	9/21 17:03 2/21 Specified
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Air 48,TO-15 12/09/21 21:19 RY								
			ppbV			ug/m3			Dilution
Parameter		Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in	Air - Mansfield La	ıb							
Dichlorodifluoromethane		0.451	0.200		2.23	0.989			1
Chloromethane		0.525	0.200		1.08	0.413			1
1,2-Dichloro-1,1,2,2-tetra	afluoroethane	ND	0.200		ND	1.40			1
1,3-Butadiene		ND	0.200		ND	0.442			1
Bromomethane		ND	0.200		ND	0.777			1
Chloroethane		ND	0.200		ND	0.528			1
Ethyl Alcohol		11.8	5.00		22.2	9.42			1

Etnyi Alconol	11.8	5.00	 22.2	9.42	 1
Vinyl bromide	ND	0.200	 ND	0.874	 1
Acetone	3.49	1.00	 8.29	2.38	 1
Trichlorofluoromethane	0.212	0.200	 1.19	1.12	 1
iso-Propyl Alcohol	0.936	0.500	 2.30	1.23	 1
tert-Butyl Alcohol	ND	0.500	 ND	1.52	 1
Methylene chloride	ND	0.500	 ND	1.74	 1
3-Chloropropene	ND	0.200	 ND	0.626	 1
Carbon disulfide	ND	0.200	 ND	0.623	 1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	 ND	1.53	 1
trans-1,2-Dichloroethene	ND	0.200	 ND	0.793	 1
1,1-Dichloroethane	ND	0.200	 ND	0.809	 1
Methyl tert butyl ether	ND	0.200	 ND	0.721	 1
2-Butanone	ND	0.500	 ND	1.47	 1
Ethyl Acetate	ND	0.500	 ND	1.80	 1
Chloroform	ND	0.200	 ND	0.977	 1
Tetrahydrofuran	ND	0.500	 ND	1.47	 1



Project Name:	FORMER DURASPEC
Project Number:	3612162326.05

 Lab Number:
 L2164604

 Report Date:
 12/10/21

#### SAMPLE RESULTS

# Lab ID:L2164604-01Client ID:IAQ-BASEMENT-112021Sample Location:JAMAICA, NY

Date Collected:	11/19/21 17:03
Date Received:	11/22/21
Field Prep:	Not Specified

Sample Depth:

	ppbV			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfiel	ld Lab							
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	ND	0.200		ND	0.705			1
Benzene	ND	0.200		ND	0.639			1
Cyclohexane	ND	0.200		ND	0.688			1
1,2-Dichloropropane	ND	0.200		ND	0.924			1
Bromodichloromethane	ND	0.200		ND	1.34			1
1,4-Dioxane	ND	0.200		ND	0.721			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
Xylene (Total)	ND	0.200		ND	0.869			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	0.477	0.200		1.80	0.754			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	ND	0.200		ND	0.869			1
p/m-Xylene	ND	0.400		ND	1.74			1
1,2-Dichloroethene (total)	ND	0.200		ND	0.793			1
Bromoform	ND	0.200		ND	2.07			1
Styrene	ND	0.200		ND	0.852			1
1,3-Dichloropropene, Total	ND	0.200		ND	0.908			1
1,1,2,2-Tetrachloroethane	ND	0.200		ND	1.37			1



Project Name:	FORMER DURASPEC
Project Number:	3612162326.05

Lab Number:	L2164604
Report Date:	12/10/21

# Lab ID:L2164604-01Client ID:IAQ-BASEMENT-112021Sample Location:JAMAICA, NY

Date Collected:11/19/21 17:03Date Received:11/22/21Field Prep:Not Specified

Sample Depth:

Sumple Deptil.		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfie	ld Lab							
o-Xylene	ND	0.200		ND	0.869			1
4-Ethyltoluene	ND	0.200		ND	0.983			1
1,3,5-Trimethylbenzene	ND	0.200		ND	0.983			1
1,2,4-Trimethylbenzene	ND	0.200		ND	0.983			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.200		ND	1.20			1
1,4-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2,4-Trichlorobenzene	ND	0.200		ND	1.48			1
Hexachlorobutadiene	ND	0.200		ND	2.13			1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	92		60-140
Bromochloromethane	89		60-140
chlorobenzene-d5	88		60-140



Project Name:	FORMER DURASPEC	Lab Number:	L2164604
Project Number:	3612162326.05	Report Date:	12/10/21

Lab ID:	L2164604-01	Date Collected:	11/19/21 17:03	
Client ID:	IAQ-BASEMENT-112021	Date Received:	11/22/21	
Sample Location:	JAMAICA, NY	Field Prep:	Not Specified	
Sample Depth:	A.:.			

Matrix:	Alf
Anaytical Method:	48,TO-15-SIM
Analytical Date:	12/09/21 21:19
Analyst:	RY

	ppbV			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - N	Mansfield Lab							
Vinyl chloride	ND	0.020		ND	0.051			1
1,1-Dichloroethene	ND	0.020		ND	0.079			1
cis-1,2-Dichloroethene	ND	0.020		ND	0.079			1
1,1,1-Trichloroethane	ND	0.020		ND	0.109			1
Carbon tetrachloride	0.065	0.020		0.409	0.126			1
Trichloroethene	ND	0.020		ND	0.107			1
Tetrachloroethene	0.037	0.020		0.251	0.136			1
1,2-Dichloroethene (total)	ND	0.020		ND	0.079			1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	90		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	88		60-140



Project Name:	FORMER DURASPEC	Lab Number:	L2164604
Project Number:	3612162326.05	Report Date:	12/10/21

Lab ID: Client ID:	L2164604-02 IAQ-FIRST-112	021				Date Collected: Date Received:		ed: 11/1 ed: 11/2	11/19/21 17:06 11/22/21	
Sample Location:	JAMAICA, NY					Field	Prep:	Not \$	Specified	
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Air 48,TO-15 12/09/21 22:00 RY									
			ppbV			ug/m3			Dilution	
Parameter		Results	RL	MDL	Results	RL	MDL	Qualifier	Factor	
Volatile Organics in	Air - Mansfield La	ab								
Dichlorodifluoromethane	•	0.428	0.200		2.12	0.989			1	
Chloromethane		0.512	0.200		1.06	0.413			1	
1,2-Dichloro-1,1,2,2-tetra	afluoroethane	ND	0.200		ND	1.40			1	
1,3-Butadiene		ND	0.200		ND	0.442			1	
Bromomethane		ND	0.200		ND	0.777			1	
Chloroethane		ND	0.200		ND	0.528			1	
Ethyl Alcohol		10.4	5.00		19.6	9.42			1	
Vinyl bromide		ND	0.200		ND	0.874			1	
Acetone		2.15	1.00		5.11	2.38			1	
Trichlorofluoromethane		0.209	0.200		1.17	1.12			1	
iso-Propyl Alcohol		0.614	0.500		1.51	1.23			1	
tert-Butyl Alcohol		ND	0.500		ND	1.52			1	
Methylene chloride		ND	0.500		ND	1.74			1	
3-Chloropropene		ND	0.200		ND	0.626			1	
Carbon disulfide		ND	0.200		ND	0.623			1	
1,1,2-Trichloro-1,2,2-Trif	luoroethane	ND	0.200		ND	1.53			1	
trans-1,2-Dichloroethene	9	ND	0.200		ND	0.793			1	
1,1-Dichloroethane		ND	0.200		ND	0.809			1	
Methyl tert butyl ether		ND	0.200		ND	0.721			1	
2-Butanone		ND	0.500		ND	1.47			1	

ND

ND

ND

0.500

0.200

0.500

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ND

ND

ND

1.80

0.977

1.47

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1

1

1

Ethyl Acetate

Chloroform

Tetrahydrofuran
11/19/21 17:06

Not Specified

11/22/21

Project Name:	FORMER DURASPEC
Project Number:	3612162326.05

 Lab Number:
 L2164604

 Report Date:
 12/10/21

Date Collected:

Date Received:

Field Prep:

#### SAMPLE RESULTS

# Lab ID:L2164604-02Client ID:IAQ-FIRST-112021Sample Location:JAMAICA, NY

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield	l Lab							
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	ND	0.200		ND	0.705			1
Benzene	ND	0.200		ND	0.639			1
Cyclohexane	ND	0.200		ND	0.688			1
1,2-Dichloropropane	ND	0.200		ND	0.924			1
Bromodichloromethane	ND	0.200		ND	1.34			1
1,4-Dioxane	ND	0.200		ND	0.721			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
Xylene (Total)	ND	0.200		ND	0.869			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	0.506	0.200		1.91	0.754			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	ND	0.200		ND	0.869			1
p/m-Xylene	ND	0.400		ND	1.74			1
1,2-Dichloroethene (total)	ND	0.200		ND	0.793			1
Bromoform	ND	0.200		ND	2.07			1
Styrene	ND	0.200		ND	0.852			1
1,3-Dichloropropene, Total	ND	0.200		ND	0.908			1
1,1,2,2-Tetrachloroethane	ND	0.200		ND	1.37			1



Project Name:	FORMER DURASPEC	Lab Number:	L2164604
Project Number:	3612162326.05	Report Date:	12/10/21

#### SAMPLE RESULTS

# Lab ID:L2164604-02Client ID:IAQ-FIRST-112021Sample Location:JAMAICA, NY

Date Collected:11/19/21 17:06Date Received:11/22/21Field Prep:Not Specified

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield	Lab							
o-Xylene	ND	0.200		ND	0.869			1
4-Ethyltoluene	ND	0.200		ND	0.983			1
1,3,5-Trimethylbenzene	ND	0.200		ND	0.983			1
1,2,4-Trimethylbenzene	ND	0.200		ND	0.983			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.200		ND	1.20			1
1,4-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2-Dichlorobenzene	ND	0.200		ND	1.20			1
1,2,4-Trichlorobenzene	ND	0.200		ND	1.48			1
Hexachlorobutadiene	ND	0.200		ND	2.13			1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	91		60-140
chlorobenzene-d5	92		60-140



Project Name:	FORMER DURASPEC	Lab Number:	L2164604
Project Number:	3612162326.05	Report Date:	12/10/21

#### SAMPLE RESULTS

Lab ID:	L2164604-02	Date Collected:	11/19/21 17:06
Client ID:	IAQ-FIRST-112021	Date Received:	11/22/21
Sample Location:	JAMAICA, NY	Field Prep:	Not Specified
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Air 48,TO-15-SIM 12/09/21 22:00 RY		

		ppbV		ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - Mar	nsfield Lab							
Vinyl chloride	ND	0.020		ND	0.051			1
1,1-Dichloroethene	ND	0.020		ND	0.079			1
cis-1,2-Dichloroethene	ND	0.020		ND	0.079			1
1,1,1-Trichloroethane	ND	0.020		ND	0.109			1
Carbon tetrachloride	0.066	0.020		0.415	0.126			1
Trichloroethene	ND	0.020		ND	0.107			1
Tetrachloroethene	0.034	0.020		0.231	0.136			1
1,2-Dichloroethene (total)	ND	0.020		ND	0.079			1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	91		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	93		60-140



		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield	Lab for sampl	e(s): 01·	02 Batch:	WG15813	71-4			
Chlorodifluoromethane	ND	0.200		ND	0.707			1
Propylene	ND	0.500		ND	0.861			1
Propane	ND	0.500		ND	0.902			1
Dichlorodifluoromethane	ND	0.200		ND	0.989			1
Chloromethane	ND	0.200		ND	0.413			1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200		ND	1.40			1
Methanol	ND	5.00		ND	6.55			1
Vinyl chloride	ND	0.200		ND	0.511			1
1,3-Butadiene	ND	0.200		ND	0.442			1
Butane	ND	0.200		ND	0.475			1
Bromomethane	ND	0.200		ND	0.777			1
Chloroethane	ND	0.200		ND	0.528			1
Ethyl Alcohol	ND	5.00		ND	9.42			1
Dichlorofluoromethane	ND	0.200		ND	0.842			1
Vinyl bromide	ND	0.200		ND	0.874			1
Acrolein	ND	0.500		ND	1.15			1
Acetone	ND	1.00		ND	2.38			1
Acetonitrile	ND	0.200		ND	0.336			1
Trichlorofluoromethane	ND	0.200		ND	1.12			1
iso-Propyl Alcohol	ND	0.500		ND	1.23			1
Acrylonitrile	ND	0.500		ND	1.09			1
Pentane	ND	0.200		ND	0.590			1
Ethyl ether	ND	0.200		ND	0.606			1
1,1-Dichloroethene	ND	0.200		ND	0.793			1
tert-Butyl Alcohol	ND	0.500		ND	1.52			1



		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfiel	d Lab for sample	e(s): 01-0	02 Batch:	WG15813	371-4			
Methylene chloride	ND	0.500		ND	1.74			1
3-Chloropropene	ND	0.200		ND	0.626			1
Carbon disulfide	ND	0.200		ND	0.623			1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200		ND	1.53			1
trans-1,2-Dichloroethene	ND	0.200		ND	0.793			1
1,1-Dichloroethane	ND	0.200		ND	0.809			1
Methyl tert butyl ether	ND	0.200		ND	0.721			1
Vinyl acetate	ND	1.00		ND	3.52			1
2-Butanone	ND	0.500		ND	1.47			1
Xylene (Total)	ND	0.200		ND	0.869			1
cis-1,2-Dichloroethene	ND	0.200		ND	0.793			1
Ethyl Acetate	ND	0.500		ND	1.80			1
Chloroform	ND	0.200		ND	0.977			1
Tetrahydrofuran	ND	0.500		ND	1.47			1
2,2-Dichloropropane	ND	0.200		ND	0.924			1
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	ND	0.200		ND	0.705			1
Isopropyl Ether	ND	0.200		ND	0.836			1
Ethyl-Tert-Butyl-Ether	ND	0.200		ND	0.836			1
1,2-Dichloroethene (total)	ND	0.200		ND	0.793			1
1,1,1-Trichloroethane	ND	0.200		ND	1.09			1
1,1-Dichloropropene	ND	0.200		ND	0.908			1
1,3-Dichloropropene, Total	ND	0.200		ND	0.908			1
Benzene	ND	0.200		ND	0.639			1
Carbon tetrachloride	ND	0.200		ND	1.26			1



		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Man	sfield Lab for sample	e(s): 01	-02 Batch:	WG15813	371-4			
Cyclohexane	ND	0.200		ND	0.688			1
Tertiary-Amyl Methyl Ether	ND	0.200		ND	0.836			1
Dibromomethane	ND	0.200		ND	1.42			1
1,2-Dichloropropane	ND	0.200		ND	0.924			1
Bromodichloromethane	ND	0.200		ND	1.34			1
1,4-Dioxane	ND	0.200		ND	0.721			1
Trichloroethene	ND	0.200		ND	1.07			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Methyl Methacrylate	ND	0.500		ND	2.05			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	ND	0.200		ND	0.754			1
1,3-Dichloropropane	ND	0.200		ND	0.924			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Butyl Acetate	ND	0.500		ND	2.38			1
Octane	ND	0.200		ND	0.934			1
Tetrachloroethene	ND	0.200		ND	1.36			1
1,1,1,2-Tetrachloroethane	ND	0.200		ND	1.37			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	ND	0.200		ND	0.869			1



**Report Date:** 12/10/21

### Method Blank Analysis Batch Quality Control

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansf	ield Lab for sample	e(s): 01-	02 Batch:	WG15813	571-4			
p/m-Xylene	ND	0.400		ND	1.74			1
Bromoform	ND	0.200		ND	2.07			1
Styrene	ND	0.200		ND	0.852			1
1,1,2,2-Tetrachloroethane	ND	0.200		ND	1.37			1
o-Xylene	ND	0.200		ND	0.869			1
1,2,3-Trichloropropane	ND	0.200		ND	1.21			1
Nonane (C9)	ND	0.200		ND	1.05			1
Isopropylbenzene	ND	0.200		ND	0.983			1
Bromobenzene	ND	0.200		ND	0.793			1
o-Chlorotoluene	ND	0.200		ND	1.04			1
n-Propylbenzene	ND	0.200		ND	0.983			1
p-Chlorotoluene	ND	0.200		ND	1.04			1
4-Ethyltoluene	ND	0.200		ND	0.983			1
1,3,5-Trimethylbenzene	ND	0.200		ND	0.983			1
tert-Butylbenzene	ND	0.200		ND	1.10			1
1,2,4-Trimethylbenzene	ND	0.200		ND	0.983			1
Decane (C10)	ND	0.200		ND	1.16			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.200		ND	1.20			1
1,4-Dichlorobenzene	ND	0.200		ND	1.20			1
sec-Butylbenzene	ND	0.200		ND	1.10			1
p-Isopropyltoluene	ND	0.200		ND	1.10			1
1,2-Dichlorobenzene	ND	0.200		ND	1.20			1
n-Butylbenzene	ND	0.200		ND	1.10			1
1,2-Dibromo-3-chloropropane	ND	0.200		ND	1.93			1



# Project Name:FORMER DURASPECProject Number:3612162326.05

### Method Blank Analysis Batch Quality Control

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield	Lab for samp	ole(s): 01-	02 Batch	: WG15813	571-4			
Undecane	ND	0.200		ND	1.28			1
Dodecane (C12)	ND	0.200		ND	1.39			1
1,2,4-Trichlorobenzene	ND	0.200		ND	1.48			1
Naphthalene	ND	0.200		ND	1.05			1
1,2,3-Trichlorobenzene	ND	0.200		ND	1.48			1
Hexachlorobutadiene	ND	0.200		ND	2.13			1



# Project Name:FORMER DURASPECProject Number:3612162326.05

### Method Blank Analysis Batch Quality Control

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - M	ansfield Lab fo	or sample	(s): 01-02	Batch: W	G158137	'4-4		
Propylene	ND	0.500		ND	0.861			1
Dichlorodifluoromethane	ND	0.200		ND	0.989			1
Chloromethane	ND	0.200		ND	0.413			1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050		ND	0.349			1
Vinyl chloride	ND	0.020		ND	0.051			1
1,3-Butadiene	ND	0.020		ND	0.044			1
Bromomethane	ND	0.020		ND	0.078			1
Chloroethane	ND	0.100		ND	0.264			1
Ethyl Alcohol	ND	5.00		ND	9.42			1
Vinyl bromide	ND	0.200		ND	0.874			1
Acrolein	ND	0.050		ND	0.115			1
Acetone	ND	1.00		ND	2.38			1
Trichlorofluoromethane	ND	0.050		ND	0.281			1
iso-Propyl Alcohol	ND	0.500		ND	1.23			1
1,2-Dichloroethene (total)	ND	0.020		ND	0.079			1
Acrylonitrile	ND	0.500		ND	1.09			1
1,1-Dichloroethene	ND	0.020		ND	0.079			1
1,3-Dichloropropene, Total	ND	0.020		ND	0.091			1
tert-Butyl Alcohol	ND	0.500		ND	1.52			1
Methylene chloride	ND	0.500		ND	1.74			1
3-Chloropropene	ND	0.200		ND	0.626			1
Carbon disulfide	ND	0.200		ND	0.623			1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050		ND	0.383			1
trans-1,2-Dichloroethene	ND	0.020		ND	0.079			1
1,1-Dichloroethane	ND	0.020		ND	0.081			1



		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - Ma	nsfield Lab fo	or sample	e(s): 01-02	Batch: W	G158137	74-4		
Methyl tert butyl ether	ND	0.200		ND	0.721			1
Vinyl acetate	ND	1.00		ND	3.52			1
2-Butanone	ND	0.500		ND	1.47			1
cis-1,2-Dichloroethene	ND	0.020		ND	0.079			1
Ethyl Acetate	ND	0.500		ND	1.80			1
Chloroform	ND	0.020		ND	0.098			1
Tetrahydrofuran	ND	0.500		ND	1.47			1
1,2-Dichloroethane	ND	0.020		ND	0.081			1
n-Hexane	ND	0.200		ND	0.705			1
1,1,1-Trichloroethane	ND	0.020		ND	0.109			1
Benzene	ND	0.100		ND	0.319			1
Carbon tetrachloride	ND	0.020		ND	0.126			1
Cyclohexane	ND	0.200		ND	0.688			1
Dibromomethane	ND	0.200		ND	1.42			1
1,2-Dichloropropane	ND	0.020		ND	0.092			1
Bromodichloromethane	ND	0.020		ND	0.134			1
1,4-Dioxane	ND	0.100		ND	0.360			1
Trichloroethene	ND	0.020		ND	0.107			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.020		ND	0.091			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.020		ND	0.091			1
1,1,2-Trichloroethane	ND	0.020		ND	0.109			1
Toluene	ND	0.100		ND	0.377			1



**Report Date:** 12/10/21

### Method Blank Analysis Batch Quality Control

		ppbV		ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM	- Mansfield Lab fo	r sample	(s): 01-02	Batch: W	G158137	4-4		
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.020		ND	0.170			1
1,2-Dibromoethane	ND	0.020		ND	0.154			1
Xylene (Total)	ND	0.020		ND	0.087			1
Tetrachloroethene	ND	0.020		ND	0.136			1
1,1,1,2-Tetrachloroethane	ND	0.020		ND	0.137			1
Chlorobenzene	ND	0.100		ND	0.461			1
Ethylbenzene	ND	0.020		ND	0.087			1
p/m-Xylene	ND	0.040		ND	0.174			1
Bromoform	ND	0.020		ND	0.207			1
Styrene	ND	0.020		ND	0.085			1
1,1,2,2-Tetrachloroethane	ND	0.020		ND	0.137			1
o-Xylene	ND	0.020		ND	0.087			1
1,2,3-Trichloropropane	ND	0.020		ND	0.121			1
Isopropylbenzene	ND	0.200		ND	0.983			1
Bromobenzene	ND	0.200		ND	0.793			1
4-Ethyltoluene	ND	0.020		ND	0.098			1
1,3,5-Trimethylbenzene	ND	0.020		ND	0.098			1
1,2,4-Trimethylbenzene	ND	0.020		ND	0.098			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.020		ND	0.120			1
1,4-Dichlorobenzene	ND	0.020		ND	0.120			1
sec-Butylbenzene	ND	0.200		ND	1.10			1
p-Isopropyltoluene	ND	0.200		ND	1.10			1
1,2-Dichlorobenzene	ND	0.020		ND	0.120			1



# Project Name:FORMER DURASPECProject Number:3612162326.05

### Method Blank Analysis Batch Quality Control

		ppbV	opbV ug/m3					Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - Ma	insfield Lab f	or sample	(s): 01-02	Batch: W	G158137	4-4		
n-Butylbenzene	ND	0.200		ND	1.10			1
1,2-Dibromo-3-chloropropane	ND	0.020		ND	0.193			1
1,2,4-Trichlorobenzene	ND	0.050		ND	0.371			1
Naphthalene	ND	0.050		ND	0.262			1
1,2,3-Trichlorobenzene	ND	0.050		ND	0.371			1
Hexachlorobutadiene	ND	0.050		ND	0.533			1



Batch Quality Control

Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery Limits RPD %Recovery Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581371-3 Chlorodifluoromethane 80 70-130 --Propylene 88 70-130 --Propane 80 70-130 --Dichlorodifluoromethane 89 70-130 --Chloromethane 93 70-130 --1,2-Dichloro-1,1,2,2-tetrafluoroethane 96 70-130 --Methanol 80 70-130 --Vinyl chloride 93 70-130 --1,3-Butadiene 98 70-130 --70-130 Butane 77 --Bromomethane 99 70-130 --Chloroethane 90 70-130 --Ethyl Alcohol 69 40-160 --Dichlorofluoromethane 70-130 81 --Vinyl bromide 74 70-130 --Acrolein 82 60-113 --69 40-160 Acetone --Acetonitrile Q 70-130 49 --Trichlorofluoromethane 70-130 102 -iso-Propyl Alcohol 82 40-160 --Acrylonitrile 88 70-130 --70-130 Pentane 85 --70-130 Ethyl ether 88 --



Batch Quality Control

Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery RPD %Recovery Limits Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581371-3 1,1-Dichloroethene 96 70-130 -tert-Butyl Alcohol 90 70-130 --Methylene chloride 108 70-130 --3-Chloropropene 90 70-130 --Carbon disulfide 85 70-130 --1,1,2-Trichloro-1,2,2-Trifluoroethane 104 70-130 -trans-1.2-Dichloroethene 80 70-130 --1,1-Dichloroethane 82 70-130 --Methyl tert butyl ether 80 70-130 --70-130 Vinyl acetate 73 --2-Butanone 79 70-130 -cis-1,2-Dichloroethene 85 70-130 --Ethyl Acetate 86 70-130 --70-130 Chloroform 88 --Tetrahydrofuran 79 70-130 --2,2-Dichloropropane 75 70-130 --1.2-Dichloroethane 78 70-130 --70-130 n-Hexane 82 --Isopropyl Ether 70-130 84 --Ethyl-Tert-Butyl-Ether 76 70-130 --1,2-Dichloroethene (total) 82 --1,2-Dichloroethene (total) 82 --1,1,1-Trichloroethane 82 70-130 --



Batch Quality Control

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery RPD %Recovery Limits Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581371-3 1,1-Dichloropropene 81 70-130 --Benzene 81 70-130 --Carbon tetrachloride 82 70-130 --Cyclohexane 83 70-130 --Tertiary-Amyl Methyl Ether 80 70-130 --Dibromomethane 83 70-130 --1,2-Dichloropropane 84 70-130 --Bromodichloromethane 85 70-130 --1,4-Dioxane 89 70-130 --70-130 Trichloroethene 93 --2,2,4-Trimethylpentane 84 70-130 --Methyl Methacrylate 63 40-160 --Heptane 78 70-130 -cis-1,3-Dichloropropene 70-130 92 --4-Methyl-2-pentanone 78 70-130 -trans-1,3-Dichloropropene 77 70-130 --1,1,2-Trichloroethane 92 70-130 --70-130 Toluene 95 --1,3-Dichloropropane 70-130 88 --2-Hexanone 82 70-130 --Dibromochloromethane 101 70-130 --1,2-Dibromoethane 101 70-130 --Butyl Acetate 89 70-130 --



Batch Quality Control

Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery Limits RPD %Recovery Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581371-3 Octane 95 70-130 --Tetrachloroethene 101 70-130 --1.1.1.2-Tetrachloroethane 94 70-130 --Chlorobenzene 101 70-130 --Ethylbenzene 98 70-130 --70-130 p/m-Xylene 98 --Bromoform 97 70-130 --Styrene 99 70-130 --1,1,2,2-Tetrachloroethane 106 70-130 --70-130 o-Xylene 101 --1,2,3-Trichloropropane 91 70-130 --Nonane (C9) 82 70-130 --Isopropylbenzene 96 70-130 --70-130 Bromobenzene 91 -o-Chlorotoluene 99 70-130 -n-Propylbenzene 99 70-130 -p-Chlorotoluene 101 70-130 --4-Ethyltoluene 94 70-130 --1,3,5-Trimethylbenzene 70-130 101 -tert-Butylbenzene 87 70-130 --1,2,4-Trimethylbenzene 93 70-130 --Decane (C10) 94 70-130 --Benzyl chloride 70-130 96 --



Batch Quality Control

Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery %Recovery Limits RPD Limits Parameter Qual Qual Qual Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581371-3 1,3-Dichlorobenzene 107 70-130 --106 70-130 1,4-Dichlorobenzene -sec-Butylbenzene 96 70-130 -p-Isopropyltoluene 92 70-130 --1,2-Dichlorobenzene 108 70-130 -n-Butylbenzene 103 70-130 --1,2-Dibromo-3-chloropropane 89 70-130 --Undecane 102 70-130 --Dodecane (C12) 105 70-130 --1,2,4-Trichlorobenzene 98 70-130 --91 70-130 Naphthalene --1,2,3-Trichlorobenzene 88 70-130 --Hexachlorobutadiene 97 70-130 --



# Lab Control Sample Analysis Batch Quality Control

Project Number: 3612162326.05 Lab Number: L2164604 Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	
Volatile Organics in Air by SIM - Mansfield	Lab Associated san	nple(s): 01-0	02 Batch: WO	G1581374-3					
Propylene	79				70-130	-		25	
Dichlorodifluoromethane	82		-		70-130	-		25	
Chloromethane	83		-		70-130	-		25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	86		-		70-130	-		25	
Vinyl chloride	82		-		70-130	-		25	
1,3-Butadiene	89		-		70-130	-		25	
Bromomethane	86		-		70-130	-		25	
Chloroethane	80		-		70-130	-		25	
Ethyl Alcohol	67		-		40-160	-		25	
Vinyl bromide	70		-		70-130	-		25	
Acrolein	76		-		60-113	-		25	
Acetone	66		-		40-160	-		25	
Trichlorofluoromethane	78		-		70-130	-		25	
iso-Propyl Alcohol	80		-		40-160	-		25	
Acrylonitrile	82		-		70-130	-		25	
1,1-Dichloroethene	85		-		70-130	-		25	
tert-Butyl Alcohol <sup>1</sup>	82		-		70-130	-		25	
Methylene chloride	99		-		70-130	-		25	
3-Chloropropene	85		-		70-130	-		25	
Carbon disulfide	84		-		70-130	-		25	
1,1,2-Trichloro-1,2,2-Trifluoroethane	95		-		70-130	-		25	
trans-1,2-Dichloroethene	75		-		70-130	-		25	
1,1-Dichloroethane	79		-		70-130	-		25	



Batch Quality Control

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery RPD %Recovery Limits Limits Parameter Qual Qual Qual Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581374-3 Methyl tert butyl ether 78 70-130 25 --Q Vinyl acetate 25 69 70-130 --2-Butanone 77 70-130 25 -cis-1.2-Dichloroethene 82 70-130 25 --Ethyl Acetate 85 70-130 25 --Chloroform 70-130 25 84 --Tetrahydrofuran 76 70-130 25 --25 1,2-Dichloroethane 75 70-130 -n-Hexane 78 70-130 25 --70-130 25 1,1,1-Trichloroethane 79 --74 25 Benzene 70-130 --25 Carbon tetrachloride 78 70-130 --25 Cyclohexane 80 70-130 --Dibromomethane<sup>1</sup> 70-130 25 75 --1,2-Dichloropropane 78 70-130 25 --25 Bromodichloromethane 79 70-130 --25 1,4-Dioxane 82 70-130 --Trichloroethene 70-130 25 88 --70-130 25 2,2,4-Trimethylpentane 81 -cis-1,3-Dichloropropene 87 70-130 25 --4-Methyl-2-pentanone 74 70-130 25 --70-130 25 trans-1,3-Dichloropropene 73 --25 1,1,2-Trichloroethane 86 70-130 --



Batch Quality Control

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCSD LCS %Recovery RPD %Recovery RPD %Recovery Limits Limits Parameter Qual Qual Qual Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581374-3 Toluene 89 70-130 25 --25 2-Hexanone 81 70-130 --Dibromochloromethane 99 70-130 25 --1,2-Dibromoethane 97 70-130 25 --93 70-130 25 Tetrachloroethene --25 1,1,1,2-Tetrachloroethane 90 70-130 --Chlorobenzene 97 70-130 25 --25 Ethylbenzene 96 70-130 -p/m-Xylene 97 70-130 25 --70-130 25 Bromoform 95 --25 Styrene 98 70-130 --25 1,1,2,2-Tetrachloroethane 103 70-130 --25 o-Xylene 98 70-130 --1,2,3-Trichloropropane1 70-130 25 89 --Isopropylbenzene 96 70-130 25 --Bromobenzene<sup>1</sup> 25 91 70-130 --25 4-Ethyltoluene 94 70-130 --1,3,5-Trimethylbenzene 70-130 25 100 --1,2,4-Trimethylbenzene 70-130 25 95 --Benzyl chloride 89 70-130 25 --1,3-Dichlorobenzene 108 70-130 25 --107 70-130 25 1,4-Dichlorobenzene --25 sec-Butylbenzene 94 70-130 --



Batch Quality Control

Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: L2164604 Report Date: 12/10/21

LCS LCSD %Recovery RPD %Recovery Parameter %Recovery Qual Limits RPD Qual Limits Qual Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581374-3 p-Isopropyltoluene 89 70-130 25 --1,2-Dichlorobenzene 105 25 70-130 -n-Butylbenzene 97 70-130 25 --1,2-Dibromo-3-chloropropane 86 70-130 25 --1,2,4-Trichlorobenzene 91 70-130 25 --Naphthalene 89 70-130 25 --25 1,2,3-Trichlorobenzene 88 70-130 --70-130 25 Hexachlorobutadiene 99 --



Project Name: FORMER DURASPEC

Lab Number: L2164604 Report Date: 12/10/21

Project Number: 3612162326.05

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Qual Limits	
Volatile Organics in Air - Mansfield Lab 112021	Associated sample(s): 01-02	QC Batch ID: WG1581371-5	QC Sample:	L2164604-02	2 Client ID: IAQ-FIRST-	
Dichlorodifluoromethane	0.428	0.461	ppbV	7	25	
Chloromethane	0.512	0.531	ppbV	4	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC	25	
1,3-Butadiene	ND	ND	ppbV	NC	25	
Bromomethane	ND	ND	ppbV	NC	25	
Chloroethane	ND	ND	ppbV	NC	25	
Ethyl Alcohol	10.4	11.0	ppbV	6	25	
Vinyl bromide	ND	ND	ppbV	NC	25	
Acetone	2.15	2.51	ppbV	15	25	
Trichlorofluoromethane	0.209	0.220	ppbV	5	25	
iso-Propyl Alcohol	0.614	0.647	ppbV	5	25	
tert-Butyl Alcohol	ND	ND	ppbV	NC	25	
Methylene chloride	ND	ND	ppbV	NC	25	
3-Chloropropene	ND	ND	ppbV	NC	25	
Carbon disulfide	ND	ND	ppbV	NC	25	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC	25	
trans-1,2-Dichloroethene	ND	ND	ppbV	NC	25	
1,1-Dichloroethane	ND	ND	ppbV	NC	25	
Methyl tert butyl ether	ND	ND	ppbV	NC	25	
2-Butanone	ND	ND	ppbV	NC	25	
Ethyl Acetate	ND	ND	ppbV	NC	25	



Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number:

 Lab Number:
 L2164604

 Report Date:
 12/10/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Qual Limits	
Volatile Organics in Air - Mansfield 112021	Lab Associated sample(s): 01-02	QC Batch ID: WG1581371-5	QC Sample:	L2164604-02	2 Client ID: IAQ-FIRST-	
Chloroform	ND	ND	ppbV	NC	25	
Tetrahydrofuran	ND	ND	ppbV	NC	25	
1,2-Dichloroethane	ND	ND	ppbV	NC	25	
n-Hexane	ND	ND	ppbV	NC	25	
Benzene	ND	ND	ppbV	NC	25	
Cyclohexane	ND	ND	ppbV	NC	25	
1,2-Dichloropropane	ND	ND	ppbV	NC	25	
Bromodichloromethane	ND	ND	ppbV	NC	25	
1,4-Dioxane	ND	ND	ppbV	NC	25	
2,2,4-Trimethylpentane	ND	ND	ppbV	NC	25	
Heptane	ND	ND	ppbV	NC	25	
cis-1,3-Dichloropropene	ND	ND	ppbV	NC	25	
Xylene (Total)	ND	ND	ppbV	NC	25	
4-Methyl-2-pentanone	ND	ND	ppbV	NC	25	
trans-1,3-Dichloropropene	ND	ND	ppbV	NC	25	
1,1,2-Trichloroethane	ND	ND	ppbV	NC	25	
Toluene	0.506	0.542	ppbV	7	25	
2-Hexanone	ND	ND	ppbV	NC	25	
Dibromochloromethane	ND	ND	ppbV	NC	25	
1,2-Dibromoethane	ND	ND	ppbV	NC	25	
Chlorobenzene	ND	ND	ppbV	NC	25	



Project Name: FORMER DURASPEC

Lab Number: L2164604 Report Date: 12/10/21

Project Number: 3612162326.05

Parameter	Native Sample	Duplicate Sample	Units	RPD	R Qual L	PD imits
Volatile Organics in Air - Mansfield Lab 112021	Associated sample(s): 01-02	QC Batch ID: WG1581371-5	QC Sample:	L2164604-02	2 Client ID:	AQ-FIRST-
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
1,2-Dichloroethene (total)	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
1,3-Dichloropropene, Total	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25



Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Lab Number: Report Date:

 ber:
 L2164604

 ate:
 12/10/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Qual Limits	
Volatile Organics in Air by SIM - Mansfield Lab FIRST-112021	Associated sample(s): 01-02	QC Batch ID: WG1	581374-5	QC Sample: L2	2164604-02 Client ID	IAQ-
Vinyl chloride	ND	ND	ppbV	NC	25	
1,1-Dichloroethene	ND	ND	ppbV	NC	25	
cis-1,2-Dichloroethene	ND	ND	ppbV	NC	25	
1,1,1-Trichloroethane	ND	ND	ppbV	NC	25	
Carbon tetrachloride	0.066	0.062	ppbV	6	25	
Trichloroethene	ND	ND	ppbV	NC	25	
Tetrachloroethene	0.034	0.035	ppbV	3	25	
1,2-Dichloroethene (total)	ND	ND	ppbV	NC	25	



Project Name: FORMER DURASPEC

**Project Number:** 3612162326.05

Serial\_No:12102114:45
Lab Number: L2164604

**Report Date:** 12/10/21

#### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2164604-01	IAQ-BASEMENT-112021	01661	Flow 4	11/11/21	370127		-	-	-	Pass	10.0	10.0	0
L2164604-01	IAQ-BASEMENT-112021	3307	6.0L Can	11/11/21	370127	L2160179-08	Pass	-29.5	-9.6	-	-	-	-
L2164604-02	IAQ-FIRST-112021	0718	Flow 4	11/11/21	370127		-	-	-	Pass	9.9	8.2	19
L2164604-02	IAQ-FIRST-112021	2324	6.0L Can	11/11/21	370127	L2160179-08	Pass	-29.4	-8.5	-	-	-	-



Project Number:	CANISTER QC E	ЗАТ				R	eport [	Date:	12/10/21
		Air Can	ister Cei	rtificatio	on Result	S			
Lab ID: Client ID: Sample Location:	L2160179-08 CAN 2723 SHE	LF 40				Date Date Field	Collecte Receive Prep:	ed: ed:	11/03/21 08:00 11/03/21 Not Specified
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Air 48,TO-15 11/08/21 19:06 TS								
			ppbV		Desertes	ug/m3		0	Dilution Factor
Parameter	Air Manefield Lab	Results	RL	MDL	Results	RL	MDL	Qualifier	
Chlorodifluoromethane		ND	0.200		ND	0.707			1
Propylene		ND	0.500		ND	0.861			1
Propane		ND	0.500		ND	0.902			1
Dichlorodifluoromethane	)	ND	0.200		ND	0.989			1
Chloromethane		ND	0.200		ND	0.413			1
Freon-114		ND	0.200		ND	1.40			1
Methanol		ND	5.00		ND	6.55			1
Vinyl chloride		ND	0.200		ND	0.511			1
1,3-Butadiene		ND	0.200		ND	0.442			1
Butane		ND	0.200		ND	0.475			1
Bromomethane		ND	0.200		ND	0.777			1
Chloroethane		ND	0.200		ND	0.528			1
Ethanol		ND	5.00		ND	9.42			1
Dichlorofluoromethane		ND	0.200		ND	0.842			1
Vinyl bromide		ND	0.200		ND	0.874			1
Acrolein		ND	0.500		ND	1.15			1
Acetone		ND	1.00		ND	2.38			1
Acetonitrile		ND	0.200		ND	0.336			1
Trichlorofluoromethane		ND	0.200		ND	1.12			1
Isopropanol		ND	0.500		ND	1.23			1
Acrylonitrile		ND	0.500		ND	1.09			1
Pentane		ND	0.200		ND	0.590			1
Ethyl ether		ND	0.200		ND	0.606			1
1,1-Dichloroethene		ND	0.200		ND	0.793			1

Project Name: BATCH CANISTER CERTIFICATION



Serial\_No:12102114:45

L2160179

Lab Number:

	Serial_No:12	2102114:45
DN	Lab Number:	L2160179
	Demonst Dete	

12/10/21 Report Date:

# **Air Canister Certification Results**

Lab ID:	L2160179-08	Date Collected:	11/03/21 08:00
Client ID:	CAN 2723 SHELF 40	Date Received:	11/03/21
Sample Location:		Field Prep:	Not Specified

	ррьУ			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield La	ab							
Tertiary butyl Alcohol	ND	0.500		ND	1.52			1
Methylene chloride	ND	0.500		ND	1.74			1
3-Chloropropene	ND	0.200		ND	0.626			1
Carbon disulfide	ND	0.200		ND	0.623			1
Freon-113	ND	0.200		ND	1.53			1
trans-1,2-Dichloroethene	ND	0.200		ND	0.793			1
1,1-Dichloroethane	ND	0.200		ND	0.809			1
Methyl tert butyl ether	ND	0.200		ND	0.721			1
Vinyl acetate	ND	1.00		ND	3.52			1
2-Butanone	ND	0.500		ND	1.47			1
Xylenes, total	ND	0.600		ND	0.869			1
cis-1,2-Dichloroethene	ND	0.200		ND	0.793			1
Ethyl Acetate	ND	0.500		ND	1.80			1
Chloroform	ND	0.200		ND	0.977			1
Tetrahydrofuran	ND	0.500		ND	1.47			1
2,2-Dichloropropane	ND	0.200		ND	0.924			1
1,2-Dichloroethane	ND	0.200		ND	0.809			1
n-Hexane	ND	0.200		ND	0.705			1
Diisopropyl ether	ND	0.200		ND	0.836			1
tert-Butyl Ethyl Ether	ND	0.200		ND	0.836			1
1,2-Dichloroethene (total)	ND	1.00		ND	1.00			1
1,1,1-Trichloroethane	ND	0.200		ND	1.09			1
1,1-Dichloropropene	ND	0.200		ND	0.908			1
Benzene	ND	0.200		ND	0.639			1
Carbon tetrachloride	ND	0.200		ND	1.26			1
Cyclohexane	ND	0.200		ND	0.688			1
tert-Amyl Methyl Ether	ND	0.200		ND	0.836			1



	Serial_No:12	2102114:45
ION	Lab Number:	L2160179

er: L2160179 Report Date: 12/10/21

# **Air Canister Certification Results**

Lab ID:	L2160179-08	Date Collected:	11/03/21 08:00
Client ID:	CAN 2723 SHELF 40	Date Received:	11/03/21
Sample Location:		Field Prep:	Not Specified

	ppbV			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield La	ab							
Dibromomethane	ND	0.200		ND	1.42			1
1,2-Dichloropropane	ND	0.200		ND	0.924			1
Bromodichloromethane	ND	0.200		ND	1.34			1
1,4-Dioxane	ND	0.200		ND	0.721			1
Trichloroethene	ND	0.200		ND	1.07			1
2,2,4-Trimethylpentane	ND	0.200		ND	0.934			1
Methyl Methacrylate	ND	0.500		ND	2.05			1
Heptane	ND	0.200		ND	0.820			1
cis-1,3-Dichloropropene	ND	0.200		ND	0.908			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.200		ND	0.908			1
1,1,2-Trichloroethane	ND	0.200		ND	1.09			1
Toluene	ND	0.200		ND	0.754			1
1,3-Dichloropropane	ND	0.200		ND	0.924			1
2-Hexanone	ND	0.200		ND	0.820			1
Dibromochloromethane	ND	0.200		ND	1.70			1
1,2-Dibromoethane	ND	0.200		ND	1.54			1
Butyl acetate	ND	0.500		ND	2.38			1
Octane	ND	0.200		ND	0.934			1
Tetrachloroethene	ND	0.200		ND	1.36			1
1,1,1,2-Tetrachloroethane	ND	0.200		ND	1.37			1
Chlorobenzene	ND	0.200		ND	0.921			1
Ethylbenzene	ND	0.200		ND	0.869			1
p/m-Xylene	ND	0.400		ND	1.74			1
Bromoform	ND	0.200		ND	2.07			1
Styrene	ND	0.200		ND	0.852			1
1,1,2,2-Tetrachloroethane	ND	0.200		ND	1.37			1



	Serial_No:12	2102114:45
Ν	Lab Number:	L2160179
	Demonst Dete	

**Report Date:** 12/10/21

### **Air Canister Certification Results**

Lab ID:	L2160179-08	Date Collected:	11/03/21 08:00
Client ID:	CAN 2723 SHELF 40	Date Received:	11/03/21
Sample Location:		Field Prep:	Not Specified

		ppbV		ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air - Mansfield La	b							
o-Xylene	ND	0.200		ND	0.869			1
1,2,3-Trichloropropane	ND	0.200		ND	1.21			1
Nonane	ND	0.200		ND	1.05			1
Isopropylbenzene	ND	0.200		ND	0.983			1
Bromobenzene	ND	0.200		ND	0.793			1
2-Chlorotoluene	ND	0.200		ND	1.04			1
n-Propylbenzene	ND	0.200		ND	0.983			1
4-Chlorotoluene	ND	0.200		ND	1.04			1
4-Ethyltoluene	ND	0.200		ND	0.983			1
1,3,5-Trimethylbenzene	ND	0.200		ND	0.983			1
tert-Butylbenzene	ND	0.200		ND	1.10			1
1,2,4-Trimethylbenzene	ND	0.200		ND	0.983			1
Decane	ND	0.200		ND	1.16			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.200		ND	1.20			1
1,4-Dichlorobenzene	ND	0.200		ND	1.20			1
sec-Butylbenzene	ND	0.200		ND	1.10			1
p-Isopropyltoluene	ND	0.200		ND	1.10			1
1,2-Dichlorobenzene	ND	0.200		ND	1.20			1
n-Butylbenzene	ND	0.200		ND	1.10			1
1,2-Dibromo-3-chloropropane	ND	0.200		ND	1.93			1
Undecane	ND	0.200		ND	1.28			1
Dodecane	ND	0.200		ND	1.39			1
1,2,4-Trichlorobenzene	ND	0.200		ND	1.48			1
Naphthalene	ND	0.200		ND	1.05			1
1,2,3-Trichlorobenzene	ND	0.200		ND	1.48			1
Hexachlorobutadiene	ND	0.200		ND	2.13			1



							Serial	_No:121	02114:45
Project Name:	BATCH CANIST	ER CERTI	FICATION	I		La	b Num	ber:	L2160179
Project Number:	CANISTER QC	BAT				Re	eport D	ate:	12/10/21
		Air Can	ister Ce	rtification	Results				
Lab ID: Client ID: Sample Location:	L2160179-08 CAN 2723 SHE	ELF 40				Date C Date R Field F	Collecte Receive Prep:	ed: ed:	11/03/21 08:00 11/03/21 Not Specified
Sample Depth:			ppbV			ug/m3			Dilution
Parameter		Results	RL	MDL	Results	RL	MDL	Qualifie	r Factor
Volatile Organics in	Air - Mansfield Lab								
		Re	sults	Qualifier	Units	RDL		Dilutio Facto	on or
Tentatively Identified Cor	npounds								

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	85		60-140
Bromochloromethane	88		60-140
chlorobenzene-d5	85		60-140



Project Number:	CANISTER QC E	BAT				R	Report D	ate:	2/10/21
		Air Car	nister Cer	tificati	ion Results				
Lab ID: Client ID: Sample Location:	L2160179-08 CAN 2723 SHEI	_F 40				Date Date Field	Collecte Receive Prep:	ed: ed:	11/03/21 08:00 11/03/21 Not Specified
Sample Depth: Matrix: Anaytical Method: Analytical Date: Analyst:	Air 48,TO-15-SIM 11/08/21 19:06 TS								
			ppbV			ug/m3			Dilution
Parameter		Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in A	Air by SIM - Mansfie	eld Lab							
Dichlorodifluoromethane		ND	0.200		ND	0.989			1
Chloromethane		ND	0.200		ND	0.413			1
Freon-114		ND	0.050		ND	0.349			1
Vinyl chloride		ND	0.020		ND	0.051			1
1,3-Butadiene		ND	0.020		ND	0.044			1
Bromomethane		ND	0.020		ND	0.078			1
Chloroethane		ND	0.100		ND	0.264			1
Acrolein		ND	0.050		ND	0.115			1
Acetone		ND	1.00		ND	2.38			1
Trichlorofluoromethane		ND	0.050		ND	0.281			1
Acrylonitrile		ND	0.500		ND	1.09			1
1,1-Dichloroethene		ND	0.020		ND	0.079			1
Methylene chloride		ND	0.500		ND	1.74			1
Freon-113		ND	0.050		ND	0.383			1
trans-1,2-Dichloroethene	9	ND	0.020		ND	0.079			1
1,1-Dichloroethane		ND	0.020		ND	0.081			1
Methyl tert butyl ether		ND	0.200		ND	0.721			1
2-Butanone		ND	0.500		ND	1.47			1
cis-1,2-Dichloroethene		ND	0.020		ND	0.079			1
Chloroform		ND	0.020		ND	0.098			1
1,2-Dichloroethane		ND	0.020		ND	0.081			1
1,1,1-Trichloroethane		ND	0.020		ND	0.109			1
Benzene		ND	0.100		ND	0.319			1
Carbon tetrachloride		ND	0.020		ND	0.126			1

Project Name: BATCH CANISTER CERTIFICATION



Serial\_No:12102114:45

L2160179

Lab Number:

Serial_No:12	2102114:45
Lab Number:	L2160179

**Report Date:** 12/10/21

# **Air Canister Certification Results**

Lab ID:	L2160179-08	Date Collected:	11/03/21 08:00
Client ID:	CAN 2723 SHELF 40	Date Received:	11/03/21
Sample Location:		Field Prep:	Not Specified

		ppbV			ug/m3			Dilution
Parameter	Results	RL	MDL	Results	Results RL MDL			Factor
Volatile Organics in Air by SIM - Ma	insfield Lab							
1,2-Dichloropropane	ND	0.020		ND	0.092			1
Bromodichloromethane	ND	0.020		ND	0.134			1
1,4-Dioxane	ND	0.100		ND	0.360			1
Trichloroethene	ND	0.020		ND	0.107			1
cis-1,3-Dichloropropene	ND	0.020		ND	0.091			1
4-Methyl-2-pentanone	ND	0.500		ND	2.05			1
trans-1,3-Dichloropropene	ND	0.020		ND	0.091			1
1,1,2-Trichloroethane	ND	0.020		ND	0.109			1
Toluene	ND	0.100		ND	0.377			1
Dibromochloromethane	ND	0.020		ND	0.170			1
1,2-Dibromoethane	ND	0.020		ND	0.154			1
Tetrachloroethene	ND	0.020		ND	0.136			1
1,1,1,2-Tetrachloroethane	ND	0.020		ND	0.137			1
Chlorobenzene	ND	0.100		ND	0.461			1
Ethylbenzene	ND	0.020		ND	0.087			1
p/m-Xylene	ND	0.040		ND	0.174			1
Bromoform	ND	0.020		ND	0.207			1
Styrene	ND	0.020		ND	0.085			1
1,1,2,2-Tetrachloroethane	ND	0.020		ND	0.137			1
o-Xylene	ND	0.020		ND	0.087			1
Isopropylbenzene	ND	0.200		ND	0.983			1
4-Ethyltoluene	ND	0.020		ND	0.098			1
1,3,5-Trimethybenzene	ND	0.020		ND	0.098			1
1,2,4-Trimethylbenzene	ND	0.020		ND	0.098			1
Benzyl chloride	ND	0.200		ND	1.04			1
1,3-Dichlorobenzene	ND	0.020		ND	0.120			1
1,4-Dichlorobenzene	ND	0.020		ND	0.120			1



		Serial_No:12	2102114:45		
Project Name:	BATCH CANISTER CERTIFICATION	Lab Number:	L2160179		
Project Number:	CANISTER QC BAT	Report Date:	12/10/21		
Air Canister Certification Results					

Lab ID:	L2160179-08	Date Collected:	11/03/21 08:00	
Client ID:	CAN 2723 SHELF 40	Date Received:	11/03/21	
		Field Prep:	Not Specified	

Sample Depth:

	ppbV				ug/m3		Dilution	
Parameter	Results RL MDL Results		Results	RL	MDL	Qualifier	Factor	
Volatile Organics in Air by SIM - Mans	sfield Lab							
sec-Butylbenzene	ND	0.200		ND	1.10			1
p-Isopropyltoluene	ND	0.200		ND	1.10			1
1,2-Dichlorobenzene	ND	0.020		ND	0.120			1
n-Butylbenzene	ND	0.200		ND	1.10			1
1,2,4-Trichlorobenzene	ND	0.050		ND	0.371			1
Naphthalene	ND	0.050		ND	0.262			1
1,2,3-Trichlorobenzene	ND	0.050		ND	0.371			1
Hexachlorobutadiene	ND	0.050		ND	0.533			1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	86		60-140
bromochloromethane	89		60-140
chlorobenzene-d5	91		60-140



Project Name:FORMER DURASPECProject Number:3612162326.05

Serial\_No:12102114:45 *Lab Number:* L2164604 *Report Date:* 12/10/21

#### Sample Receipt and Container Information

Were project specific reporting limits specified?

#### **Cooler Information**

Cooler	Custody Seal
N/A	Absent

#### **Container Information**

Container Info	rmation		Initial	Final	Temp			Frozen	
Container ID	Container Type	Cooler	рН	pН	deg C Pre	es	Seal	Date/Time	Analysis(*)
L2164604-01A	Canister - 6 Liter	N/A	NA		Y	Ý	Absent		TO15-LL(30),TO15-SIM(30)
L2164604-02A	Canister - 6 Liter	N/A	NA		Y	Y	Absent		TO15-LL(30),TO15-SIM(30)

YES



#### Project Name: FORMER DURASPEC

Project Number: 3612162326.05

#### Lab Number: L2164604

#### **Report Date:** 12/10/21

#### GLOSSARY

#### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report


## Project Name: FORMER DURASPEC

Project Number: 3612162326.05

# Lab Number: L2164604

**Report Date:** 12/10/21

#### Footnotes

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- The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

#### Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Waterpreserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'. Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(a)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

#### Data Qualifiers

- A Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For NJ-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- **D** Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- **F** The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.
- H The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I The lower value for the two columns has been reported due to obvious interference.
- J Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- **ND** Not detected at the reporting limit (RL) for the sample.
- NJ Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

Report Format: Data Usability Report



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## Project Name: FORMER DURASPEC

Project Number: 3612162326.05

Lab Number: L2164604

**Report Date:** 12/10/21

#### Data Qualifiers

the identification is based on a mass spectral library search.

- **P** The RPD between the results for the two columns exceeds the method-specified criteria.
- Q The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- **R** Analytical results are from sample re-analysis.
- **RE** Analytical results are from sample re-extraction.
- **S** Analytical results are from modified screening analysis.
- V The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report



Project Name: FORMER DURASPEC Project Number: 3612162326.05 
 Lab Number:
 L2164604

 Report Date:
 12/10/21

### REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

### LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## **Certification Information**

#### The following analytes are not included in our Primary NELAP Scope of Accreditation:

#### Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625/625.1: alpha-Terpineol

**EPA 8260C/8260D:** <u>NPW</u>: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; <u>SCM</u>: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D/8270E:** <u>NPW:</u> Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; <u>SCM</u>: Dimethylnaphthalene,1,4-Diphenylhydrazine. **SM4500**: <u>NPW</u>: Amenable Cyanide; <u>SCM</u>: Total Phosphorus, TKN, NO2, NO3.

#### Mansfield Facility

SM 2540D: TSS

**EPA 8082A:** <u>NPW:</u> PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187. **EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene. **Biological Tissue Matrix:** EPA 3050B

#### The following analytes are included in our Massachusetts DEP Scope of Accreditation

#### Westborough Facility:

#### Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP. Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D.

#### Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate. EPA 624.1: Volatile Halocarbons & Aromatics, EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II.

**EPA 608.3**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs **EPA 625.1**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

#### Mansfield Facility:

#### **Drinking Water**

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg. EPA 522, EPA 537.1.

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn. **EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn. **EPA 245.1** Hg. **SM2340B** 

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

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